

BGS 4SIL Box

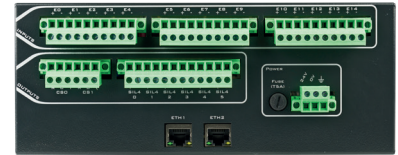
SIL4-certified generic safety system - compact format



The BGS4SIL Box 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

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



BGS4SIL Box capabilities

- 0 to 15 discrete inputs
- 0 to 8 discrete outputs, including 6 SIL4 and 2 dry contacts
- Redundant IP-based digital communication link (PRP/HSR)
- Secure digital communication protocol compliant with EN50159 up to SIL4 (subset 98)
- RS-485 digital link dedicated to remote monitoring



Technical features

POWER SUPPLY	Minimum	Nominal	Maximum
Voltage	16.8 Vdc	24 Vdc	30 Vdc
Current (all discrete outputs activated)	1.3 A	1.4 A	1.6 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 ToR inputs; between ToR input 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 ToR outputs; between SIL4 ToR 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

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

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

DIMENSIONS	
Depth	22.1 cm
Height x Width	8.8 x 22.1 cm
Weight (assembly)	≈ 2.5 kg



BGS4SIL Box 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	2 x Ethernet - RJ45	Subset 98 or specific
Remote monitoring link	RS 485	JBUS / SIAM ST2
Maintenance link	USB2	Proprietary

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■ SCLE SFE - Agence Marseille

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