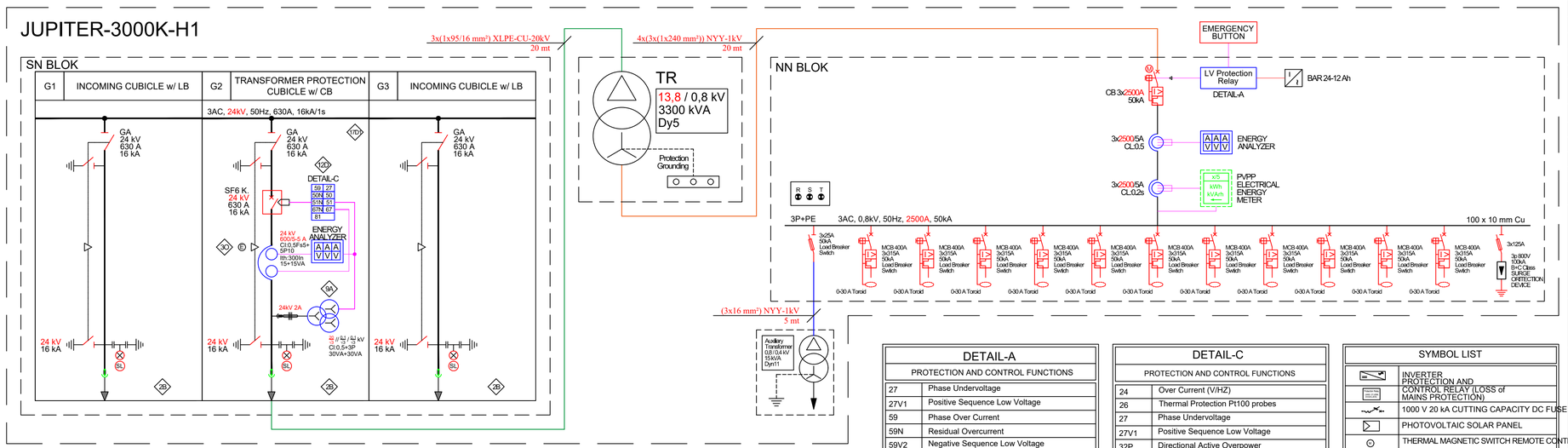


| DETAIL-A | |
|---|---|
| PROTECTION AND CONTROL FUNCTIONS | |
| 27 | Phase Undervoltage |
| 27V1 | Positive Sequence Low Voltage |
| 59 | Phase Over Current |
| 59N | Residual Overcurrent |
| 59V2 | Negative Sequence Low Voltage |
| 59Uavg | Average Overvoltage |
| 81O/81U | Underfrequency and Overfrequency |
| 81R | Frequency Rate of Charge |
| BF | Current Breaker Error |
| 74TCS | Trip Circuit Control |
| ARF | Automatic Reclosing (Optional for PV Plants) |

| DETAIL-C | |
|---|---|
| PROTECTION AND CONTROL FUNCTIONS | |
| 24 | Over Current (V/HZ) |
| 26 | Thermal Protection Pt100 probes |
| 27 | Phase Undervoltage |
| 27V1 | Positive Sequence Low Voltage |
| 32P | Directional Active Overpower |
| 32Q | Directional Reactive Low Power |
| 37P | Directional Active Low Power |
| 37Q | Directional Reactive Low Power |
| 46 | Negative Sequence Overcurrent |
| I2/I1 | Negative/Positive component Current Ratio |
| 49 | Thermal Image (for faults and transformers) |
| 50/51 | Phase Over Current |
| 50N/51N | Residual Overcurrent |
| 51V | Voltage Control Overcurrent |
| 55 | Minimum Power Factor |
| 59 | Phase Over Current |
| 59N | Residual Overcurrent |
| 59V2 | Negative Sequence Low Voltage |
| 67 | Phase Directional Overcurrent |
| 67N | Earth Direction Overcurrent |
| 81O/81U | Underfrequency and Overfrequency |
| 81R | Frequency Rate of Charge |
| BF | Current Breaker Error |
| 79 | Automatic Reclosing |
| 79CT | CT Control |
| 74VT | VT Control |
| 74TCS | Trip Circuit Control |

| SYMBOL LIST | |
|---|---|
| | INVERTER |
| | PROTECTION AND CONTROL RELAY (LOSS of MAINS PROTECTION) |
| | 1000 V 20 kA CUTTING CAPACITY DC FUSE |
| | PHOTOVOLTAIC SOLAR PANEL |
| | THERMAL MAGNETIC SWITCH REMOTE CONTROL TER. |
| | CURRENT MEASUREMENT TRANSFORMER |
| | VOLTAGE TRANSFORMER |
| | CIRCUIT BREAKER |
| | LOAD BREAKER |
| | ONE WAY ELECTRICAL ENERGY METER |
| | DUAL ELECTRICAL ENERGY METER |
| | SURGE ORITECTION DEVICE |
| | THERMAL MAGNETIC SWITCH (MOTOR SWITCH) |
| | THERMAL MAGNETIC CIRCUIT BREAKER |
| | 1000 VDC 10 kA gPV CARTRIDGE FUSE |
| | SIGNAL LAMP |
| | 65x65x7mm 1750mm GALVANIZED STEEL ANG |
| | THERMO-SOURCE CABLE / CONDUCTOR CONNE |

| VERSION / VERZIJA | DATE / DATUM | DESIGNED BY / PROJEKTOVAO | CHECKED BY / KONTROLA | APPROVED BY / ODOBRIO | DESCRIPTION / OPIS |
|---|---|---|---|---|---|
| 0.1 | | | | | |

**REVISIONS** / *REVIZIJE*

| DESIGNED BY / *PROJEKTOVAO* | CHECKED BY / *KONTROLISAO* | APPROVED BY / *ODOBRIO* |
|---|---|---|
| Aleksandar Janjić, dipl. inž. elektr. | Radovan Ćeramilac | Jeremy Lazenby |
| **VERSION** / *VERZIJA* | **SCALE** / *SKALA* | **DATE** / *DATUM* |
| | | Decembar 2024 |

**DRAWING NO** / *BROJ CRTEŽA*: **WB28SRBENE02-111-CD-EL-DWG-007**

**DRAWING TITLE** / *NAZIV CRTEŽA*:

**Single-pole scheme of the JUPITER-3000K-H1 substation** / *Jednopolna šema trafostanice JUPITER-3000K-H1*

**SUBPROJECT** / *PROJEKTANT*

**GOPA-INTERNATIONAL ENERGY CONSULTANTS GMBH**
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**Knez Mihajlova 1-3, 11000 Beograd**
**Broj Licence: 002174027 2024 14810 005 000 000 001**

intec GOPA International Energy Consultants

**SUBPROJECT COMPONENT** / *DEO PROJEKTA*

**Book 4** / *Sveska 4*
**Project of electrical installations** / *Projekat elektroenergetskih instalacija*
**Conceptual design** / *Idejno rešenje*

**BENEFICIARY** / *kORISNIK*

**Akcionarsko društvo Elektro privreda Srbije** / *Joint stock company Elektro privreda Srbije*
**Balkanska 13**

**LOGO OF THE BENEFICIARY**

EPS

**PROJECT** *XXXXXXXX*

**Western Balkans Investment Framework (WBIF)**
**Infrastructure Project Facility Technical Assistance 11 (IPF11)**

**This project is funded by the European Union**

15 years Western Balkans Investment Framework WBIF BUILDING THE EUROPEAN FUTURE TOGETHER | BLENDING PUBLIC PRIVATE GUARANTEES

European Investment Bank | Global

Project Management

COWI | IPF11

In consortium with CeSTRA, GOPA, Detecon, TRENECON

Designer

765 x 765x297