Certificate of Acceptance PA05/05342

Manufacturer:
ILECSYS Ltd

Issue : 2
Valid From : 29/03/2018

Class II FSP Switchgear Assemblies

Product Description

Class II FSP Switchgear Assemblies for Signalling Power Supplies

Typical Product Image

Scope of Acceptance

Full Acceptance

Full acceptance as per the User, Manufacturer and Manufacturer (Sub-System Assembly/Modular Integrator) 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:

Tom Riley
Product Acceptance Coordinator

Authorised by:

Kyle Windsor
Acting Professional Head of Power Distribution HV/LV

Manufacturer:
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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) 'Power Block, Class II FSP-Module' production units shall be tested in accordance with section 4.5.2 of NR/L2/SIGELP/27409.2 (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 'Power Block, Class II FSP-03 Module' production units shall be tested in accordance with the following Reports and Schedules;
    - FSP03 AUX Inspection & Test Report rev1.0
    - FSP03 MICRO Inspection & Test Report rev1.0
    - FSP03 POWER Inspection & Test Report rev1.0
    - FSP03 AUX Mechanical Test Report rev1.0
    - FSP03 MICRO Mechanical Test Report rev1.1
    - FSP03 POWER Mechanical Test Report rev1.0
    - Inspection & Test Procedure ILS100013 rev2.0
    - Inspection & Test Procedure ILS100013 rev2.1
    - Inspection & Test Procedure ILS100013 rev2.2
    - Inspection & Test Procedure ILS100013 rev2.3

Manufacturer conditions (Sub-System Assembly/Modular Integrator)

1) Modular and Sub-System Assembly integration into an FSP03 System Assembly shall be in accordance with drawings and schedules detailed in assessed documentation and O&M Manual.
2) FSP03 System Integration Tests shall be in accordance with the following Reports and Schedules;
    - Factory Acceptance Test (FAT) Procedure - FAT 1 3702670A
    - Final Inspection & Test Procedure for Signet 650 Class II Functional Supply Point (Camlin)
    - Final Inspection & Test Report

    Test records for each production unit shall be maintained for traceability of System Integration Tests.

User

The 'Power Block, Class II FSP- Module' product range is suitable for use as a Class II FSP Switchgear Assembly in accordance with NR/L2/SIGELP/27409.2.
The 'Power Block, Class II FSP-03' shall only be installed in Class II Based Signalling Power Distribution Systems in accordance with NR/L2/SIGELP/27410.2.
The following application criteria and installation constraints shall be complied with:

1) A Class II installation is satisfied if the 'Power Block, Class II FSP-Modules' are installed in conjunction with other system components in accordance with NR/L2/SIGELP/27410.2.
2) 'Power Block, Class II FSP-03 Modules' shall only be installed with Approved ASR equipment:
    - Camlin Rail (Signet 650) Auto Reconfiguration Equipment in accordance with Product Certificate PA05/05289 or;
    - Schneider Electric Equivalent.
3) The 'Power Block, Class II FSP-Modules' shall be used in the FSP categories specified in NR/L2/SIGELP/27410.2.
4) 'Power Block, Class II FSP-03' use is limited to a Manual Reconfiguration dual/single end fed system and Automatic Reconfigurable dual end fed system.
5) FSP Switchgear Assemblies for use with 2 core cables in accordance with NR/L2/SIGELP/27408.2 or unarmoured B2/D2 EPR cable to NR/PS/SIG/00005 or other legacy 2 core unarmoured cable.

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6) 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.
7) Not to be used in subsurface environments in accordance with section 12 stations and locations.
8) 'Power Block, Class II FSP-Modules' 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.
9) Where Overvoltage protection is specified or fitted it shall be a Product Approved 2 Wire Overvoltage protection device in accordance with NR/L2/SIGELP/27410.2
10) Only 'Power Block, Class II FSP-Module' assemblies installed within a PADS approved Stainless Steel or GFRP (PA05/06490) full apparatus case are suitable for installation in marine/aggressive applications.
11) Where a 'Power Block, Class II FSP-Module' is damaged externally and requires repair in accordance with the O&M manual, this shall be undertaken by the original manufacturer.
12) Class II FSP Switchgear Assemblies shall not be drilled on site. Only Brass glands (Metallic) shall be used with fully Insulated Adaptor Reducer, with a dielectric strength exceeding 3.5KV, in accordance with NR/L2/SIGELP/27410.2. Insulated glands shall not be used to make off and terminate cable in 'Power Block, Class II FSP-Module' System Assemblies, Sub-system Assemblies and Modules.
13) Class II FSP Switchgear Assemblies that utilise ABB E90 series IEC 60269 Fuse holders shall only be used in conjunction with Signalling Transformers in accordance with NR/L2/SIGELP/30007.3 and shall not be used to connect to Signalling transformers in accordance with BR924A
14) For the 'Power Block, Class II FSP-03' product, depending on the requirements of the particular application, some or all of the outgoing circuits may directly exit the FSP03 Switchgear Assembly. In other arrangements, Class II Hybrid Isolating Transformers for Functional Signalling Circuits may be located in the FSP03 Enclosure. In this latter arrangement outgoing cables will connect to the Class II Hybrid Isolating Transformers; in which case they should be terminated in accordance with the NR/L2/SIGELP/27410.2 and Class II Hybrid Isolating Transformers Manufacturer instructions.
15) Class II Hybrid Isolating Transformers for Functional Signalling Circuits, when installed, are to be Product Approved Class II Hybrid Transformers in accordance with NR/L2/SIGELP/30007.3 Product Specification for Power Transformers for Signalling Systems.
16) Auto Reconfiguration Equipment interconnecting cabling installed in the 'Power Block, Class II FSP-03' shall be in accordance with NR/L2/SIGELP/27410.2
17) Internal Bonding conductors in 'Power Block, Class II FSP-03' are rated for connection to a.c. Traction Systems having fault current of 12KA not exceeding 0.2s. External Bonding conductors shall be adequately selected for the fault current withstand.

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Product Configuration: Issue 1 (FSP 03)

System Assembly

Part Number	Circuit Drawing Reference	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	PADS No.
FSP03-CII/9SW-ST	02-26-032	5	8	1	18	086/034680
	Power Block, Class II FSP-03 System Assembly **9 switch, Single Layer without ESP** Class II Distribution unit rated to 690V fitted with: Feeder Side 1 & Side 2 Isolators, Feeder Side 1 & Side 2 Bypass Switches & One Distribution Supply Isolator. x8 switched & fused output Functional Supplies. x1 switched & fused Auxiliary Supply including equipment 4 Way 110VAC Distribution Centre, 100VA 650/110 Class II Transformer, 50W Case Heater & Two 11W Panel Lights. All Installed inside PADS Approved Mild Steel Apparatus Case. Functional Supply Fuse carriers to be IEC60269 (A.B.B. 10x38mm). Outgoing 110VAC Transformer supplies to be BS88-2 Fuse carriers. Auto Reconfiguration Equipment not supplied. Signalling Transformers not supplied.					
Part Number	**Circuit Drawing Reference**	**Distribution Switches**	**Functional Switches**	**Auxiliary Switches**	**Fuses**	**PADS No.**
FSP03-CII/10SW-ESP-ST	01-18-110	5	8	2	20	086/034681
	Power Block, Class II FSP-03 System Assembly **10 switch, Single Layer with ESP** Class II Distribution unit rated to 690V fitted with: Feeder Side 1 & Side 2 Isolators, Feeder Side 1 & Side 2 Bypass Switches & One Distribution Supply Isolator. x8 switched & fused output Functional Supplies. x1 switched & fused Auxiliary Supply including equipment 4 Way 110VAC Distribution Centre, 100VA 650/110 Class II Transformer, 50W Case Heater & Two 11W Panel Lights. x1 switched & fused internal supply to Surge Arrestor. Built-in Surge Arrestor. All Installed inside PADS Approved Mild Steel Apparatus Case. Functional Supply Fuse carriers to be IEC60269 (A.B.B. 10x38mm). Outgoing 110VAC Transformer supplies to be BS88-2 Fuse carriers. Auto Reconfiguration Equipment not supplied. Signalling Transformers not supplied.					

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Part Number	Circuit Drawing Reference	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	PADS No.
FSP03-CII/9SW-SS	02-26-032	5	8	1	18	086/034682
	Power Block, Class II FSP-03 System Assembly **9 switch, Single Layer without ESP** Class II Distribution unit rated to 690V fitted with: Feeder Side 1 & Side 2 Isolators, Feeder Side 1 & Side 2 Bypass Switches & One Distribution Supply Isolator. x8 switched & fused output Functional Supplies. x1 switched & fused Auxiliary Supply including equipment 4 Way 110VAC Distribution Centre, 100VA 650/110 Class II Transformer, 50W Case Heater & Two 11W Panel Lights. All Installed inside PADS Approved Stainless Steel Apparatus Case. Functional Supply Fuse carriers to be IEC60269 (A.B.B. 10x38mm). Outgoing 110VAC Transformer supplies to be BS88-2 Fuse carriers. Auto Reconfiguration Equipment not supplied. Signalling Transformers not supplied.					
Part Number	**Circuit Drawing Reference**	**Distribution Switches**	**Functional Switches**	**Auxiliary Switches**	**Fuses**	**PADS No.**
FSP03-CII/10SW-ESP-SS	01-18-110	5	8	2	20	086/034683
	Power Block, Class II FSP-03 System Assembly **10 switch, Single Layer with ESP** Class II Distribution unit rated to 690V fitted with: Feeder Side 1 & Side 2 Isolators, Feeder Side 1 & Side 2 Bypass Switches & One Distribution Supply Isolator. x8 switched & fused output Functional Supplies. x1 switched & fused Auxiliary Supply including equipment 4 Way 110VAC Distribution Centre, 100VA 650/110 Class II Transformer, 50W Case Heater & Two 11W Panel Lights. x1 switched & fused internal supply to Surge Arrestor. Built-in Surge Arrestor. All Installed inside PADS Approved Stainless Steel Apparatus Case. Functional Supply Fuse carriers to be IEC60269 (A.B.B. 10x38mm). Outgoing 110VAC Transformer supplies to be BS88-2 Fuse carriers. Auto Reconfiguration Equipment not supplied. Signalling Transformers not supplied.					

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Subsystem Assembly

Part Number	Circuit Drawing Reference	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	PADS No.
FSP03-CII/9SW-ST	02-26-032	5	8	1	18	086/034680
	Power Block, Class II FSP-03 System Assembly **9 switch, Single Layer without ESP** Class II Distribution unit rated to 690V fitted with: Feeder Side 1 & Side 2 Isolators, Feeder Side 1 & Side 2 Bypass Switches & One Distribution Supply Isolator. x8 switched & fused output Functional Supplies. x1 switched & fused Auxiliary Supply including equipment 4 Way 110VAC Distribution Centre, 100VA 650/110 Class II Transformer, 50W Case Heater & Two 11W Panel Lights. All Installed inside PADS Approved Mild Steel Apparatus Case. Functional Supply Fuse carriers to be IEC60269 (A.B.B. 10x38mm). Outgoing 110VAC Transformer supplies to be BS88-2 Fuse carriers. Auto Reconfiguration Equipment not supplied. Signalling Transformers not supplied.					

Part Number	Circuit Drawing Reference	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	PADS No.
FSP03-CII/10SW-ESP-ST	01-18-110	5	8	2	20	086/034681
	Power Block, Class II FSP-03 System Assembly **10 switch, Single Layer with ESP** Class II Distribution unit rated to 690V fitted with: Feeder Side 1 & Side 2 Isolators, Feeder Side 1 & Side 2 Bypass Switches & One Distribution Supply Isolator. x8 switched & fused output Functional Supplies. x1 switched & fused Auxiliary Supply including equipment 4 Way 110VAC Distribution Centre, 100VA 650/110 Class II Transformer, 50W Case Heater & Two 11W Panel Lights. x1 switched & fused internal supply to Surge Arrestor. Built-in Surge Arrestor. All Installed inside PADS Approved Mild Steel Apparatus Case. Functional Supply Fuse carriers to be IEC60269 (A.B.B. 10x38mm). Outgoing 110VAC Transformer supplies to be BS88-2 Fuse carriers. Auto Reconfiguration Equipment not supplied. Signalling Transformers not supplied.					

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Part Number	Circuit Drawing Reference	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	PADS No.
FSP03-CII/9SW-SS	02-26-032	5	8	1	18	086/034682
	Power Block, Class II FSP-03 System Assembly **9 switch, Single Layer without ESP** Class II Distribution unit rated to 690V fitted with: Feeder Side 1 & Side 2 Isolators, Feeder Side 1 & Side 2 Bypass Switches & One Distribution Supply Isolator. x8 switched & fused output Functional Supplies. x1 switched & fused Auxiliary Supply including equipment 4 Way 110VAC Distribution Centre, 100VA 650/110 Class II Transformer, 50W Case Heater & Two 11W Panel Lights. All Installed inside PADS Approved Stainless Steel Apparatus Case. Functional Supply Fuse carriers to be IEC60269 (A.B.B. 10x38mm). Outgoing 110VAC Transformer supplies to be BS88-2 Fuse carriers. Auto Reconfiguration Equipment not supplied. Signalling Transformers not supplied.					

Part Number	Circuit Drawing Reference	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	PADS No.
FSP03-CII/10SW-ESP-SS	01-18-110	5	8	2	20	086/034683
	Power Block, Class II FSP-03 System Assembly **10 switch, Single Layer with ESP** Class II Distribution unit rated to 690V fitted with: Feeder Side 1 & Side 2 Isolators, Feeder Side 1 & Side 2 Bypass Switches & One Distribution Supply Isolator. x8 switched & fused output Functional Supplies. x1 switched & fused Auxiliary Supply including equipment 4 Way 110VAC Distribution Centre, 100VA 650/110 Class II Transformer, 50W Case Heater & Two 11W Panel Lights. x1 switched & fused internal supply to Surge Arrestor. Built-in Surge Arrestor. All Installed inside PADS Approved Stainless Steel Apparatus Case. Functional Supply Fuse carriers to be IEC60269 (A.B.B. 10x38mm). Outgoing 110VAC Transformer supplies to be BS88-2 Fuse carriers. Auto Reconfiguration Equipment not supplied. Signalling Transformers not supplied.					

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Module

Part Number	Circuit Drawing Reference	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	PADS No.
FSP-CII/POWER/5SW	02-26-032	5	0	0	0	086/034686
	Power Block, Class II FSP-03 Module Class II Distribution Module rated to 690V fitted with: Feeder Side 1 & Side 2 Isolators, Feeder Side 1 & Side 2 Bypass Switches & One Distribution Supply Isolator.					
Part Number	**Circuit Drawing Reference**	**Distribution Switches**	**Functional Switches**	**Auxiliary Switches**	**Fuses**	**PADS No.**
FSP-CII/MICRO/4SW	02-26-032	0	4	0	8	086/034687
	Power Block, Class II FSP-03 Module Class II Functional Module rated to 690V fitted with: x4 switched & fused output Functional Supplies. All Fuse carriers to be IEC60269 (A.B.B. 10x38mm).					
Part Number	**Circuit Drawing Reference**	**Distribution Switches**	**Functional Switches**	**Auxiliary Switches**	**Fuses**	**PADS No.**
FSP-CII/AUX/2SW-ESP	02-26-032	0	0	2	4	086/034688
	Power Block, Class II FSP-03 Module Class II Auxiliary Module rated to 690V fitted with: x1 switched & fused Auxiliary Supply. x1 switched & fused internal supply to Surge Arrestor. Built-in Surge Arrestor. All Fuse carriers to be IEC60269 (A.B.B. 10x38mm).					
Part Number	**Circuit Drawing Reference**	**Distribution Switches**	**Functional Switches**	**Auxiliary Switches**	**Fuses**	**PADS No.**
FSP-CII/AUX/1SW	02-26-032	0	0	1	2	086/034689
	Power Block, Class II FSP-03 Module Class II Auxiliary Module rated to 690V fitted with: x1 switched & fused Auxiliary Supply. All Fuse carriers to be IEC60269 (A.B.B. 10x38mm).					

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Part Number	Circuit Drawing Reference	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	PADS No.
FSP-CII/DIST	02-26-032	0	0	0	4	086/034690
	Power Block, Class II FSP-03 Module Class II Auxiliary Distribution Module rated to 110V fitted with: 4 Way 110VAC Distribution Centre & Thermostat Assembly for Case Heater. All Fuse carriers to be IEC60269 (A.B.B. 10x38mm).					

Part Number	Circuit Drawing Reference	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	PADS No.
FSP-CII/SEG/A	02-26-032	0	0	0	0	086/034691
	Power Block, Class II FSP-03 Module Class II Distribution Terminal Box Assembly rated to 690V fitted with: Two Distribution Feeder Terminals, Suitable for Copper (Cu) Cabling of up to 150mm² C.S.A. in 2 x Parallel Configuration. Removable Gland plate pre-machined with 63mm entry.					

Part Number	Circuit Drawing Reference	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	PADS No.
FSP-CII/SEG/B	02-26-032	0	0	0	0	086/034692
	Power Block, Class II FSP-03 Module Class II Distribution Terminal Box Assembly rated to 690V fitted with: Four Functional Supply Terminals, Suitable for Copper (Cu) Cabling of up to 95mm² C.S.A. Terminal Box pre machined with 1 x 63mm entry and 1 x 40mm entry.					

Part Number	Circuit Drawing Reference	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	PADS No.
FSP-CII/SEG/C	02-26-032	0	0	0	0	086/034693
	Power Block, Class II FSP-03 Module Class II Distribution Terminal Box Assembly rated to 690V fitted with: Two Functional Supply Terminals, Suitable for Copper (Cu) Cabling of up to 10mm² C.S.A. Terminal Box pre machined with 1 x 20mm entry.					

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Part Number	Circuit Drawing Reference	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	PADS No.
FSP-CII/SEG/D	02-26-032	0	0	0	0	086/034694
	Power Block, Class II FSP-03 Module Class II Distribution Terminal Box Assembly rated to 690V fitted with: Six Terminals, Suitable for Copper (Cu) Cabling of up to 50mm² C.S.A. MODULE pre machined with 3 x 25mm entries. To be fitted to FSP-03 System Assemblies when Auto-Reconfiguration equipment not supplied/fitted.					
Part Number	**Circuit Drawing Reference**	**Distribution Switches**	**Functional Switches**	**Auxiliary Switches**	**Fuses**	**PADS No.**
FSP-CII/SEG/G	02-13-186	0	0	0	8	086/034695
	Power Block, Class II FSP-03 Module Class II 110V Distribution Terminal Box Assembly (IP66) rated to 690V fitted with: Up to x8 BS88-2 32A CAMaster Fuse carriers, Suitable for Copper (Cu) Cabling.					
Part Number	**Circuit Drawing Reference**	**Distribution Switches**	**Functional Switches**	**Auxiliary Switches**	**Fuses**	**PADS No.**
FSP-CII/SEG/H	02-13-228	0	0	0	0	086/034696
	Power Block, Class II FSP-03 Module Class II Communications (Copper) Terminal Box Assembly (IP66) rated to 690V fitted with: Eight Terminals, Suitable for connection of Copper (Cu) Communication Cabling of up to 10mm² C.S.A. Module pre-machined & fitted with 3 x M25 IP68 compression glands.					

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Product Configuration: Issue 2 (Additional Switchgear Assembly Modules)

System Assembly – Backplates

Part Number	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	Drawing Ref/ Image	Catalogue Number
POWER/3 SW/ESP/A /FP	3	0	2	8	171106-1248	
	3 Switch Power Backplate Assembly with ESP - Tunnel Terminals - Full Width Plate • Class II distribution unit rated to 690V with 125A line isolators • Auxiliary supply fuse carriers IEC60269 (ABB 10x38mm) • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 16-50mm² • Removable / Easy access M63 gland plates • KE68 Tunnel Terminals • Full Class II Auxiliary transformer - 100VA • Includes surge protection (ESP)					086/034697
POWER/3 SW/ESP/A /HP	3	0	1	2	171106-1247	
	3 Switch Power Backplate Assembly with ESP - Tunnel Terminals - Half Width Plate • Class II distribution unit rated to 690V with 125A line isolator • Auxiliary supply fuse carriers IEC60269 (ABB 10x38mm) • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 16-50mm² • Removable / Easy access M63 gland plates • KE68 Tunnel Terminals • Includes surge protection (ESP)					086/034698
POWER/3 SW/ESP/A -2040/FP	3	0	2	8	171020-1156	
	3 Switch Power Backplate Assembly with ESP - Tunnel Terminals - Full Width Plate • Class II distribution unit rated to 690V with 125A line isolators • Auxiliary supply fuse carriers IEC60269 (ABB 10x38mm) • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 70-120mm² • Removable / Easy access M75 gland plates • KE68 Tunnel Terminals • Full Class II Auxiliary transformer - 100VA • Includes surge protection (ESP)					086/034699

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Part Number	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	Drawing Ref/ Image	Catalogue Number
POWER/3 SW/ESP/A -2040/HP	3	0	1	2	171020-1158	
	3 Switch Power Backplate Assembly with ESP - Tunnel Terminals - Half Width Plate • Class II distribution unit rated to 690V with 125A line isolators • Auxiliary supply fuse carriers IEC60269 (ABB 10x38mm) • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 70-120mm² • Removable / Easy access M75 gland plates • KE68 Tunnel Terminals • Includes surge protection (ESP)					086/034700
POWER/3 SW/ESP/K 4C/FP	3	0	2	8	170627-707	
	3 Switch Power Backplate Assembly with ESP - Stud Terminals - Full Width Plate • Class II distribution unit rated to 690V with 125A line isolators • Auxiliary supply fuse carriers IEC60269 (ABB 10x38mm) • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 16-50mm² • Removable / Easy access M63 gland plates • M10 Stud Terminals • Full Class II Auxiliary transformer - 100VA • Includes surge protection (ESP)					086/034701
POWER/3 SW/ESP/K 4C/HP	3	0	1	2	170807-847	
	3 Switch Power Backplate Assembly with ESP - Stud Terminals - Half Width Plate • Class II distribution unit rated to 690V with 125A line isolators • Auxiliary supply fuse carriers IEC60269 (ABB 10x38mm) • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 16-50mm² • Removable / Easy access M63 gland plates • M10 Stud Terminals • Includes surge protection (ESP)					086/034702

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Part Number	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	Drawing Ref/ Image	Catalogue Number
POWER/3SW/ESP/K4C-2040/FP	3	0	2	8	171020-1157	
	3 Switch Power Backplate Assembly with ESP - Stud Terminals - Full Width Plate • Class II distribution unit rated to 690V with 125A line isolators • Auxiliary supply fuse carriers IEC60269 (ABB 10x38mm) • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 70-120mm² • Removable / Easy access M75 gland plates • M10 Stud Terminals • Full Class II Auxiliary transformer - 100VA • Includes surge protection (ESP)					086/034703
POWER/3SW/ESP/K4C-2040/HP	3	0	1	2	171020-1159	
	3 Switch Power Backplate Assembly with ESP - Stud Terminals - Half Width Plate • Class II distribution unit rated to 690V with 125A line isolators • Auxiliary supply fuse carriers IEC60269 (ABB 10x38mm) • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 70-120mm² • Removable / Easy access M75 gland plates • M10 Stud Terminals • Includes surge protection (ESP)					086/034704
POWER/5SW/ESP/A/FP	5	0	2	8	180220-148	
	5 Switch Power Backplate Assembly with ESP - Tunnel Terminals - ASR Compatible • Class II distribution unit rated to 690V with 125A line isolators • Auxiliary supply fuse carriers IEC60269 (ABB 10x38mm) • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 16-50mm² • Removable / Easy access M63 gland plates • KE68 Direct tunnel terminals • Full Class II Auxiliary transformer - 100VA • Includes surge protection (ESP)					086/034705

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Part Number	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	Drawing Ref/ Image	Catalogue Number
POWER/5 SW/ESP/K 4C/FP	5	0	2	8	170912-994	
	5 Switch Power Backplate Assembly with ESP - Stud Terminals - ASR Compatible • Class II distribution unit rated to 690V with 125A line isolators • Auxiliary supply fuse carriers IEC60269 (ABB 10x38mm) • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 16-50mm² • Removable / Easy access M63 gland plates M10 Stud Terminals • Full Class II Auxiliary transformer - 100VA • Includes surge protection (ESP)					086/034706
POWER/5 SW/ESP/A -2040/FP	5	0	2	8	171020-1154	
	• **5 Switch Power Backplate Assembly with ESP - Tunnel Terminals - ASR Compatible** Class II distribution unit rated to 690V with 125A line isolators • Auxiliary supply fuse carriers IEC60269 (ABB 10x38mm) • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 70-120mm² • Removable / Easy access M75 gland plates • KE68 Direct tunnel terminals • Full Class II Auxiliary transformer - 100VA • Includes surge protection (ESP)					086/034707
POWER/5 SW/ESP/K 4C-2040/FP	5	0	2	8	171020-1155	
	5 Switch Power Backplate Assembly with ESP - Stud Terminals - ASR Compatible • Class II distribution unit rated to 690V with 125A line isolators • Auxiliary supply fuse carriers IEC60269 (ABB 10x38mm) • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 70-120mm² • Removable / Easy access M75 gland plates • M10 Stud Terminals • Full Class II Auxiliary transformer - 100VA • Includes surge protection (ESP)					086/034708

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Modules

Part Number	Distribution Switches	Functional Switches	Auxiliary Switches	Fuses	Drawing Ref/ Image	Catalogue Number
FSP-CII/POWER/3SW	3	0	0	0	170927-1065	
	Power Block, Class II FSP Module Class II distribution module rated to 690V fitted with: • SW1: Main Power IN Isolator and Test Points • SW2: Main Power OUT Isolator and Test Points • SW3: Functional Supply					086/034709
FSP-CII/POWER/3SW/ESP	3	0	1	2	170814-883	
	Power Block, Class II FSP Module - with Integrated ESP Class II distribution module rated to 690V fitted with: • SW1: Main Power IN Isolator and Test Points • SW2: Main Power OUT Isolator and Test Points • SW3: Signalling Supply • SWJ: ESP Supply					086/034710
FSP-CII/SEG/A-2040	0	0	0	0	171020-1150	
	Power Block, Class II FSP Module Class II Distribution Terminal Box assembly rated to 690V fitted with: • KE68 Tunnel terminals for direct connection • Suitable for Copper (Cu) or Aluminium (Al) 2/4C feeder cables 70-120m² • Enclosure size: 200x400mm • Removable Gland plate pre-machined with M75 cable entry hole					086/034711

Installation Accessories

Part No.	Description	Image	Catalogue No.
CBL-10	**LED Wander light** Class II /IK07 / IP54 5-Watt LED lamp rated 100-240 V supplied with mounting clip for BRS-SM Bar work mounting		086/034712
06000-0-00	**Class II / 50w (110-240V) Enclosure Heater** Supplied with 110mm pre-drilled DIN rail for BRS-SM Bar work mounting		086/034713

Earth bars

Manufacturer:
ILECSYS Ltd

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Part No.	Description	Image	Catalogue No.
IEB-1DL-FSP	Earth Bar 320mm O/A with 1 disconnect link. Mounted via stainless steel plate to existing barwork.		086/034714
IEB1-2DL-FSP	Earth Bar 480mm O/A "1 way" with 2 disconnect links. Mounted via stainless steel plate to existing barwork.		086/034715
IEB4-2DL-FSP	Earth Bar 635mm O/A "4 way" with 2 disconnect links. Mounted via stainless steel plate to existing barwork.		086/034716
IEB6-2DL-FSP	Earth Bar 705mm O/A "6 way" with 2 disconnect links. Mounted via stainless steel plate to existing barwork.		086/034717
IEB8-FSP	Earth Bar 540mm O/A "8 way", no disconnect link. Mounted to existing barwork in accordance with applicable standards.		086/034718
IEB9-FSP	Earth Bar 590mm O/A "9 way", no disconnect link. Mounted to existing barwork in accordance with applicable standards.		086/034719
IEB14-FSP	Earth Bar 840mm O/A "14 way", no disconnect link. Mounted to existing barwork in accordance with applicable standards.		0086/034720
IEB6DL-FSP03	Earth Bar 540mm O/A "6 way" with 1 disconnect link. Mounted via stainless steel plate to existing barwork.		086/034721

Assessed Documentation

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
	PA05/05342 iLecsys Evidence zip file		11/12/2013	1
	PA05/05342 Acceptance Requirements		02/03/2012	1
ILS100013	PA05/05342 Acceptance Requirements Response (Cover Letter)	V3.2	03/12/2013	1
ILS100013	PA05/05342 Acceptance (Compliance Matrix Acceptance Data – Directory of Evidence)	V3.1	03/12/2013	1
NR/SPE/AR/CII	PA05/05342 Sponsors Report		18/12/2013	1
ILS100013	Compliance Matrix to NR/L2/ELP/27409	V3.1	02/12/2013	1
ILS100013	Compliance Matrix to BS 7671(Extract)		21/06/2013	1
ILS100013	Compliance Matrix to BS EN 61439 (Extract)	V2.0	21/06/2013	1
ILS100013	FSP-03 Configurations	V3.1	02/12/2013	1
ILS100013	FSP-03 Ordering Schedule	V3.0	02/12/2013	1
ILS100013	PA05_05342 Product Configurations (System Assembly, Sub-System Assembly and Module)		21/11/2013	1
ILS100013	Compliance Matrix to BS 7671(Extract)		21/06/2013	1
-	Annex A - Certificates folder		11/12/2013	1

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Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
-	Annex B - Components (Data Sheets) folder		11/12/2013	1
-	Annex C - Reports folder		11/12/2013	1
-	Annex D - Supporting Documents folder		11/12/2013	1
-	Annex E - Drawings (GA & Wirings) folder		11/12/2013	1
ILS100013	Annex F - O&M Manual Folder		11/12/2013	1
	Annex G – ENSTO Terminal Data		11/12/2013	1
-	Images/Photographs		11/12/2013	1
-	Prototype Testing		11/12/2013	1
ILS100013	PA05_05342 Product Configurations (System Assembly, Sub-System Assembly and Module)		29/03/2018	2
ILS100013	Compliance Matrix to BS 7671(Extract)		29/03/2018	2
-	Annex A - Certificates folder		29/03/2018	2
-	Annex B - Components (Data Sheets) folder		29/03/2018	2
-	Annex C - Reports folder		29/03/2018	2
-	Annex D - Supporting Documents folder		29/03/2018	2
-	Annex E - Drawings (GA & Wirings) folder		29/03/2018	2
ILS100013	Annex F - O&M Manual Folder		29/03/2018	2
	Annex G – ENSTO Terminal Data		29/03/2018	2
-	Images/Photographs		29/03/2018	2
-	Prototype Testing		29/03/2018	2
-	Earth bus-bars folder		29/03/2018	2
-	Schematics for different configurations to be added		29/03/2018	2
05-05342	Covering letter	V1	29/03/2018	2
05342	Configuration document		29/03/2018	2
05342 - Risk	Engineering case		29/03/2018	2
	Siemens product guide	V7	29/03/2018	2

Manuals and Training Materials

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
ILS100013	O&M Manual – Class II FSP 03 Assembly	2.2	03/12/2013	1
OM ILS100013	Class II FSP Assembly Operations and maintenance manual	V3.0	29/03/2018	2

Certificate History

Issue	Date	Issue History
1	03/12/2013	First accepted for use
2	29/03/2018	Additional switchgear assemblies as shown in the Product configuration issue 2 of this certificate.

Manufacturer:
ILECSYS Ltd

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Manufacturer:
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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.

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 Acceptance Requirements 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 2011, where the specification and/or Product Acceptance Certificates specify quality assurance classifications (QA1 to QA5) 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.

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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 GE/RT8270, 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 Regulation) 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.