

# CCTVI - H2 STATION SORIGNY

## ETUDE

Société  
Responsable  
Adresse

CEGELEC TOURS ELECTRICITE



Code Postal  
Ville  
Tél  
Courriel

## CLIENT

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CCTVI

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## CONTROLE

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| Indice | Date       | Objet       | Dessiné       | Vérfié        | Approuvé   |
|--------|------------|-------------|---------------|---------------|------------|
|        |            |             |               |               |            |
|        |            |             |               |               |            |
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|        |            |             |               |               |            |
|        |            |             |               |               |            |
|        |            |             |               |               |            |
|        |            |             |               |               |            |
| B      | 22/09/2022 | MISE A JOUR | J. BROSSILLON | J. BROSSILLON | X. COTTRON |
| A      | 03/08/2022 | CREATION    | J. BROSSILLON | J. BROSSILLON | X. COTTRON |

Indice: B

Avancement BPE (Bon Pour Exécution)



Date: 22/09/2022

Poste:

TV

Avis Technique ELIE

AFFAIRE: P.0515342

Folio

PLAN: 040- NC

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| Folio | Libellé   | Indice | Date       | Folio | Libellé | Indice | Date |
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| 21    | Fiche de calcul 3 circuits TGBT TGBT-FM10..TGBT-GEN-ECL | B      | 22/09/2022 |       |         |        |      |
| 22    | Fiche de calcul 3 circuits TGBT TGBT-TBS..TGBT-EC02     | A      | 03/08/2022 |       |         |        |      |
| 23    | Fiche de calcul 3 circuits TGBT TGBT-EC03..TGBT-PC01    | A      | 03/08/2022 |       |         |        |      |
| 24    | Fiche de calcul 3 circuits TGBT TGBT-FM11               | A      | 03/08/2022 |       |         |        |      |
|       |   |        |            |       |         |        |      |



CCTVI - H2 STATION SORIGNY

Liste de folios

B

MISE A JOUR

A

CREATION

Ind.

MODIFICATIONS

Date: 22/09/2022

Norme: C1510020

Avis Technique ELIE



AFFAIRE: P.0515342

PLAN: 040- NC

Folio

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# Grappe réseau SOURCE

| Amont | Arbre | Désignation |
|-------|-------|-------------|
|-------|-------|-------------|



CCTVI - H2 STATION SORIGNY

Grappe réseau SOURCE

|        |               |
|--------|---------------|
| B      | MISE A JOUR   |
| A      | CREATION      |
| Ind.   | MODIFICATIONS |
| Date:  | 22/09/2022    |
| Norme: | C1510020      |

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**AFFAIRE:** P.0515342

**PLAN:** 040- NC

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Révision

A

## RESEAU

|          |       |
|----------|-------|
| Rég.de N | TN    |
| Tension  | 400 V |

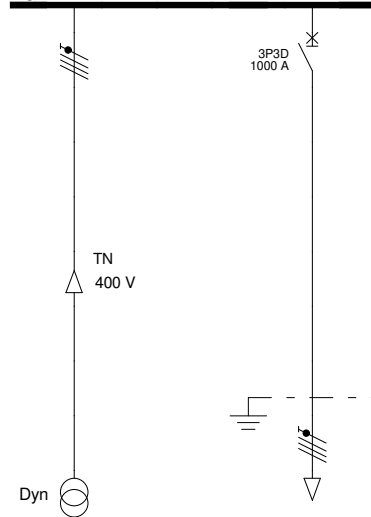
## DISTRIBUTION

|         |        |
|---------|--------|
| Normal  | SOURCE |
| Amont   |        |
| Secours |        |

## Désignation

|             |          |         |
|-------------|----------|---------|
| I installée | Normal   | Secours |
| I Totale    | 909,33 A |         |
| Ik3 max     | 20972 A  |         |
| Ik1 max     | 20414 A  |         |
| ΔU max      | 0,22 %   |         |

## AGBT



| CIRCUIT     | Repère Circuit    |         | SOURCE          |         | AGBT-TGBT                |         |                |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
|-------------|-------------------|---------|-----------------|---------|--------------------------|---------|----------------|----------|-------------------------------------|---------|--------------------------|--|--------------------------|--|--------------------------|--|--------------------------|--|
|             | Repère Câble      |         | AGBT            |         | TGBT                     |         |                |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
| LIAISON     | Repère Récepteur  |         |                 |         | ARMOIRE TGBT             |         |                |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
|             | Désignation       |         |                 |         |                          |         |                |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
| PROT.       | Nb                |         | Consommation    |         | 1                        |         | 630KVA         |          | 1                                   |         | 630kVA                   |  |                          |  |                          |  |                          |  |
|             | Alimentation      |         | Normal          |         | Normal                   |         |                |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
| CIRCUIT     | JdB Amont         |         |                 |         |                          |         |                |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
|             | Type              |         | U1000R2V (90°C) |         | U1000AR2V TWISTAL (90°C) |         |                |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
|             | Pose              |         | Ame             |         | 13                       |         | Cu             |          | 61                                  |         | Al                       |  |                          |  |                          |  |                          |  |
|             | Longueur          |         | L.Max prot.     |         | 10 m                     |         |                |          | 60 m                                |         | 105 m (CC)               |  |                          |  |                          |  |                          |  |
|             | ΔU Totale         |         |                 |         | 0,22 %                   |         |                |          | 1,10 %                              |         |                          |  |                          |  |                          |  |                          |  |
|             | Câble             |         |                 |         | 2X3X(1x300)              |         |                |          | 4 Câbles 4x300                      |         |                          |  |                          |  |                          |  |                          |  |
|             | Neutre            |         | Séparé          |         | 2X(1x300)                |         |                |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
|             | PE/PEN            |         |                 |         | TH <= 15%                |         |                |          | TH <= 15%                           |         |                          |  |                          |  |                          |  |                          |  |
|             | Taux d'Harmonique |         |                 |         | 909,33 A                 |         | 13729 A        |          | 909,33 A                            |         | 915,61 A                 |  |                          |  |                          |  |                          |  |
|             | IB                |         | Iz              |         | 20972 A                  |         | 15758 A        |          | 18482 A                             |         | 12115 A                  |  |                          |  |                          |  |                          |  |
| Ik3 Max     |                   | Ik2 Min |                 | 15758 A |                          | 15758 A |                | 12339 A  |                                     | 12115 A |                          |  |                          |  |                          |  |                          |  |
| Ik1 Min     |                   | If      |                 |         |                          |         |                |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
| Sélectivité |                   |         |                 |         |                          |         |                | Non calc |                                     |         |                          |  |                          |  |                          |  |                          |  |
| PROT.       | Protection        |         |                 |         | NS1000N                  |         |                |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
|             | Icu Disj. Vérifié |         |                 |         | <input type="checkbox"/> |         | Micrologic 2.0 |          | <input checked="" type="checkbox"/> |         | <input type="checkbox"/> |  | <input type="checkbox"/> |  | <input type="checkbox"/> |  | <input type="checkbox"/> |  |
|             | Calibre           |         | Ir              |         | 1000 A                   |         | 950 A          |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
|             | Tempo             |         | Im / Isd        |         | 20 ms                    |         | 9500 A         |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
|             | Cont. Ind.        |         | Im/Isd max.     |         | Prot Base                |         | Equipot        |          |                                     |         |                          |  |                          |  |                          |  |                          |  |
|             | IΔn               |         | Δt              |         |                          |         |                |          |                                     |         |                          |  |                          |  |                          |  |                          |  |

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Unif. Exploitant 8 circuits AGBT

B MISE A JOUR

A CREATION

Ind.

MODIFICATIONS

Date: 22/09/2022

Norme: C1510020

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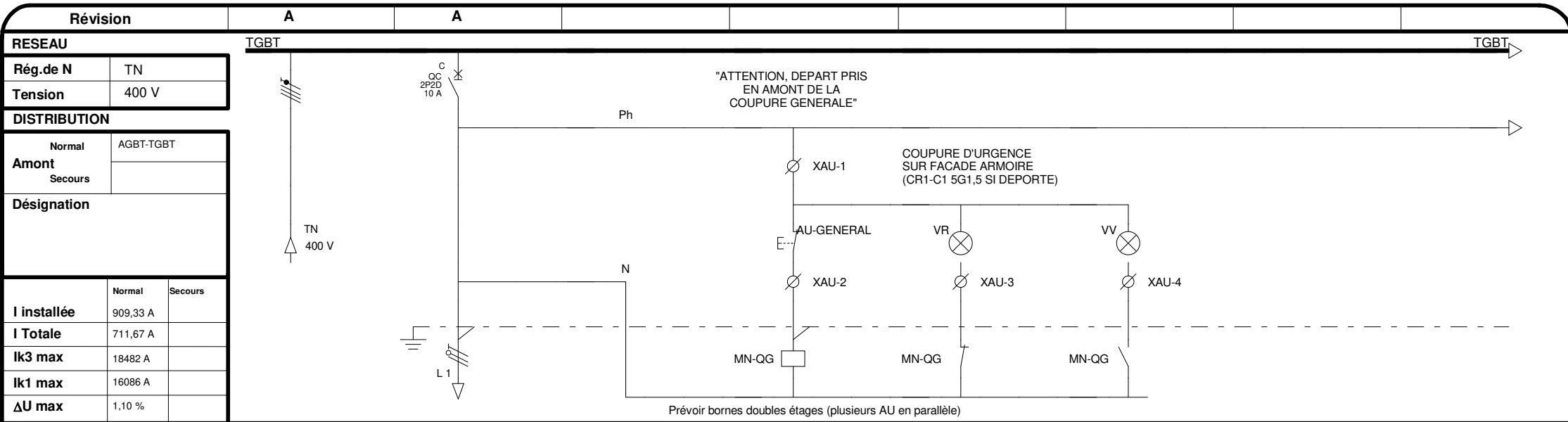
AFFAIRE: P.0515342

PLAN: 040- NC

Folio

4/24





|                |                   |                          |                          |                                     |                          |                               |                                   |                          |                          |     |
|----------------|-------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------|-----------------------------------|--------------------------|--------------------------|-----|
| <b>CIRCUIT</b> | Repère Circuit    | AGBT-TGBT                | TGBT-CMD                 | TGBT-CMD-001                        | TGBT-CMD-002             | TGBT-CMD-003                  | TGBT-CMD-004                      |                          |                          |     |
|                | Repère Câble      | AGBT-TGBT                | TGBT-CMD                 |                                     |                          |                               |                                   |                          |                          |     |
|                | Repère Récepteur  | TGBT                     | TGBT-CMD                 |                                     |                          |                               |                                   |                          |                          |     |
|                | Désignation       |                          | CIRCUITS DE COMMANDES    |                                     | ARRET D'URGENCE GENERAL  | POSITION COUPEURE GENERALE DG | PRESENCE TENSION EN AMONT DU TGBT |                          |                          |     |
|                | Nb                | Consommation             | 1                        | 630kVA                              | 1                        | 10A                           | 0                                 | 0                        | 0                        | 0   |
| Alimentation   |                   | Normal                   |                          | Normal                              |                          |                               |                                   |                          |                          |     |
| <b>LIAISON</b> | JdB Amont         |                          |                          |                                     |                          |                               |                                   |                          |                          |     |
|                | Type              | U1000AR2V TWISTAL (90°C) |                          | U1000R2V (90°C)                     |                          |                               |                                   |                          |                          |     |
|                | Pose              | Ame                      | 61                       | Al                                  | 13                       | Cu                            |                                   |                          |                          |     |
|                | Longueur          | L.Max prot.              | 60 m                     | 105 m (CC)                          | 1 m                      | 35 m (DU)                     | 0 m                               | 0 m                      | 0 m                      | 0 m |
|                | ΔU Totale         |                          | 1,10 %                   |                                     | 1,20 %                   |                               |                                   |                          |                          |     |
|                | Câble             |                          | 4 Câbles 4x300           |                                     | 3G1,5                    |                               | 5G1.5                             |                          |                          |     |
|                | Neutre            | Séparé                   |                          |                                     |                          |                               |                                   |                          |                          |     |
|                | PE/PEN            |                          |                          |                                     |                          |                               |                                   |                          |                          |     |
|                | Taux d'Harmonique |                          | TH <= 15%                |                                     |                          |                               |                                   |                          |                          |     |
|                | IB                | Iz                       | 909,33 A                 | 915,61 A                            | 10,00 A                  | 19,00 A                       |                                   |                          |                          |     |
| Ik3 Max        | Ik2 Min           | 18482 A                  | 12115 A                  |                                     |                          |                               |                                   |                          |                          |     |
| Ik1 Min        | If                | 12339 A                  |                          | 4909 A                              | 4909 A                   |                               |                                   |                          |                          |     |
| Sélectivité    |                   |                          |                          | Totale                              |                          |                               |                                   |                          |                          |     |
| <b>PROT.</b>   | Protection        |                          |                          | iC60L                               |                          |                               |                                   |                          |                          |     |
|                | Icu Disj. Vérifié |                          | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      | <input type="checkbox"/>          | <input type="checkbox"/> | <input type="checkbox"/> |     |
|                | Calibre           | Ir                       |                          | 10 A                                |                          |                               |                                   |                          |                          |     |
|                | Tempo             | Im / Isd                 |                          |                                     | 96 A                     |                               |                                   |                          |                          |     |
|                | Cont. Ind.        | Im/Isd max.              |                          |                                     |                          |                               |                                   |                          |                          |     |
| IΔn            | Δt                | Prot Base                |                          | Prot Base                           |                          |                               |                                   |                          |                          |     |

|  |                                  |       |               |                     |           |  |  |  |  |       |
|--|----------------------------------|-------|---------------|---------------------|-----------|--|--|--|--|-------|
|  | CCTVI - H2 STATION SORIGNY       |       |               |                     |           |  |  |  |  |       |
|  | Unif. Exploitant 8 circuits TGBT | B     | MISE A JOUR   | Avis Technique ELIE |           |  |  |  |  | LI BT |
|  |                                  | A     | CREATION      | AFFAIRE:            | P.0515342 |  |  |  |  | Folio |
|  |                                  | Ind.  | MODIFICATIONS | PLAN:               | 040- NC   |  |  |  |  | 5     |
|  |                                  | Date: | 22/09/2022    | Norme:              | C1510020  |  |  |  |  | 24    |

Révision

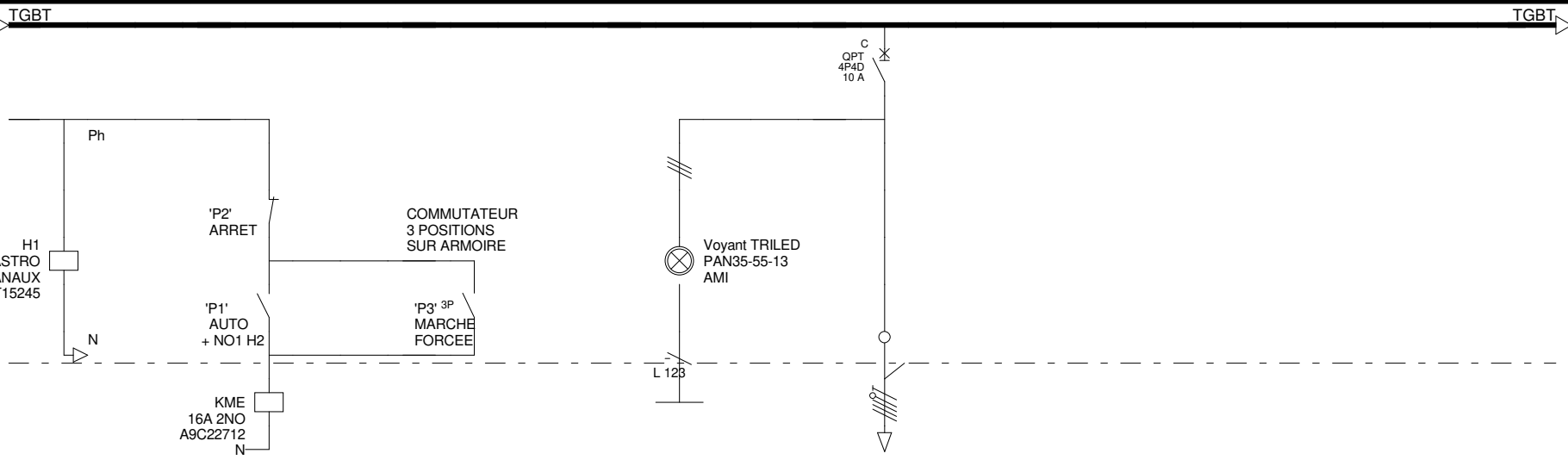
A

TGBT

|               |       |
|---------------|-------|
| <b>RESEAU</b> |       |
| Rég.de N      | TN    |
| Tension       | 400 V |

|                     |           |
|---------------------|-----------|
| <b>DISTRIBUTION</b> |           |
| Normal              | AGBT-TGBT |
| Amont               |           |
| Secours             |           |
| Désignation         |           |

|                    |                 |          |
|--------------------|-----------------|----------|
| <b>I installée</b> | Normal          | Secours  |
|                    | 909,33 A        |          |
|                    | <b>I Totale</b> | 711,67 A |
|                    | <b>Ik3 max</b>  | 18482 A  |
|                    | <b>Ik1 max</b>  | 16086 A  |
| <b>ΔU max</b>      | 1,10 %          |          |



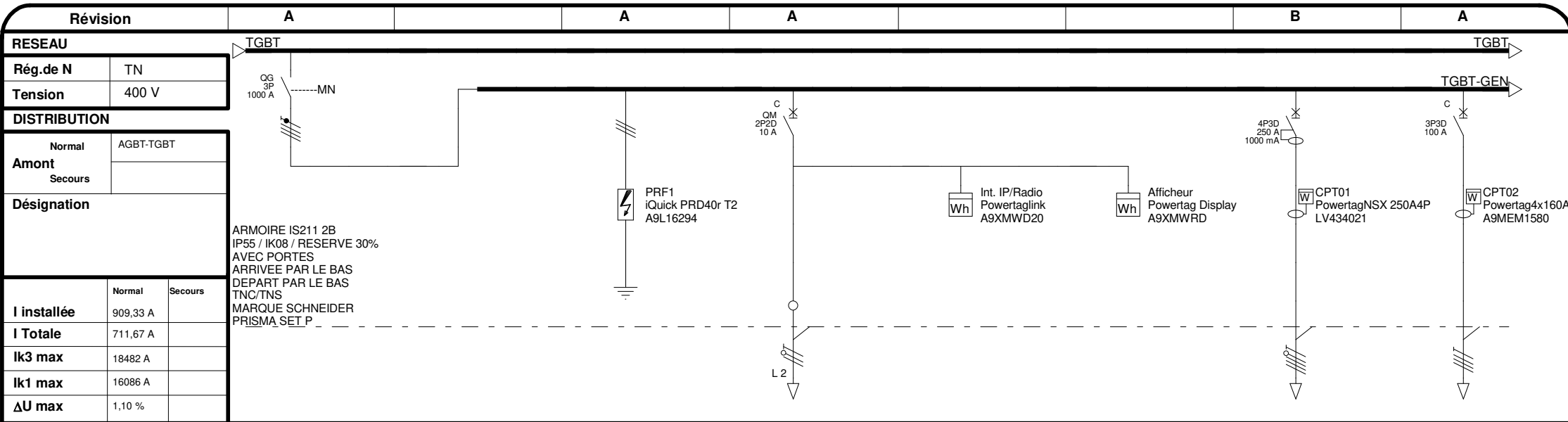
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|----------------|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| <b>CIRCUIT</b> | Repère Circuit    | TGBT-CMD-005             | TGBT-CMD-006             | TGBT-CMD-007             | TGBT-PT-001              | TGBT-PT                             |                          |                          |                          |
|                | Repère Câble      |                          |                          |                          |                          | TGBT-PT                             |                          |                          |                          |
|                | Repère Récepteur  |                          |                          |                          |                          | TGBT-PT                             |                          |                          |                          |
|                | Désignation       | INTERRUPTEUR HORAIRE ECL | CMD ECL EXT BATIMENT     |                          | VOYANT PRESENCE TENSIONS | PRESENCE TENSION                    |                          |                          |                          |
|                | Nb                | Consommation             | 0                        | 0                        | 0                        | 0                                   | 1                        | 1A                       |                          |
| <b>LIAISON</b> | Alimentation      |                          |                          |                          |                          |                                     | Normal                   |                          |                          |
|                | JdB Amont         |                          |                          |                          |                          |                                     |                          |                          |                          |
|                | Type              |                          |                          |                          |                          |                                     | U1000R2V (90°C)          |                          |                          |
|                | Pose              | Ame                      |                          |                          |                          |                                     | 13                       | Cu                       |                          |
|                | Longueur          | L.Max prot.              | 0 m                      | 0 m                      | 0 m                      | 0 m                                 | 1 m                      | 68 m (CI)                |                          |
|                | ΔU Totale         |                          |                          |                          |                          |                                     | 1,10 %                   |                          |                          |
|                | Câble             |                          |                          |                          |                          |                                     | 5G1,5                    |                          |                          |
|                | Neutre            | Séparé                   |                          |                          |                          |                                     |                          |                          |                          |
|                | PE/PEN            |                          |                          |                          |                          |                                     |                          |                          |                          |
|                | Taux d'Harmonique |                          |                          |                          |                          |                                     | TH <= 15%                |                          |                          |
| IB             | Iz                |                          |                          |                          |                          | 1,00 A                              | 16,50 A                  |                          |                          |
| Ik3 Max        | Ik2 Min           |                          |                          |                          |                          | 11703 A                             | 7033 A                   |                          |                          |
| Ik1 Min        | If                |                          |                          |                          |                          | 4909 A                              | 4909 A                   |                          |                          |
| Sélectivité    |                   |                          |                          |                          |                          | Totale                              |                          |                          |                          |
| <b>PROT.</b>   | Protection        |                          |                          |                          |                          | iC60L                               |                          |                          |                          |
|                | Icu Disj. Vérifié |                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|                | Calibre           | Ir                       |                          |                          |                          | 10 A                                |                          |                          |                          |
|                | Tempo             | Im / Isd                 |                          |                          |                          |                                     | 96 A                     |                          |                          |
|                | Cont. Ind.        | Im/Isd max.              |                          |                          |                          |                                     |                          |                          |                          |
| IΔn            | Δt                |                          |                          |                          |                          | Prot Base                           |                          |                          |                          |

CCTVI - H2 STATION SORIGNY  
Unif. Exploitant 8 circuits TGBT

|        |               |
|--------|---------------|
| B      | MISE A JOUR   |
| A      | CREATION      |
| Ind.   | MODIFICATIONS |
| Date:  | 22/09/2022    |
| Norme: | C1510020      |

|                            |           |       |
|----------------------------|-----------|-------|
| <b>Avis Technique ELIE</b> |           |       |
| <b>AFFAIRE:</b>            | P.0515342 | Folio |
| <b>PLAN:</b>               | 040- NC   | 6/24  |





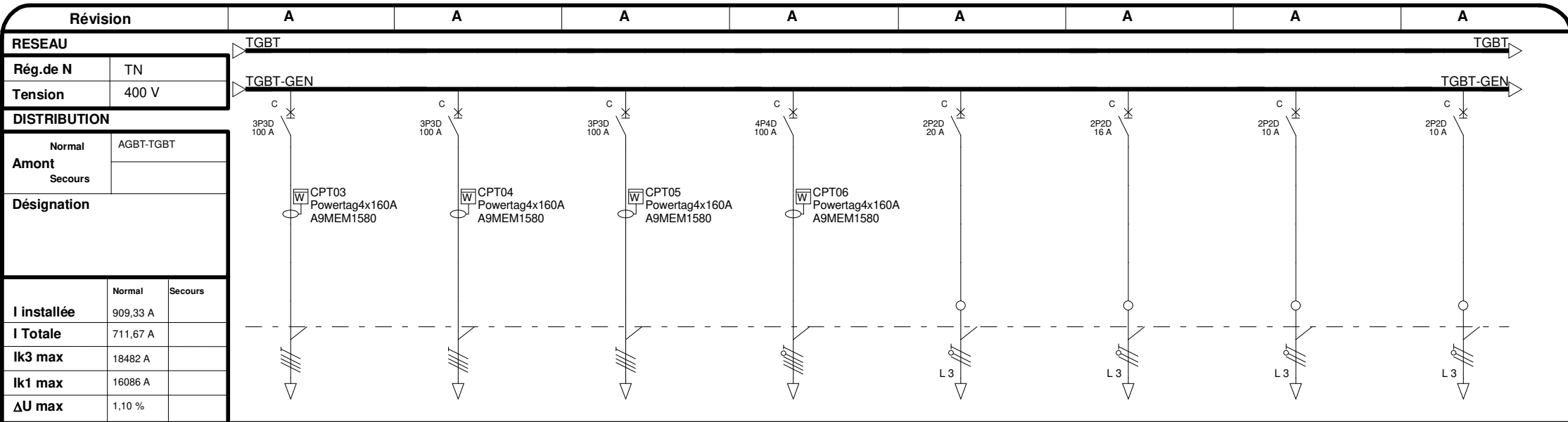
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|-----------------|-------------------|---------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>CIRCUIT</b>  | Repère Circuit    | TGBT-GEN                              | TGBT-GEN                            | TGBT-PRF                 | TGBT-CPT                 | TGBT-CTP-001                        | TGBT-CTP-002                 | TGBT-SM                  | TGBT-FM01                |                          |                                     |                                     |                                     |                                     |                                     |
|                 | Repère Câble      |                                       |                                     |                          | TGBT-CPT                 |                                     |                              | TGBT-SM                  | TGBT-FM01                |                          |                                     |                                     |                                     |                                     |                                     |
|                 | Repère Récepteur  | TGBT-GEN                              |                                     | TGBT-PRF                 | TGBT-CPT                 |                                     |                              | SM                       | TGBT-FM01                |                          |                                     |                                     |                                     |                                     |                                     |
|                 | Désignation       | INTERRUPTEUR GENERAL ARMOIRE          |                                     | PARAFoudre               | MESURES & COMPTAGES      | INTERFACE IP/RADIO POWERTAG         | AFFICHEUR COMPTEURS POWERTAG | STATION MODULE           | COMPRESSEUR INNOV. BATT1 |                          |                                     |                                     |                                     |                                     |                                     |
|                 | Nb                | Consommation                          | 1                                   | 900A                     | 0                        | 1                                   | 1A                           | 0                        | 0                        | 1                        | 122kW                               | 1                                   | 50kW                                |                                     |                                     |
| Alimentation    |                   | Normal                                |                                     | Normal                   |                          | Normal                              |                              | Normal                   |                          | Normal                   |                                     | Normal                              |                                     |                                     |                                     |
| <b>LIAISON</b>  | JdB Amont         |                                       |                                     | TGBT-GEN                 |                          | TGBT-GEN                            |                              | TGBT-GEN                 |                          | TGBT-GEN                 |                                     | TGBT-GEN                            |                                     |                                     |                                     |
|                 | Type              |                                       |                                     |                          |                          | U1000R2V (90°C)                     |                              |                          |                          | U1000AR2V TWISTAL (90°C) |                                     | U1000AR2V TWISTAL (90°C)            |                                     |                                     |                                     |
|                 | Pose              | Ame                                   | 13                                  |                          | 13                       | Cu                                  |                              |                          | 61                       | Al                       | 61                                  | Al                                  |                                     |                                     |                                     |
|                 | Longueur          | L.Max prot.                           |                                     | 0 m                      | 0 m                      | 3 m (CC)                            | 1 m                          | 68 m (CI)                | 0 m                      | 0 m                      | 25 m                                | 173 m (CC)                          | 45 m                                | 189 m (CI)                          |                                     |
|                 | ΔU Totale         |                                       | 1,10 %                              |                          | 1,10 %                   |                                     | 1,11 %                       |                          |                          |                          | 1,45 %                              |                                     | 1,94 %                              |                                     |                                     |
|                 | Câble             |                                       |                                     |                          |                          |                                     | 3G1,5                        |                          |                          |                          | 4x300                               |                                     | 4x70                                |                                     |                                     |
|                 | Neutre            | Séparé                                |                                     |                          |                          |                                     |                              |                          |                          |                          |                                     |                                     |                                     |                                     |                                     |
|                 | PE/PEN            |                                       |                                     |                          |                          |                                     |                              |                          |                          |                          | 1x95                                |                                     |                                     |                                     |                                     |
|                 | Taux d'Harmonique |                                       | TH <= 15%                           |                          |                          |                                     |                              |                          |                          |                          | TH <= 15%                           |                                     |                                     |                                     |                                     |
|                 | IB                | Iz                                    | 900,00 A                            |                          | 1,00 A                   |                                     | 1,00 A                       | 19,00 A                  |                          |                          | 220,11 A                            | 260,42 A                            | 90,21 A                             | 112,14 A                            |                                     |
| Ik3 Max         | Ik2 Min           | 18482 A                               | 12115 A                             | 18482 A                  | 12115 A                  |                                     |                              |                          |                          | 15312 A                  | 9759 A                              | 8729 A                              | 5201 A                              |                                     |                                     |
| Ik1 Min         | If                | 12339 A                               | 12339 A                             |                          |                          | 4909 A                              | 4909 A                       |                          |                          | 8447 A                   |                                     |                                     | 3432 A                              |                                     |                                     |
| Sélectivité     |                   | Non calc                              |                                     |                          |                          | Totale                              |                              |                          |                          | Totale                   |                                     | Totale                              |                                     |                                     |                                     |
| <b>PROT.</b>    | Protection        | NS1000NA                              |                                     |                          |                          | IC60N                               |                              |                          |                          | NSX250B                  |                                     | Vigi MH                             |                                     | NG125N                              |                                     |
|                 | Icu Disj. Vérifié |                                       | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|                 | Calibre           | Ir                                    | 1000 A                              |                          |                          |                                     | 10 A                         |                          |                          |                          | 250 A                               | 250 A                               | 100 A                               |                                     | 960 A                               |
|                 | Tempo             | I <sub>m</sub> / I <sub>sd</sub>      |                                     |                          |                          |                                     |                              | 96 A                     |                          |                          |                                     | 2500 A                              |                                     |                                     |                                     |
|                 |                   | I <sub>m</sub> / I <sub>sd</sub> max. |                                     |                          |                          |                                     |                              |                          |                          |                          |                                     | 7679 A                              |                                     |                                     |                                     |
|                 | Cont. Ind.        |                                       | Prot Base                           |                          | Equipot                  |                                     | Prot Base                    |                          |                          |                          | Autres Différentiels                |                                     | Prot Base                           |                                     |                                     |
| I <sub>Δn</sub> | Δt                |                                       |                                     |                          |                          |                                     |                              |                          |                          | 1000 mA                  | 60 ms                               |                                     |                                     |                                     |                                     |



CCTVI - H2 STATION SORIGNY  
Unif. Exploitant 8 circuits TGBT

|        |               |
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| B      | MISE A JOUR   |
| A      | CREATION      |
| Ind.   | MODIFICATIONS |
| Date:  | 22/09/2022    |
| Norme: | C1510020      |

|                            |           |            |
|----------------------------|-----------|------------|
| <b>Avis Technique ELIE</b> |           |            |
| <b>AFFAIRE:</b>            | P.0515342 | Folio 7/24 |
| <b>PLAN:</b>               | 040- NC   |            |



|                |                   |                                     |                          |                                     |                        |                                     |                         |                                     |            |                                     |           |                                     |           |                                     |           |                                     |           |
|----------------|-------------------|-------------------------------------|--------------------------|-------------------------------------|------------------------|-------------------------------------|-------------------------|-------------------------------------|------------|-------------------------------------|-----------|-------------------------------------|-----------|-------------------------------------|-----------|-------------------------------------|-----------|
| <b>CIRCUIT</b> | Repère Circuit    | TGBT-FM02                           | TGBT-FM03                | TGBT-FM04                           | TGBT-FM05              | TGBT-FM06                           | TGBT-FM07               | TGBT-FM08                           | TGBT-FM09  |                                     |           |                                     |           |                                     |           |                                     |           |
|                | Repère Câble      | TGBT-FM02                           | TGBT-FM03                | TGBT-FM04                           | TGBT-FM05              | TGBT-FM06                           | TGBT-FM07               | TGBT-FM08                           | TGBT-FM09  |                                     |           |                                     |           |                                     |           |                                     |           |
|                | Repère Récepteur  | TGBT-FM02                           | TGBT-FM03                | TGBT-FM04                           | TGBT-FM05              | TGBT-FM06                           | TGBT-FM07               | TGBT-FM08                           | TGBT-FM09  |                                     |           |                                     |           |                                     |           |                                     |           |
|                | Désignation       | COMPRESSEUR INNOV. BATT2            | COMPRESSEUR INNOV. BATT3 | COMPRESSEUR INNOV. BATT4            | COMPRESSEUR INNOV. AUX | GASPLATE                            | BORNE DE PAIEMENT (POS) | PORTAIL 1                           | PORTAIL 2  |                                     |           |                                     |           |                                     |           |                                     |           |
|                | Nb                | 1                                   | 1                        | 1                                   | 1                      | 1                                   | 1                       | 1                                   | 1          |                                     |           |                                     |           |                                     |           |                                     |           |
| Consommation   | 50kW              | 50kW                                | 50kW                     | 50kW                                | 3680W                  | 1500W                               | 130W                    | 130W                                |            |                                     |           |                                     |           |                                     |           |                                     |           |
| Alimentation   | Normal            | Normal                              | Normal                   | Normal                              | Normal                 | Normal                              | Normal                  | Normal                              |            |                                     |           |                                     |           |                                     |           |                                     |           |
| <b>LIAISON</b> | JdB Amont         | TGBT-GEN                            |                          | TGBT-GEN                            |                        | TGBT-GEN                            |                         | TGBT-GEN                            |            | TGBT-GEN                            |           | TGBT-GEN                            |           | TGBT-GEN                            |           |                                     |           |
|                | Type              | U1000AR2V TWISTAL (90°C)            |                          | U1000AR2V TWISTAL (90°C)            |                        | U1000AR2V TWISTAL (90°C)            |                         | U1000AR2V TWISTAL (90°C)            |            | U1000R2V (90°C)                     |           | U1000R2V (90°C)                     |           | U1000R2V (90°C)                     |           |                                     |           |
|                | Pose              | 61                                  | Al                       | 61                                  | Al                     | 61                                  | Al                      | 61                                  | Al         | 61                                  | Cu        | 61                                  | Cu        | 61                                  | Cu        |                                     |           |
|                | Longueur          | 45 m                                | 189 m (CI)               | 45 m                                | 189 m (CI)             | 45 m                                | 189 m (CI)              | 45 m                                | 100 m (CI) | 30 m                                | 52 m (DU) | 40 m                                | 71 m (CI) | 15 m                                | 68 m (CI) | 45 m                                | 68 m (CI) |
|                | ΔU Totale         | 1,94 %                              |                          | 1,94 %                              |                        | 1,94 %                              |                         | 1,94 %                              |            | 5,06 %                              |           | 3,25 %                              |           | 1,21 %                              |           | 1,44 %                              |           |
|                | Câble             | 4x70                                |                          | 4x70                                |                        | 4x70                                |                         | 4x70                                |            | 3G2,5                               |           | 3G2,5                               |           | 3G1,5                               |           | 3G1,5                               |           |
|                | Neutre            | Séparé                              |                          |                                     |                        |                                     |                         |                                     |            |                                     |           |                                     |           |                                     |           |                                     |           |
|                | PE/PEN            |                                     |                          |                                     |                        |                                     |                         | 1x25                                |            |                                     |           |                                     |           |                                     |           |                                     |           |
|                | Taux d'Harmonique |                                     |                          |                                     |                        |                                     |                         | TH <= 15%                           |            |                                     |           |                                     |           |                                     |           |                                     |           |
|                | IB                | 90,21 A                             | 112,14 A                 | 90,21 A                             | 112,14 A               | 90,21 A                             | 112,14 A                | 90,21 A                             | 112,14 A   | 19,92 A                             | 27,88 A   | 8,12 A                              | 27,88 A   | 0,70 A                              | 21,07 A   | 0,70 A                              | 21,37 A   |
| Ik3 Max        | 8729 A            | 5201 A                              | 8729 A                   | 5201 A                              | 8729 A                 | 5201 A                              | 8729 A                  | 5201 A                              |            |                                     |           |                                     |           |                                     |           |                                     |           |
| Ik2 Min        |                   |                                     |                          |                                     |                        |                                     |                         |                                     |            |                                     |           |                                     |           |                                     |           |                                     |           |
| Ik1 Min        |                   | 3432 A                              |                          | 3432 A                              |                        | 3432 A                              |                         | 3432 A                              | 2030 A     | 360 A                               | 271 A     | 271 A                               | 431 A     | 431 A                               | 145 A     | 145 A                               |           |
| Sélectivité    | Totale            |                                     | Totale                   |                                     | Totale                 |                                     | Totale                  |                                     | Totale     |                                     | Totale    |                                     | Totale    |                                     | Totale    |                                     |           |
| <b>PROT.</b>   | Protection        | NG125N                              |                          | NG125N                              |                        | NG125N                              |                         | NG125N                              |            | iC60N                               |           | iC60N                               |           | iC60N                               |           | iC60N                               |           |
|                | Icu Disj. Vérifié | <input checked="" type="checkbox"/> |                          | <input checked="" type="checkbox"/> |                        | <input checked="" type="checkbox"/> |                         | <input checked="" type="checkbox"/> |            | <input checked="" type="checkbox"/> |           | <input checked="" type="checkbox"/> |           | <input checked="" type="checkbox"/> |           | <input checked="" type="checkbox"/> |           |
|                | Calibre           | 100 A                               |                          | 100 A                               |                        | 100 A                               |                         | 100 A                               |            | 20 A                                |           | 16 A                                |           | 10 A                                |           | 10 A                                |           |
|                | Im / Isd          |                                     | 960 A                    |                                     | 960 A                  |                                     | 960 A                   |                                     | 960 A      |                                     | 192 A     |                                     | 153,6 A   |                                     | 96 A      |                                     | 96 A      |
|                | Tempo             |                                     |                          |                                     |                        |                                     |                         |                                     |            |                                     |           |                                     |           |                                     |           |                                     |           |
|                | Cont. Ind.        | Prot Base                           |                          | Prot Base                           |                        | Prot Base                           |                         | Prot Base                           |            | Prot Base                           |           | Prot Base                           |           | Prot Base                           |           | Prot Base                           |           |
| IΔn            |                   |                                     |                          |                                     |                        |                                     |                         |                                     |            |                                     |           |                                     |           |                                     |           |                                     |           |
| Δt             |                   |                                     |                          |                                     |                        |                                     |                         |                                     |            |                                     |           |                                     |           |                                     |           |                                     |           |



CCTVI - H2 STATION SORIGNY  
Unif. Exploitant 8 circuits TGBT

|       |            |                 |
|-------|------------|-----------------|
|       | B          | MISE A JOUR     |
|       | A          | CREATION        |
|       | Ind.       | MODIFICATIONS   |
| Date: | 22/09/2022 | Norme: C1510020 |

|                            |           |        |
|----------------------------|-----------|--------|
| <b>Avis Technique ELIE</b> |           |        |
| <b>AFFAIRE:</b>            | P.0515342 |        |
| <b>PLAN:</b>               | 040- NC   |        |
|                            | Folio     | 8 / 24 |



Révision

B

A

TGBT

TGBT-GEN

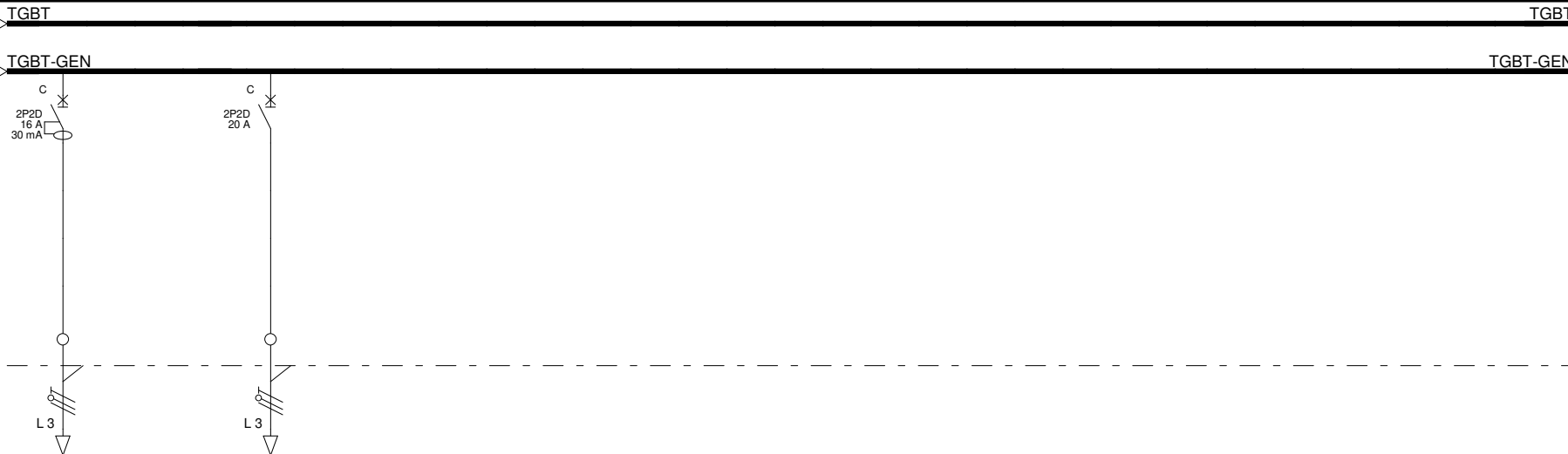
RESEAU

|          |       |
|----------|-------|
| Rég.de N | TN    |
| Tension  | 400 V |

DISTRIBUTION

|             |           |  |
|-------------|-----------|--|
| Normal      | AGBT-TGBT |  |
| Amont       |           |  |
| Secours     |           |  |
| Désignation |           |  |

|             |          |         |
|-------------|----------|---------|
| I installée | Normal   | Secours |
| I Totale    | 909,33 A |         |
| Ik3 max     | 711,67 A |         |
| Ik1 max     | 18482 A  |         |
| ΔU max      | 16086 A  |         |
|             | 1,10 %   |         |



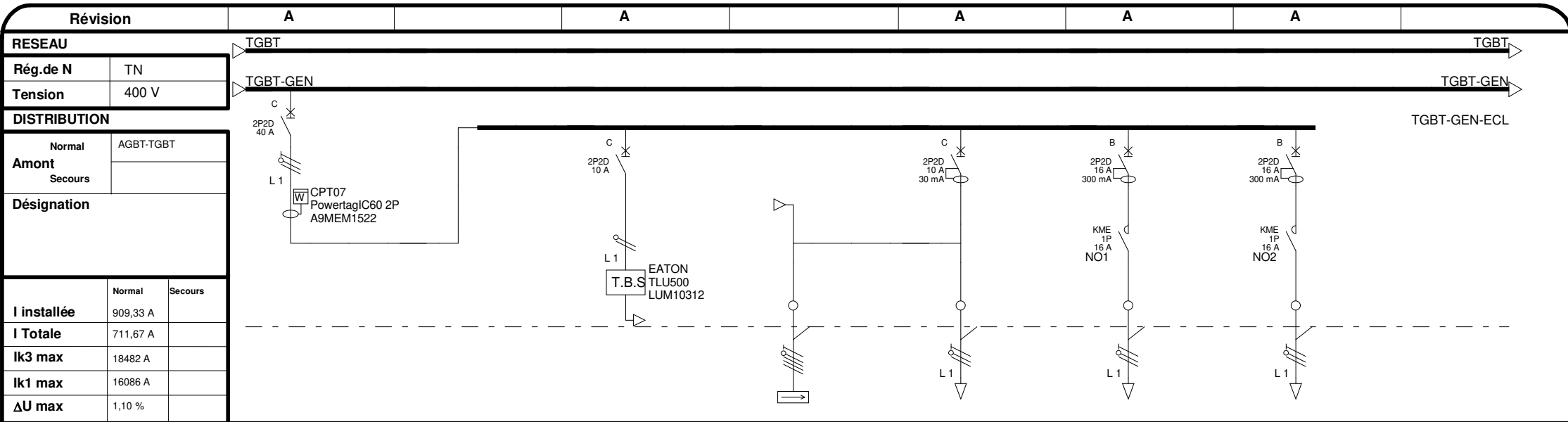
| CIRCUIT     | Repère Circuit    |              | TGBT-FM10       |           | TGBT-FM12                           |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|-------------|-------------------|--------------|-----------------|-----------|-------------------------------------|-----------|-------------------------------------|--|--------------------------|--|--------------------------|--|--------------------------|--|--------------------------|--|--------------------------|--|
|             |                   | Repère Câble |                 | TGBT-FM10 |                                     | TGBT-FM12 |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Repère Récepteur  |              | TGBT-FM10       |           | TGBT-FM12                           |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Désignation       |              | (DISPONIBLE)    |           | FILING CENTER                       |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Nb                | Consommation | 1               | 1W        | 1                                   | 3680W     |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Alimentation      |              | Normal          |           | Normal                              |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
| LIAISON     | JdB Amont         |              | TGBT-GEN        |           | TGBT-GEN                            |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Type              |              | U1000R2V (90°C) |           | U1000R2V (90°C)                     |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Pose              | Ame          | 61              | Cu        | 13                                  | Cu        |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Longueur          | L.Max prot.  | 1 m             | 71 m (CC) | 25 m                                | 52 m (DU) |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | ΔU Totale         |              | 1,10 %          |           | 4,40 %                              |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Câble             |              | 3G2,5           |           | 3G2,5                               |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Neutre            |              | Séparé          |           |                                     |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Taux d'Harmonique |              |                 |           |                                     |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | IB                | Iz           | 0,01 A          | 28,27 A   | 19,92 A                             | 26,12 A   |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
| Ik3 Max     | Ik2 Min           |              |                 | 431 A     | 431 A                               |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
| Ik1 Min     | If                | 6739 A       |                 |           |                                     |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
| Sélectivité |                   | Totale       |                 | Totale    |                                     |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
| PROT.       | Protection        |              | iC60N           |           | Type AC                             |           | iC60N                               |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Icu Disj. Vérifié |              |                 |           | <input checked="" type="checkbox"/> |           | <input checked="" type="checkbox"/> |  | <input type="checkbox"/> |  | <input type="checkbox"/> |  | <input type="checkbox"/> |  | <input type="checkbox"/> |  | <input type="checkbox"/> |  |
|             | Calibre           | Ir           | 16 A            |           | 20 A                                |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Im / Isd          |              | 153,6 A         |           | 192 A                               |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Tempo             |              | Im/lsd max.     |           |                                     |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
|             | Cont. Ind.        |              | Dif.30mA        |           | Prot Base                           |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |
| IΔn         | Δt                | 30 mA        | 0 ms            |           |                                     |           |                                     |  |                          |  |                          |  |                          |  |                          |  |                          |  |



CCTVI - H2 STATION SORIGNY  
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| A      | CREATION      |
| Ind.   | MODIFICATIONS |
| Date:  | 22/09/2022    |
| Norme: | C1510020      |

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| Avis Technique ELIE |           |       |    |
| AFFAIRE:            | P.0515342 | Folio | 9  |
| PLAN:               | 040- NC   |       | 24 |



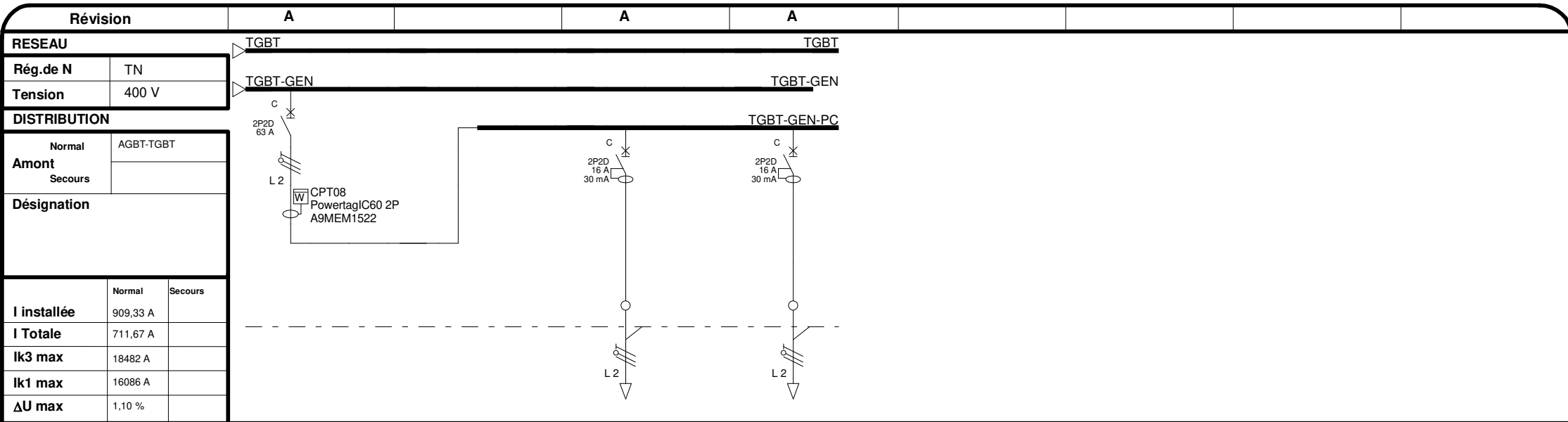
|                |                   |                                     |              |                               |              |                                     |                 |                                     |           |                                     |            |         |            |
|----------------|-------------------|-------------------------------------|--------------|-------------------------------|--------------|-------------------------------------|-----------------|-------------------------------------|-----------|-------------------------------------|------------|---------|------------|
| <b>CIRCUIT</b> | Repère Circuit    | TGBT-GEN-ECL                        | TGBT-GEN-ECL | TGBT-TBS                      | TGBT-ES01    | TGBT-EC01                           | TGBT-EC02       | TGBT-EC03                           |           |                                     |            |         |            |
|                | Repère Câble      |                                     |              | TGBT-TBS                      |              | TGBT-EC01                           | TGBT-EC02       | TGBT-EC03                           |           |                                     |            |         |            |
|                | Repère Récepteur  | TGBT-GEN-ECL                        |              | TGBT-TBS                      |              | TGBT-EC01                           | TGBT-EC02       | TGBT-EC03                           |           |                                     |            |         |            |
|                | Désignation       | GENERAL ECL                         |              | Télécommande bloc de sécurité | BAES         | ECL LOCAL TECHNIQUE                 | ECL EXTERIEUR 1 | ECL EXTERIEUR 2 (LIBRE)             |           |                                     |            |         |            |
|                | Nb                | Consommation                        | 1            | 20A                           | 0            |                                     | 1               | 10A                                 | 7         | 75W                                 | 3          | 75W     |            |
| Alimentation   |                   | Normal                              |              | Normal                        |              | Normal                              |                 | Normal                              |           | Normal                              |            |         |            |
| <b>LIAISON</b> | JdB Amont         | TGBT-GEN                            | TGBT-GEN     | TGBT-GEN-ECL                  | TGBT-GEN-ECL | TGBT-GEN-ECL                        | TGBT-GEN-ECL    | TGBT-GEN-ECL                        |           |                                     |            |         |            |
|                | Type              |                                     |              | U1000R2V (90°C)               |              | U1000R2V (90°C)                     |                 | U1000R2V (90°C)                     |           | U1000R2V (90°C)                     |            |         |            |
|                | Pose              | Ame                                 | 13           |                               | 13           | Cu                                  | 13              | Cu                                  | 13        | Cu                                  | 13         | Cu      |            |
|                | Longueur          | L.Max prot.                         |              | 0 m                           | 1 m          | 62 m (DU)                           | 0 m             | 10 m                                | 38 m (DU) | 100 m                               | 342 m (CC) | 100 m   | 342 m (CC) |
|                | ΔU Totale         | 1,10 %                              |              | 1,20 %                        |              | 2,36 %                              |                 | 1,88 %                              |           | 1,43 %                              |            |         |            |
|                | Câble             |                                     |              | 2x1,5                         |              | 5G1,5                               |                 | 3G1,5                               |           | 3G6                                 |            |         |            |
|                | Neutre            | Séparé                              |              |                               |              |                                     |                 |                                     |           |                                     |            |         |            |
|                | PE/PEN            |                                     |              |                               |              |                                     |                 |                                     |           |                                     |            |         |            |
|                | Taux d'Harmonique |                                     |              |                               |              |                                     |                 |                                     |           |                                     |            |         |            |
|                | IB                | Iz                                  | 20,00 A      |                               | 10,00 A      | 19,00 A                             | 10,00 A         | 19,00 A                             | 2,47 A    | 45,07 A                             | 1,06 A     | 45,07 A |            |
| Ik3 Max        | Ik2 Min           |                                     |              |                               |              |                                     |                 |                                     |           |                                     |            |         |            |
| Ik1 Min        | If                | 12339 A                             | 12339 A      | 4909 A                        |              | 641 A                               |                 | 260 A                               |           | 260 A                               |            |         |            |
| Sélectivité    | Totale            |                                     |              | I<0,32kA                      |              | I<0,32kA                            |                 | I<0,32kA                            |           | I<0,32kA                            |            |         |            |
| <b>PROT.</b>   | Protection        | iC60L                               |              | iC60L                         |              | iC60L Type AC                       |                 | iC60L Type AC                       |           | iC60L Type AC                       |            |         |            |
|                | Icu Disj. Vérifié | <input checked="" type="checkbox"/> |              | <input type="checkbox"/>      |              | <input checked="" type="checkbox"/> |                 | <input checked="" type="checkbox"/> |           | <input checked="" type="checkbox"/> |            |         |            |
|                | Calibre           | Ir                                  | 40 A         |                               | 10 A         |                                     | 10 A            |                                     | 16 A      |                                     | 16 A       |         |            |
|                | Im / Isd          |                                     | 384 A        |                               | 96 A         |                                     | 96 A            |                                     | 76,8 A    |                                     | 76,8 A     |         |            |
|                | Tempo             | Im/Isd max.                         |              |                               |              |                                     |                 |                                     |           |                                     |            |         |            |
|                | Cont. Ind.        | Prot Base                           |              |                               | Equipot      |                                     | Dif.30mA        |                                     | Dif.300mA |                                     | Dif.300mA  |         |            |
| IΔn            | Δt                |                                     |              |                               |              | 30 mA 0 ms                          |                 | 300 mA 0 ms                         |           | 300 mA 0 ms                         |            |         |            |



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| <b>Avis Technique ELIE</b> |           |       |
| <b>AFFAIRE:</b>            | P.0515342 | Folio |
| <b>PLAN:</b>               | 040- NC   | 10    |
|                            |           | 24    |



|                |                   |                                      |             |                          |                          |                                     |          |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|----------------|-------------------|--------------------------------------|-------------|--------------------------|--------------------------|-------------------------------------|----------|-------------------------------------|-----|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| <b>CIRCUIT</b> | Repère Circuit    | TGBT-GEN-PC                          | TGBT-GEN-PC | TGBT-PC01                | TGBT-FM11                |                                     |          |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Repère Câble      |                                      |             | TGBT-PC01                | TGBT-FM11                |                                     |          |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Repère Récepteur  | TGBT-GEN-PC                          |             | TGBT-PC01                | TGBT-FM11                |                                     |          |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Désignation       | GENERAL PC                           |             | PC LOCAL TECHNIQUE       | COFFRET VDI (BANDEAU PC) |                                     |          |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Nb                | Consommation                         | 1           | 20A                      | 0                        |                                     | 1        | 16A                                 | 1   | 16A                      |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
| <b>LIAISON</b> | Alimentation      | Normal                               |             | Normal                   |                          | Normal                              |          | Normal                              |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | JdB Amont         | TGBT-GEN                             |             | TGBT-GEN                 |                          | TGBT-GEN-PC                         |          | TGBT-GEN-PC                         |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Type              |                                      |             |                          |                          | U1000R2V (90°C)                     |          | U1000R2V (90°C)                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Pose              | Ame                                  | 13          |                          |                          | 13                                  | Cu       | 13                                  | Cu  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Longueur          | L.Max prot.                          |             |                          | 0 m                      |                                     | 1 m      | 64 m (DU)                           | 5 m | 64 m (DU)                |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | ΔU Totale         | 1,10 %                               |             |                          |                          | 1,20 %                              |          | 1,62 %                              |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Câble             |                                      |             |                          |                          | 3G2,5                               |          | 3G2,5                               |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Neutre            | Séparé                               |             |                          |                          |                                     |          |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | PE/PEN            |                                      |             |                          |                          |                                     |          |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Taux d'Harmonique |                                      |             |                          |                          |                                     |          |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
| IB             | Iz                | 20,00 A                              |             |                          | 16,00 A                  | 26,12 A                             | 16,00 A  | 26,12 A                             |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
| Ik3 Max        | Ik2 Min           |                                      |             |                          |                          |                                     |          |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
| Ik1 Min        | If                | 12339 A                              | 12339 A     |                          | 6739 A                   |                                     | 1999 A   |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
| Sélectivité    | Totale            |                                      |             |                          |                          | I<0,50kA                            |          | I<0,50kA                            |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
| <b>PROT.</b>   | Protection        | iC60L                                |             | iC60L Type AC            |                          | iC60L Type AC                       |          |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Icu Disj. Vérifié | <input checked="" type="checkbox"/>  |             | <input type="checkbox"/> |                          | <input checked="" type="checkbox"/> |          | <input checked="" type="checkbox"/> |     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
|                | Calibre           | Ir                                   | 63 A        |                          | 16 A                     | 153,6 A                             | 16 A     | 153,6 A                             |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Tempo             | I <sub>m</sub> / I <sub>sd</sub>     |             | 604,8 A                  |                          |                                     |          |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Cont. Ind.        | I <sub>m</sub> /I <sub>sd</sub> max. |             |                          |                          |                                     |          |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                | Δn                | Δt                                   | Prot Base   |                          | Dif.30mA                 |                                     | Dif.30mA |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|                |                   |                                      |             | 30 mA                    | 0 ms                     | 30 mA                               | 0 ms     |                                     |     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |



CCTVI - H2 STATION SORIGNY  
Unif. Exploitant 8 circuits TGBT

|        |               |
|--------|---------------|
| B      | MISE A JOUR   |
| A      | CREATION      |
| Ind.   | MODIFICATIONS |
| Date:  | 22/09/2022    |
| Norme: | C1510020      |

|                            |           |                |
|----------------------------|-----------|----------------|
| <b>Avis Technique ELIE</b> |           |                |
| <b>AFFAIRE:</b>            | P.0515342 | Folio<br>11/24 |
| <b>PLAN:</b>               | 040- NC   |                |

Révision

B

## RESEAU

|          |       |
|----------|-------|
| Rég.de N | TN    |
| Tension  | 400 V |

SM

TN  
400 V

## DISTRIBUTION

|         |         |
|---------|---------|
| Normal  | TGBT-SM |
| Amont   |         |
| Secours |         |

## Désignation

|             | Normal   | Secours |
|-------------|----------|---------|
| I installée | 220,11 A |         |
| I Totale    | 0,00 A   |         |
| Ik3 max     | 15312 A  |         |
| Ik1 max     | 11706 A  |         |
| ΔU max      | 1,45 %   |         |

CIRCUIT

|                  |         |
|------------------|---------|
| Repère Circuit   | TGBT-SM |
| Repère Câble     | TGBT-SM |
| Repère Récepteur | SM      |

Désignation

|              |              |        |       |
|--------------|--------------|--------|-------|
| Nb           | Consommation | 1      | 122kW |
| Alimentation |              | Normal |       |

LIAISON

|                   |                          |          |            |
|-------------------|--------------------------|----------|------------|
| JdB Amont         | TGBT-GEN                 |          |            |
| Type              | U1000AR2V TWISTAL (90°C) |          |            |
| Pose              | Ame                      | 61       | AI         |
| Longueur          | L.Max prot.              | 25 m     | 173 m (CC) |
| ΔU Totale         | 1,45 %                   |          |            |
| Câble             | 4x300                    |          |            |
| Neutre            | Séparé                   | 1x95     |            |
| PE/PEN            | TH <= 15%                |          |            |
| Taux d'Harmonique |                          |          |            |
| IB                | Iz                       | 220,11 A | 260,42 A   |
| Ik3 Max           | Ik2 Min                  | 15312 A  | 9759 A     |
| Ik1 Min           | If                       | 8447 A   |            |
| Sélectivité       |                          |          |            |

PROT.

|            |                   |                          |                          |                          |                          |                          |                          |                          |                          |
|------------|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Protection | Icu Disj. Vérifié | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Calibre    | Ir                |                          |                          |                          |                          |                          |                          |                          |                          |
| Tempo      | Im / Isd          |                          |                          |                          |                          |                          |                          |                          |                          |
| Cont. Ind. | Im/Isd max.       |                          |                          |                          |                          |                          |                          |                          |                          |
| Cont. Ind. | Prot Base         |                          |                          |                          |                          |                          |                          |                          |                          |
| IΔn        | Δt                |                          |                          |                          |                          |                          |                          |                          |                          |

CCTVI - H2 STATION SORIGNY

Unif. Exploitant 8 circuits SM

|        |               |
|--------|---------------|
| B      | MISE A JOUR   |
| A      | CREATION      |
| Ind.   | MODIFICATIONS |
| Date:  | 22/09/2022    |
| Norme: | C1510020      |

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AFFAIRE: P.0515342

PLAN: 040- NC

Folio

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## Carnet de câbles SOURCE

| Amont | Repère | Longueur | Type de câble   | Ame | Nb câbles multi | Câble       | Neutre | PE ou PEN |
|-------|--------|----------|-----------------|-----|-----------------|-------------|--------|-----------|
|       | SOURCE | 10 m     | U1000R2V (90°C) | Cu  |                 | 2X3X(1x300) |        | 2X(1x300) |

## Carnet de câbles AGBT

| Amont | Repère    | Longueur | Type de câble            | Ame | Nb câbles multi | Câble          | Neutre | PE ou PEN |
|-------|-----------|----------|--------------------------|-----|-----------------|----------------|--------|-----------|
| AGBT  | AGBT-TGBT | 60 m     | U1000AR2V TWISTAL (90°C) | Al  | 4               | 4 Câbles 4x300 |        |           |

## Carnet de câbles TGBT

| Amont | Repère       | Longueur | Type de câble            | Ame | Nb câbles multi | Câble | Neutre | PE ou PEN |
|-------|--------------|----------|--------------------------|-----|-----------------|-------|--------|-----------|
| TGBT  | TGBT-CMD     | 1 m      | U1000R2V (90°C)          | Cu  | 1               | 3G1,5 |        |           |
| TGBT  | TGBT-PT      | 1 m      | U1000R2V (90°C)          | Cu  | 1               | 5G1,5 |        |           |
| TGBT  | TGBT-GEN     |          |                          |     |                 |       |        |           |
| TGBT  | TGBT-PRF     | 0 m      |                          |     |                 |       |        |           |
| TGBT  | TGBT-CPT     | 1 m      | U1000R2V (90°C)          | Cu  | 1               | 3G1,5 |        |           |
| TGBT  | TGBT-SM      | 25 m     | U1000AR2V TWISTAL (90°C) | Al  | 1               | 4x300 |        | 1x95      |
| TGBT  | TGBT-FM01    | 45 m     | U1000AR2V TWISTAL (90°C) | Al  | 1               | 4x70  |        |           |
| TGBT  | TGBT-FM02    | 45 m     | U1000AR2V TWISTAL (90°C) | Al  | 1               | 4x70  |        |           |
| TGBT  | TGBT-FM03    | 45 m     | U1000AR2V TWISTAL (90°C) | Al  | 1               | 4x70  |        |           |
| TGBT  | TGBT-FM04    | 45 m     | U1000AR2V TWISTAL (90°C) | Al  | 1               | 4x70  |        |           |
| TGBT  | TGBT-FM05    | 45 m     | U1000AR2V TWISTAL (90°C) | Al  | 1               | 4x70  |        | 1x25      |
| TGBT  | TGBT-FM06    | 30 m     | U1000R2V (90°C)          | Cu  | 1               | 3G2,5 |        |           |
| TGBT  | TGBT-FM07    | 40 m     | U1000R2V (90°C)          | Cu  | 1               | 3G2,5 |        |           |
| TGBT  | TGBT-FM08    | 15 m     | U1000R2V (90°C)          | Cu  | 1               | 3G1,5 |        |           |
| TGBT  | TGBT-FM09    | 45 m     | U1000R2V (90°C)          | Cu  | 1               | 3G1,5 |        |           |
| TGBT  | TGBT-FM10    | 1 m      | U1000R2V (90°C)          | Cu  | 1               | 3G2,5 |        |           |
| TGBT  | TGBT-FM12    | 25 m     | U1000R2V (90°C)          | Cu  | 1               | 3G2,5 |        |           |
| TGBT  | TGBT-GEN-ECL |          |                          |     |                 |       |        |           |
| TGBT  | TGBT-TBS     | 1 m      | U1000R2V (90°C)          | Cu  | 1               | 2x1,5 |        |           |
| TGBT  | TGBT-EC01    | 10 m     | U1000R2V (90°C)          | Cu  | 1               | 3G1,5 |        |           |
| TGBT  | TGBT-EC02    | 100 m    | U1000R2V (90°C)          | Cu  | 1               | 3G6   |        |           |
| TGBT  | TGBT-EC03    | 100 m    | U1000R2V (90°C)          | Cu  | 1               | 3G6   |        |           |
| TGBT  | TGBT-GEN-PC  |          |                          |     |                 |       |        |           |
| TGBT  | TGBT-PC01    | 1 m      | U1000R2V (90°C)          | Cu  | 1               | 3G2,5 |        |           |
| TGBT  | TGBT-FM11    | 5 m      | U1000R2V (90°C)          | Cu  | 1               | 3G2,5 |        |           |
| TGBT  | TGBT-ES01    | 0 m      |                          |     |                 | 5G1,5 |        |           |
| TGBT  | TGBT-CTP-001 | 0 m      |                          |     |                 |       |        |           |
| TGBT  | TGBT-CTP-002 | 0 m      |                          |     |                 |       |        |           |
| TGBT  | TGBT-CMD-001 | 0 m      |                          |     |                 |       |        |           |
| TGBT  | TGBT-CMD-002 | 0 m      |                          |     |                 | 5G1.5 |        |           |
| TGBT  | TGBT-CMD-003 | 0 m      |                          |     |                 |       |        |           |
| TGBT  | TGBT-CMD-004 | 0 m      |                          |     |                 |       |        |           |
| TGBT  | TGBT-CMD-005 | 0 m      |                          |     |                 |       |        |           |



CCTVI - H2 STATION SORIGNY

Carnet de câbles

B MISE A JOUR

A CREATION

Ind. MODIFICATIONS

Date: 22/09/2022

Norme: C1510020

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PLAN: 040- NC

Folio

13

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Carnet de câbles TGBT

| Amont | Repère       | Longueur | Type de câble | Ame | Nb câbles multi | Câble | Neutre | PE ou PEN |
|-------|--------------|----------|---------------|-----|-----------------|-------|--------|-----------|
| TGBT  | TGBT-CMD-006 | 0 m      |               |     |                 |       |        |           |
| TGBT  | TGBT-CMD-007 | 0 m      |               |     |                 |       |        |           |
| TGBT  | TGBT-PT-001  | 0 m      |               |     |                 |       |        |           |



CCTVI - H2 STATION SORIGNY

Carnet de câbles

|        |               |
|--------|---------------|
| B      | MISE A JOUR   |
| A      | CREATION      |
| Ind.   | MODIFICATIONS |
| Date:  | 22/09/2022    |
| Norme: | C1510020      |

Avis Technique ELIE





AFFAIRE: P.0515342

PLAN: 040- NC

Folio

14  
24

| RESEAU   |                | Normal  |  | Secours  |  |
|--|----------------|---|--|--|--|
| Rég.de N   | TN             | I Totale  | 909,33 A   |  |  |
| Tension  | 400 V          | I installée   | 909,33 A   |  |  |
| DISTRIBUTION   |                | I Dispo   | 417,77 A   |  |  |
| Amont N  | SOURCE         | Ik3 max   | 20972 A  |  |  |
| Amont S  |                | ΔU  | 0,22 %   |  |  |
| Repère   | AGBT           |   |  |  |  |
| CIRCUIT  |                | Circuit conforme  |  |  |  |
|  |                | IN <input checked="" type="checkbox"/>                      | DU <input checked="" type="checkbox"/>             | CI <input checked="" type="checkbox"/>             | CC <input checked="" type="checkbox"/> |
|  |                | IN <input type="checkbox"/>                                 | DU <input type="checkbox"/>                        | CI <input type="checkbox"/>                        | CC <input type="checkbox"/>            |
| Amont  | Repère         | AGBT  | AGBT-TGBT  |  |  |
| JdB Amont  | D.origine      |   |  |  |  |
| Style  |                | Tableau   |  |  |  |
| Contenu  | Du Variateur   | 3P+PEN  |  |  |  |
| Désignation  |                | ARMOIRE TGBT  |  |  |  |
| INFOS CABLES / RECEPTEUR   |                |   |  |  |  |
| Nb   | Conso          | K Fois  | Lieu géo.  | 1  | 630kVA                                 |
| Rep. Récepteur   | JdB Aval       | Rév.  | TGBT   |  | A                                      |
| Cos φ  | K Util.        | UL  | 0,8  | 1  |  |
| Cos φ Dém.   | ID/IN          | ΔU Dém.   |  |  |  |
| η  | Alimentation   | 1,00  | Normal   |  |  |
| Polarité Récept.   | Type           | 3P+PEN  |  |  |  |
| CABLE  |                |   |  |  |  |
| Repère   | Mode de pose   | AGBT-TGBT   | 61   |  |  |
| Type   | Ame            | Pôle  | U1000AR2V TWISTAL (90°C)                           | Al   | Uni Tréfle                             |
| Long.  | 1er Récep.     | L. Max  | 60 m   | 105 m (CC)   |  |
| ΔU Max   | dU Circuit     | ΔU Totale   | 8 %  | 0,88 %   | 1,10 %                                 |
| K T°   | K prox         | K Comp  | Fs   | K Cumul  | 1,00 0,65 1,00 1,00 0,65               |
| PROTECTION   |                |   |  |  |  |
|  |                | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          | <input type="checkbox"/> Disp. de Vérif. Tenue CC. | <input type="checkbox"/> Disp. de Vérif. Tenue CC. |  |
|  |                | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié | <input type="checkbox"/> Icu Disjoncteur Vérifié   | <input type="checkbox"/> Icu Disjoncteur Vérifié   |  |
| Type   | Prot. CI       | Disj. Boîtier moulé   | Equipot  |  |  |
| RESULTATS FORC.  |                |   |  |  |  |
| forcé <input checked="" type="checkbox"/>  | Nb             | Phase   | forcé <input checked="" type="checkbox"/>          | 4  | 300 mm²                                |
|  | Nb             | Neutre  |  |  |  |
|  | Nb             | PE/PEN  |  | 4  | 300 mm²                                |
| Taux Harm.   | N Chargé       | TH <= 15%   | Non  |  |  |
| Protection   |                | NS1000N   | Micrologic 2.0                                     |  |  |
| Calibre  | Ir             | Im/Isd/IN Fus.  | 1000 A   | 950 A  | 9500 A                                 |
| K/Cal.   | Tr             | Tempo   | 1  | 5 s  | 20 ms                                  |
| Déclencheur  | Li off         | IΔn   | Electronique                                       |  |  |
| Therm. Aval  | Li             | Δt  | Sur circuit  | 10000 A  |  |
| RESULTATS  |                |   |  |  |  |
| Câble  | Neutre         | PE/PEN  | 4 Câbles 4x300                                     |  |  |
| Critère  | IB             | IN!!  | 909,33 A   |  |  |
| S Th.  | Iz             | 320,762 mm²   | 915,61 A   |  |  |
| Im / Isd Max   | Ik Am/Av       | 11014 A   | 21,0 kA / 18,5 kA                                  |  | /                                      |
| Sélectivité  | Association    | Non calc  |  |  | /                                      |
| INFOS IK / PROTECTION  |                |   |  |  |  |
| Icu / Icm  | Icu Assoc.     | Ip  | 50 kA  | 50 kA  | 36,96 kA                               |
| Icu Uni.   | Icu Uni. Asso. |   |  |  |  |
| Tmax. Prot.  | Déclencheur    | 5000 ms   | 3P3D   |  |  |
| Contacteur   | Relais therm.  | mg21fr1.dug   |  |  |  |
| Constructeur   |                |   |  |  |  |
| SELECTIVITE  |                |   |  |  |  |
| Limite   | A partir de    |   |  |  |  |
| Thermique  | Différentielle | Non Calc  | Sans objet   |  |  |
| Sélectivité logique  |                | <input type="checkbox"/>                                    |  | <input type="checkbox"/>                           |  |
| T1   | T2             |   |  |  |  |
| IK EXTREMITE   |                |   |  |  |  |
| Ik3 Max  | Ik2 Min        | If  | 18482 A  | 12115 A  |  |
| Ik2 Max  | Ik1 Min        | Ik1 Max   | 16005,9 A  | 12339 A  | 16086 A                                |
|  |                | B   | MISE A JOUR  | Avis Technique ELIE                                |  |
|  |                | A   | CREATION   | Fiche de calcul 3 circuits AGBT AGBT-TGBT          |  |
|  |                | Ind.  | MODIFICATIONS                                      | AFFAIRE: P.0515342                                 |  |
|  |                |   | CCTVI - H2 STATION SORIGNY                         | Folio  |  |
|  |                | Date:   | 22/09/2022   | PLAN: 040- NC                                      |  |
|  |                | Norme:  | C1510020   | 15   |  |
|  |                |   |  | 24   |  |

| RESEAU   |                | Normal  |   | Secours   |  |   |  |  |   |  |  |  |  |   |      |  |
|--|----------------|---|---|---|--|---|--|--|---|--|--|--|--|---|------|--|
| Rég.de N   | TN             | I Totale  | 711,67 A                                  |   |  |   |  |  |   |  |  |  |  |   |      |  |
| Tension  | 400 V          | I installée   | 909,33 A                                  |   |  |   |  |  |   |  |  |  |  |   |      |  |
| DISTRIBUTION   |                | I Dispo   | 417,77 A                                  |   |  |   |  |  |   |  |  |  |  |   |      |  |
| Amont N  | AGBT-TGBT      | Ik3 max   | 18482 A                                   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| Amont S  |                | ΔU  | 1,10 %                                    |   |  |   |  |  |   |  |  |  |  |   |      |  |
| Repère   | TGBT           |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| CIRCUIT  |                | Circuit conforme  |   | Circuit conforme  |  | Circuit conforme                          |  |  |   |  |  |  |  |   |      |  |
|  |                | IN <input checked="" type="checkbox"/>  | DU <input checked="" type="checkbox"/>    | CI <input checked="" type="checkbox"/>                                    | CC <input checked="" type="checkbox"/> | IN <input checked="" type="checkbox"/>    | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/> | CC <input checked="" type="checkbox"/>                      | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/> | CC <input checked="" type="checkbox"/> |   |      |  |
| Amont  | Repère         | TGBT  | TGBT-CMD                                  | TGBT  | TGBT-PT                                | TGBT                                      | TGBT-GEN                               |  |   |  |  |  |  |   |      |  |
| JdB Amont  | D.origine      |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| Style  |                | Divers  |   | Divers  |  | Jeu Barres                                |  |  |   |  |  |  |  |   |      |  |
| Contenu  | Du Variateur   | P+N+PE  |   | 3P+N+PE   |  | 3P+PEN                                    |  |  |   |  |  |  |  |   |      |  |
| Désignation  |                | CIRCUITS DE COMMANDES   |   | PRESENCE TENSION  |  | INTERRUPTEUR GENERAL ARMOIRE              |  |  |   |  |  |  |  |   |      |  |
| INFOS CABLES / RECEPTEUR   |                |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| Nb   | Conso          | K Fois  | Lieu géo.                                 | 1   | 10A                                    | 1   |  | 1                                      | 1A  | 1                                      |  | 1                                      | 900A                                   | 1   |      |  |
| Rep. Récepteur   | JdB Aval       | Rév.  |   | TGBT-CMD  |  | A   |  | TGBT-PT                                |   | A                                      |  | TGBT-GEN                               |  | TGBT-GEN  | A    |  |
| Cos φ  | K Util.        | UL  |   | 0,8   | 1                                      |   |  | 0,8                                    | 1   |  |  | 0,8                                    | 1                                      |   |      |  |
| Cos φ Dém.   | ID/IN          | ΔU Dém.   |   | 0,3   | 1,00                                   | 1,2 %                                     |  | 0,3                                    | 1,00  | 1,1 %                                  |  |  |  |   |      |  |
| η  | Alimentation   |   |   | 1,00  | Normal                                 |   |  | 1,00                                   | Normal  |  |  | 1,00                                   | Normal                                 |   |      |  |
| Polarité Récept.   | Type           |   |   | P+N   |  |   |  | 3P+N                                   |   |  |  | 3P+N                                   |  |   |      |  |
| CABLE  |                |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| Repère   | Mode de pose   | TGBT-CMD  | 13  | TGBT-PT   | 13                                     |   |  |  |   |  |  |  |  | 13  |      |  |
| Type   | Ame            | Pôle  |   | U1000R2V (90°C)   | Cu                                     | Multi                                     |  | U1000R2V (90°C)                        | Cu  | Multi                                  |  |  |  | Multi/Uni   |      |  |
| Long.  | 1er Récep.     | L. Max  |   | 1 m   |  | 35 m (DU)                                 |  | 1 m                                    |   | 68 m (CI)                              |  |  |  |   |      |  |
| ΔU Max   | dU Circuit     | ΔU Totale   |   | 5 %   | 0,11 %                                 | 1,20 %                                    |  | 8 %                                    | 0,01 %  | 1,10 %                                 |  | 0 %                                    | 1,10 %                                 |   |      |  |
| K T°   | K prox         | K Comp  | Fs  | K Cumul   | 1,00                                   | 0,72                                      | 1,00                                   | 1,00                                   | 0,72  | 1,00                                   | 0,72                                   | 1,00                                   | 0,72                                   |   | 1,00 |  |
| PROTECTION   |                |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
|  |                |   |   | <input type="checkbox"/> Disp. de Vérif. Tenue CC.                        |  |   |  |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |  |  |  |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |      |  |
|  |                |   |   | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié               |  |   |  |  | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |  |  |  |  | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |      |  |
| Type   | Prot. CI       | Disjonct. C   | Prot Base                                 | Disjonct. C   | Prot Base                              | Interrupteur                              | Prot Base                              |  |   |  |  |  |  |   |      |  |
| RESULTATS FORC.  |                |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| forcé <input checked="" type="checkbox"/>  | Nb             | Phase   | forcé <input checked="" type="checkbox"/> | 1   | 1,5 mm²                                | forcé <input checked="" type="checkbox"/> | 1                                      | 1,5 mm²                                | forcé <input type="checkbox"/>                              | 2                                      | 185 mm²                                |  |  |   |      |  |
|  | Nb             | Neutre  |   | 1   | 1,5 mm²                                |   | 1                                      | 1,5 mm²                                |   |  |  |  |  |   |      |  |
|  | Nb             | PE/PEN  |   | 1   | 1,5 mm²                                |   | 1                                      | 1,5 mm²                                |   | 2                                      | 185 mm²                                |  |  |   |      |  |
| Taux Harm.   | N Chargé       |   |   |   | Non                                    |   | TH <= 15%                              | Non                                    |   | TH <= 15%                              | Non                                    |  |  |   |      |  |
| Protection   |                |   |   | iC60L   |  |   | iC60L                                  |  |   | NS1000NA                               |  |  |  |   |      |  |
| Calibre  | Ir             | Im/Isd/IN Fus.  |   | 10 A  |  | 96 A                                      | 10 A                                   |  | 96 A  | 1000 A                                 |  |  |  |   |      |  |
| K/Cal.   | Tr             | Tempo   |   | 1   |  |   | 1                                      |  |   | 1                                      |  |  |  |   |      |  |
| Déclencheur  | Li off         | Idn   |   | Standard (C)  |  |   | Standard (C)                           |  |   |  |  |  |  |   |      |  |
| Therm. Aval  | Li             | Δt  |   | Sur circuit   |  |   | Sur circuit                            |  |   | En amont                               |  |  |  |   |      |  |
| RESULTATS  |                |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| Câble  | Neutre         | PE/PEN  |   | 3G1,5   |  |   | 5G1,5                                  |  |   |  |  |  |  |   |      |  |
| Critère  | IB             |   |   | FORC  | 10,00 A                                |   | FORC                                   | 1,00 A                                 |   | INI!                                   | 900,00 A                               |  |  |   |      |  |
| S Th.  | Iz             |   |   | 0,535 mm²   | 19,00 A                                |   | 0,671 mm²                              | 16,50 A                                |   | 167,877 mm²                            |  |  |  |   |      |  |
| Im / Isd Max   | Ik Am/Av       |   |   |   | 16,1 kA / 7,3 kA                       |   |  | 18,5 kA / 11,7 kA                      |   |  | 18,5 kA / 18,5 kA                      |  |  |   |      |  |
| Sélectivité  | Association    |   |   | Totale  | Sans                                   |   | Totale                                 | Sans                                   |   | Non calc                               |  |  |  |   |      |  |
| INFOS IK / PROTECTION  |                |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| Icu / Icm  | Icu Assoc.     | Ip  |   | 50 kA   | 50 kA                                  | 2,61 kA                                   | 25 kA                                  | 25 kA                                  | 4,29 kA   | 17 kA                                  | 52 kA                                  | 36,96 kA                               |  |   |      |  |
| Icu Uni.   | Icu Uni. Asso. |   |   | 25 kA   |  |   |  |  |   |  |  |  |  |   |      |  |
| Tmax. Prot.  | Déclencheur    |   |   | 400 ms  | 2P2D                                   |   | 400 ms                                 | 4P4D                                   |   | 5000 ms                                | 3P                                     |  |  |   |      |  |
| Contacteur   | Relais therm.  |   |   | mg21fr1.dmi   |  |   | mg21fr1.dmi                            |  |   | mg21fr1.itr                            |  |  |  |   |      |  |
| Constructeur   |                |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| SELECTIVITE  |                |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| Limite   | A partir de    |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| Thermique  | Différentielle |   |   | Avec  | Sans objet                             |   | Avec                                   | Sans objet                             |   | Non Calc                               | Sans objet                             |  |  |   |      |  |
| Sélectivité logique  |                |   |   | <input type="checkbox"/>  |  |   | <input type="checkbox"/>               |  |   | <input type="checkbox"/>               |  |  |  |   |      |  |
| T1   | T2             |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| IK EXTREMITE   |                |   |   |   |  |   |  |  |   |  |  |  |  |   |      |  |
| Ik3 Max  | Ik2 Min        | If  |   |   | 4909 A                                 | 11703 A                                   | 7033 A                                 | 4909 A                                 | 18482 A   | 12115 A                                | 12339 A                                |  |  |   |      |  |
| Ik2 Max  | Ik1 Min        | Ik1 Max   |   | 4909 A  | 7315 A                                 | 10135,2 A                                 | 4909 A                                 | 7315 A                                 | 16005,9 A   | 12339 A                                | 16086 A                                |  |  |   |      |  |
|  |                | B MISE A JOUR<br>A CREATION<br>Ind. MODIFICATIONS<br>CCTVI - H2 STATION SORIGNY |   | Avis Technique ELIE<br>Fiche de calcul 3 circuits TGBT TGBT-CMD..TGBT-GEN |  | AFFAIRE: P.0515342                        |  | PLAN: 040- NC                          |   | Folio<br>16<br>24                      |  | Date: 22/09/2022<br>Norme: C1510020    |  |   |      |  |

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# FICHE DE CALCUL 3C



| RESEAU                         |                | Normal                                 |  | Secours  |  |  |  |   |   |  |  |   |  |   |      |      |
|--------------------------------|----------------|--|--|--|--|--|--|---|---|--|--|---|--|---|------|------|
| Rég.de N                       | TN             | I Totale                               | 711,67 A                               |  |  |  |  |   |   |  |  |   |  |   |      |      |
| Tension                        | 400 V          | I installée                            | 909,33 A                               |  |  |  |  |   |   |  |  |   |  |   |      |      |
| DISTRIBUTION                   |                | I Dispo                                | 417,77 A                               |  |  |  |  |   |   |  |  |   |  |   |      |      |
| Amont N                        | AGBT-TGBT      | Ik3 max                                | 18482 A                                |  |  |  |  |   |   |  |  |   |  |   |      |      |
| Amont S                        |                | ΔU                                     | 1,10 %                                 |  |  |  |  |   |   |  |  |   |  |   |      |      |
| Repère                         | TGBT           |  |  |  |  |  |  |   |   |  |  |   |  |   |      |      |
| CIRCUIT                        |                | Circuit conforme                       |  | Circuit conforme                                   |  | Circuit conforme                       |  |   |   |  |  |   |  |   |      |      |
| Amont                          | Repère         | TGBT                                   | TGBT-PRF                               | TGBT   | TGBT-CPT                               | TGBT                                   | TGBT-SM                                |   |   |  |  |   |  |   |      |      |
| JdB Amont                      | D.origine      | TGBT-GEN                               |  | TGBT-GEN   |  | TGBT-GEN                               |  |   |   |  |  |   |  |   |      |      |
| Style                          |                | PARAFOUDRE 2                           |  | Divers   |  | Tableau                                |  |   |   |  |  |   |  |   |      |      |
| Contenu                        | Du Variateur   | 3P                                     |  | P+N+PE   |  | 3P+N+PE                                |  |   |   |  |  |   |  |   |      |      |
| Désignation                    |                | PARAFOUDRE                             |  | MESURES & COMPTAGES                                |  | STATION MODULE                         |  |   |   |  |  |   |  |   |      |      |
|                                |                | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>             | CC <input checked="" type="checkbox"/> | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>            | CC <input checked="" type="checkbox"/>                      | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>    | CC <input checked="" type="checkbox"/> |   |      |      |
| INFOS CABLES / RECEPTEUR       |                |  |  |  |  |  |  |   |   |  |  |   |  |   |      |      |
| Nb                             | Conso          | K Foix                                 | Lieu géo.                              | 1  | 1A                                     | 1                                      |  | 1   | 1A  | 1                                      |  | 1   | 122kW                                  | 1   |      |      |
| Rep. Récepteur                 | JdB Aval       | Rév.                                   |  | TGBT-PRF   |  | A                                      |  | TGBT-CPT  |   | A                                      |  | SM  |  |   | B    |      |
| Cos φ                          | K Util.        | UL                                     |  | 0,8  | 1                                      |  |  | 0,8   | 1   |  |  | 0,8                                       | 1                                      |   |      |      |
| Cos φ Dém.                     | ID/IN          | ΔU Dém.                                |  | 0,3  | 1,00                                   | 1,1 %                                  |  | 0,3   | 1,00  | 1,11 %                                 |  |   |  |   |      |      |
| η                              | Alimentation   |  |  | 1,00   | Normal                                 |  |  | 1,00  | Normal  |  |  | 1,00                                      | Normal                                 |   |      |      |
| Polarité Récept.               | Type           |  |  | 3P   |  |  |  | P+N   |   |  |  | 3P+N                                      |  |   |      |      |
| CABLE                          |                |  |  |  |  |  |  |   |   |  |  |   |  |   |      |      |
| Repère                         | Mode de pose   |  |  |  | 13                                     |  |  | TGBT-CPT  |   | 13                                     |  | TGBT-SM                                   |  | 61  |      |      |
| Type                           | Ame            | Pôle                                   |  |  | Multi/Uni                              |  |  | U1000R2V (90°C)                                   | Cu  | Multi                                  |  | U1000AR2V TWISTAL (90°C)                  | Al                                     | Uni Trèfle  |      |      |
| Long.                          | 1er Récep.     | L. Max                                 |  | 0 m  | 3 m (CC)                               |  |  | 1 m   | 68 m (CI)   |  |  | 25 m                                      | 173 m (CC)                             |   |      |      |
| ΔU Max                         | dU Circuit     | ΔU Totale                              |  | 8 %  | 0 %                                    | 1,10 %                                 |  | 8 %   | 0,01 %  | 1,11 %                                 |  | 8 %                                       | 0,35 %                                 | 1,45 %  |      |      |
| K T°                           | K prox         | K Comp                                 | Fs                                     | K Cumul  | 1,00                                   | 0,72                                   | 1,00                                   | 1,00  | 0,72  |  |  | 1,00                                      | 0,87                                   | 0,85  | 1,00 | 0,74 |
| PROTECTION                     |                |  |  |  |  |  |  |   |   |  |  |   |  |   |      |      |
|                                |                |  |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC. |  |  |  |   | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |  |  |   |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |      |      |
|                                |                |  |  | <input type="checkbox"/> Icu Disjoncteur Vérifié   |  |  |  |   | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |  |  |   |  | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |      |      |
| Type                           | Prot. CI       |  |  | Sans Prot.   | Equipot                                |  |  | Disjonct. C                                       | Prot Base   |  |  | Disj. Boitier moulé                       | Autres Différentiels                   |   |      |      |
| RESULTATS FORC.                |                |  |  |  |  |  |  |   |   |  |  |   |  |   |      |      |
| forcé <input type="checkbox"/> | Nb             | Phase                                  |  | forcé <input type="checkbox"/>                     | 1                                      | 2,5 mm²                                |  | forcé <input checked="" type="checkbox"/>         | 1 X   | 1,5 mm²                                |  | forcé <input checked="" type="checkbox"/> | 1                                      | 300 mm²   |      |      |
|                                | Nb             | Neutre                                 |  |  |  |  |  |   | 1   | 1,5 mm²                                |  |   | 1                                      | 300 mm²   |      |      |
|                                | Nb             | PE/PEN                                 |  |  |  |  |  |   | 1   | 1,5 mm²                                |  |   | 1                                      | 95 mm²  |      |      |
| Taux Harm.                     | N Chargé       |  |  |  | Non                                    |  |  |   | Non   |  |  | TH <= 15%                                 | Non                                    |   |      |      |
| Protection                     |                |  |  |  |  |  |  | iC60N   |   |  |  | NSX250B                                   | Micrologic 2.2                         |   |      |      |
| Calibre                        | Ir             | Im/Isd/IN Fus.                         |  |  |  |  |  | 10 A  | 96 A  |  |  | 250 A                                     | 250 A                                  | 250 A   |      |      |
| K/Cal.                         | Tr             | Tempo                                  |  | 1  | 0 s                                    |  |  | 1   |   |  |  | 1,1                                       | 16 s                                   | 20 ms   |      |      |
| Déclencheur                    | Li off         | Idn                                    |  | Standard (C)                                       |  |  |  | Standard (C)                                      |   |  |  | Electronique                              |  | 1000 mA   |      |      |
| Therm. Aval                    | Li             | Δt                                     |  | En aval  |  |  |  | Sur circuit                                       |   |  |  | Sur circuit                               | 3000 A                                 | 60 ms   |      |      |
| RESULTATS                      |                |  |  |  |  |  |  |   |   |  |  |   |  |   |      |      |
| Câble                          | Neutre         | PE/PEN                                 |  |  |  |  |  | 3G1,5   |   |  |  | 4x300                                     |  | 1x95  |      |      |
| Critère                        | IB             |  |  | MINI   | 1,00 A                                 |  |  | FORC  | 1,00 A  |  |  | FORC                                      | 220,11 A                               |   |      |      |
| S Th.                          | Iz             |  |  | 0,017 mm²  |  |  |  | 0,535 mm²   | 19,00 A   |  |  | 278,569 mm²                               | 260,42 A                               |   |      |      |
| Im / Isd Max                   | Ik Am/Av       |  |  |  | 18,5 kA / 18,5 kA                      |  |  |   | 16,1 kA / 7,3 kA  |  |  | 7679 A                                    | 18,5 kA / 15,3 kA                      |   |      |      |
| Sélectivité                    | Association    |  |  |  |  |  |  | Totale  | Sans  |  |  | Totale                                    | Sans                                   |   |      |      |
| INFOS IK / PROTECTION          |                |  |  |  |  |  |  |   |   |  |  |   |  |   |      |      |
| Icu / Icm                      | Icu Assoc.     | Ip                                     |  |  | 36,96 kA                               |  |  | 20 kA   | 20 kA   | 2,61 kA                                |  | 25 kA                                     | 25 kA                                  | 12,53 kA  |      |      |
| Icu Uni.                       | Icu Uni. Asso. |  |  |  |  |  |  | 10 kA   |   |  |  |   |  |   |      |      |
| Tmax. Prot.                    | Déclencheur    |  |  |  |  |  |  | 400 ms  | 2P2D  |  |  | 2279 ms                                   | 4P3D                                   |   |      |      |
| Contacteur                     | Relais therm.  |  |  |  |  |  |  | mg21fr1.dmi                                       |   |  |  | mg21fr1.dug                               |  |   |      |      |
| Constructeur                   |                |  |  |  |  |  |  |   |   |  |  |   |  |   |      |      |
| SELECTIVITE                    |                |  |  |  |  |  |  |   |   |  |  |   |  |   |      |      |
| Limite                         | A partir de    |  |  |  |  |  |  |   |   |  |  |   |  |   |      |      |
| Thermique                      | Différentielle |  |  |  |  |  |  | Avec  | Sans objet  |  |  | Avec                                      | Sans objet                             |   |      |      |
| Sélectivité logique            |                | <input type="checkbox"/>               |  |  |  |  |  | <input type="checkbox"/>                          |   |  |  | <input type="checkbox"/>                  |  |   |      |      |
| T1                             | T2             |  |  |  |  |  |  |   |   |  |  |   |  |   |      |      |
| IK EXTREMITE                   |                |  |  |  |  |  |  |   |   |  |  |   |  |   |      |      |
| Ik3 Max                        | Ik2 Min        | If                                     |  | 18482 A  | 12115 A                                |  |  |   | 4909 A  | 15312 A                                | 9759 A                                 |   |  |   |      |      |
| Ik2 Max                        | Ik1 Min        | Ik1 Max                                |  | 16005,9 A  |  |  |  | 4909 A  | 7315 A  | 13260,3 A                              | 8447 A                                 |   |  | 11706 A   |      |      |
|                                |                | B                                      | MISE A JOUR                            |  |  |  |  | Avis Technique ELIE                               |   |  |  |   |  |   |      |      |
|                                |                | A                                      | CREATION                               |  |  |  |  | Fiche de calcul 3 circuits TGBT TGBT-PRF..TGBT-SM |   |  |  |   |  |   |      |      |
|                                |                | Ind.                                   | MODIFICATIONS                          |  |  |  | AFFAIRE: P.0515342                     |   |   |  | Folio                                  |   |  |   |      |      |
|                                |                |  | CCTVI - H2 STATION SORIGNY             |  |  |  | PLAN: 040- NC                          |   |   |  | 17                                     |   |  |   |      |      |
|                                |                | Date:                                  | 22/09/2022                             | Norme:   |  | C1510020                               |  |   |   |  |  | 24  |  |   |      |      |

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| RESEAU   |                | Normal                                 |  | Secours   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
|--|----------------|--|--|---|--|--|---|---|---|--|--|---|--|---|------|--|--|--|
| Rég.de N   | TN             | I Totale                               | 711,67 A                               |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| Tension  | 400 V          | I installée                            | 909,33 A                               |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| DISTRIBUTION   |                | I Dispo                                | 417,77 A                               |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| Amont N  | AGBT-TGBT      | Ik3 max                                | 18482 A                                |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| Amont S  |                | ΔU                                     | 1,10 %                                 |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| Repère   | TGBT           |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| CIRCUIT  |                | Circuit conforme                       |  | Circuit conforme  |  | Circuit conforme                       |   |   |   |  |  |   |  |   |      |  |  |  |
|  |                | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>                      | CC <input checked="" type="checkbox"/> | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/>  | CI <input checked="" type="checkbox"/>    | CC <input checked="" type="checkbox"/>                      | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>    | CC <input checked="" type="checkbox"/> |   |      |  |  |  |
| Amont  | Repère         | TGBT                                   | TGBT-FM01                              | TGBT  | TGBT-FM02                              | TGBT                                   | TGBT-FM03   |   |   |  |  |   |  |   |      |  |  |  |
| JdB Amont  | D.origine      | TGBT-GEN                               |  | TGBT-GEN  |  | TGBT-GEN                               |   |   |   |  |  |   |  |   |      |  |  |  |
| Style  |                | Divers                                 |  | Divers  |  | Divers                                 |   |   |   |  |  |   |  |   |      |  |  |  |
| Contenu  | Du Variateur   | 3P+PE                                  |  | 3P+PE   |  | 3P+PE                                  |   |   |   |  |  |   |  |   |      |  |  |  |
| Désignation  |                | COMPRESSEUR INNOV. BATT1               |  | COMPRESSEUR INNOV. BATT2                                    |  | COMPRESSEUR INNOV. BATT3               |   |   |   |  |  |   |  |   |      |  |  |  |
| INFOS CABLES / RECEPTEUR   |                |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| Nb   | Conso          | K Fois                                 | Lieu géo.                              | 1   | 50kW                                   | 1                                      |   | 1   | 50kW  | 1                                      |  | 1   | 50kW                                   | 1   |      |  |  |  |
| Rep. Récepteur   | JdB Aval       | Rév.                                   |  | TGBT-FM01   |  | A                                      |   | TGBT-FM02                                 |   | A                                      |  | TGBT-FM03                                 |  | A   |      |  |  |  |
| Cos φ  | K Util.        | UL                                     |  | 0,8   | 1                                      |  |   | 0,8                                       | 1   |  |  | 0,8                                       | 1                                      |   |      |  |  |  |
| Cos φ Dém.   | ID/IN          | ΔU Dém.                                |  | 0,3   | 1,00                                   | 1,94 %                                 |   | 0,3                                       | 1,00  | 1,94 %                                 |  | 0,3                                       | 1,00                                   | 1,94 %  |      |  |  |  |
| η  | Alimentation   |  |  | 1,00  | Normal                                 |  |   | 1,00                                      | Normal  |  |  | 1,00                                      | Normal                                 |   |      |  |  |  |
| Polarité Récept.   | Type           |  |  | 3P  |  |  |   | 3P  |   |  |  | 3P  |  |   |      |  |  |  |
| CABLE  |                |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| Repère   | Mode de pose   |  |  | TGBT-FM01   | 61                                     |  |   | TGBT-FM02                                 | 61  |  |  | TGBT-FM03                                 | 61                                     |   |      |  |  |  |
| Type   | Ame            | Pôle                                   |  | U1000AR2V TWISTAL (90°C)                                    | Al                                     | Uni Tréfle                             |   | U1000AR2V TWISTAL (90°C)                  | Al  | Uni Tréfle                             |  | U1000AR2V TWISTAL (90°C)                  | Al                                     | Uni Tréfle  |      |  |  |  |
| Long.  | 1er Récep.     | L. Max                                 |  | 45 m  |  | 189 m (CI)                             |   | 45 m                                      |   | 189 m (CI)                             |  | 45 m                                      |  | 189 m (CI)  |      |  |  |  |
| ΔU Max   | dU Circuit     | ΔU Totale                              |  | 8 %   | 0,84 %                                 | 1,94 %                                 |   | 8 %                                       | 0,84 %  | 1,94 %                                 |  | 8 %                                       | 0,84 %                                 | 1,94 %  |      |  |  |  |
| K T°   | K prox         | K Comp                                 | Fs                                     | K Cumul   | 1,00                                   | 0,71                                   | 1,00  | 1,00                                      | 0,71  | 1,00                                   | 0,71                                   | 1,00                                      | 0,71                                   | 1,00  | 0,71 |  |  |  |
| PROTECTION   |                |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
|  |                |  |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |  |  |   |   | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |  |  |   |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |      |  |  |  |
|  |                |  |  | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |  |  |   |   | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |  |  |   |  | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |      |  |  |  |
| Type   | Prot. CI       |  |  | Disjonct. C   | Prot Base                              |  |   | Disjonct. C                               | Prot Base   |  |  | Disjonct. C                               | Prot Base                              |   |      |  |  |  |
| RESULTATS FORC.  |                |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| forcé <input checked="" type="checkbox"/>  | Nb             | Phase                                  |  | forcé <input checked="" type="checkbox"/>                   | 1                                      | 70 mm²                                 |   | forcé <input checked="" type="checkbox"/> | 1 X   | 70 mm²                                 |  | forcé <input checked="" type="checkbox"/> | 1                                      | 70 mm²  |      |  |  |  |
|  | Nb             | Neutre                                 |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
|  | Nb             | PE/PEN                                 |  |   | 1                                      | 70 mm²                                 |   |   | 1   | 70 mm²                                 |  |   | 1                                      | 70 mm²  |      |  |  |  |
| Taux Harm.   | N Chargé       |  |  |   |  | Non                                    |   |   |   | Non                                    |  |   |  | Non   |      |  |  |  |
| Protection   |                |  |  | NG125N  |  |  |   | NG125N                                    |   |  |  | NG125N                                    |  |   |      |  |  |  |
| Calibre  | Ir             | Im/Isd/IN Fus.                         |  | 100 A   |  | 960 A                                  |   | 100 A                                     |   | 960 A                                  |  | 100 A                                     |  | 960 A   |      |  |  |  |
| K/Cal.   | Tr             | Tempo                                  |  | 1   |  |  |   | 1   |   |  |  | 1   |  |   |      |  |  |  |
| Déclencheur  | Li off         | Idn                                    |  | Standard (C)  |  |  |   | Standard (C)                              |   |  |  | Standard (C)                              |  |   |      |  |  |  |
| Therm. Aval  | Li             | Δt                                     |  | Sur circuit   |  |  |   | Sur circuit                               |   |  |  | Sur circuit                               |  |   |      |  |  |  |
| RESULTATS  |                |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| Câble  | Neutre         | PE/PEN                                 |  | 4x70  |  |  |   | 4x70                                      |   |  |  | 4x70                                      |  |   |      |  |  |  |
| Critère  | IB             |  |  | FORC  | 90,21 A                                |  |   | FORC                                      | 90,21 A   |  |  | FORC                                      | 90,21 A                                |   |      |  |  |  |
| S Th.  | Iz             |  |  | 56,860 mm²  | 112,14 A                               |  |   | 56,860 mm²                                | 112,14 A  |  |  | 56,860 mm²                                | 112,14 A                               |   |      |  |  |  |
| Im / Isd Max   | Ik Am/Av       |  |  |   | 18,5 kA / 8,7 kA                       |  |   |   | 18,5 kA / 8,7 kA  |  |  |   | 18,5 kA / 8,7 kA                       |   |      |  |  |  |
| Sélectivité  | Association    |  |  | Totale  | Sans                                   |  |   | Totale                                    | Sans  |  |  | Totale                                    | Sans                                   |   |      |  |  |  |
| INFOS IK / PROTECTION  |                |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| Icu / Icm  | Icu Assoc.     | Ip                                     |  | 25 kA   | 25 kA                                  | 7,44 kA                                |   | 25 kA                                     | 25 kA   | 7,44 kA                                |  | 25 kA                                     | 25 kA                                  | 7,44 kA   |      |  |  |  |
| Icu Uni.   | Icu Uni. Asso. |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| Tmax. Prot.  | Déclencheur    |  |  | 124 ms  |  | 3P3D                                   |   | 124 ms                                    |   | 3P3D                                   |  | 124 ms                                    |  | 3P3D  |      |  |  |  |
| Contacteur   | Relais therm.  |  |  | mg21fr1.dmi   |  |  |   | mg21fr1.dmi                               |   |  |  | mg21fr1.dmi                               |  |   |      |  |  |  |
| Constructeur   |                |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| SELECTIVITE  |                |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| Limite   | A partir de    |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| Thermique  | Différentielle |  |  | Avec  |  | Sans objet                             |   | Avec                                      |   | Sans objet                             |  | Avec                                      |  | Sans objet  |      |  |  |  |
| Sélectivité logique  |                |  |  | <input type="checkbox"/>                                    |  |  |   | <input type="checkbox"/>                  |   |  |  | <input type="checkbox"/>                  |  |   |      |  |  |  |
| T1   | T2             |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| IK EXTREMITE   |                |  |  |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
| Ik3 Max  | Ik2 Min        | If                                     |  | 8729 A  | 5201 A                                 | 3432 A                                 |   | 8729 A                                    | 5201 A  | 3432 A                                 |  | 8729 A                                    | 5201 A                                 | 3432 A  |      |  |  |  |
| Ik2 Max  | Ik1 Min        | Ik1 Max                                |  | 7559,3 A  |  |  |   | 7559,3 A                                  |   |  |  | 7559,3 A                                  |  |   |      |  |  |  |
|  |                | B                                      | MISE A JOUR                            |   | Avis Technique ELIE                    |  |  |   | Fiche de calcul 3 circuits TGBT TGBT-FM01..TGBT-FM03        |  |  |   |  |   |      |  |  |  |
|  |                | A                                      | CREATION                               |   |  |  |   |   |   |  |  |   |  |   |      |  |  |  |
|  |                | Ind.                                   | MODIFICATIONS                          |   | CCTVI - H2 STATION SORIGNY             |  | AFFAIRE:  |   | P.0515342   |  | Folio                                  |   |  |   |      |  |  |  |
|  |                | Date:                                  | 22/09/2022                             |   | Norme:                                 |  | C1510020  |   | PLAN:   |  | 040- NC                                |   | 18 / 24                                |   |      |  |  |  |


| RESEAU   |                | Normal                                 |  | Secours   |  |  |  |   |   |  |  |   |  |   |      |      |
|--|----------------|--|--|---|--|--|--|---|---|--|--|---|--|---|------|------|
| Rég.de N   | TN             | I Totale                               | 711,67 A                               |   |  |  |  |   |   |  |  |   |  |   |      |      |
| Tension  | 400 V          | I installée                            | 909,33 A                               |   |  |  |  |   |   |  |  |   |  |   |      |      |
| DISTRIBUTION   |                | I Dispo                                | 417,77 A                               |   |  |  |  |   |   |  |  |   |  |   |      |      |
| Amont N  | AGBT-TGBT      | Ik3 max                                | 18482 A                                |   |  |  |  |   |   |  |  |   |  |   |      |      |
| Amont S  |                | ΔU                                     | 1,10 %                                 |   |  |  |  |   |   |  |  |   |  |   |      |      |
| Repère   | TGBT           |  |  |   |  |  |  |   |   |  |  |   |  |   |      |      |
| CIRCUIT  |                | Circuit conforme                       |  | Circuit conforme  |  | Circuit conforme                       |  |   |   |  |  |   |  |   |      |      |
|  |                | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>                      | CC <input checked="" type="checkbox"/>   | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>    | CC <input checked="" type="checkbox"/>                      | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>    | CC <input checked="" type="checkbox"/> |   |      |      |
| Amont  | Repère         | TGBT                                   | TGBT-FM04                              | TGBT  | TGBT-FM05  | TGBT                                   | TGBT-FM06                              |   |   |  |  |   |  |   |      |      |
| JdB Amont  | D.origine      | TGBT-GEN                               |  | TGBT-GEN  |  | TGBT-GEN                               |  |   |   |  |  |   |  |   |      |      |
| Style  |                | Divers                                 |  | Divers  |  | Divers                                 |  |   |   |  |  |   |  |   |      |      |
| Contenu  | Du Variateur   | 3P+PE                                  |  | 3P+N+PE   |  | P+N+PE                                 |  |   |   |  |  |   |  |   |      |      |
| Désignation  |                | COMPRESSEUR INNOV. BATT4               |  | COMPRESSEUR INNOV. AUX                                      |  | GASPLATE                               |  |   |   |  |  |   |  |   |      |      |
| INFOS CABLES / RECEPTEUR   |                |  |  |   |  |  |  |   |   |  |  |   |  |   |      |      |
| Nb   | Conso          | K Fois                                 | Lieu géo.                              | 1   | 50kW   | 1                                      |  | 1   | 50kW  | 1                                      |  | 1   | 3680W                                  | 1   |      |      |
| Rep. Récepteur   | JdB Aval       | Rév.                                   |  | TGBT-FM04   |  | A                                      |  | TGBT-FM05                                 |   | A                                      |  | TGBT-FM06                                 |  | A   |      |      |
| Cos φ  | K Util.        | UL                                     |  | 0,8   | 1  |  |  | 0,8                                       | 1   |  |  | 0,8                                       | 1                                      |   |      |      |
| Cos φ Dém.   | ID/IN          | ΔU Dém.                                |  | 0,3   | 1,00   | 1,94 %                                 |  | 0,3                                       | 1,00  | 1,94 %                                 |  | 0,3                                       | 1,00                                   | 5,06 %  |      |      |
| η  | Alimentation   |  |  | 1,00  | Normal   |  |  | 1,00                                      | Normal  |  |  | 1,00                                      | Normal                                 |   |      |      |
| Polarité Récept.   | Type           |  |  | 3P  |  |  |  | 3P+N                                      |   |  |  | P+N                                       |  |   |      |      |
| CABLE  |                |  |  |   |  |  |  |   |   |  |  |   |  |   |      |      |
| Repère   | Mode de pose   |  |  | TGBT-FM04   | 61   |  |  | TGBT-FM05                                 | 61  |  |  | TGBT-FM06                                 | 61                                     |   |      |      |
| Type   | Ame            | Pôle                                   |  | U1000AR2V TWISTAL (90°C)                                    | Al   | Uni Tréfle                             |  | U1000AR2V TWISTAL (90°C)                  | Al  | Uni Tréfle                             |  | U1000R2V (90°C)                           | Cu                                     | Multi   |      |      |
| Long.  | 1er Récep.     | L. Max                                 |  | 45 m  |  | 189 m (CI)                             |  | 45 m                                      |   | 100 m (CI)                             |  | 30 m                                      |  | 52 m (DU)   |      |      |
| ΔU Max   | dU Circuit     | ΔU Totale                              |  | 8 %   | 0,84 %   | 1,94 %                                 |  | 8 %                                       | 0,84 %  | 1,94 %                                 |  | 8 %                                       | 3,97 %                                 | 5,06 %  |      |      |
| K T°   | K prox         | K Comp                                 | Fs                                     | K Cumul   | 1,00   | 0,71                                   | 1,00                                   | 1,00                                      | 0,71  | 1,00                                   | 1,00                                   | 1,00                                      | 0,71                                   | 1,00  | 1,00 | 0,71 |
| PROTECTION   |                |  |  |   |  |  |  |   |   |  |  |   |  |   |      |      |
|  |                |  |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |  |  |  |   | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |  |  |   |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |      |      |
|  |                |  |  | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |  |  |  |   | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |  |  |   |  | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |      |      |
| Type   | Prot. CI       |  |  | Disjonct. C   |  | Prot Base                              |  | Disjonct. C                               |   | Prot Base                              |  | Disjonct. C                               |  | Prot Base   |      |      |
| RESULTATS FORC.  |                |  |  |   |  |  |  |   |   |  |  |   |  |   |      |      |
| forcé <input checked="" type="checkbox"/>  | Nb             | Phase                                  |  | forcé <input checked="" type="checkbox"/>                   | 1  | 70 mm²                                 |  | forcé <input checked="" type="checkbox"/> | 1 X   | 70 mm²                                 |  | forcé <input checked="" type="checkbox"/> | 1                                      | 2,5 mm²   |      |      |
|  | Nb             | Neutre                                 |  |   |  |  |  |   | 1   | 70 mm²                                 |  |   | 1                                      | 2,5 mm²   |      |      |
|  | Nb             | PE/PEN                                 |  |   | 1  | 70 mm²                                 |  |   | 1   | 25 mm²                                 |  |   | 1                                      | 2,5 mm²   |      |      |
| Taux Harm.   | N Chargé       |  |  |   |  | Non                                    |  | TH <= 15%                                 |   | Non                                    |  |   |  | Non   |      |      |
| Protection   |                |  |  | NG125N  |  |  |  | NG125N                                    |   |  |  | iC60N                                     |  |   |      |      |
| Calibre  | Ir             | Im/Isd/IN Fus.                         |  | 100 A   |  | 960 A                                  |  | 100 A                                     |   | 960 A                                  |  | 20 A                                      |  | 192 A   |      |      |
| K/Cal.   | Tr             | Tempo                                  |  | 1   |  |  |  | 1   |   |  |  | 1   |  |   |      |      |
| Déclencheur  | Li off         | Idn                                    |  | Standard (C)  |  |  |  | Standard (C)                              |   |  |  | Standard (C)                              |  |   |      |      |
| Therm. Aval  | Li             | Δt                                     |  | Sur circuit   |  |  |  | Sur circuit                               |   |  |  | Sur circuit                               |  |   |      |      |
| RESULTATS  |                |  |  |   |  |  |  |   |   |  |  |   |  |   |      |      |
| Câble  | Neutre         | PE/PEN                                 |  | 4x70  |  |  |  | 4x70                                      |   | 1x25                                   |  | 3G2,5                                     |  |   |      |      |
| Critère  | IB             |  |  | FORC  |  | 90,21 A                                |  | INI!                                      |   | 90,21 A                                |  | MINI                                      |  | 19,92 A   |      |      |
| S Th.  | Iz             |  |  | 56,860 mm²  |  | 112,14 A                               |  | 56,860 mm²                                |   | 112,14 A                               |  | 1,363 mm²                                 |  | 27,88 A   |      |      |
| Im / Isd Max   | Ik Am/Av       |  |  |   |  | 18,5 kA / 8,7 kA                       |  |   |   | 18,5 kA / 8,7 kA                       |  |   |  | 16,1 kA / 0,6 kA  |      |      |
| Sélectivité  | Association    |  |  | Totale  |  | Sans                                   |  | Totale                                    |   | Sans                                   |  | Totale                                    |  | Sans  |      |      |
| INFOS IK / PROTECTION  |                |  |  |   |  |  |  |   |   |  |  |   |  |   |      |      |
| Icu / Icm  | Icu Assoc.     | Ip                                     |  | 25 kA   | 25 kA  | 7,44 kA                                |  | 25 kA                                     | 25 kA   | 7,44 kA                                |  | 20 kA                                     | 20 kA                                  | 0,84 kA   |      |      |
| Icu Uni.   | Icu Uni. Asso. |  |  |   |  |  |  |   |   |  |  | 10 kA                                     |  |   |      |      |
| Tmax. Prot.  | Déclencheur    |  |  | 124 ms  |  | 3P3D                                   |  | 124 ms                                    |   | 4P4D                                   |  | 400 ms                                    |  | 2P2D  |      |      |
| Contacteur   | Relais therm.  |  |  | mg21fr1.dmi   |  |  |  | mg21fr1.dmi                               |   |  |  | mg21fr1.dmi                               |  |   |      |      |
| Constructeur   |                |  |  |   |  |  |  |   |   |  |  |   |  |   |      |      |
| SELECTIVITE  |                |  |  |   |  |  |  |   |   |  |  |   |  |   |      |      |
| Limite   | A partir de    |  |  |   |  |  |  |   |   |  |  |   |  |   |      |      |
| Thermique  | Différentielle |  |  | Avec  |  | Sans objet                             |  | Avec                                      |   | Sans objet                             |  | Avec                                      |  | Sans objet  |      |      |
| Sélectivité logique  |                |  |  | <input type="checkbox"/>                                    |  |  |  | <input type="checkbox"/>                  |   |  |  | <input type="checkbox"/>                  |  |   |      |      |
| T1   | T2             |  |  |   |  |  |  |   |   |  |  |   |  |   |      |      |
| IK EXTREMITE   |                |  |  |   |  |  |  |   |   |  |  |   |  |   |      |      |
| Ik3 Max  | Ik2 Min        | If                                     |  | 8729 A  | 5201 A   | 3432 A                                 |  | 8729 A                                    | 5201 A  | 2030 A                                 |  |   |  | 360 A   |      |      |
| Ik2 Max  | Ik1 Min        | Ik1 Max                                |  | 7559,3 A  |  |  |  | 7559,3 A                                  | 3432 A  | 5121 A                                 |  |   | 360 A                                  | 563 A   |      |      |
|  |                | B                                      | MISE A JOUR                            |   | Avis Technique ELIE<br>Fiche de calcul 3 circuits TGBT TGBT-FM04..TGBT-FM06<br>ELIE BT |  | AFFAIRE: P.0515342                     |   | PLAN: 040- NC   |  | Folio<br>19<br>24                      |   |  |   |      |      |
|  |                | A                                      | CREATION                               |   |  |  |  |   |   |  |  |   |  |   |      |      |
|  |                | Ind.                                   | MODIFICATIONS                          |   |  |  |  |   |   |  |  |   |  |   |      |      |
|  |                |  | CCTVI - H2 STATION SORIGNY             |   |  |  |  |   |   |  |  |   |  |   |      |      |
| Date:  | 22/09/2022     | Norme:                                 | C1510020                               |   |  |  |  |   |   |  |  |   |  |   |      |      |

| RESEAU   |                | Normal                                 |  | Secours   |   |  |   |   |   |  |  |   |  |   |      |      |
|--|----------------|--|--|---|---|--|---|---|---|--|--|---|--|---|------|------|
| Rég.de N   | TN             | I Totale                               | 711,67 A                               |   |   |  |   |   |   |  |  |   |  |   |      |      |
| Tension  | 400 V          | I installée                            | 909,33 A                               |   |   |  |   |   |   |  |  |   |  |   |      |      |
| DISTRIBUTION   |                | I Dispo                                | 417,77 A                               |   |   |  |   |   |   |  |  |   |  |   |      |      |
| Amont N  | AGBT-TGBT      | Ik3 max                                | 18482 A                                |   |   |  |   |   |   |  |  |   |  |   |      |      |
| Amont S  |                | ΔU                                     | 1,10 %                                 |   |   |  |   |   |   |  |  |   |  |   |      |      |
| Repère   | TGBT           |  |  |   |   |  |   |   |   |  |  |   |  |   |      |      |
| CIRCUIT  |                | Circuit conforme                       |  | Circuit conforme  |   | Circuit conforme                       |   |   |   |  |  |   |  |   |      |      |
|  |                | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>                      | CC <input checked="" type="checkbox"/>                                      | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/>  | CI <input checked="" type="checkbox"/>    | CC <input checked="" type="checkbox"/>                      | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>    | CC <input checked="" type="checkbox"/> |   |      |      |
| Amont  | Repère         | TGBT                                   | TGBT-FM07                              | TGBT  | TGBT-FM08   | TGBT                                   | TGBT-FM09   |   |   |  |  |   |  |   |      |      |
| JdB Amont  | D.origine      | TGBT-GEN                               |  | TGBT-GEN  |   | TGBT-GEN                               |   |   |   |  |  |   |  |   |      |      |
| Style  |                | Divers                                 |  | Divers  |   | Divers                                 |   |   |   |  |  |   |  |   |      |      |
| Contenu  | Du Variateur   | P+N+PE                                 |  | P+N+PE  |   | P+N+PE                                 |   |   |   |  |  |   |  |   |      |      |
| Désignation  |                | BORNE DE PAIEMENT (POS)                |  | PORTAIL 1   |   | PORTAIL 2                              |   |   |   |  |  |   |  |   |      |      |
| INFOS CABLES / RECEPTEUR   |                |  |  |   |   |  |   |   |   |  |  |   |  |   |      |      |
| Nb   | Conso          | K Fois                                 | Lieu géo.                              | 1   | 1500W   | 1                                      |   | 1   | 130W  | 1                                      |  | 1   | 130W                                   | 1   |      |      |
| Rep. Récepteur   | JdB Aval       | Rév.                                   |  | TGBT-FM07   |   | A                                      |   | TGBT-FM08                                 |   | A                                      |  | TGBT-FM09                                 |  | A   |      |      |
| Cos φ  | K Util.        | UL                                     |  | 0,8   | 1   |  |   | 0,8                                       | 1   |  |  | 0,8                                       | 1                                      |   |      |      |
| Cos φ Dém.   | ID/IN          | ΔU Dém.                                |  | 0,3   | 1,00  | 3,25 %                                 |   | 0,3                                       | 1,00  | 1,21 %                                 |  | 0,3                                       | 1,00                                   | 1,44 %  |      |      |
| η  | Alimentation   |  |  | 1,00  | Normal  |  |   | 1,00                                      | Normal  |  |  | 1,00                                      | Normal                                 |   |      |      |
| Polarité Récept.   | Type           |  |  | P+N   |   |  |   | P+N                                       |   |  |  | P+N                                       |  |   |      |      |
| CABLE  |                |  |  |   |   |  |   |   |   |  |  |   |  |   |      |      |
| Repère   | Mode de pose   |  |  | TGBT-FM07   | 61  |  |   | TGBT-FM08                                 | 61  |  |  | TGBT-FM09                                 | 61                                     |   |      |      |
| Type   | Ame            | Pôle                                   |  | U1000R2V (90°C)   | Cu  | Multi                                  |   | U1000R2V (90°C)                           | Cu  | Multi                                  |  | U1000R2V (90°C)                           | Cu                                     | Multi   |      |      |
| Long.  | 1er Récep.     | L. Max                                 |  | 40 m  |   | 71 m (CI)                              |   | 15 m                                      |   | 68 m (CI)                              |  | 45 m                                      |  | 68 m (CI)   |      |      |
| ΔU Max   | dU Circuit     | ΔU Totale                              |  | 8 %   | 2,15 %  | 3,25 %                                 |   | 8 %                                       | 0,12 %  | 1,21 %                                 |  | 8 %                                       | 0,35 %                                 | 1,44 %  |      |      |
| K T°   | K prox         | K Comp                                 | Fs                                     | K Cumul   | 1,00  | 0,71                                   | 1,00  | 1,00                                      | 0,71  | 1,00                                   | 1,00                                   | 1,00                                      | 0,72                                   | 1,00  | 1,00 | 0,72 |
| PROTECTION   |                |  |  |   |   |  |   |   |   |  |  |   |  |   |      |      |
|  |                |  |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |   |  |   |   | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |  |  |   |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |      |      |
|  |                |  |  | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |   |  |   |   | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |  |  |   |  | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |      |      |
| Type   | Prot. CI       |  |  | Disjonct. C   | Prot Base   |  |   | Disjonct. C                               | Prot Base   |  |  | Disjonct. C                               | Prot Base                              |   |      |      |
| RESULTATS FORC.  |                |  |  |   |   |  |   |   |   |  |  |   |  |   |      |      |
| forcé <input checked="" type="checkbox"/>  | Nb             | Phase                                  |  | forcé <input checked="" type="checkbox"/>                   | 1   | 2,5 mm²                                |   | forcé <input checked="" type="checkbox"/> | 1 X   | 1,5 mm²                                |  | forcé <input checked="" type="checkbox"/> | 1                                      | 1,5 mm²   |      |      |
|  | Nb             | Neutre                                 |  |   | 1   | 2,5 mm²                                |   |   | 1   | 1,5 mm²                                |  |   | 1                                      | 1,5 mm²   |      |      |
|  | Nb             | PE/PEN                                 |  |   | 1   | 2,5 mm²                                |   |   | 1   | 1,5 mm²                                |  |   | 1                                      | 1,5 mm²   |      |      |
| Taux Harm.   | N Chargé       |  |  |   |   | Non                                    |   |   |   | Non                                    |  |   |  | Non   |      |      |
| Protection   |                |  |  | iC60N   |   |  |   | iC60N                                     |   |  |  | iC60N                                     |  |   |      |      |
| Calibre  | Ir             | Im/Isd/IN Fus.                         |  | 16 A  |   | 153,6 A                                |   | 10 A                                      |   | 96 A                                   |  | 10 A                                      |  | 96 A  |      |      |
| K/Cal.   | Tr             | Tempo                                  |  | 1,2   |   |  |   | 1   |   |  |  | 1   |  |   |      |      |
| Déclencheur  | Li off         | Idn                                    |  | Standard (C)  |   |  |   | Standard (C)                              |   |  |  | Standard (C)                              |  |   |      |      |
| Therm. Aval  | Li             | Δt                                     |  | Sur circuit   |   |  |   | Sur circuit                               |   |  |  | Sur circuit                               |  |   |      |      |
| RESULTATS  |                |  |  |   |   |  |   |   |   |  |  |   |  |   |      |      |
| Câble  | Neutre         | PE/PEN                                 |  | 3G2,5   |   |  |   | 3G1,5                                     |   |  |  | 3G1,5                                     |  |   |      |      |
| Critère  | IB             |  |  | FORC  | 8,12 A  |  |   | FORC                                      | 0,70 A  |  |  | FORC                                      | 0,70 A                                 |   |      |      |
| S Th.  | Iz             |  |  | 0,907 mm²   | 27,88 A   |  |   | 0,385 mm²                                 | 21,07 A   |  |  | 0,375 mm²                                 | 21,37 A                                |   |      |      |
| Im / Isd Max   | Ik Am/Av       |  |  |   | 16,1 kA / 0,4 kA  |  |   |   | 16,1 kA / 0,7 kA  |  |  |   | 16,1 kA / 0,2 kA                       |   |      |      |
| Sélectivité  | Association    |  |  | Totale  | Sans  |  |   | Totale                                    | Sans  |  |  | Totale                                    | Sans                                   |   |      |      |
| INFOS IK / PROTECTION  |                |  |  |   |   |  |   |   |   |  |  |   |  |   |      |      |
| Icu / Icm  | Icu Assoc.     | Ip                                     |  | 20 kA   | 20 kA   | 0,64 kA                                |   | 20 kA                                     | 20 kA   | 1,01 kA                                |  | 20 kA                                     | 20 kA                                  | 0,34 kA   |      |      |
| Icu Uni.   | Icu Uni. Asso. |  |  | 10 kA   |   |  |   | 10 kA                                     |   |  |  | 10 kA                                     |  |   |      |      |
| Tmax. Prot.  | Déclencheur    |  |  | 400 ms  | 2P2D  |  |   | 400 ms                                    | 2P2D  |  |  | 400 ms                                    | 2P2D                                   |   |      |      |
| Contacteur   | Relais therm.  |  |  | mg21fr1.dmi   |   |  |   | mg21fr1.dmi                               |   |  |  | mg21fr1.dmi                               |  |   |      |      |
| Constructeur   |                |  |  |   |   |  |   |   |   |  |  |   |  |   |      |      |
| SELECTIVITE  |                |  |  |   |   |  |   |   |   |  |  |   |  |   |      |      |
| Limite   | A partir de    |  |  |   |   |  |   |   |   |  |  |   |  |   |      |      |
| Thermique  | Différentielle |  |  | Avec  | Sans objet  |  |   | Avec                                      | Sans objet  |  |  | Avec                                      | Sans objet                             |   |      |      |
| Sélectivité logique  |                |  |  | <input type="checkbox"/>                                    |   |  |   | <input type="checkbox"/>                  |   |  |  | <input type="checkbox"/>                  |  |   |      |      |
| T1   | T2             |  |  |   |   |  |   |   |   |  |  |   |  |   |      |      |
| IK EXTREMITE   |                |  |  |   |   |  |   |   |   |  |  |   |  |   |      |      |
| Ik3 Max  | Ik2 Min        | If                                     |  |   | 271 A   |  |   |   | 431 A   | 431 A                                  |  |   | 145 A                                  | 145 A   |      |      |
| Ik2 Max  | Ik1 Min        | Ik1 Max                                |  |   | 271 A   | 424 A                                  |   |   | 431 A   | 673 A                                  |  |   | 145 A                                  | 227 A   |      |      |
|  |                | B                                      | MISE A JOUR                            |   | Avis Technique ELIE<br>Fiche de calcul 3 circuits TGBT TGBT-FM07..TGBT-FM09 |  |  |   | AFFAIRE: P.0515342  |  | Folio<br>20 / 24                       |   |  |   |      |      |
|  |                | A                                      | CREATION                               |   |   |  |   |   |   |  |  |   |  |   |      |      |
|  |                | Ind.                                   | MODIFICATIONS                          |   |   |  |   |   |   |  |  |   |  |   |      |      |
|  |                |  | CCTVI - H2 STATION SORIGNY             |   |   |  |   |   |   |  |  |   |  |   |      |      |
| Date:  | 22/09/2022     | Norme:                                 | C1510020                               |   | PLAN:   |  | 040- NC   |   |   |  |  |   |  |   |      |      |

Fichier : P.0515342-040-B-NC Caréoco.aff



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# FICHE DE CALCUL 3C



| RESEAU   |                | Normal  |  | Secours  |  |  |  |   |   |  |  |  |  |   |         |  |
|--|----------------|---|--|--|--|--|--|---|---|--|--|--|--|---|---------|--|
| Rég.de N   | TN             | I Totale  | 711,67 A                               |  |  |  |  |   |   |  |  |  |  |   |         |  |
| Tension  | 400 V          | I installée   | 909,33 A                               |  |  |  |  |   |   |  |  |  |  |   |         |  |
| DISTRIBUTION   |                | I Dispo   | 417,77 A                               |  |  |  |  |   |   |  |  |  |  |   |         |  |
| Amont N  | AGBT-TGBT      | Ik3 max   | 18482 A                                |  |  |  |  |   |   |  |  |  |  |   |         |  |
| Amont S  |                | ΔU  | 1,10 %                                 |  |  |  |  |   |   |  |  |  |  |   |         |  |
| Repère   | TGBT           |   |  |  |  |  |  |   |   |  |  |  |  |   |         |  |
| CIRCUIT  |                | Circuit conforme  |  | Circuit conforme   |  | Circuit conforme                       |  |   |   |  |  |  |  |   |         |  |
|  |                | IN <input checked="" type="checkbox"/>  | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>   | CC <input checked="" type="checkbox"/> | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>    | CC <input checked="" type="checkbox"/>                      | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/> | CC <input checked="" type="checkbox"/> |   |         |  |
| Amont  | Repère         | TGBT  | TGBT-FM10                              | TGBT   | TGBT-FM12                              | TGBT                                   | TGBT-GEN-ECL                           |   |   |  |  |  |  |   |         |  |
| JdB Amont  | D.origine      | TGBT-GEN  |  | TGBT-GEN   |  | TGBT-GEN                               |  |   |   |  |  |  |  |   |         |  |
| Style  |                | Divers  |  | Divers   |  | Jeu Barres                             |  |   |   |  |  |  |  |   |         |  |
| Contenu  | Du Variateur   | P+N+PE  |  | P+N+PE   |  | P+N+PE                                 |  |   |   |  |  |  |  |   |         |  |
| Désignation  |                | (DISPONIBLE)  |  | FILING CENTER  |  | GENERAL ECL                            |  |   |   |  |  |  |  |   |         |  |
| INFOS CABLES / RECEPTEUR   |                |   |  |  |  |  |  |   |   |  |  |  |  |   |         |  |
| Nb   | Conso          | K Fois  | Lieu géo.                              | 1  | 1W                                     | 1                                      |  | 1   | 3680W   | 1                                      |  | 1                                      | 20A                                    | 1   |         |  |
| Rep. Récepteur   | JdB Aval       | Rév.  |  | TGBT-FM10  |  | B                                      |  | TGBT-FM12                                 |   | A                                      |  | TGBT-GEN-ECL                           |  | TGBT-GEN-ECL  |         |  |
| Cos φ  | K Util.        | UL  |  | 0,8  | 1                                      |  |  | 0,8                                       | 1   |  |  | 0,8                                    | 1                                      |   |         |  |
| Cos φ Dém.   | ID/IN          | ΔU Dém.   |  | 0,3  | 1,00                                   | 1,1 %                                  |  | 0,3                                       | 1,00  | 4,4 %                                  |  |  |  |   |         |  |
| η  | Alimentation   |   |  | 1,00   | Normal                                 |  |  | 1,00                                      | Normal  |  |  | 1,00                                   | Normal                                 |   |         |  |
| Polarité Récept.   | Type           |   |  | P+N  |  |  |  | P+N                                       |   |  |  | P+N                                    |  |   |         |  |
| CABLE  |                |   |  |  |  |  |  |   |   |  |  |  |  |   |         |  |
| Repère   | Mode de pose   |   |  | TGBT-FM10  | 61                                     |  |  | TGBT-FM12                                 | 13  |  |  |  | 13                                     |   |         |  |
| Type   | Ame            | Pôle  |  | U1000R2V (90°C)  | Cu                                     | Multi                                  |  | U1000R2V (90°C)                           | Cu  | Multi                                  |  |  | Multi/Uni                              |   |         |  |
| Long.  | 1er Récep.     | L. Max  |  | 1 m  |  | 71 m (CC)                              |  | 25 m                                      |   | 52 m (DU)                              |  |  |  |   |         |  |
| ΔU Max   | dU Circuit     | ΔU Totale   |  | 8 %  | 0 %                                    | 1,10 %                                 |  | 8 %                                       | 3,3 %   | 4,40 %                                 |  |  | 0 %                                    | 1,10 %  |         |  |
| K T°   | K prox         | K Comp  | Fs                                     | K Cumul  | 1,00                                   | 0,72                                   | 1,00                                   | 1,00                                      | 0,72  |  |  |  |  |   | 1,00    |  |
| PROTECTION   |                |   |  |  |  |  |  |   |   |  |  |  |  |   |         |  |
|  |                |   |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC.                             |  |  |  |   | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |  |  |  |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          |         |  |
|  |                |   |  | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié                    |  |  |  |   | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |  |  |  |  | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |         |  |
| Type   | Prot. CI       |   |  | Disjonct. C  |  | Dif.30mA                               |  | Disjonct. C                               |   | Prot Base                              |  | Disjonct. C                            |  | Prot Base   |         |  |
| RESULTATS FORC.  |                |   |  |  |  |  |  |   |   |  |  |  |  |   |         |  |
| forcé <input checked="" type="checkbox"/>  | Nb             | Phase   |  | forcé <input checked="" type="checkbox"/>                                      | 1                                      | 2,5 mm²                                |  | forcé <input checked="" type="checkbox"/> | 1   | 2,5 mm²                                |  | forcé <input type="checkbox"/>         | 1                                      | 4 mm²   |         |  |
|  | Nb             | Neutre  |  |  | 1                                      | 2,5 mm²                                |  |   | 1   | 2,5 mm²                                |  |  | 1                                      | 4 mm²   |         |  |
|  | Nb             | PE/PEN  |  |  | 1                                      | 2,5 mm²                                |  |   | 1   | 2,5 mm²                                |  |  | 1                                      | 4 mm²   |         |  |
| Taux Harm.   | N Chargé       |   |  |  |  | Non                                    |  |   |   | Non                                    |  |  |  | Non   |         |  |
| Protection   |                |   |  | iC60N  |  |  |  | iC60N                                     |   |  |  | iC60L                                  |  |   |         |  |
| Calibre  | Ir             | Im/Isd/IN Fus.  |  | 16 A   |  | 153,6 A                                |  | 20 A                                      |   | 192 A                                  |  | 40 A                                   |  | 384 A   |         |  |
| K/Cal.   | Tr             | Tempo   |  | 1  |  |  |  | 1   |   |  |  | 1                                      |  |   |         |  |
| Déclencheur  | Li off         | Idn   |  | Standard (C)   |  | 30 mA                                  |  | Standard (C)                              |   |  |  | Standard (C)                           |  |   |         |  |
| Therm. Aval  | Li             | Δt  |  | Sur circuit  |  | 0 ms                                   |  | Sur circuit                               |   |  |  | Sur circuit                            |  |   |         |  |
| RESULTATS  |                |   |  |  |  |  |  |   |   |  |  |  |  |   |         |  |
| Câble  | Neutre         | PE/PEN  |  | 3G2,5  |  |  |  | 3G2,5                                     |   |  |  |  |  |   |         |  |
| Critère  | IB             |   |  | FORC   |  | 0,01 A                                 |  | FORC                                      |   | 19,92 A                                |  | INI!                                   |  | 20,00 A   |         |  |
| S Th.  | Iz             |   |  | 0,885 mm²  |  | 28,27 A                                |  | 1,628 mm²                                 |   | 26,12 A                                |  | 2,924 mm²                              |  |   |         |  |
| Im / Isd Max   | Ik Am/Av       |   |  |  |  | 16,1 kA / 9,7 kA                       |  |   |   | 16,1 kA / 0,7 kA                       |  |  |  | 16,1 kA / 16,1 kA   |         |  |
| Sélectivité  | Association    |   |  | Totale   |  | Sans                                   |  | Totale                                    |   | Sans                                   |  | Totale                                 |  | Sans  |         |  |
| INFOS IK / PROTECTION  |                |   |  |  |  |  |  |   |   |  |  |  |  |   |         |  |
| Icu / Icm  | Icu Assoc.     | Ip  |  | 20 kA  |  | 20 kA                                  | 3,94 kA                                | 20 kA                                     |   | 20 kA                                  | 1,01 kA                                | 36 kA                                  |  | 36 kA   | 7,11 kA |  |
| Icu Uni.   |                | Icu Uni. Asso.  |  | 10 kA  |  |  |  | 10 kA                                     |   |  |  | 20 kA                                  |  |   |         |  |
| Tmax. Prot.  |                | Déclencheur   |  | 400 ms   |  | 2P2D                                   |  | 400 ms                                    |   | 2P2D                                   |  | 1 ms                                   |  | 2P2D  |         |  |
| Contacteur   | Relais therm.  |   |  | mg21fr1.dmi  |  |  |  | mg21fr1.dmi                               |   |  |  | mg21fr1.dmi                            |  |   |         |  |
| Constructeur   |                |   |  |  |  |  |  |   |   |  |  |  |  |   |         |  |
| SELECTIVITE  |                |   |  |  |  |  |  |   |   |  |  |  |  |   |         |  |
| Limite   | A partir de    |   |  |  |  |  |  |   |   |  |  |  |  |   |         |  |
| Thermique  | Différentielle |   |  | Avec   |  | Sans objet                             |  | Avec                                      |   | Sans objet                             |  | Avec                                   |  | Sans objet  |         |  |
| Sélectivité logique  |                |   |  | <input type="checkbox"/>   |  |  |  | <input type="checkbox"/>                  |   |  |  | <input type="checkbox"/>               |  |   |         |  |
| T1   | T2             |   |  |  |  |  |  |   |   |  |  |  |  |   |         |  |
| IK EXTREMITE   |                |   |  |  |  |  |  |   |   |  |  |  |  |   |         |  |
| Ik3 Max  | Ik2 Min        | If  |  |  |  |  |  |   |   | 431 A                                  |  |  |  | 12339 A   |         |  |
| Ik2 Max  | Ik1 Min        | Ik1 Max   |  |  | 6739 A                                 | 9749 A                                 |  |   | 431 A   | 673 A                                  |  |  | 12339 A                                | 16086 A   |         |  |
|  |                | B MISE A JOUR<br>A CREATION<br>Ind. MODIFICATIONS<br>CCTVI - H2 STATION SORIGNY |  | Avis Technique ELIE<br>Fiche de calcul 3 circuits TGBT TGBT-FM10..TGBT-GEN-ECL |  | AFFAIRE: P.0515342                     |  | PLAN: 040- NC                             |   | Folio<br>21 / 24                       |  | Date: 22/09/2022                       |  | Norme: C1510020   |         |  |

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| RESEAU   |                | Normal                                 |  | Secours  |   |  |   |   |  |  |  |   |   |            |      |  |
|--|----------------|--|--|--|---|--|---|---|--|--|--|---|---|------------|------|--|
| Rég.de N   | TN             | I Totale                               | 711,67 A                               |  |   |  |   |   |  |  |  |   |   |            |      |  |
| Tension  | 400 V          | I installée                            | 909,33 A                               |  |   |  |   |   |  |  |  |   |   |            |      |  |
| DISTRIBUTION   |                | I Dispo                                | 417,77 A                               |  |   |  |   |   |  |  |  |   |   |            |      |  |
| Amont N  | AGBT-TGBT      | Ik3 max                                | 18482 A                                |  |   |  |   |   |  |  |  |   |   |            |      |  |
| Amont S  |                | ΔU                                     | 1,10 %                                 |  |   |  |   |   |  |  |  |   |   |            |      |  |
| Repère   | TGBT           |  |  |  |   |  |   |   |  |  |  |   |   |            |      |  |
| CIRCUIT  |                | Circuit conforme                       |  | Circuit conforme                                   |   | Circuit conforme                       |   |   |  |  |  |   |   |            |      |  |
|  |                | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>             | CC <input checked="" type="checkbox"/>                      | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/>  | CI <input checked="" type="checkbox"/>    | CC <input checked="" type="checkbox"/>             | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>    | CC <input checked="" type="checkbox"/>                      |            |      |  |
| Amont  | Repère         | TGBT                                   | TGBT-TBS                               | TGBT   | TGBT-EC01   | TGBT                                   | TGBT-EC02   |   |  |  |  |   |   |            |      |  |
| JdB Amont  | D.origine      | TGBT-GEN-ECL                           |  | TGBT-GEN-ECL                                       |   | TGBT-GEN-ECL                           |   |   |  |  |  |   |   |            |      |  |
| Style  |                | TBS                                    |  | ECL + BAES   |   | Eclairage                              |   |   |  |  |  |   |   |            |      |  |
| Contenu  | Du Variateur   | P+N                                    |  | P+N+PE   |   | P+N+PE                                 |   |   |  |  |  |   |   |            |      |  |
| Désignation  |                | Télécommande bloc de sécurité          |  | ECL LOCAL TECHNIQUE                                |   | ECL EXTERIEUR 1                        |   |   |  |  |  |   |   |            |      |  |
| INFOS CABLES / RECEPTEUR   |                |  |  |  |   |  |   |   |  |  |  |   |   |            |      |  |
| Nb   | Conso          | K Fois                                 | Lieu géo.                              | 1  | 10A   | 1                                      |   | 1   | 10A  | 1                                      |  | 7   | 75W   | 1          |      |  |
| Rep. Récepteur   | JdB Aval       | Rév.                                   |  | TGBT-TBS   |   | A                                      |   | TGBT-EC01                                 |  | A                                      |  | TGBT-EC02                                 |   | A          |      |  |
| Cos φ  | K Util.        | UL                                     |  | 0,8  | 1   |  |   | 0,92                                      | 1  |  |  | 0,92                                      | 1   |            |      |  |
| Cos φ Dém.   | ID/IN          | ΔU Dém.                                |  | 0,3  | 1,00  | 1,2 %                                  |   | 0,92                                      | 1,00   | 2,36 %                                 |  | 0,52                                      | 1,00  | 1,88 %     |      |  |
| η  | Alimentation   |  |  | 1,00   | Normal  |  |   | 1,00                                      | Normal   |  |  | 1,00                                      | Normal  |            |      |  |
| Polarité Récept.   | Type           |  |  | P+N  |   |  |   | P+N                                       |  |  |  | P+N                                       |   |            |      |  |
| CABLE  |                |  |  |  |   |  |   |   |  |  |  |   |   |            |      |  |
| Repère   | Mode de pose   | TGBT-TBS                               |  | 13   |   | TGBT-EC01                              |   | 13  |  | TGBT-EC02                              |  | 13  |   |            |      |  |
| Type   | Ame            | Pôle                                   |  | U1000R2V (90°C)                                    | Cu  | Multi/Uni                              |   | U1000R2V (90°C)                           | Cu   | Multi                                  |  | U1000R2V (90°C)                           | Cu  | Multi      |      |  |
| Long.  | 1er Récep.     | L. Max                                 |  | 1 m  |   | 62 m (DU)                              |   | 10 m                                      |  | 38 m (DU)                              |  | 100 m                                     | 100 m   | 342 m (CC) |      |  |
| ΔU Max   | dU Circuit     | ΔU Totale                              |  | 8 %  | 0,11 %  | 1,20 %                                 |   | 6 %                                       | 1,26 %   | 2,36 %                                 |  | 6 %                                       | 0,78 %  | 1,88 %     |      |  |
| K T°   | K prox         | K Comp                                 | Fs                                     | K Cumul  | 1,00  | 0,72                                   | 1,00  | 1,00                                      | 0,72   | 1,00                                   | 0,72                                   | 1,00                                      | 0,72  | 1,00       | 0,72 |  |
| PROTECTION   |                |  |  |  |   |  |   |   |  |  |  |   |   |            |      |  |
|  |                |  |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC. | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |  |   |   | <input type="checkbox"/> Disp. de Vérif. Tenue CC. |  |  |   | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |            |      |  |
| Type   | Prot. CI       | Disjonct. C                            |  | Equipot  |   | Disjonct. C                            |   | Dif.30mA                                  |  | Disjonct. B                            |  | Dif.300mA                                 |   |            |      |  |
| RESULTATS FORC.  |                |  |  |  |   |  |   |   |  |  |  |   |   |            |      |  |
| forcé <input type="checkbox"/>   | Nb             | Phase                                  |  | forcé <input type="checkbox"/>                     | 1   | 1,5 mm²                                |   | forcé <input checked="" type="checkbox"/> | 1 X  | 1,5 mm²                                |  | forcé <input checked="" type="checkbox"/> | 1   | 6 mm²      |      |  |
|  | Nb             | Neutre                                 |  |  | 1   | 1,5 mm²                                |   |   | 1  | 1,5 mm²                                |  |   | 1   | 6 mm²      |      |  |
|  | Nb             | PE/PEN                                 |  |  |   |  |   |   | 1  | 1,5 mm²                                |  |   | 1   | 6 mm²      |      |  |
| Taux Harm.   | N Chargé       |  |  |  |   | Non                                    |   |   |  | Non                                    |  |   |   | Non        |      |  |
| Protection   |                |  |  | iC60L  |   |  |   | iC60L                                     |  | Type AC                                |  | iC60L                                     |   | Type AC    |      |  |
| Calibre  | Ir             | Im/Isd/IN Fus.                         |  | 10 A   |   | 96 A                                   |   | 10 A                                      |  | 96 A                                   |  | 16 A                                      |   | 76.8 A     |      |  |
| K/Cal.   | Tr             | Tempo                                  |  | 1  |   |  |   | 1   |  |  |  | 1   |   |            |      |  |
| Déclencheur  | Li off         | Idn                                    |  | Standard (C)                                       |   |  |   | Standard (C)                              |  | 30 mA                                  |  | Bas (B)                                   |   | 300 mA     |      |  |
| Therm. Aval  | Li             | Δt                                     |  | Sur circuit  |   |  |   | Sur circuit                               |  | 0 ms                                   |  | Sur circuit                               |   | 0 ms       |      |  |
| RESULTATS  |                |  |  |  |   |  |   |   |  |  |  |   |   |            |      |  |
| Câble  | Neutre         | PE/PEN                                 |  | 2x1,5  |   |  |   | 3G1,5                                     |  |  |  | 3G6                                       |   |            |      |  |
| Critère  | IB             |  |  | MINI   |   | 10,00 A                                |   | FORC                                      |  | 10,00 A                                |  | FORC                                      |   | 2,47 A     |      |  |
| S Th.  | Iz             |  |  | 0,535 mm²  |   | 19,00 A                                |   | 0,535 mm²                                 |  | 19,00 A                                |  | 1,138 mm²                                 |   | 45,07 A    |      |  |
| Im / Isd Max   | Ik Am/Av       |  |  | 16,1 kA / 7,3 kA                                   |   |  |   | 16,1 kA / 1,0 kA                          |  |  |  | 16,1 kA / 0,4 kA                          |   |            |      |  |
| Sélectivité  | Association    |  |  | I<0,32kA   |   | Sans                                   |   | I<0,32kA                                  |  | Sans                                   |  | I<0,32kA                                  |   | Sans       |      |  |
| INFOS IK / PROTECTION  |                |  |  |  |   |  |   |   |  |  |  |   |   |            |      |  |
| Icu / Icm  | Icu Assoc.     | Ip                                     |  | 50 kA  | 50 kA   | 2,61 kA                                |   | 50 kA                                     | 50 kA  | 0,90 kA                                |  | 50 kA                                     | 50 kA   | 0,61 kA    |      |  |
| Icu Uni.   | Icu Uni. Asso. |  |  | 25 kA  |   |  |   | 25 kA                                     |  |  |  | 25 kA                                     |   |            |      |  |
| Tmax. Prot.  | Déclencheur    |  |  | 2P2D   |   |  |   | 400 ms                                    |  | 2P2D                                   |  | 3 ms                                      |   | 2P2D       |      |  |
| Contacteur   | Relais therm.  |  |  | mg21fr1.dmi  |   |  |   | mg21fr1.dmi                               |  |  |  | mg21fr1.dmi                               |   |            |      |  |
| Constructeur   |                |  |  |  |   |  |   |   |  |  |  |   |   |            |      |  |
| SELECTIVITE  |                |  |  |  |   |  |   |   |  |  |  |   |   |            |      |  |
| Limite   | A partir de    |  |  | 320 A  |   |  |   | 320 A                                     |  |  |  | 320 A                                     |   |            |      |  |
| Thermique  | Différentielle |  |  | Avec   |   | Sans objet                             |   | Avec                                      |  | Sans objet                             |  | Avec                                      |   | Sans objet |      |  |
| Sélectivité logique  |                |  |  | <input type="checkbox"/>                           |   |  |   | <input type="checkbox"/>                  |  |  |  | <input type="checkbox"/>                  |   |            |      |  |
| T1   | T2             |  |  |  |   |  |   |   |  |  |  |   |   |            |      |  |
| IK EXTREMITE   |                |  |  |  |   |  |   |   |  |  |  |   |   |            |      |  |
| Ik3 Max  | Ik2 Min        | If                                     |  |  |   |  |   |   |  |  |  |   |   |            |      |  |
| Ik2 Max  | Ik1 Min        | Ik1 Max                                |  | 4909 A   | 7315 A  |  |   | 641 A                                     | 999 A  |  |  | 260 A                                     | 407 A   |            |      |  |
|  |                | B                                      | MISE A JOUR                            |  | Avis Technique ELIE   |  |  |   |  |  |  |   |   |            |      |  |
|  |                | A                                      | CREATION                               |  | Fiche de calcul 3 circuits TGBT TGBT-TBS..TGBT-EC02         |  |   |   |  |  |  |   |   |            |      |  |
|  |                | Ind.                                   | MODIFICATIONS                          |  | AFFAIRE: P.0515342  |  | Folio   |   |  |  |  |   |   |            |      |  |
|  |                |  | CCTVI - H2 STATION SORIGNY             |  | PLAN: 040- NC   |  | 22 / 24   |   |  |  |  |   |   |            |      |  |
| Date:  | 22/09/2022     | Norme:                                 | C1510020                               |  |   |  |   |   |  |  |  |   |   |            |      |  |

| RESEAU   |                | Normal  |  | Secours   |   |  |  |  |  |  |  |   |   |                  |  |  |
|--|----------------|---|--|---|---|--|--|--|--|--|--|---|---|------------------|--|--|
| Rég.de N   | TN             | I Totale  | 711,67 A                               |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| Tension  | 400 V          | I installée   | 909,33 A                               |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| DISTRIBUTION   |                | I Dispo   | 417,77 A                               |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| Amont N  | AGBT-TGBT      | Ik3 max   | 18482 A                                |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| Amont S  |                | ΔU  | 1,10 %                                 |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| Repère   | TGBT           |   |  |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| CIRCUIT  |                | Circuit conforme  |  | Circuit conforme  |   | Circuit conforme                       |  |  |  |  |  |   |   |                  |  |  |
|  |                | IN <input checked="" type="checkbox"/>  | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>                                      | CC <input checked="" type="checkbox"/>                      | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/> | CC <input checked="" type="checkbox"/>             | IN <input checked="" type="checkbox"/> | DU <input checked="" type="checkbox"/> | CI <input checked="" type="checkbox"/>    | CC <input checked="" type="checkbox"/>                      |                  |  |  |
| Amont  | Repère         | TGBT  | TGBT-EC03                              | TGBT  | TGBT-GEN-PC   | TGBT                                   | TGBT-PC01                              |  |  |  |  |   |   |                  |  |  |
| JdB Amont  | D.origine      | TGBT-GEN-ECL  |  | TGBT-GEN  |   | TGBT-GEN-PC                            |  |  |  |  |  |   |   |                  |  |  |
| Style  |                | Eclairage   |  | Jeu Barres  |   | PC                                     |  |  |  |  |  |   |   |                  |  |  |
| Contenu  | Du Variateur   | P+N+PE  |  | P+N+PE  |   | P+N+PE                                 |  |  |  |  |  |   |   |                  |  |  |
| Désignation  |                | ECL EXTERIEUR 2 (LIBRE)   |  | GENERAL PC  |   | PC LOCAL TECHNIQUE                     |  |  |  |  |  |   |   |                  |  |  |
| INFOS CABLES / RECEPTEUR   |                |   |  |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| Nb   | Conso          | K Fois  | Lieu géo.                              | 3   | 75W   | 1                                      |  | 1                                      | 20A  | 1                                      |  | 1   | 16A   | 1                |  |  |
| Rep. Récepteur   | JdB Aval       | Rév.  |  | TGBT-EC03   |   | A                                      |  | TGBT-GEN-PC                            |  | TGBT-GEN-PC                            |  | TGBT-PC01                                 |   | A                |  |  |
| Cos φ  | K Util.        | UL  |  | 0,92  | 1   |  |  | 0,8                                    | 1  |  |  | 0,8                                       | 1   |                  |  |  |
| Cos φ Dém.   | ID/IN          | ΔU Dém.   |  | 0,52  | 1,00  | 1,43 %                                 |  |  |  |  |  |   |   |                  |  |  |
| η  | Alimentation   |   |  | 1,00  | Normal  |  |  | 1,00                                   | Normal   |  |  | 1,00                                      | Normal  |                  |  |  |
| Polarité Récept.   | Type           |   |  | P+N   |   |  |  | P+N                                    |  |  |  | P+N                                       |   |                  |  |  |
| CABLE  |                |   |  |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| Repère   | Mode de pose   | TGBT-EC03   |  | 13  |   |  |  | 13                                     |  |  |  | TGBT-PC01                                 | 13  |                  |  |  |
| Type   | Ame            | Pôle  |  | U1000R2V (90°C)   | Cu  | Multi                                  |  | Multi/Uni                              |  |  |  | U1000R2V (90°C)                           | Cu  | Multi            |  |  |
| Long.  | 1er Récep.     | L. Max  |  | 100 m   | 100 m   | 342 m (CC)                             |  |  |  |  |  | 1 m                                       |   | 64 m (DU)        |  |  |
| ΔU Max   | dU Circuit     | ΔU Totale   |  | 6 %   | 0,34 %  | 1,43 %                                 |  | 0 %                                    | 1,10 %   |  |  | 8 %                                       | 0,11 %  | 1,20 %           |  |  |
| K T°   | K prox         | K Comp  | Fs                                     | K Cumul   | 1,00  | 0,72                                   | 1,00                                   | 1,00                                   | 0,72   |  |  | 1,00                                      | 1,00  | 0,72             |  |  |
| PROTECTION   |                |   |  |   |   |  |  |  |  |  |  |   |   |                  |  |  |
|  |                |   |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC.                          | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |  |  |  | <input type="checkbox"/> Disp. de Vérif. Tenue CC. |  |  |   | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |                  |  |  |
|  |                |   |  | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié                 |   |  |  |  |  |  |  |   | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié |                  |  |  |
| Type   | Prot. CI       | Disjonct. B   |  | Dif.300mA   | Disjonct. C   |  | Prot Base                              | Disjonct. C                            |  | Dif.30mA                               |  |   |   |                  |  |  |
| RESULTATS FORC.  |                |   |  |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| forcé <input checked="" type="checkbox"/>  | Nb             | Phase   |  | forcé <input checked="" type="checkbox"/>                                   | 1   | 6 mm²                                  |  | forcé <input type="checkbox"/>         | 1 X  | 6 mm²                                  |  | forcé <input checked="" type="checkbox"/> | 1   | 2,5 mm²          |  |  |
|  | Nb             | Neutre  |  |   | 1   | 6 mm²                                  |  |  | 1  | 6 mm²                                  |  |   | 1   | 2,5 mm²          |  |  |
|  | Nb             | PE/PEN  |  |   | 1   | 6 mm²                                  |  |  | 1  | 6 mm²                                  |  |   | 1   | 2,5 mm²          |  |  |
| Taux Harm.   | N Chargé       |   |  | Non   |   |  |  | Non                                    |  |  |  | Non                                       |   |                  |  |  |
| Protection   |                | iC60L   |  | Type AC   |   | iC60L                                  |  | Type AC                                |  | iC60L                                  |  | Type AC                                   |   |                  |  |  |
| Calibre  | Ir             | Im/Isd/IN Fus.  |  | 16 A  |   | 76,8 A                                 |  | 63 A                                   |  | 604,8 A                                |  | 16 A                                      |   | 153,6 A          |  |  |
| K/Cal.   | Tr             | Tempo   |  | 1   |   |  |  | 1                                      |  |  |  | 1   |   |                  |  |  |
| Déclencheur  | Li off         | Idn   |  | Bas (B)   |   | 300 mA                                 |  | Standard (C)                           |  |  |  | Standard (C)                              |   | 30 mA            |  |  |
| Therm. Aval  | Li             | Δt  |  | Sur circuit   |   | 0 ms                                   |  | Sur circuit                            |  |  |  | Sur circuit                               |   | 0 ms             |  |  |
| RESULTATS  |                |   |  |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| Câble  | Neutre         | PE/PEN  |  | 3G6   |   |  |  |  |  |  |  | 3G2,5                                     |   |                  |  |  |
| Critère  | IB             |   |  | FORC  |   | 1,06 A                                 |  | INI!                                   |  | 20,00 A                                |  | FORC                                      |   | 16,00 A          |  |  |
| S Th.  | Iz             |   |  | 1,138 mm²   |   | 45,07 A                                |  | 6,062 mm²                              |  |  |  | 1,138 mm²                                 |   | 26,12 A          |  |  |
| Im / Isd Max   | Ik Am/Av       |   |  |   |   | 16,1 kA / 0,4 kA                       |  |  |  | 16,1 kA / 16,1 kA                      |  |   |   | 16,1 kA / 9,7 kA |  |  |
| Sélectivité  | Association    |   |  | I<0,32kA  |   | Sans                                   |  | Totale                                 |  | Sans                                   |  | I<0,50kA                                  |   | Sans             |  |  |
| INFOS IK / PROTECTION  |                |   |  |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| Icu / Icm  | Icu Assoc.     | Ip  |  | 50 kA   | 50 kA   | 0,61 kA                                |  | 30 kA                                  | 30 kA  | 7,79 kA                                |  | 50 kA                                     | 50 kA   | 3,94 kA          |  |  |
| Icu Uni.   | Icu Uni. Asso. |   |  | 25 kA   |   |  |  | 15 kA                                  |  |  |  | 25 kA                                     |   |                  |  |  |
| Tmax. Prot.  | Déclencheur    |   |  | 3 ms  |   | 2P2D                                   |  | 3 ms                                   |  | 2P2D                                   |  | 400 ms                                    |   | 2P2D             |  |  |
| Contacteur   | Relais therm.  |   |  | mg21fr1.dmi   |   |  |  | mg21fr1.dmi                            |  |  |  | mg21fr1.dmi                               |   |                  |  |  |
| Constructeur   |                |   |  |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| SELECTIVITE  |                |   |  |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| Limite   | A partir de    |   |  | 320 A   |   |  |  |  |  |  |  | 500 A                                     |   |                  |  |  |
| Thermique  | Différentielle |   |  | Avec  |   | Sans objet                             |  | Avec                                   |  | Sans objet                             |  | Avec                                      |   | Sans objet       |  |  |
| Sélectivité logique  |                |   |  | <input type="checkbox"/>  |   |  |  | <input type="checkbox"/>               |  |  |  | <input type="checkbox"/>                  |   |                  |  |  |
| T1   | T2             |   |  |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| IK EXTREMITE   |                |   |  |   |   |  |  |  |  |  |  |   |   |                  |  |  |
| Ik3 Max  | Ik2 Min        | If  |  |   |   |  |  |  |  | 12339 A                                |  |   |   |                  |  |  |
| Ik2 Max  | Ik1 Min        | Ik1 Max   |  |   | 260 A   | 407 A                                  |  |  |  | 12339 A                                | 16086 A                                |   | 6739 A  | 9749 A           |  |  |
|  |                | B MISE A JOUR<br>A CREATION<br>Ind. MODIFICATIONS<br>CCTVI - H2 STATION SORIGNY |  | Avis Technique ELIE<br>Fiche de calcul 3 circuits TGBT TGBT-EC03..TGBT-PC01 |   | AFFAIRE: P.0515342                     |  | PLAN: 040- NC                          |  | Folio<br>23<br>24                      |  | Date: 22/09/2022<br>Norme: C1510020       |   |                  |  |  |

| RESEAU   |                | Normal  |  | Secours   |  |
|--|----------------|---|--|---|--|
| Rég.de N   | TN             | I Totale  | 711,67 A   |   |  |
| Tension  | 400 V          | I installée   | 909,33 A   |   |  |
| DISTRIBUTION   |                | I Dispo   | 417,77 A   |   |  |
| Amont N  | AGBT-TGBT      | Ik3 max   | 18482 A  |   |  |
| Amont S  |                | ΔU  | 1,10 %   |   |  |
| Repère   | TGBT           |   |  |   |  |
| CIRCUIT  |                | Circuit conforme  |  |   |  |
|  |                | IN <input checked="" type="checkbox"/>                      | DU <input checked="" type="checkbox"/>             | CI <input checked="" type="checkbox"/>  | CC <input checked="" type="checkbox"/> |
|  |                | IN <input type="checkbox"/>                                 | DU <input type="checkbox"/>                        | CI <input type="checkbox"/>   | CC <input type="checkbox"/>            |
| Amont  | Repère         | TGBT  | TGBT-FM11  |   |  |
| JdB Amont  | D.origine      | TGBT-GEN-PC   |  |   |  |
| Style  |                | PC  |  |   |  |
| Contenu  | Du Variateur   | P+N+PE  |  |   |  |
| Désignation  |                | COFFRET VDI (BANDEAU PC)                                    |  |   |  |
| INFOS CABLES / RECEPTEUR   |                |   |  |   |  |
| Nb   | Conso          | K Fois  | Lieu géo.  | 1   | 16A                                    |
| Rep. Récepteur   | JdB Aval       | Rév.  | TGBT-FM11  |   | A                                      |
| Cos φ  | K Util.        | UL  | 0,8  | 1   |  |
| Cos φ Dém.   | ID/IN          | ΔU Dém.   |  |   |  |
| η  | Alimentation   | 1,00  | Normal   |   |  |
| Polarité Récept.   | Type           | P+N   |  |   |  |
| CABLE  |                |   |  |   |  |
| Repère   | Mode de pose   | TGBT-FM11   | 13   |   |  |
| Type   | Ame            | Pôle  | U1000R2V (90°C)                                    | Cu  | Multi                                  |
| Long.  | 1er Récep.     | L. Max  | 5 m  | 64 m (DU)   |  |
| ΔU Max   | dU Circuit     | ΔU Totale   | 8 %  | 0,53 %  | 1,62 %                                 |
| K T°   | K prox         | K Comp  | Fs   | K Cumul   | 1,00 0,72 1,00 1,00 0,72               |
| PROTECTION   |                |   |  |   |  |
|  |                | <input type="checkbox"/> Disp. de Vérif. Tenue CC.          | <input type="checkbox"/> Disp. de Vérif. Tenue CC. | <input type="checkbox"/> Disp. de Vérif. Tenue CC.                                    |  |
|  |                | <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié | <input type="checkbox"/> Icu Disjoncteur Vérifié   | <input type="checkbox"/> Icu Disjoncteur Vérifié                                      |  |
| Type   | Prot. CI       | Disjonct. C   | Dif.30mA   |   |  |
| RESULTATS FORC.  |                |   |  |   |  |
| forcé <input checked="" type="checkbox"/>  | Nb             | Phase   | forcé <input checked="" type="checkbox"/>          | 1   | 2,5 mm²                                |
|  | Nb             | Neutre  |  | 1   | 2,5 mm²                                |
|  | Nb             | PE/PEN  |  | 1   | 2,5 mm²                                |
| Taux Harm.   | N Chargé       |   |  |   | Non                                    |
| Protection   |                | iC60L   |  |   |  |
|  |                | Type AC   |  |   |  |
| Calibre  | Ir             | Im/Isd/IN Fus.  | 16 A   | 153,6 A   |  |
| K/Cal.   | Tr             | Tempo   | 1  |   |  |
| Déclencheur  | Li off         | IΔn   | Standard (C)                                       | 30 mA   |  |
| Therm. Aval  | Li             | Δt  | Sur circuit  | 0 ms  |  |
| RESULTATS  |                |   |  |   |  |
| Câble  | Neutre         | PE/PEN  | 3G2,5  |   |  |
| Critère  | IB             | FORC  | 16,00 A  |   |  |
| S Th.  | Iz             | 1,138 mm²   | 26,12 A  |   |  |
| Im / Isd Max   | Ik Am/Av       | 16,1 kA   | / 3,1 kA   | /   | /                                      |
| Sélectivité  | Association    | I<0,50kA  | Sans   |   |  |
| INFOS IK / PROTECTION  |                |   |  |   |  |
| Icu / Icm  | Icu Assoc.     | Ip  | 50 kA  | 50 kA   | 2,03 kA                                |
| Icu Uni.   | Icu Uni. Asso. | 25 kA   |  |   |  |
| Tmax. Prot.  | Déclencheur    | 400 ms  | 2P2D   |   |  |
| Contacteur   | Relais therm.  | mg21fr1.dmi   |  |   |  |
| Constructeur   |                |   |  |   |  |
| SELECTIVITE  |                |   |  |   |  |
| Limite   | A partir de    | 500 A   |  |   |  |
| Thermique  | Différentielle | Avec  | Sans objet   |   |  |
| Sélectivité logique  |                | <input type="checkbox"/>                                    | <input type="checkbox"/>                           | <input type="checkbox"/>  |  |
| T1   | T2             |   |  |   |  |
| IK EXTREMITE   |                |   |  |   |  |
| Ik3 Max  | Ik2 Min        | If  |  |   |  |
| Ik2 Max  | Ik1 Min        | Ik1 Max   | 1999 A   | 3084 A  |  |
|  |                | B   | MISE A JOUR  |   |  |
|  |                | A   | CREATION   |   |  |
|  |                | Ind.  | MODIFICATIONS                                      |   |  |
|  |                |   | CCTVI - H2 STATION SORIGNY                         |   |  |
| Date:  | 22/09/2022     | Norme:  | C1510020   |   |  |
|  |                | Avis Technique ELIE   |  |  |  |
|  |                | Fiche de calcul 3 circuits TGBT TGBT-FM11                   |  |   |  |
| AFFAIRE:   |                | P.0515342   |  | Folio   |  |
| PLAN:  |                | 040- NC   |  | 24  |  |
|  |                |   |  | 24  |  |