

## Safety device - PSR-SCP- 24DC/RSM4/4X1 - 2981538

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Two-channel zero speed and overspeed safety relay up to SIL 3 or Cat. 4, PL e according to EN ISO 13849, 4 N/O contacts, suitable for connecting incremental encoders and initiators, plug-in screw connection terminal blocks, width: 45 mm

### Your advantages

- Easy configuration via software (PSR-RSM4)
- Up to SIL 3 according to IEC 61508
- Standard sensors can be connected



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 996826
GTIN	4017918996826
Weight per Piece (excluding packing)	365.000 g
Custom tariff number	90328900
Country of origin	Germany

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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#### Dimensions

Width	45 mm
Height	99 mm
Depth	114.5 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C

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### Technical data

#### Ambient conditions

Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)
Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)
Maximum altitude	max. 2000 m (Above sea level)

#### Input data

Nominal input voltage $U_N$	24 V DC
Input voltage range in reference to $U_N$	0.85 ... 1.1
Typical input current at $U_N$	100 mA
Voltage at input/start and feedback circuit	approx. 24 V DC
Typical response time	15 ms
Typical release time	12 ms
Recovery time	1 s
Status display	Green LED
Protective circuit	Surge protection Suppressor diode
Limit frequency	2 kHz (IN1, IN2)
	400 kHz (RJ45)

#### Output data

Contact type	4 enabling current paths
Contact material	AgNi10, + 5 $\mu$ m Au
Maximum switching voltage	250 V AC/DC (when the gold layer is destroyed)
	60 V AC/DC (With gold layer existing)
Minimum switching voltage	100 mV AC/DC
Limiting continuous current	5 A
	100 mA (alarm outputs)
Maximum inrush current	6 A
Inrush current, minimum	1 mA
Sq. Total current	$42.25 \text{ A}^2 (I_{TH}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2)$
Interrupting rating (ohmic load) max.	67 W (24 V DC, $\tau = 0$ ms)
	36 W (48 V DC, $\tau = 0$ ms)
	43 MW (110 V DC, $\tau = 0$ ms)
	68 MW (220 V DC, $\tau = 0$ ms)
Switching capacity min.	1 mW
Mechanical service life	> $50 \times 10^6$ cycles
Output fuse	6 A gL

#### General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with EN 50205
Nominal operating mode	100% operating factor
Net weight	365 g
Mounting position	any

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### Technical data

#### General

Mounting type	DIN rail mounting
Assembly instructions	In rows with zero spacing
Degree of protection	IP20
	IP54
Min. degree of protection of inst. location	IP54
Housing color	yellow

#### Connection data

Connection method	Screw connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3

#### Safety-related characteristic data

Stop category	0
Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	3
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	3
Designation	EN ISO 13849
Performance level (PL)	e
Category	4
Safety Integrity Level Claim Limit (SIL CL)	3

#### Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	EN 60664/VDE 0110
Rated insulation voltage	250 V
Rated surge voltage/insulation	4 kV / Basic isolation, (safe isolation, reinforced insulation and 6 kV between input circuit and enabling current paths.)
Degree of pollution	2
Overvoltage category	III

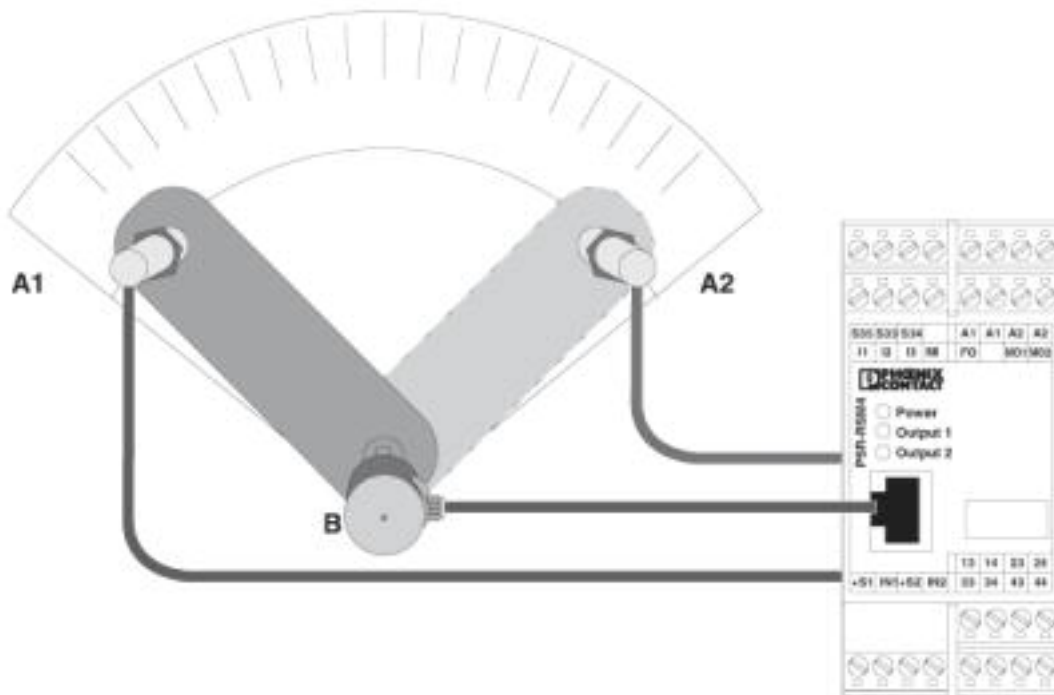
#### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

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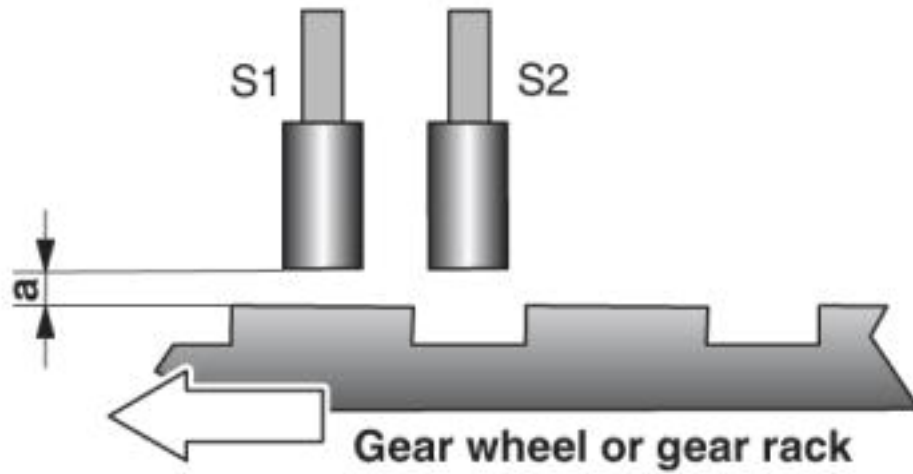
## Drawings

Application drawing

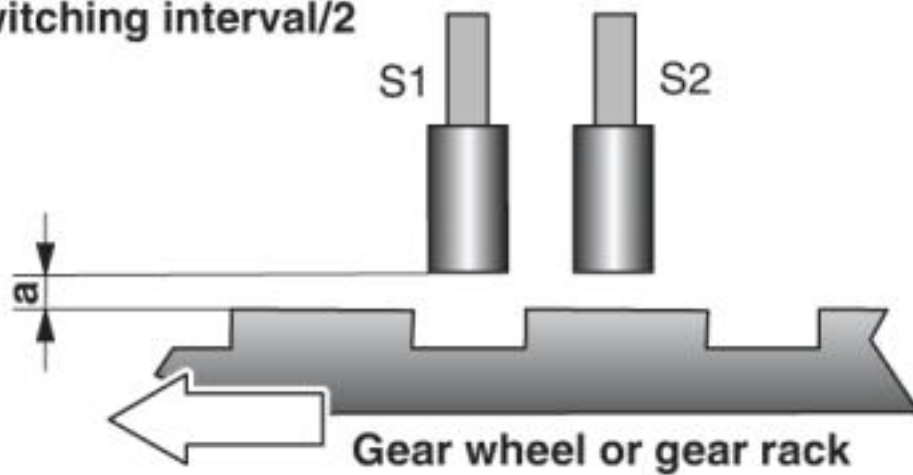


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Diagram

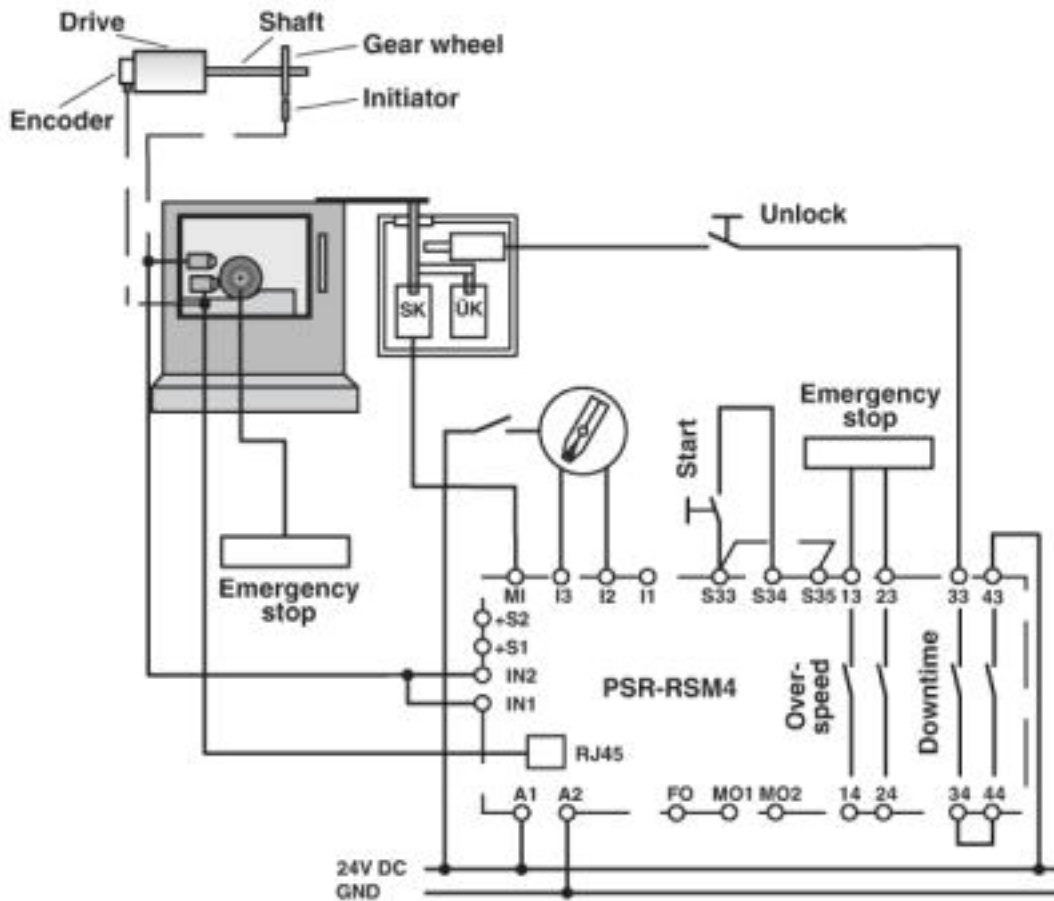


**a = Switching interval/2**



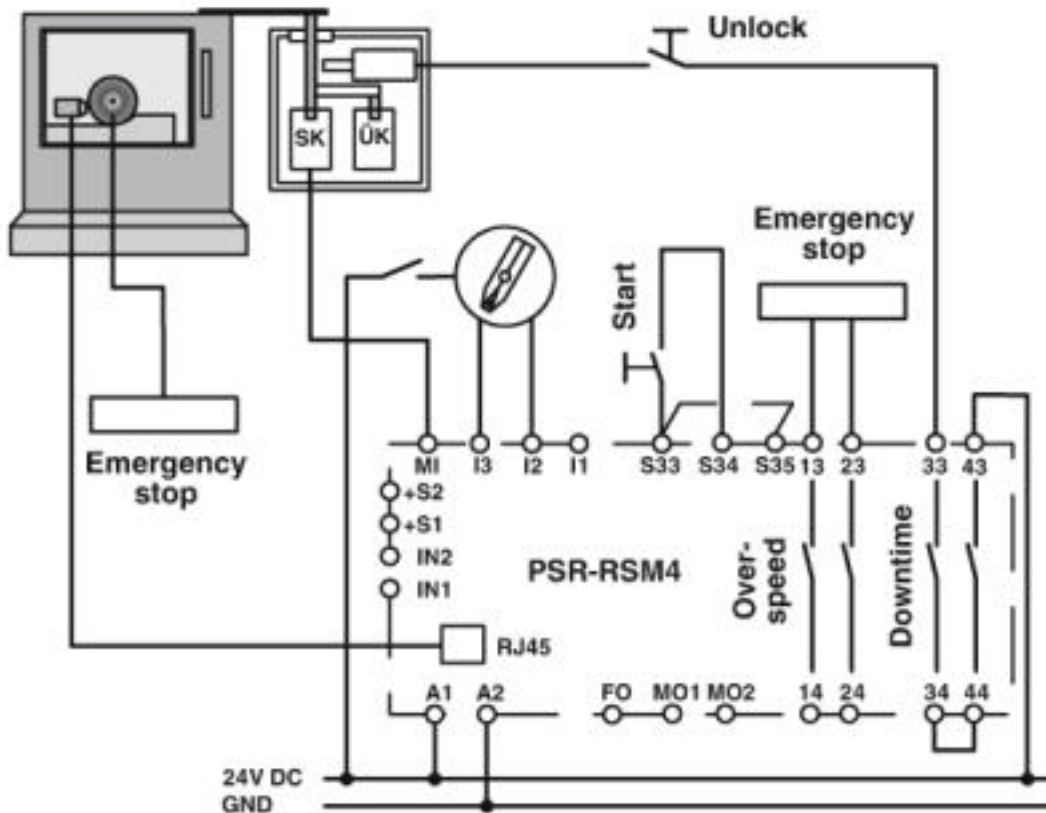
# Safety device - PSR-SCP- 24DC/RSM4/4X1 - 2981538

Diagram



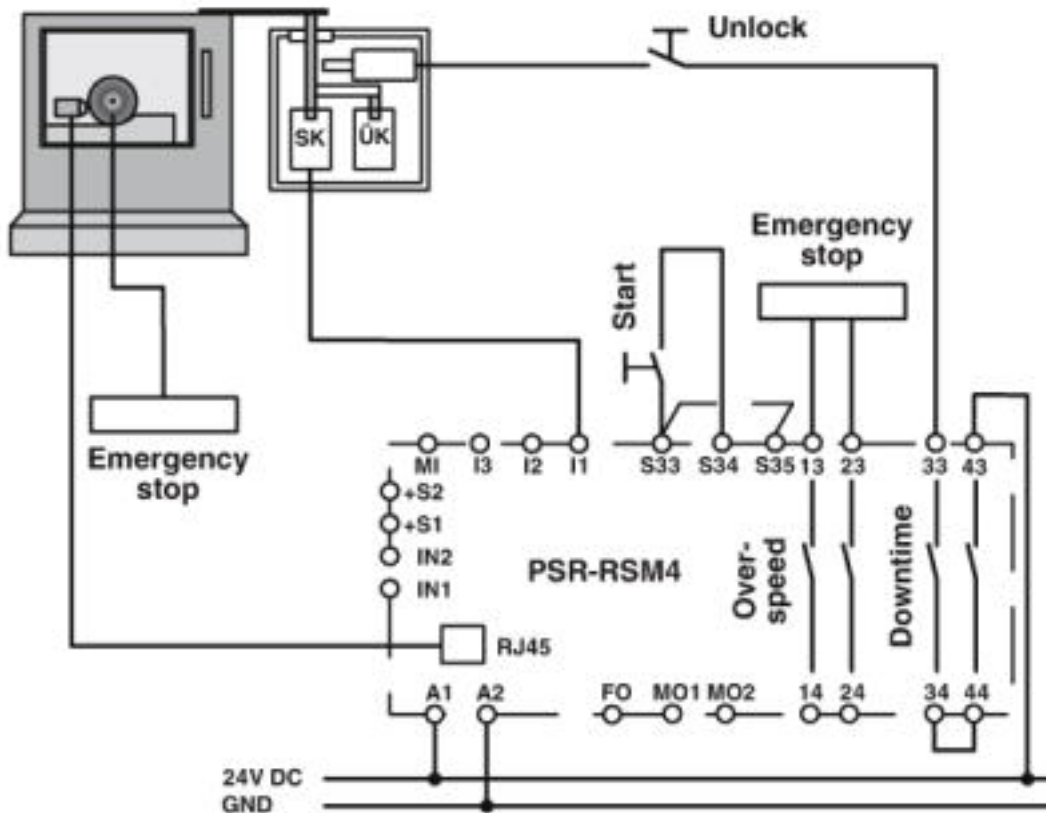
# Safety device - PSR-SCP- 24DC/RSM4/4X1 - 2981538

Diagram



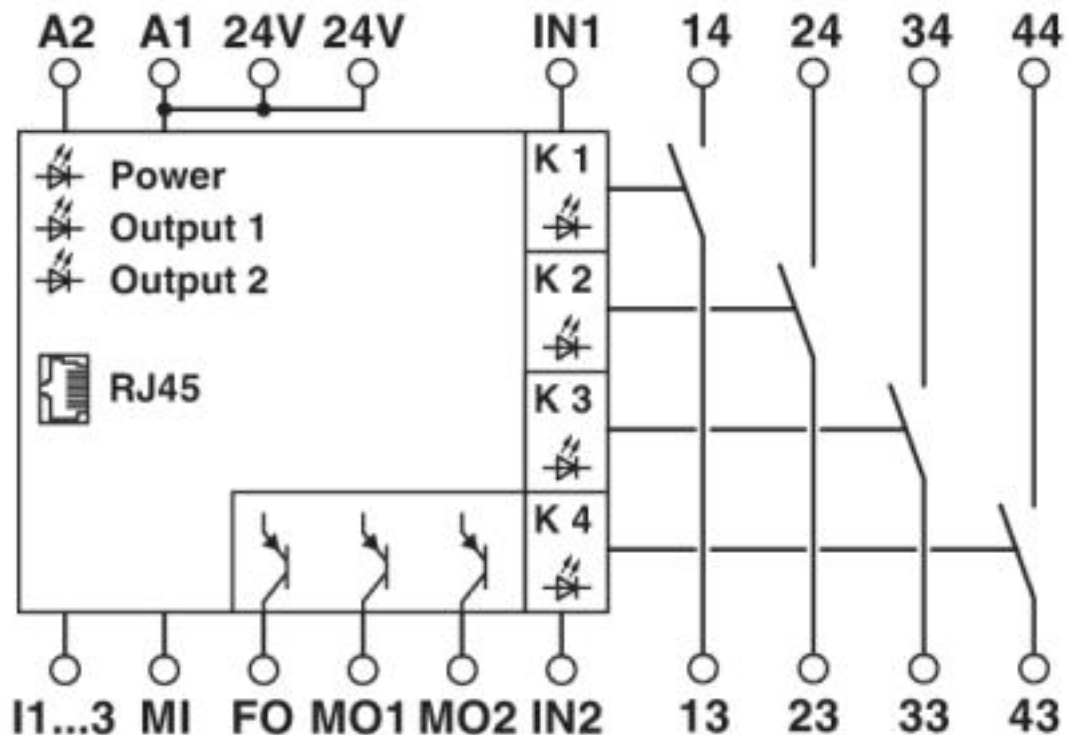
# Safety device - PSR-SCP- 24DC/RSM4/4X1 - 2981538

Diagram

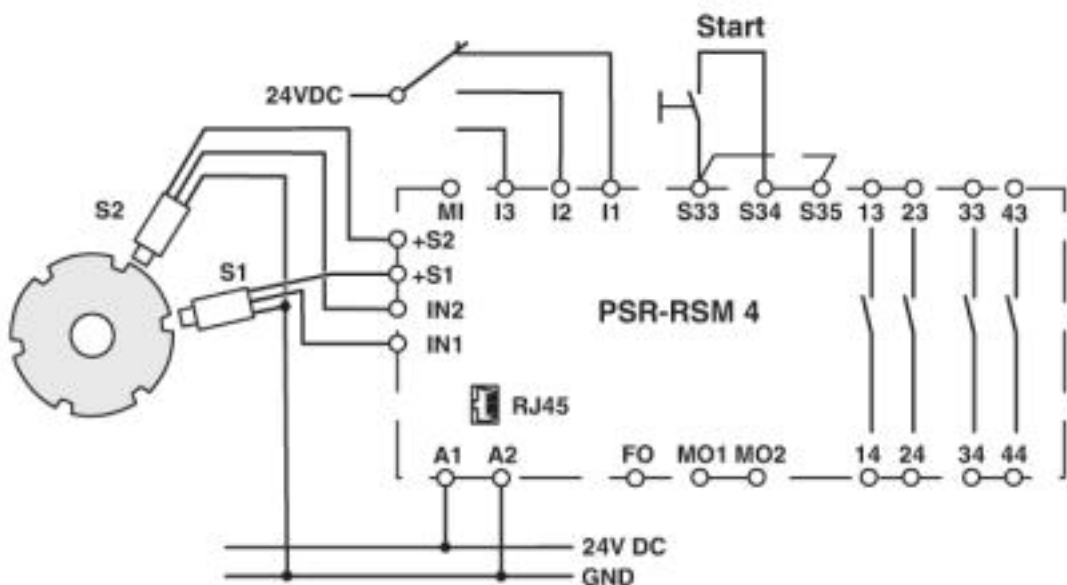


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Circuit diagram



Circuit diagram



## Classifications

eCl@ss

eCl@ss 4.0	40020600
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### Classifications

#### eCl@ss

eCl@ss 4.1	40020600
eCl@ss 5.0	27371900
eCl@ss 5.1	27371900
eCl@ss 6.0	27371800
eCl@ss 7.0	27371811
eCl@ss 8.0	27371811
eCl@ss 9.0	27371811

#### ETIM

ETIM 2.0	EC001449
ETIM 3.0	EC001449
ETIM 4.0	EC001449
ETIM 5.0	EC001448
ETIM 6.0	EC001448
ETIM 7.0	EC001448

#### UNSPSC

UNSPSC 6.01	30211901
UNSPSC 7.0901	39121501
UNSPSC 11	39121501
UNSPSC 12.01	39121501
UNSPSC 13.2	39122331

### Approvals

#### Approvals

##### Approvals

EAC / UL Listed / cUL Listed / Functional Safety / EAC / EAC / cULus Listed

##### Ex Approvals

#### Approval details







EAC		RU C- DE.A*30.B.01082
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### Approvals

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 140324
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 140324
Functional Safety			01/205/5199.02/16
EAC			EAC-Zulassung
EAC			RU C- DE.A*30.B.01082
cULus Listed			

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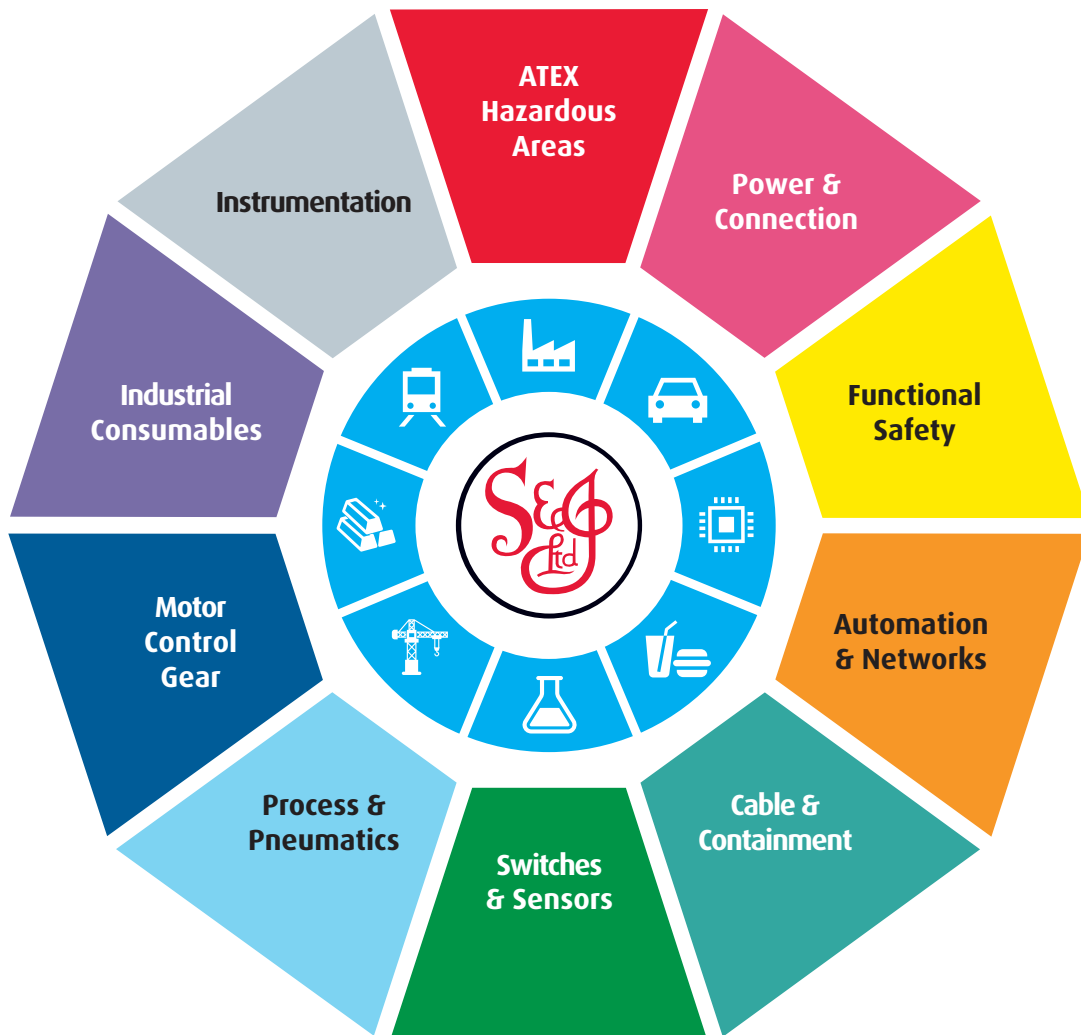
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