

Repeater power supply - MINI MCR-SL-RPS-I-I - 2864422

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MCR repeater power supplies, screw connection, input signal: (0)4..20 mA, output signal: (0)4..20 mA

Product Description

The 6.2 mm wide MINI MCR-SL-RPS-I-I... repeater power supply supplies transmitters in the field and electrically isolates the input signal from the output signal. The module can be used in both isolator and repeater power supply operation. Electrically isolated 0...20 mA or 4...20 mA analog standard signals are available on the input and output side. The power supply (19.2 V DC to 30 V DC) can be supplied via connection terminal blocks on the modules or in conjunction with the DIN rail connector.

Your advantages

- ✓ Power supply possible via the foot element (TBUS)
- ✓ Can be used as an isolator with passive input
- ✓ Highly-compact repeater power supplies for electrical isolation, amplification, and filtering of standard analog signals
- ✓ 3-way isolation
- ✓ Supply of 2-wire and passive 3-wire sensors



Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 956165
GTIN	4017918956165
Weight per Piece (excluding packing)	72.150 g
Custom tariff number	85437090
Country of origin	Germany

Technical data

Note

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Technical data

Note

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

Width	6.2 mm
Height	93.1 mm
Depth	101.2 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.

Input data

Description of the input	Current input (sensor circuit)
Number of inputs	1
Current input signal	4 mA ... 20 mA (repeater power supply and isolator operation)
	0 mA ... 20 mA (isolator operation)
Max. input current	28 mA
Input resistance current input	approx. 50 Ω
Transmitter supply voltage	U_B - max. 4.5 V for load 0 mA ... 20 mA
Transmitter supply voltage range	14.7 V DC ... 25.5 V DC

Output data

Output name	Current output
Number of outputs	1
Current output signal	4 mA ... 20 mA (repeater power supply and isolator operation)
	0 mA ... 20 mA (isolator operation)
Max. output current	28 mA
Load/output load current output	$\leq 500 \Omega$ ($I = 20$ mA)
Ripple	< 20 mV _{rms} (at 500 Ω)
Transmission Behavior	1:1 to input signal

Power supply

Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (The DIN rail bus connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715))
Power consumption	< 900 mW (at 24 V DC and in repeater power supply operation)

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Technical data

Power supply

	< 600 mW (at 24 V DC and in isolator operation)
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Connection data

Connection method	Screw connection
Stripping length	12 mm
Screw thread	M3
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	26 ... 12

General

No. of channels	1
Maximum transmission error	≤ 0.2 % (of final value)
Transmission error, typical	≤ 0.1 % (of final value)
Maximum temperature coefficient	< 0.01 %/K
Temperature coefficient, typical	< 0.002 %/K
Limit frequency (3 dB)	approx. 100 Hz
Step response (10-90%)	approx. 3.5 ms
Protective circuit	Transient protection
Electrical isolation	Basic insulation according to EN 61010
Overvoltage category	II
Degree of pollution	2
Rated insulation voltage	50 V AC/DC
Test voltage, input/output/supply	1.5 kV (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
Color	green
Housing material	PBT
Mounting position	any
Assembly instructions	To bridge the supply voltage, the DIN rail connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used. It can be snapped onto a 35 mm DIN rail according to EN 60715.
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D T5
GL	GL EMC 2 D

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Technical data

General

Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2

EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	10 %
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	10 %
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	10 %

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2
Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Electrical isolation	Basic insulation according to EN 61010
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	UL 508 Recognized
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Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50

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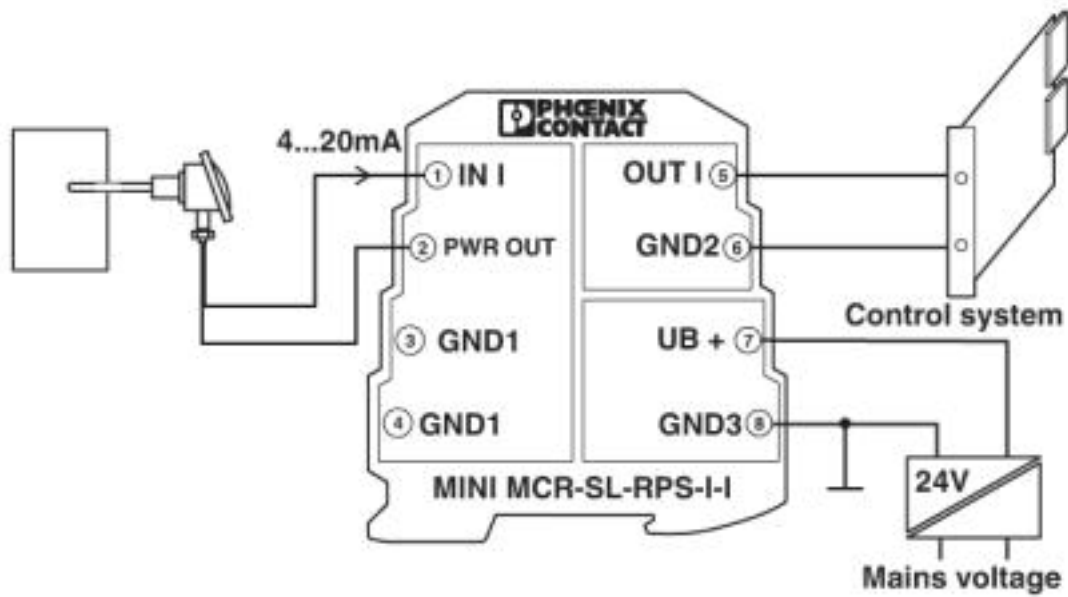
Technical data

Environmental Product Compliance

	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"
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Drawings

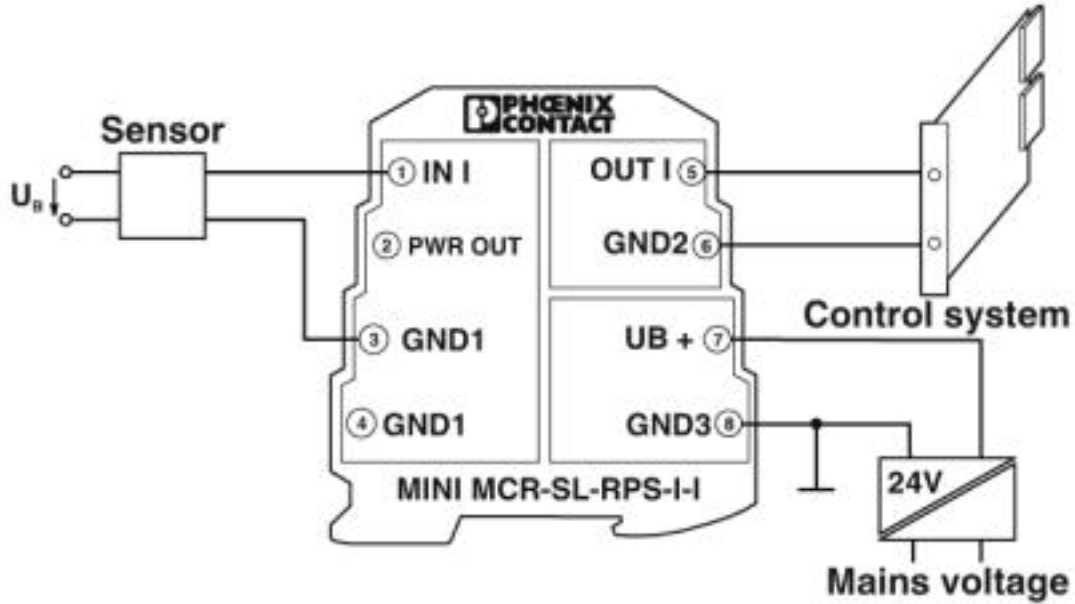
Application drawing



Repeater power supply operation with a passive sensor

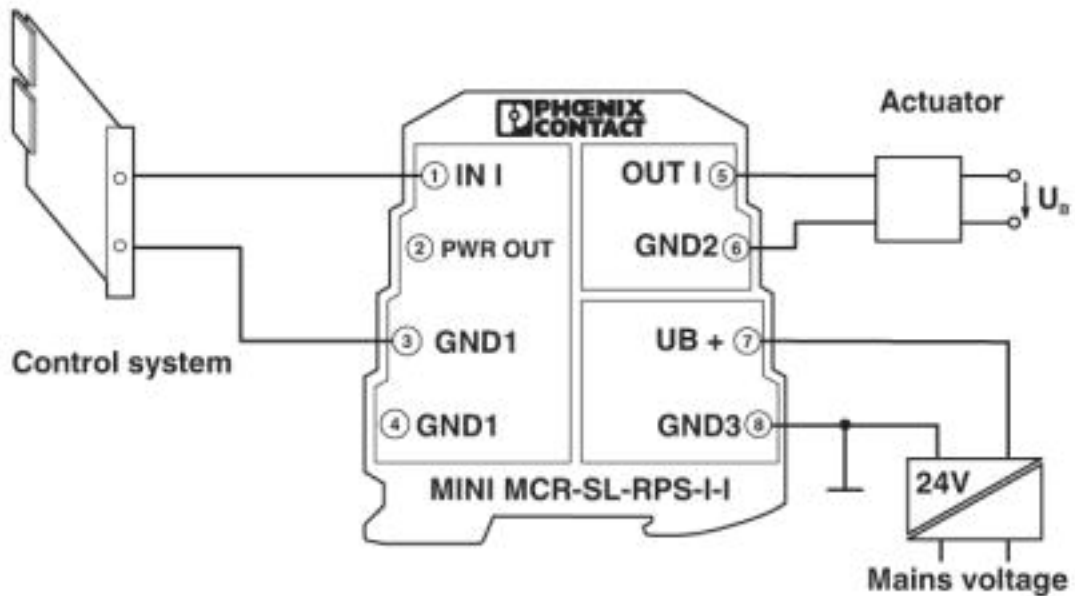
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Application drawing



Isolator operation with an active sensor

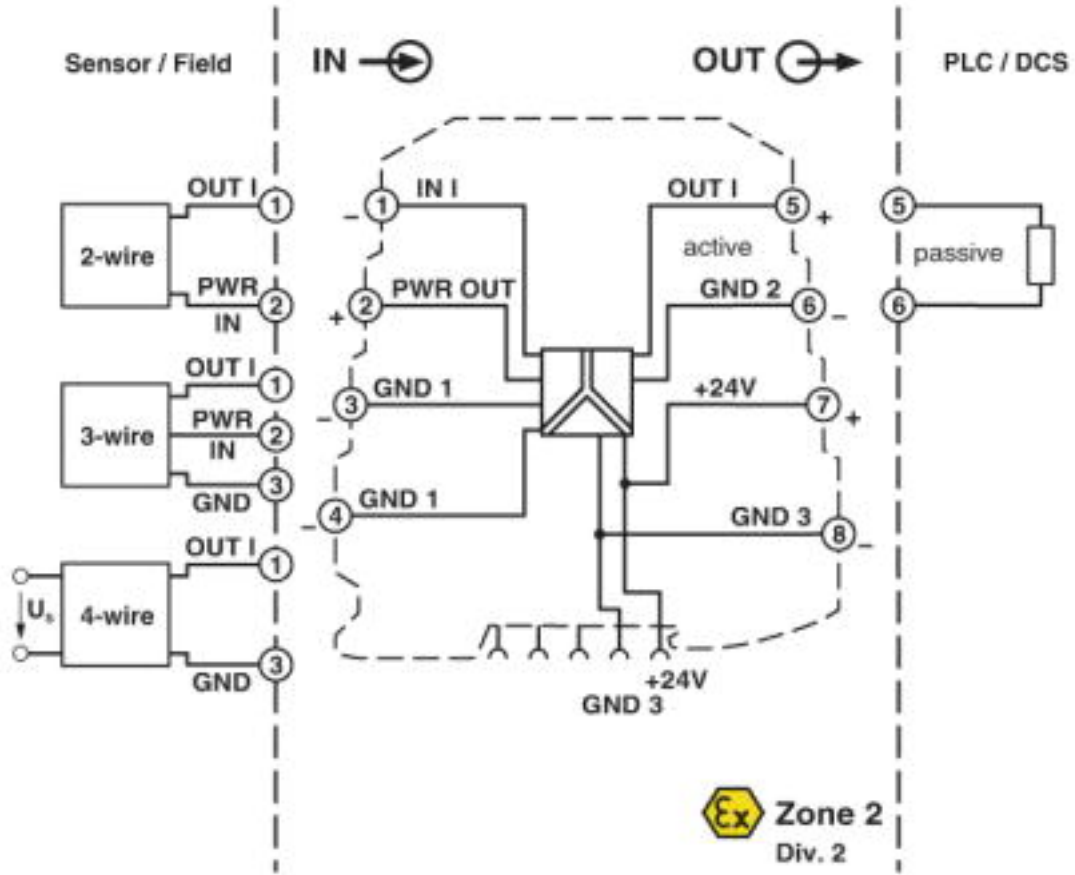
Application drawing



Isolator operation at the analog output module

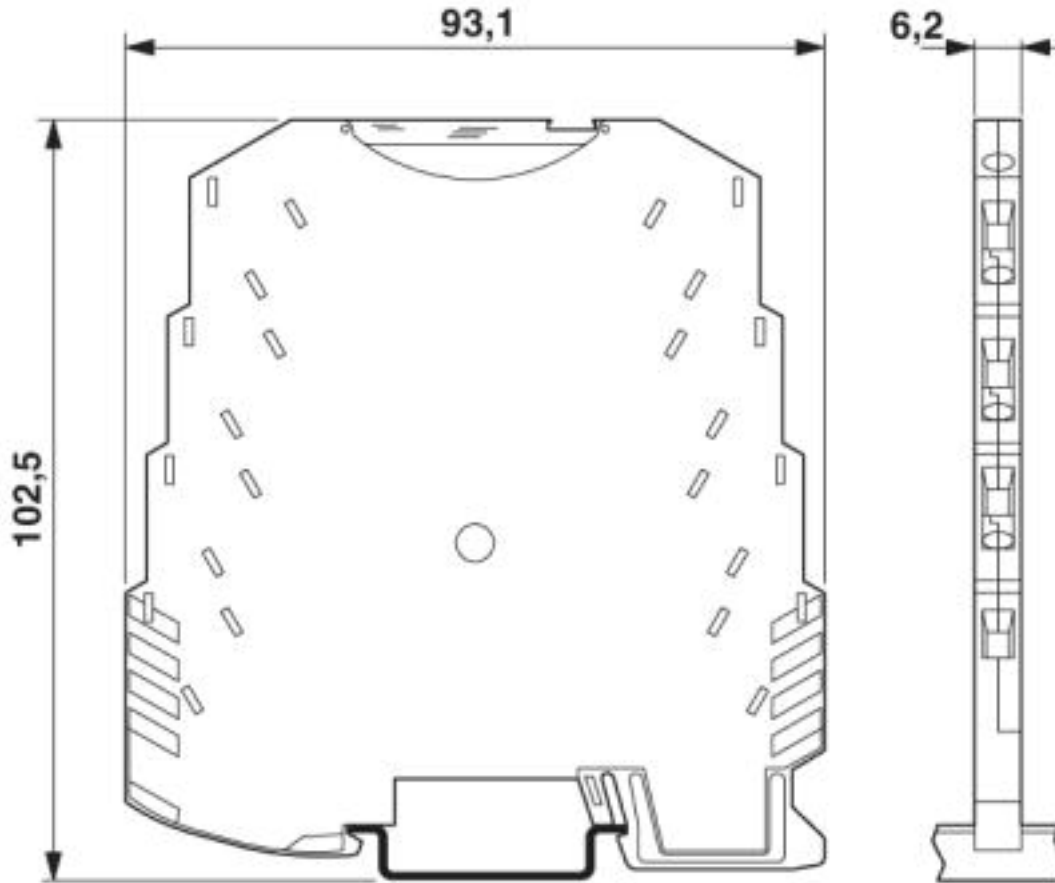
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Block diagram



Repeater power supply - MINI MCR-SL-RPS-I-I - 2864422

Dimensional drawing



Classifications

eCl@ss

eCl@ss 4.0	27210100
eCl@ss 4.1	27210100
eCl@ss 5.0	27210100
eCl@ss 5.1	27210100
eCl@ss 6.0	27210100
eCl@ss 7.0	27210120
eCl@ss 8.0	27210120
eCl@ss 9.0	27210120

ETIM

ETIM 4.0	EC002653
ETIM 5.0	EC002653

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Classifications

ETIM

ETIM 6.0	EC002653
ETIM 7.0	EC002653

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

Approvals

Approvals

Approvals


UL Recognized / cUL Recognized / DNV GL / cULus Recognized

Ex Approvals

ATEX / UL Listed / cUL Listed / EAC Ex / cULus Listed

Approval details

UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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DNV GL		https://approvalfinder.dnvgl.com/	TAA000020N
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cULus Recognized			
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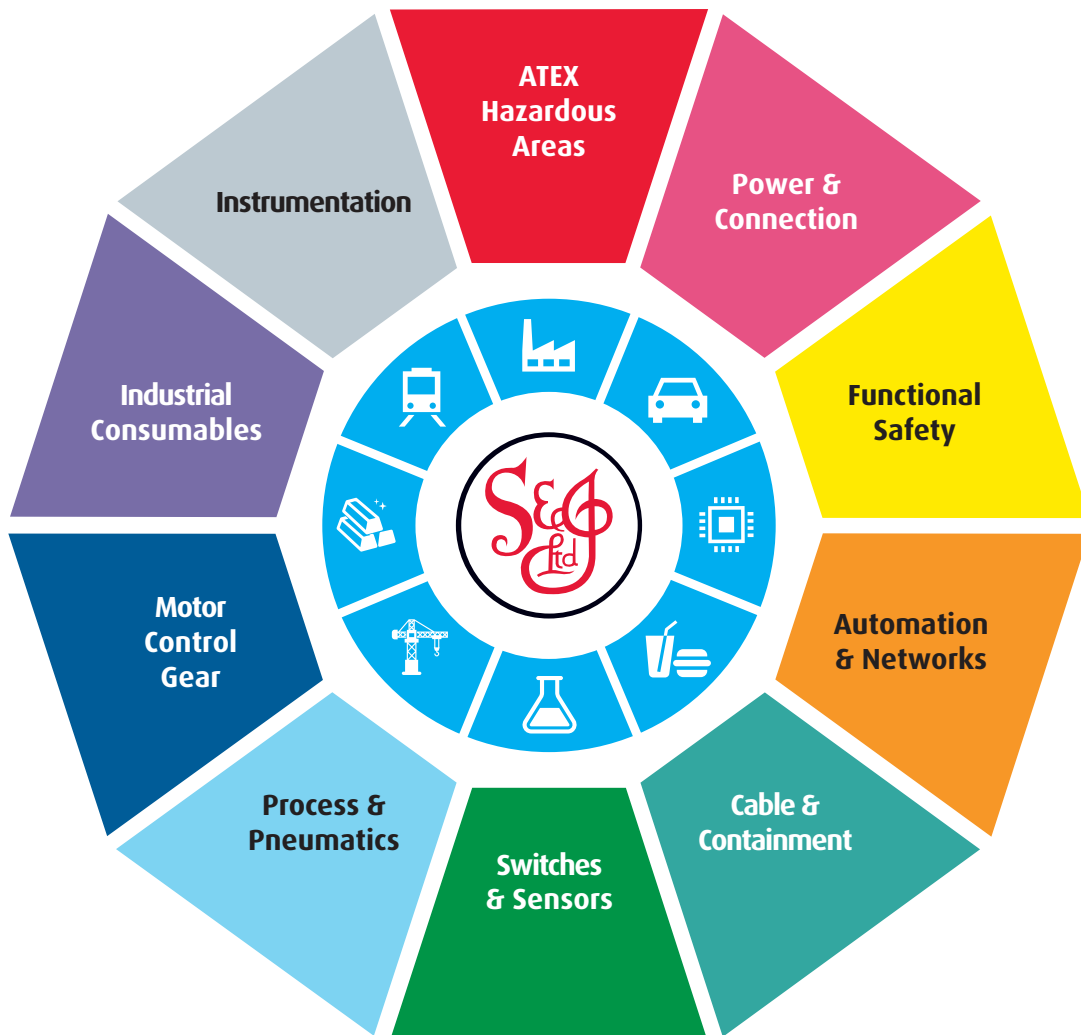
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