

Certificate of Acceptance

OFFICIAL
PA05/05344

Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022

Class II FSP Switchgear Assembly (Type: FSP01 and FSP02)

Product Description

Class II FSP Switchgear Assembly (Type: FSP01 and FSP02) for Signalling Power Supplies.

Typical Product Image



Scope of Acceptance

Full Acceptance

Full acceptance as per the User and Manufacturer's conditions detailed within this certificate.

Network Rail Acceptance Panel (NRAP) hereby authorises the product above for use and trial use on railway infrastructure for which Network Rail is the Infrastructure Manager under the ROGS regulations.

Reviewed by:

Authorised by:



Aamir Malik
Product Acceptance Coordinator



Felix Langley
Network Technical Head of Power Distribution HV/LV

Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022

Specific Conditions

The following Conditions are specific to the approved product/s contained within this Certificate. These conditions must be adhered to in addition to the Network Rail General Conditions contained within the "General Terms and Conditions" section.

Failure to adhere to these conditions may result in the withdrawal or suspension of Acceptance of some, or all of the items contained within the accepted configuration.

Manufacturer

- 1) The Class II 'Power Block' production units shall be tested in accordance with section 4.5.2 of NR/L2/SIGELP/27409 (Class II dielectric test). Test records along with photos for each production unit shall be maintained for traceability of Class II tests.
- 2) In addition the Class II 'Power Block' production units shall be tested in accordance with Inspection & Test Report Class II rev3 and Mechanical Test Report 2.0. All Testing shall be conducted as per Inspection & Test Procedure ILS100023 rev2.3.
- 3) All Class II 'Power Block Compact' production units shall be tested in accordance with section 4.5.2 of NR/L2/SIGELP/27409 (Class II dielectric test). Test records along with photos for each production unit shall be maintained for traceability of Class II tests.
- 4) All Class II 'Power Block Compact' production units shall be tested in accordance with ILS100042 Inspection & Test Report Class II rev2.3 and ILS100042 Mechanical Test Report rev1.1. All testing shall be conducted as per the ILS100042 Test Procedure r2.4.

User

The Class II 'Power Block' product range is suitable for use as a Class II FSP Switchgear Assembly in accordance with NR/L2/SIGELP/27409.

Where Class II 'Power Block' is used in Class I installations the continuity of the protective conductors or bonding must be maintained.

Note: The use of Class II Switchgear Assemblies alone in Class I installations does not provide full protective measures as detailed in NR/L2/SIGELP/27410.

The following application criteria and installation constraints shall be complied with:

- 1) A Class II installation is satisfied if the Class II 'Power Block' is installed in conjunction with other system components in accordance with NR/L2/SIGELP/27410.
- 2) Only for use as categories FSP01 and FSP02 in accordance with NR/L2/SIGELP/27409.
- 3) Use limited to a single end fed radial system (or branch from the main distribution system) (FSP 01 & FSP02); manual reconfiguration dual end fed system (FSP02).
- 4) FSP Switchgear Assemblies for use with 2 core cable in accordance with NR/L2/SIGELP/27408 or unarmoured B2/D2 EPR cable to NR/PS/SIG/00005 or other legacy 2 core unarmoured cable.
- 5) Functional circuit protection feeding transformers shall be in accordance with approved transformer manufacturer recommendations. The use of MCB or MCCB over current protective devices in the switchgear assembly will require a product change request in accordance with Application For Configuration Change Or Update.
- 6) Not to be used in subsurface environments in accordance with section 12 stations and locations.
- 7) The Class II 'Power Block' shall not be installed in signalling distribution feeders, where the PSP outgoing or source feeder protection exceeds a BS 88 63A at AC22 or equivalent protective device.
- 8) Where Overvoltage protection is specified or fitted it shall be a Product Approved 2 Wire Overvoltage protection device in accordance with NR/L2/SIGELP/27410, or Mersen equivalent unit as detailed in the engineering case dated 20/05/2022.
- 9) Class II 'Power Block' properties suitable for installation in marine/aggressive applications.
- 10) Where Class II 'Power Block' is damaged externally and requires repair in accordance with the O&M manual, this shall be undertaken by the original manufacturer.





Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022

- 11) Class II FSP Switchgear Assemblies shall not be drilled on site. Brass glands (Metallic) shall only be used with fully Insulated Adaptor Reducer, with a dielectric strength exceeding 3.5KV, in accordance with NR/L2/SIGELP/27410.
- 12) Class II FSP Switchgear Assembly (Type: FSP01 and FSP02)–ABB E90 series IEC 60269 Fuse holders shall only be used in conjunction with Signalling Transformers in accordance with NR/L2/SIGELP/30007 and shall not be used to connect to Signalling transformers in accordance with BR924A.
- 13) Power Block Compact 300 is limited to a maximum feeder cable size of 35mm² Copper (Cu) cable.
- 14) Power Block Compact 400 is limited to a maximum feeder cable size of 120mm² Copper (Cu) cable.


Product Configuration: Issue 5

Class II FSP Switchgear Assembly (Type: FSP01 and FSP02)–CAMaster BS88 Fuse-holders




| Part Number | Distribution Switches | Functional Switches | Auxiliary Switches | Fuses | Drawing Ref/ Image | Catalogue Number |
|--|---|---------------------|--------------------|-------|---|------------------|
| PL-CII/1SW-SL | 2 | 1 | 0 | 2 | 170112-020 | 054/213850 |
| | Power Block 1 switch, Single Layer without ESP | | | |  | |
| Class II distribution unit rated to 690V fitted with Ring Power IN and OUT Isolators. One switched & fused output functional supply. Fuse-carriers to be BS88 (CAMaster). | | | | | | |
| PL-CII/2SW-SL | 2 | 2 | 0 | 4 | 02-21-129 | 054/213851 |
| | Power Block 2 switch, Single Layer without ESP | | | |  | |
| Class II distribution unit rated to 690V fitted with Ring Power IN and OUT Isolators. Two switched & fused output functional supplies. Fuse-carriers to be BS88 (CAMaster). | | | | | | |
| PL-CII/2SW-ESP-SL | 2 | 2 | 0 | 4 | 170327-348 | 054/213852 |
| | Power Block 2 switch, Single Layer with ESP | | | |  | |
| Class II distribution unit rated to 690V fitted with Ring Power IN and OUT Isolators. Two switched & fused output functional supplies. One switched & fused internal supply to Surge Arrestor. Built-in Surge Arrestor. Fuse-carriers to be BS88 (CAMaster). | | | | | | |
| PL-CII/3SW-SL | 2 | 3 | 0 | 6 | 03-12-585 | 054/213853 |
| | Power Block 3 switch, Single Layer without ESP | | | |  | |
| Class II distribution unit rated to 690V fitted with Ring Power IN and OUT Isolators. Three switched & fused output functional supplies. Fuse-carriers to be BS88 (CAMaster). | | | | | | |

Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022

| Part Number | Distribution Switches | Functional Switches | Auxiliary Switches | Fuses | Drawing Ref/ Image | Catalogue Number |
|--------------------------|--|---------------------|--------------------|-------|---|------------------|
| | 2 | 3 | 0 | 6 | 02-20-314 | |
| PL-CII/3SW-ESP-SL | Power Block 3 switch, Single Layer with ESP | | | |  | 054/213854 |
| | Class II distribution unit rated to 690V fitted with Ring Power IN and OUT Isolators. Three switched & fused output functional supplies. One switched & fused internal supply to Surge Arrestor. Built-in Surge Arrestor. Fuse-carriers to be BS88 (CAMaster). | | | | | |

Class II FSP Switchgear Assembly (Type: FSP01 and FSP02)–ABB E90 series IEC 60269 Fuse-holders

| Part Number | Distribution Switches | Functional Switches | Auxiliary Switches | Fuses | Drawing Ref/ Image | Catalogue Number |
|--------------------------|--|---------------------|--------------------|-------|---|------------------|
| | 2 | 1 | 0 | 2 | 03-24-403 | |
| PL-CII/1SW-SL-IEC | Power Block 1 switch, Single Layer without ESP | | | |  | 054/213855 |
| | Class II distribution unit rated to 690V fitted with Ring Power IN and OUT Isolators. One switched & fused output functional supply. Fuse-carriers to be IEC 60269 (ABB) | | | | | |
| | 2 | 2 | 0 | 4 | 02-22-083 | |
| PL-CII/2SW-SL-IEC | Power Block 2 switch, Single Layer without ESP | | | |  | 054/213856 |
| | Class II distribution unit rated to 690V fitted with Ring Power IN and OUT Isolators. Two switched & fused output functional supplies. Fuse-carriers to be IEC 60269 (ABB) | | | | | |
| | 2 | 3 | 0 | 6 | 03-10-248 | |
| PL-CII/3SW-SL-IEC | Power Block 3 switch, Single Layer without ESP | | | |  | 054/213857 |
| | Class II distribution unit rated to 690V fitted with Ring Power IN and OUT Isolators. Three switched & fused output functional supplies. Fuse-carriers to be IEC 60269 (ABB) | | | | | |

Hardware (Maintenance Spares and Line Replaceable Units)

| Part No. | Description | Image | Catalogue No. |
|----------|---|-------|---------------|
| -- | E 91/32 Fuse-disconnector for 10.3 x 38mm fuses | | 054/213860 |



Certificate of Acceptance

OFFICIAL
PA05/05344

Manufacturer:
ILECSYS Ltd


Issue : 8
Valid From : 22/07/2022

Class II FSP Switchgear Assembly (Type: FSP01 and FSP02) – Compact Range

| | | | | | | |
|----------------------------|---|---|---|---|---|------------|
| PL- CII/3SW- SLC-35 | 2 | 3 | 0 | 6 | 03-28-560 | 054/213858 |
| | Power Block Compact 300, 3 switch, Single Layer without ESP Class II distribution unit rated to 690V fitted with Ring Power IN and OUT Isolators. Three switched & fused output functional supply. Fuse-carriers to be IEC 60269 (ABB). Switchgear height 300mm | | | |  | |
| PL- CII/3SW- SLC-120 | 2 | 3 | 0 | 6 | 03-21-348 | 054/213859 |
| | Power Block Compact 400, 3 switch, Single Layer without ESP Class II distribution unit rated to 690V fitted with Ring Power IN and OUT Isolators. Three switched & fused output functional supplies. Fuse-carriers to be IEC 60269 (ABB). Switchgear height 400mm | | | |  | |




Product Configuration: Issue 6 - Additional Switchgear Assembly Modules

System or Complete Assembly

| Part Number | Distribution Switches | Functional Switches | Auxiliary Switches | Fuses | Drawing Ref/ Image | Catalogue Number |
|--|-----------------------|---------------------|--------------------|-------|---|------------------|
| PL- CII/6SW- SLC-001 | 1 | 6 | 0 | 12 | 171201-1363 | |
| FSP-01 Single End Fed Switch Box - 6SW Functional Supply Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) Suitable for Copper (Cu) 2C feeder cables • Cable size $\leq 35\text{mm}^2$ • Dimensions [(W x H x D) mm] - 600 x 300 x 275 • Weight - 19kg | | | | |  | 054/213865 |

Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022




| Part Number | Distribution Switches | Functional Switches | Auxiliary Switches | Fuses | Drawing Ref/ Image | Catalogue Number |
|------------------------|--|---------------------|--------------------|-------|---|------------------|
| PL-CII/6SW-SLC-2B | 2 | 6 | 0 | 12 | 170330-377 | 054/213866 |
| | FSP-02 Dual End Fed Switch Box - 6SW Functional Supply Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) • Suitable for Copper (Cu) 2C feeder cables Cable size $\leq 35\text{mm}^2$ • Dimensions [(W x H x D) mm] - 600 x 300 x 275 • Weight - 19kg | | | |  | |
| PL-CII/6SW-SLC-ESP/ABB | 1 | 6 | 0 | 12 | 03-19-100 | 054/213867 |
| | FSP-01 Single End Fed Switch Box - 6SW Functional Supply with ESP Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) • Supplied with ESP • Suitable for Copper (Cu) 2C feeder cables • Cable size $\leq 35\text{mm}^2$ • Dimensions [(W x H x D) mm] - 600 x 300 x 275 • Weight – 19kg | | | |  | |
| PL-CII/3SW-SLC-ESP-120 | 2 | 3 | 0 | 6 | 180130-083 | 054/213868 |
| | FSP-02 Dual End Fed Manually Reconfigurable Switch Box - 2 Functional Switches with ESP Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) • Supplied with ESP • Suitable for copper (Cu) or aluminium (Al) 2C feeder cables. • Cable size 16-120mm² • Dimensions [(W x H x D) mm] - 400 x 400 x 275 (496W x 435H including mounting bracket) • Weight – 12kg | | | |  | |

Certificate of Acceptance

OFFICIAL
PA05/05344




Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022

| Part Number | Distribution Switches | Functional Switches | Auxiliary Switches | Fuses | Drawing Ref/ Image | Catalogue Number |
|----------------------------|--|---------------------|--------------------|-------|---|------------------|
| PL-CII/3SW-SL-IEC120-A-ESP | 2 | 3 | 0 | 6 | 160407-310 | 054/213869 |
| | FSP-02 Dual End Fed Manually Reconfigurable Switch Box - 2 Functional Switches with ESP & 650V Spur Switch Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) • Supplied with ESP • Suitable for copper (Cu) or aluminium (Al) 2C feeder cables. • Cable size 16-120mm² • Dimensions [(W x H x D) mm] - 400 x 400 x 275 (496W x 435H including mounting bracket) • Weight - 12kg • One Functional Supply with one 650V Spur cable size up to 120mm Cu/Al | | | |  | |
| PL-CII/4SW-SLC-IEC120 | 2 | 4 | 0 | 8 | 160915-835 | 054/213870 |
| | Dual End Fed Manually Reconfigurable Switch Box - 4 Functional Switches Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) • Suitable for copper (Cu) or aluminium (Al) 2C feeder cables. • Cable size 120mm² • Dimensions [(W x H x D) mm] - 400 x 400 x 275 • Weight – 12kg | | | |  | |
| PL-CII/4SW-SLC-IEC120-ESP | 2 | 3 | 1 | 8 | 151023-748 | 054/213871 |
| | Dual End Fed Manually Reconfigurable Switch Box - 3 Functional Switches with ESP Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) • Supplied with ESP • Suitable for copper (Cu) or aluminium (Al) 2C feeder cables. • Cable size 120mm² • Dimensions [(W x H x D) mm] - 400 x 400 x 275 • Weight – 12kg | | | |  | |

Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022


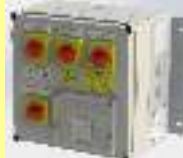
| Part Number | Distribution Switches | Functional Switches | Auxiliary Switches | Fuses | Drawing Ref/ Image | Catalogue Number |
|--------------------------------|---|---------------------|--------------------|-------|---|------------------|
| PL-CII/4SW-SLC-IEC-120-ESP-K4C | 2 | 3 | 1 | 8 | 180220-149 | 054/213872 |
| | Dual End Fed Manually Reconfigurable Switch Box - 3 Functional Switches with ESP Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) • Supplied with ESP • Suitable for Aluminium (Al) or Copper (Cu) 2/4C feeder cables. • Cable size 16 - 120mm² • Weight – 19kg | | | |  | |
| FSP01/2S W-SL-IEC/ESP-95 | 1 | 2 | 0 | 4 | 170217-162 | 054/213873 |
| | FSP-01 / 04 Single End Fed Manually Reconfigurable Switch Box - 2 Functional Switches with ESP Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) • Supplied with ESP • Suitable for copper (Cu) or aluminium (Al) 2C feeder cables. • Cable size 16-95mm² • Dimensions [(W x H x D) mm] - 300 x 300 x 225 • Weight – 8kg • One transformer functional supply (SWA) • Suitable for use with single end fed feeder | | | |  | |
| FSP01/2S W-SL-IEC/ESP-120 | 1 | 2 | 0 | 4 | 170217-163 | 054/213874 |
| | FSP-01 / 04 Single End Fed Manually Reconfigurable Switch Box - 2 Functional Switches with ESP Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) • Supplied with ESP • Suitable for copper (Cu) or aluminium (Al) 2C feeder cables. • Cable size 35-120mm² • Dimensions [(W x H x D) mm] - 300 x 300 x 225 • Weight - 9kg • One transformer functional supply (SWA) • Suitable for use with single end fed feeder | | | |  | |

Certificate of Acceptance

OFFICIAL
PA05/05344

Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022


| Part Number | Distribution Switches | Functional Switches | Auxiliary Switches | Fuses | Drawing Ref/ Image | Catalogue Number |
|--------------------------------|--|---------------------|--------------------|-------|---|------------------|
| PL-CII/2SW-SL-IEC/ESP-95/RING | 2 | 2 | 0 | 4 | 170217-164 | 054/213875 |
| | FSP-02 Dual End Fed Manually Reconfigurable Switch Box - 2 Functional Switches with ESP Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) • Supplied with ESP • Suitable for copper (Cu) or aluminium (Al) 2C feeder cables. • Cable size 16-95mm² • Dimensions [(W x H x D) mm] - 300 x 300 x 225 • Weight - 8kg • One transformer functional supply (SWA) • Suitable for use with dual end fed feeder | | | |  | |
| PL-CII/2SW-SL-IEC/ESP-120/RING | 2 | 2 | 0 | 6 | 170217-165 | 4/213876 |
| | FSP-02 Dual End Fed Manually Reconfigurable Switch Box - 2 Functional Switches with ESP Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) • Supplied with ESP • Suitable for copper (Cu) or aluminium (Al) 2C feeder cables. • Cable size 35-120mm² • Dimensions [(W x H x D) mm] - 300 x 300 x 225 • Weight - 9kg • One transformer functional supply (SWA) • Suitable for use with dual end fed feeder | | | |  | |

Certificate of Acceptance

OFFICIAL
PA05/05344


Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022

| Part Number | Distribution Switches | Functional Switches | Auxiliary Switches | Fuses | Drawing Ref/ Image | Catalogue Number |
|-------------------|---|---------------------|--------------------|-------|---|------------------|
| ILS100047 /299 | 0 | 1 | 1 | 4 | 170613-639 | 054/213877 |
| | FSP01 Complete with ESP and Earth Connection Box (ECB) Assembly <ul style="list-style-type: none"> Suitable for the fast and efficient upgrade of 'Legacy' location cases or new installations Class II distribution unit(FSP04) rated to 690V fitted with 63A line isolator Functional supply fuse carriers - ABB IEC60269 (10x38mm) One switched and fused output functional supply ECB box suitable for the termination of 3 core armoured cable to retain the Class II integrity of the FSP04 Cable size 16-95mm² Dimensions [(W x H x D) mm] - 200 x 500 x 225 Weight - 10kg Front cover hinged on left hand side | | | |  | |

Product Configuration: Issue 8 – Sliding Gland Plate Modules

System or Complete Assembly



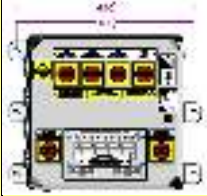
| Part Number | Distribution Switches | Functional Switches | Auxiliary Switches | Fuses | Drawing Ref/ Image | Catalogue Number |
|-------------------------------|--|---------------------|--------------------|-------|---|------------------|
| PL- CII/3SW120/ GP-650V | 2 | 3 | 0 | 6 | 200317-5125 | 054/213878 |
| | FSP-01/02 Single End Fed Switch Box - 3SW Functional Supply Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> Full Class II specification. Assembly insulation dielectric strength certified to 10kV Functional supply fuse carriers - ABB IEC60269 (10x38mm) Suitable for Copper (Cu) and Aluminium (Al) 2C feeder cables Cable size $\leq 70\text{mm}^2$, $\leq 120\text{mm}^2$ with constraints Dimensions [(W x H x D) mm] - 300 x 400 x 275 Weight - 10kg For use with voltages up to 650V A.C. | | | |  | |

Certificate of Acceptance

OFFICIAL
PA05/05344

Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022

| Part Number | Distribution Switches | Functional Switches | Auxiliary Switches | Fuses | Drawing Ref/ Image | Catalogue Number |
|------------------------------|---|---------------------|--------------------|-------|---|------------------|
| PL-CII/3SW120-ESP-GP-650V | 2 | 2 | 1 | 6 | 210107-6479 | 054/213879 |
| | FSP-01/02 Single End Fed Switch Box - 3SW Functional Supply – With ESP Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) Suitable for Copper (Cu) and Aluminium (Al) 2C feeder cables • Cable size $\leq 70\text{mm}^2$, $\leq 120\text{mm}^2$ with constraints • Dimensions [(W x H x D) mm] - 300 x 400 x 275 • Weight - 10kg • For use with voltages up to 650V A.C. | | | |  | |
| PL-CII/4SW120-CT/GP-650V | 2 | 4 | 0 | 8 | 201221-6416 | 054/213880 |
| | FSP-01/02 Single End Fed Switch Box - 4SW Functional Supply Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) Suitable for Copper (Cu) and Aluminium (Al) 2C feeder cables • Cable size $\leq 120\text{mm}^2$ • Dimensions [(W x H x D) mm] - 400 x 400 x 275 • Weight - 12kg • For use with voltages up to 650V A.C. | | | |  | |
| PL-CII/4SW120-ESP-CT/GP-650V | 2 | 3 | 1 | 8 | 210107-6480 | 054/213881 |
| | FSP-01/02 Single End Fed Switch Box - 4SW Functional Supply- With ESP Isolation and distribution enclosure for 650V signalling systems, rated current 63A <ul style="list-style-type: none"> • Full Class II specification. • Assembly insulation dielectric strength certified to 10kV • Functional supply fuse carriers - ABB IEC60269 (10x38mm) Suitable for Copper (Cu) and Aluminium (Al) 2C feeder cables • Cable size $\leq 120\text{mm}^2$ • Dimensions [(W x H x D) mm] - 400 x 400 x 275 • Weight - 12kg • For use with voltages up to 650V A.C. | | | |  | |

Certificate of Acceptance

OFFICIAL
PA05/05344

Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022

Assessed Documentation

| Reference | Title | Doc. Rev. | Date and Applies to Cert. issue No. | |
|---------------------|---|-----------|-------------------------------------|---|
| | PA05/05344 Evidence zip file (Contains NR & iLecsys Folders) | | 02/01/2013 | 1 |
| ILS100023 | PA05/05344 Acceptance Requirements Response (Cover Letter) | | undated | 1 |
| NR/SE/AR/CII | PA05/05344 Sponsors Report | | 12.12.2012 | 1 |
| ILS100023 | PA05/05344 Appendix Directory (NR & iLecsys) | | 19.11.2012 | 1 |
| ILS100023 | Compliance Matrix to NR/L2/ELP/27409 | | 15.11.2012 | 1 |
| ILS100023 | Compliance Matrix to BS 7671(Extract) | | 15.11.2012 | 1 |
| ILS100023 | Compliance Matrix to BS EN 61439 (Extract) | | 15.11.2012 | 1 |
| - | Certificates folder | | 02/01/2013 | 1 |
| - | Components (Data Sheets) folder | | 02/01/2013 | 1 |
| - | Reports folder | | 02/01/2013 | 1 |
| - | Supporting Documents folder | | 02/01/2013 | 1 |
| - | Drawings (GA & Wirings) folder | | 02/01/2013 | 1 |
| ILS100023_PA05/5344 | O&M Manual Version 1.7 | | 09/01/2013 | 1 |
| - | Images/Photographs | | 02/01/2013 | 1 |
| - | Test Data (Additional Videos) | | 02/01/2013 | 1 |
| - | iLecsys Test Reports Covering Letter | | 14.12.2012 | 1 |
| 19056 | ISO9001:2008 certificate | | 20.07.2011 | 1 |
| | Link up Certificate | | 08.01.2013 | 1 |
| | PA05/05344/1 Evidence zip file (Contains iLecsys Change Evidence Folders) | | 08/07/13 | 2 |
| | PA05/05344/1 Application for Configuration Change | | 08/07/13 | 2 |
| | PA05/05344/2 Evidence zip file (Contains iLecsys Change Evidence Folders) | | 14/04/2014 | 4 |
| | PA05/05344/2 Application for Configuration Change | | 11/07/2013 | 4 |
| | | | | |
| 03-15-129 iss B | Schematic | Iss B | 29/03/2018 | 6 |
| 03-19-100 iss B | GA Drawing | Iss B | 29/03/2018 | 6 |
| 151023-748 iss B | GA Drawing | | 29/03/2018 | 6 |
| 151113-813 iss A | Schematic | | 29/03/2018 | 6 |
| 160407-310 iss A | GA Drawing | | 29/03/2018 | 6 |
| 160915-835 iss A | GA Drawing | | 29/03/2018 | 6 |
| 160915-838 iss A | Schematic | | 29/03/2018 | 6 |
| 170217-162 iss A | GA Drawing | | 29/03/2018 | 6 |
| 170217-163 iss A | GA Drawing | | 29/03/2018 | 6 |
| 170217-164 iss A | GA Drawing | | 29/03/2018 | 6 |
| 170217-165 iss A | GA Drawing | | 29/03/2018 | 6 |
| 170323-331 iss A | Schematic | | 29/03/2018 | 6 |
| 170330-377 iss B | GA Drawing | | 29/03/2018 | 6 |
| 170421-464-01 iss A | Schematic | | 29/03/2018 | 6 |
| 170613-639 iss C | GA Drawing | | 29/03/2018 | 6 |
| 170821-910 iss A | Schematic | | 29/03/2018 | 6 |

Certificate of Acceptance

OFFICIAL
PA05/05344

Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022

| Reference | Title | Doc. Rev. | Date and Applies to Cert. issue No. | |
|-----------------------|---|-----------|-------------------------------------|---|
| 170821-911 iss A | Schematic | | 29/03/2018 | 6 |
| 170822-919 iss A | Schematic | | 29/03/2018 | 6 |
| 170822-920 iss A | Schematic | | 29/03/2018 | 6 |
| 170822-923 iss A | Schematic | | 29/03/2018 | 6 |
| 171201-1363 iss A | GA Drawing | | 29/03/2018 | 6 |
| 180130-083 iss A | GA Drawing | | 29/03/2018 | 6 |
| O&M ILS100042 | O&M Manual - Compact Class II Power Block Single Layer | v1.5 | 29/03/2018 | 6 |
| ILS100042 6SW | OM Manual for 6 SW Assemblies | v1.1 | 29/03/2018 | 6 |
| Engineering case | Engineering Case for change | | 29/03/2018 | |
| Safety case | Safety Case for change | | 29/03/2018 | 6 |
| Siemens Product Guide | Product configuration guide | _v7.0 | 29/03/2018 | 6 |
| | Email from Ernie Brigden requesting symbol change for cable sizes to ≤ on three items | | 01/11/2019 | 7 |
| | Folder of documentation '05344 – iLecsys Gland Plate' | | 11/07/2022 | 8 |

Manuals and Training Materials

| Reference | Title | Doc. Rev. | Date and Applies to Cert. issue No. | |
|----------------------|--|-----------|-------------------------------------|---|
| ILS100023_PA05/05344 | O&M Manual | 1.6 | 09/01/2013 | 1 |
| ILS100042_PA05/05344 | O&M Manual | 1.4 | 14/04/2014 | 4 |
| O&M ILS100042 | O&M Manual - Compact Class II Power Block Single Layer | v1.5 | 29/03/2018 | 6 |
| ILS100042 6SW | OM Manual for 6 SW Assemblies | v1.1 | 29/03/2018 | 6 |

Certificate History

| Issue | Date | Issue History |
|-------|------------|--|
| 1 | 04/07/2013 | First accepted for use |
| 2 | 12/07/2013 | Amended to include new components and new scope of acceptance as per configuration change request PA05/05344/1 |
| 3 | 27/08/2013 | Scope of acceptance amended. |
| 4 | 11/05/2014 | Amended to include new configurations and new scope of acceptance as per configuration change request PA05/05344/2 |
| 5 | 09/10/2014 | Amended to include 91/32 Fuse-disconnector for 10.3 x 38mm fuses |
| 6 | 29/03/2018 | Amended to include new switch assembly configurations and additional earth connection boxes |
| 7 | 01/11/2019 | Symbol change for cable sizes to ≤ on three items |
| 8 | 22/07/2022 | Addition of split gland plate units and addition of Mersen surge protection devices. |

Certificate of Acceptance

OFFICIAL
PA05/05344

Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022

Contact Details

Manufacturer

Peter Dickson

pjd@ilecsys.co.uk

Applicant

Russell Cordingley

Russell.Cordingley@networkrail.co.uk

Lead Reviewing Engineer

Clare Yeowart

clare.yeowart@networkrail.co.uk

Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022

General Terms & Conditions

1) General

- 1) This certificate can only be amended by Network Rail Product Acceptance, the Professional Head or nominated delegate. Any alterations made by a other persons will invalidate the entire certificate.
- 2) Failure to abide by the requirements in this Certificate of Acceptance may invalidate the certificate, thereby restricting the right to operate the product and / or limiting the future supply and deployment of the product on the infrastructure.
- 3) Upon the review date this certificate and the product it relates to is invalid and not accepted for use. Manufacturers are to make an application for a review prior to the review date via the NR sponsoring applicant.

2) Manufacturer

The Manufacturer shall:

- 1) Ensure that all products supplied comply with the standards defined in the Acceptance Requirements or otherwise documented as part of the assessment, including meeting the reliability requirements included in the Network Rail Design for Reliability Standard(DFR) NR-L2-RSE-0005 and in any deed of warranty for the relevant certificate number.
- 2) Notify Network Rail Product Acceptance:
 - a. Within 48 hours, of any deficiencies affecting the quality, functionality or safety integrity of the product (including corrective action undertaken or proposed).
 - b. Of any intended change to the accepted product; changes include:
 - i. a change to the product configuration (to the actual product or its application);
 - ii. a variation to or addition of manufacturing locations or processes;
 - iii. a change in the name or ownership of the manufacturing company;
 - iv. any changes to the ability or intention to support with technical services, spares or repairs.
- 3) The Manufacturer shall provide Network Rail Product Acceptance or National Supply Chain (NSC) at least 12 (twelve) months notice of its intention to discontinue supply or to provide such notice as is reasonable if such discontinuance is outside its control and will offer the opportunity of a Last Time Buy to Network Rail together with date for last order placement and supply of the parts affected. The introduction of proposed alternative products shall be communicated to Network Rail Product Acceptance.
- 4) Provide further copies of operating and maintenance manuals to purchasers / users of the product as necessary (including certificates of conformance, calibration etc).
- 5) Provide further copies of training manuals and an appropriate level of training to purchasers or users of the product as necessary.
- 6) Where applicable, specialist technical support, repairs and servicing of the product shall be carried out by the Original Equipment Manufacturer (OEM) or authorised agent only.
- 7) Network Rail may request information from the manufacturer to prove product compliance with clauses 1 and 2 above and reserve the right to suspend and/or withdraw any application where information is not forthcoming within a reasonable timeframe.
- 8) In accordance with Network Rail's Quality Assurance Policy Statement, where the specification and/or Product Acceptance Certificates specify quality assurance classifications for the products, the manufacturer shall comply with the specified level of quality assurance for each product and allow Network Rail access to carry out its quality assurance checks.
- 9) The manufacturer shall give Network Rail's representatives access at all reasonable times to its premises and allow them to inspect its quality systems and production methods and, if requested, to inspect, examine and test the products both during and after their manufacture and the materials being used in their manufacture.

3) Conditions of Use

Specifiers, installers, operators, maintainers, etc. using the product shall:

- 1) Comply with the certificate conditions. If a condition is not understood guidance must be sought from Network Rail Product Acceptance.
- 2) Check that the application of use complies with the relevant certificate's scope of acceptance.
- 3) Report any defect if it is a design or manufacturing fault likely to affect performance and/or the safe operation of the railway in writing to Network Rail Product Acceptance.
- 4) Inform Network Rail Product Acceptance in writing of a change to the product configuration (or to the actual product or its application).
- 5) Operate, maintain and service the product in accordance with Network Rail standards and Operation and Maintenance manuals as appropriate.
- 6) Be appropriately trained and authorised for the installation, maintenance and use of the product.
- 7) Only send products for repair or reconditioning to the Original Equipment Manufacturer (OEM) or authorised agent.
- 8) Users are to be aware that Product Acceptance is not a substitute for design approval.

Manufacturer:
ILECSYS Ltd

Issue : 8
Valid From : 22/07/2022

4) Compliance

Railways and Other Guided Systems (ROGS) Regulations

1) Where the product is to be used in areas where Network Rail is not the Infrastructure Manager (e.g. leased stations), the sponsor shall additionally obtain formal consent from the Infrastructure Manager for the locality where the equipment is to be installed. This may include a requirement for additional safety verification. The decision of that Infrastructure Manager is binding, and cannot be overridden by Network Rail except by the escalation processes established in the ROGS regulations

2) As required in Railway Group Standard RIS-8270-RST, at each use of this product the project or group responsible for installation and commissioning shall be required to demonstrate compatibility with:

- a. All rail vehicle types that have access rights over the area affected by the change
- b. Infrastructure managed by others
- c. Neighbours.

Railway Interoperability Regulations

3) For interoperable constituents of systems the project or group responsible for installation and commissioning shall be required to demonstrate compliance with the relevant Technical Specifications for Interoperability (TSI) where appropriate.

4) An authorisation from the national safety authority (i.e. the Railway Safety Directorate of the Office of Rail and Road) is required before the equipment is to be used in revenue earning service.

5) Supply Chain Arrangements

1) Certificates of acceptance do not imply any particular quantity of supply nor any exclusivity of supply.

2) Products may be purchased by Network Rail or its agents, suppliers or contractors.

3) Manufacturers should note that it is not necessary to enter into any exclusive supply arrangements with resellers or other suppliers.