SCS 24VDC P1SIL3ES LL

This SIL3 safety relay have been specially developed for applications in which a functionally safe switch-on in the process industry is required. The relay meet the requirements of functional safety and has been certified by TUV NORD according to EN 61508:2010. The approval for Ex-areas as well as the extended temperature range up to 70 °C enables the usage even under challenging environmental conditions. The integrated diagnostic and alarm output of the relay ensures permanent monitoring for wire breakage and load faults.

- Line (Wire break detection) and load monitoring
- Approval for Ex-areas
- Certified according to EN 61508:2010
- Optional 17.8 mm slim safety relay with temperature range up to 50 °C

General ordering data

Version	Safety relay, 24 V DC ± 20%, , Max. switching current, internal fuse : , Safety category: SIL 3 EN 61508:2010
Order No.	2633940000
Type	SCS 24VDC P1SIL3ES LL
GTIN (EAN)	4050118665543
Qty.	1 items

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Technical data

Approvals

Approvals	

ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E141197
Certificate no. (cULusEX)	E324123

Dimensions and weights

Depth	119.2 mm	Depth (inches)	4.6929 inch
Height	113.6 mm	Height (inches)	4.4724 inch
Width	17.5 mm	Width (inches)	0.689 inch
Net weight	218 g		

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-40 °C...50 °C
Humidity	95 %, no condensation		

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption	
RoHS Exemption (if applicable/known)	7a, 7cl	
REACH SVHC	Lead 7439-92-1	
SCIP	807f1906-ce90-4f93-8801-4b128b343e6b	

Input (power supply)

Connection designation	0V, 24 V	Rated control voltage	24 V DC ±20 %
Current consumption	<40 mA + M14	Protective circuit	Reverse polarity protection

Input (safety circuit)

Connection designation (safety circuit)	A1, A2	Rated control voltage	24 V DC ± 20%
Current consumption	56 mA	Status indicator	LED yellow (RLY): lights up when input circuit (A1,A2) of the device is actuated
Protective circuit	Reverse polarity protection, Free-wheeling diode		

Test inputs (safety circuit)

Connection designation (safety test)	T1, T2, T3	Rated control voltage	24 V DC ±20 %
Number of test inputs	3		

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Weidmüller

Technical data

Output (safety circuit)

Connection designation (safety output)	L, N, 13, 14	Contact design	1 x energised to safe (NO contact)
Contact base material	AgNi gold flashed	Max. permitted switching voltage	250 V AC
Max. switching current, external fuse	2,5 A	Max. switching capacity	625 VA
External back-up fuse	2.5 A (slow blow)	Switch-on time	50 ms
Min. switching capacity	30 mA @ 15 V		

Alarm output

Connection designation (Alarm output)	M13, M14	Digital output (Alarm output)	1 DO
Solid-state type (Alarm output)	MOS-FET high-active	output current, max. (Alarm output)	100 mA
Short-circuit-proof (Alarm output)	Yes, without time limit	Voltage drop at max. load (Alarm output)	1.5 V
Status indicator (Alarm output)	LED red (ERR): flashes when device detects a fault, supply voltage applied and input circuit (A1, A2) not actuated		

Diagnostic output

Connection designation (Diagnostic output)	D21, D22	Switching voltage, max.(Diagnostic output)	30 V
Switching, current, max. (Diagnostic output)	100 mA	switching capacity, min. (Diagnostic output)	1 mW
Contact design (Diagnostic output)	1 NC contact	Contact material (Diagnostic output)	AgNi gold-plated
Status indicator (Diagnostic output)	LED green (DIAG): lights up when supply voltage applied and input circuit (A1, A2) not actuated		

Safety-related basic specifications

Device type	A	Safety category	SIL 3
Safety standard	EN 61508:2010		

General data

Operating altitude	≤ 2000 m, above sea level	Mounting rail	TS 35
Colour	black, yellow		

Insulation coordination

Insulation coordination according to	EN 61010-2-201	Rated voltage	300 V
Pollution severity	2	Surge voltage category	III
Clearance and creepage distances for control side - load side	≥ 6 mm	Dielectric strength for control side - load side	3.51 kVeff /1 min.
Protection degree	IP20		

Further details of approvals / standards

Standards	EN 61010-1, EN 61010-2-201, EN 61326-3-2, EN 61326-1, EN 61326-3-1, DIN EN 61508	Certificate no. (cULus)	E141197

Creation date 26.11.2025 03:10:52 MEZ

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Technical data

Connection data

Wire connection method	Screw connection	Stripping length, rated connection	8 mm
Tightening torque, min.	0.4 Nm	Tightening torque, max.	0.6 Nm
Clamping range, rated connection	1.5 mm²	Clamping range, min.	0.13 mm²
Clamping range, max.	2.5 mm²	Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG, max.	AWG 12	Wire cross-section, solid, min.	0.2 mm²
Wire cross-section, solid, max.	2.5 mm²	Wire connection cross section, finely stranded, min.	0.2 mm²
Wire connection cross section, finely stranded, max.	2.5 mm²	Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min.	0.2 mm²
Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max.	2.5 mm²	Conductor cross-section, flexible, AEH (DIN 46228-1), min.	0.2 mm²
Conductor cross-section, flexible, AEH (DIN 46228-1), max.	2.5 mm²	Blade size	size PH0

Ratings IECEx/ATEX/cUL

Certificate No. (ATEX)	UL20ATEX2457X	Certificate No. (IECEX)	IECExULD20.0032X
Certificate no. (cULus)	E141197	Certificate no. (cULusEX)	E324123
Marking EN 60079	Ex ec nC IIC T4 Gc		

Classifications

ETIM 6.0	EC001449	ETIM 7.0	EC001449
ETIM 8.0	EC001449	ETIM 9.0	EC001449
ETIM 10.0	EC001449	ECLASS 9.0	27-37-18-19
ECLASS 9.1	27-37-18-19	ECLASS 10.0	27-37-18-19
ECLASS 11.0	27-37-18-19	ECLASS 12.0	27-37-18-19
ECLASS 13.0	27-37-18-19	ECLASS 14.0	27-37-18-19
ECLASS 15.0	27-37-18-19		

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Drawings

Wiring diagram
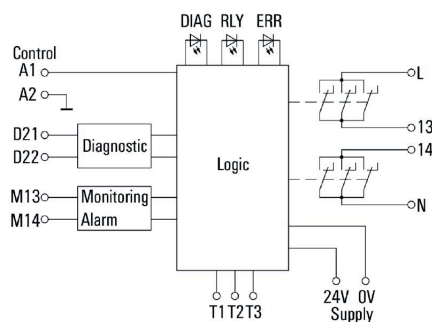
Graph
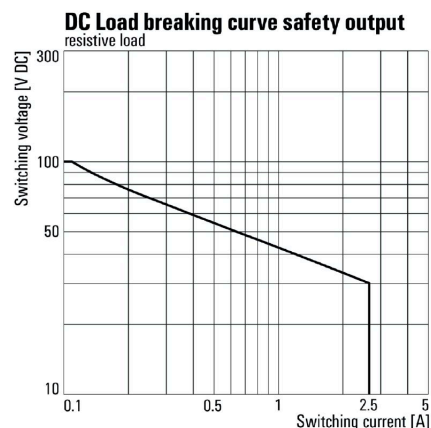
DC load limit curve Resistive load

Dimensional drawing
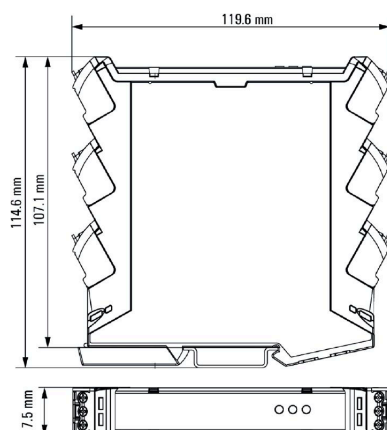
SCS 24VDC P1SIL3ES LL

Drawings

Miscellaneous

S	SAFESERIES
Housing	
C	CH20M housing
Wire connection method	
S	Screw Connection
Control voltage	
24 VDC	
P	Process safety
Number of output channels	
1	1 channel
2	2 channel
T	Extended temperature range up to 70 °C
Special feature	
LL	Line and load monitoring
Typical application	
ES	Energized to safe
DSES	De-energized to safe <u>or</u> energized to safe
SIL3	Safety integrity level 3

Type codes

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Accessories

Blank, adhesive backing

SM is a MultiCard marker for labelling control and signalling devices. The tags are clipped into the carriers or attached by means of the adhesive film already fitted to them. Customised tags can be created with the PrintJet CONNECT or Plotter marking systems.
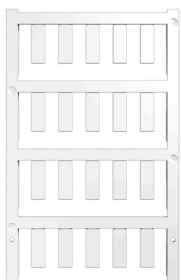- Users can quickly produce tags to suit their needs
- No need to stock expensive standard tags
- Highly resistant printing quality when using the PrintJet as a substitute for engraving
- For extreme demands, we recommend the ETO SM protective film
- Holders can be used for the 22-mm or 30-mm-diameter push-buttons from Siemens, ABB, Moeller and Télémécanique

For custom printing: Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

General ordering data

Type	SM 18/9.5 K MC NE GE	Version	
Order No.	1248590000	SwitchMark, Device markers, 9.5 x 18 mm, Siemens 3 SB, yellow	
GTIN (EAN)	4050118038958		
Qty.	200 ST		
Type	SM 18/9.5 K MC NE GR	Version	
Order No.	1248610000	SwitchMark, Device markers, 9.5 x 18 mm, grey	
GTIN (EAN)	4050118038675		
Qty.	200 ST		
Type	SM 18/9.5 K MC NE WS	Version	
Order No.	1248580000	SwitchMark, Device markers, 9.5 x 18 mm, white	
GTIN (EAN)	4050118038965		
Qty.	200 ST		

Blank

ESG is the tried-and-tested marker in MultiCard format for use on many well-known electrical devices. The result is high-quality device marking with a high-contrast appearance.

Various types are available for devices from manufacturers like Siemens, ABB, Beckhoff etc.
Advantages at a glance:
- Tags for universal usage, self-adhesive or clip-on tags, depending on type
- For aligned equipment, e.g. circuit breakers, we supply ESG markers for clipping onto tag rails
- Individual laser-quality printing according to specifications

For custom printing: Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

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Accessories

General ordering data

Type	ESG 6/17 K MC NE WS	Version	
Order No.	1880120000	ESG, Device markers x 17 mm, PA 66, Colour: white, Self-adhesive	
GTIN (EAN)	4032248478804		
Qty.	200 ST		
Type	ESG 6/17 K MC NE GE	Version	
Order No.	1880110000	ESG, Device markers x 17 mm, PA 66, Colour: yellow, Self-adhesive	
GTIN (EAN)	4032248478798		
Qty.	200 ST		
Type	ESG 6/15 K MC NE GE	Version	
Order No.	1880130000	ESG, Device markers x 15 mm, PA 66, Colour: yellow, Self-adhesive	
GTIN (EAN)	4032248478910		
Qty.	200 ST		
Type	ESG 6/15 K MC NE WS	Version	
Order No.	1880100000	ESG, Device markers x 15 mm, PA 66, Colour: white, Self-adhesive	
GTIN (EAN)	4032248478781		
Qty.	200 ST		
Type	ESG 9/11 K MC NE WS	Version	
Order No.	1857440000	ESG, Device markers x 11 mm, PA 66, Colour: white, Self-adhesive	
GTIN (EAN)	4032248402731		
Qty.	200 ST		

SM 18/9.5

Prevention of incorrect operation: SM
MultiMark device markers can be used with marking materials from different manufacturers.Wherever they are used, they ensure that all components, such as control and signalling devices from different vendors, are clearly assigned.
Your benefits with MultiMark
• "Different materials for various requirements"
• Can be used with equipment from many manufacturers
• Device markers with a familiar design

General ordering data

Type	SM 18/9.5 MM WS	Version	
Order No.	2006220000	SwitchMark, Device markers, 9 x 18 mm, white	
GTIN (EAN)	4050118391435		
Qty.	1000 ST		
Type	SM 18/9.5 MM GE	Version	
Order No.	2006240000	SwitchMark, Device markers, 9 x 18 mm, yellow	
GTIN (EAN)	4050118390698		
Qty.	1000 ST		
Type	SM 18/9.5 MM GR	Version	
Order No.	2006260000	SwitchMark, Device markers, 9 x 18 mm, grey	
GTIN (EAN)	4050118390964		
Qty.	1000 ST		

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Accessories

ESG 6/17

Guaranteed long service life: ESG
The multi-colour and multi-format labels have a strong adhesive layer to ensure the best possible adhesion to the underlying surface. Double laminated polyester makes the basic material very thin and yet extremely tear-resistant.
Your benefits with MultiMark
• "Different materials for various requirements"
• Can be used with equipment from many manufacturers
• Device markers with a familiar design

General ordering data

Type	ESG 6/17 MM WS	Version
Order No.	2005100000	ESG, Device markers, 6 x 17 mm, white
GTIN (EAN)	4050118390728	
Qty.	3000 ST	
Type	ESG 6/17 MM GE	Version
Order No.	2005110000	ESG, Device markers, 6 x 17 mm, yellow
GTIN (EAN)	4050118390827	
Qty.	3000 ST	

White

THM GEW woven-fabric labels are made from a very flexible cotton fabric. Delivery on reels for use with thermal transfer printers enables an adhesive layer which is thicker than that of A4 sheets for office laser printers. Together, this flexibility and the thick adhesive layer ensure higher adhesive strength and enable use on angular or round objects such as e.g. cables or hoses.

General ordering data

Type	THM GEW 15/6 WS	Version
Order No.	1059780000	THM, Device markers, 6 x 15 mm, white
GTIN (EAN)	4032248808175	
Qty.	1 ST	

Yellow

THM GEW woven-fabric labels are made from a very flexible cotton fabric. Delivery on reels for use with thermal transfer printers enables an adhesive layer which is thicker than that of A4 sheets for office laser printers. Together, this flexibility and the thick adhesive layer ensure higher adhesive strength and enable use on angular or round objects such as e.g. cables or hoses.

SCS 24VDC P1SIL3ES LL

Accessories

General ordering data

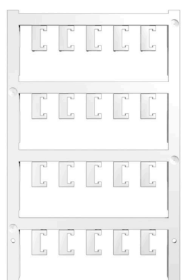| Type	THM GEW 15/6 GE	Version	
Order No.	1059790000	THM, Device markers, 6 x 15 mm, yellow	
GTIN (EAN)	4032248808182		
Qty.	1 ST		

Crosshead screwdriver Phillips

VDE insulated crosshead screwdriver, for Phillips screws, SDIK PH DIN 7438, ISO 8764/2-PH, output to ISO 8764-PH, SoftFinish grip

General ordering data

Type	SDIK PH0 X 60	Version	
Order No.	2749880000	Screwdriver, Blade width (B): 0 mm, 60 mm, Blade thickness (A): 0	
GTIN (EAN)	4050118897081		
Qty.	1 ST		
Type	SDK PH0 X 60	Version	
Order No.	2749400000	Screwdriver, Blade width (B): 0 mm, 60 mm, Blade thickness (A): 0	
GTIN (EAN)	4050118895629		
Qty.	1 ST		

Blank

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- Individual laser-quality printing according to specifications

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General ordering data

Type	ESG 6.6/15 BHZ 5.00/03	Version	
Order No.	1082520000	ESG, Device markers x 15 mm, PA 66, Colour: white, pluggable	
GTIN (EAN)	4032248845323		
Qty.	200 ST		