B G S 4SIL Rack

SIL4-certified generic safety system - 19" rack format

he BGS4SIL Rack is a SIL4-certified hardware and software platform designed to host embedded application software performing safety functions, available in a 19" 2U rack format.

The BGS4SIL Rack eases the development and deployment of safety systems up to SIL4 level, specifically designed for railway signaling.

SCLE's specialist teams can put their expertise at your service to develop a safety solution that meets your specific requirements.

Benefits

- SIL4-certified hardware and software platform
- 2-out-of-2 hardware architecture
- Reduced certification costs
- Software library available
- Field-proven solution
- Modular hardware

Functionalities

- Input data acquisition (analog and/or discrete and/or digital)
- Output management (discrete and/or digital)
- C-ANSI development
- Maintenance and remote monitoring
- Device safety warranty
- Application parameter management

Certificat de type
par examen de la conception
design examination type certificate

N° 8479/0192 édition 1

délivré à
attributed to

SCLE SFE – Agence Marseille
Parc des Aygalades Bât. 10,
35 Boulevard du Capitaine Gèze
13014 MARSEILLE – France
par
by

CERTIFER

qui certifie que la conception du produit suivant :
which certifies that the design of the following product :

BLOC GÉNÉRIQUE DE SÉCURITÉ – Version 2.2
BLOCK GENERIC SECURITY – Version 2.2

est conforme aux exigences SIL4 des normes CENELEC EN50126, EN50128, EN50129.
meets the SIL4 requirements of the standards EN50126, EN50128, EN50129.

L'annexe EC_8479_0011 édition 1 fait partie intégrante du présent certificat.
This certificate includes appendix EC_8479_0011 edition 1.

Ce certificat ne s'applique qu'à la conception du produit référencé en annexe et au dossier descriptif en résultant.
The scope of this certificate is limited to the design of the product referenced in the appendix and its description file.

La présente certification a été conduite en conformité avec le référentiel CERTIFER RF0015 version 2.
This certification was performed in accordance with CERTIFER repository RF0015 version 2.

Date de délivrance : 1er Décembre 2016
Date of certification : December, 1st 2016

Le Directeur Général Délégué
The Managing Director

Pierre KADZIOLA

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BGS4SIL Rack capabilities

- 0 to 15 discrete inputs
- 0 to 8 discrete outputs, including 6 SIL 4 and 2 dry contacts
- IP or RS-485 / 422 digital communication link
- Secure digital communication protocol compliant with EN50159 up to SIL 4 (subset 98)
- RS-485 digital link dedicated to remote monitoring
- 0 to 6 analog inputs

1 Connector strip

2 Rack drawer

3 Location for remote parameter memory dongle

Technical features

POWER SUPPLY	Minimum	Nominal	Maximum
Voltage	21.5 Vdc	24 Vdc	28.8 Vdc
Current (all discrete outputs activated)	1.4 A	1.7 A	1.9 A
Dielectric strength / Frame mass	2 kVac (50 Hz) / 1 mn		

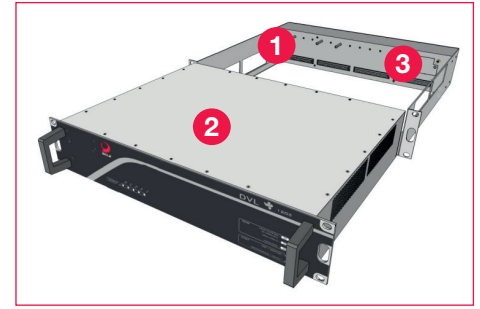| SIL4 DISCRETE INPUTS	
Accepted voltage range	0 to 35 Vdc
Impedance	1 kΩ
Dielectric strength between discrete inputs; between discrete inputs and power supply	500 Vac 50 Hz / 1mn

SIL4 DISCRETE OUTPUTS	
Type	Power supply
Maximum voltage of inactive output	0 Vdc
Voltage of active output	Supply voltage - 5 %
Load impedance	125 Ω
Dielectric strength between SIL4 discrete outputs; between SIL4 discrete output and remainder	2 kVac 50 Hz / 1mn

SIL0 DISCRETE OUTPUTS	
Type	Relay
Power cut-off capacity	30 VA
Maximum switchable voltage	400 V peak

ENVIRONMENT	Minimum	Maximum
Operating temperature	- 25 °C	+ 70 °C
Storage temperature	- 30 °C	+ 80 °C
Relative humidity	5 %	100 %

DIMENSIONS		
Depth	Rack drawer exc. handles	34 cm
	Rack drawer inc. handles	39 cm
	Connector strip	7.5 cm
Height x Width		9 x 60 cm
Weight (assembly)		≈ 8 kg

Standards

EF5B68.1 (IG.PS specifications)
N° 00/01 (IG.PS specifications), Index A
NF EN 50126: 2000
NF EN 50128: 2011
NF EN 50159: 2011
NF EN 50129: 2003
UTE C 80-810
NF EN 50121-4

BGS4SIL Rack is designed and manufactured at our Marseille production site, in collaboration with our French partners and sub-contractors.

DIGITAL LINKS	INTERFACE	PROTOCOL
SIL4 communication link	Ethernet - RJ45	Subset 98 or specific
Remote monitoring link	RS 485	JBUS / SIAM ST2
Maintenance link	USB2	Proprietary

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