

# Grounding monitoring devices and systems

## Grounding monitoring device



8150/5-V75 Art. No. 256498



- Continuous monitoring of correct grounding
- Robust design
- Weather-protected stainless steel enclosure (IP66)
- One potential-free change-over contact for signalling to the distributed control system or external signalling devices
- Insulated suspension point
- For use up to SIL 2 (IEC 61508)

MY R. STAHL 8150G



The grounding monitoring device ensures that tank containers, barrels, road tankers, rail vehicles and IBCs are electrostatically grounded while combustible liquids and powders are being loaded. The device simultaneously monitors electrostatic grounding.

This guarantees that an electrostatic charge remains at a safe level and that there is no explosion hazard caused by the uncontrolled discharge of this energy.

### Technical Data

#### Explosion Protection

Application range (zones)	1 2 21 22
Ex interface zone	1 2 21
IECEX gas certificate	IECEX PTB 09.0049
IECEX gas explosion protection	Ex db eb [ia Ga] IIC T4 Gb
IECEX dust certificate	IECEX PTB 09.0049
IECEX dust explosion protection	Ex tb [ia Da] IIIC T80 °C Db
ATEX gas certificate	PTB 09 ATEX 1109
ATEX gas explosion protection	Ex II 2(1) G Ex db eb [ia Ga] IIC T4 Gb
ATEX dust certificate	PTB 09 ATEX 1109
ATEX dust explosion protection	Ex II 2 (1) D Ex tb [ia Da] IIIC T80 °C Db
Certificates	ATEX (PTB), Brazil (ULB), China (NEPSI), IECEx (PTB), India (PESO), SIL (exida), Taiwan (ITRI)
Declaration of Conformity	ATEX (EUK), China (CCC)

#### Safety Data

Max. voltage $U_o$	9.6 V
Max. current $I_o$	10 mA
Max. power $P_o$	24 mW
Max. permissible external capacity $C_o$ for IIC	3.6 $\mu$ F
Max. permissible external inductance $L_o$ for IIC	350 mH
Internal capacitance	2.42 nF

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### Safety Data

Internal inductance	Negligible
Safety-related max. voltage	253 V

### Functional Safety

SIL	2			
Test report	Exida STAHL 11/07-089 R022			
Safe state	Relay de-energised/no release			
Safe failure fraction (SFF)	73%			
PFD <sub>AVG</sub> at T <sub>[Proof]</sub>	T <sub>[Proof]</sub>	1 year	2 years	5 years
	PFD <sub>AVG</sub>	4.14 x 10 <sup>-4</sup>	7.9 x 10 <sup>-4</sup>	1.92 x 10 <sup>-3</sup>

### Electrical Data

Number of channels	1
Frequency range	48 – 62Hz

### Auxiliary Power

Nominal voltage range AC	96 – 253 V
Nominal current	27 mA
Power consumption	3 W

### Output

Limit contact	Change-over contact
Min. output load condition	12 V / 100 µA
Max. output DC load condition	250 V / 2 A
Max. output AC load condition	250 V / 4 A
Output switching capacity	50 W / 1000 VA

### Ambient Conditions

Ambient temperature	-20 °C ... 55 °C
Ambient temperature	-4°F ... +131°F
Storage temperature	-40 °C ... 80 °C
Storage temperature	-40°F ... +176°F
Use at the height of	< 2000 m

### Mechanical Data

Degree of protection (IP)	IP66		
Enclosure material	Stainless steel 1.4404		
Silicone-free	No		
Terminal range of cable glands	4 – 13 mm		
Cable connection terminal area, inches	0.15 – 0.51 in		
Width	396 mm		
Width, inches	15.59 in		
Height	242 mm		
Height, inches	9.52 in		
Depth	107 mm		
Mounting depth, inches	4.21 in		
Weight	6.58 kg		
Weight	14.51 lb		
Connection		grey and green-yellow	blue

8150/5-V75 Art. No. 256498

Single-wire connection

- rigid
- flexible
- flexible with core end sleeves with plastic sleeve
- flexible with core end sleeves without plastic sleeve

0.2 to 6 mm<sup>2</sup>

0.2 to 4 mm<sup>2</sup>

0.2 to 4 mm<sup>2</sup>

0.2 to 2.5 mm<sup>2</sup>

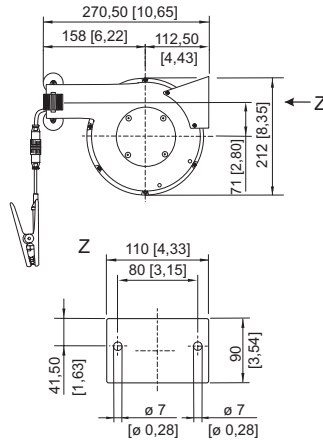
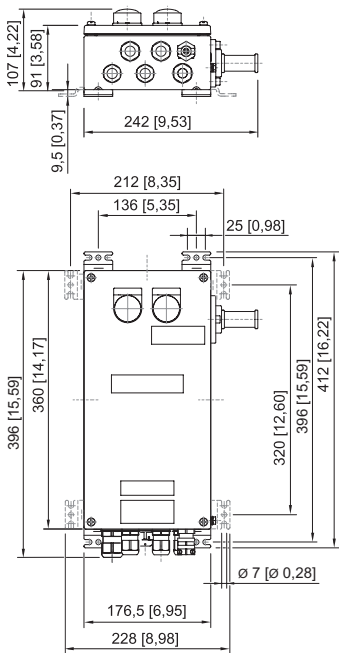
0.25 to 2.5 mm<sup>2</sup>

0.25 to 1.5 mm<sup>2</sup>

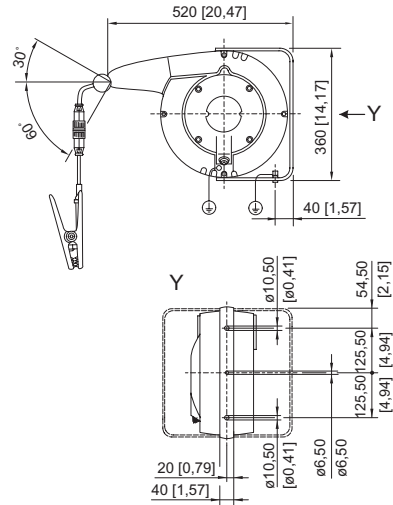
0.25 to 4 mm<sup>2</sup>

0.25 to 2.5 mm<sup>2</sup>

Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations

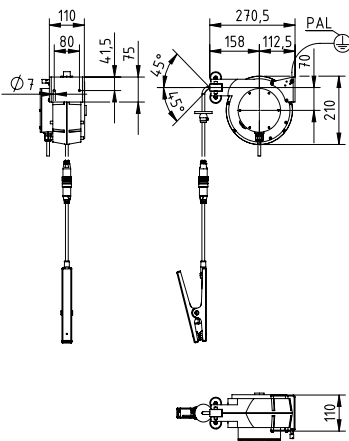


Grounding clamp with automatic retractor for cable  
Item no. 247660



Grounding clamp with automatic retractor for cable  
Item no. 247671

Type 8150/5-V75









Grounding clamp with automatic retractor for cable  
Item no. 269915

## Accessories


Grounding clamp with cable

Art. No.

8150/5-V75 Art. No. 256498

	<p>10 m oil- and petrol-resistant cable with robust, ergonomic grounding clamp made from stainless steel, and fast-action plug                      Installation in Zone 1, IIC, T6; Zone 21, IIIC, 135 °C                      Temperature range: -40 °C to +70 °C                      Certificates: ATEX, IECEx</p>	<p>247673</p>
<p><b>Grounding clamp with spiral cable</b> <span style="float: right;"><b>Art. No.</b></span></p>		
	<p>10 m oil- and petrol-resistant spiral cable with robust, ergonomic grounding clamp made from stainless steel, and fast-action plug                      Installation in Zone 1, IIC, T6; Zone 21, IIIC, 135 °C                      Temperature range: -40 °C to +70 °C                      Certificates: ATEX, IECEx</p>	<p>247674</p>
	<p>5 m oil- and petrol-resistant spiral cable with robust, ergonomic grounding clamp made from stainless steel, and fast-action plug                      Installation in Zone 1, IIC, T6; Zone 21, IIIC, 135 °C                      Temperature range: -40 °C to +70 °C                      Certificates: ATEX, IECEx</p>	<p>247672</p>
<p><b>Grounding clamp with automatic retractor for cable</b> <span style="float: right;"><b>Art. No.</b></span></p>		
	<p>Automatic retractor with 20 m oil- and petrol-resistant cable with robust, ergonomic grounding clamp made from stainless steel, and fast-action plug, aluminium enclosure, protected cable duct with stopper                      Installation in Zone 1, IIC, T6; Zone 21, IIIC, 135 °C                      Temperature range: -40 °C to +70 °C                      Degree of protection (IP): IP43                      Certificates: ATEX, IECEx</p>	<p>247671</p>
	<p>Automatic retractor with 12 m oil- and petrol-resistant cable with robust, ergonomic grounding clamp made from stainless steel, and fast-action plug, aluminium enclosure, protected cable duct with stopper                      Installation in Zone 1, IIC, T6; Zone 21, IIIC, 135 °C                      Temperature range: -40 °C to +70 °C                      Degree of protection (IP): IP42                      Certificates: ATEX, IECEx</p>	<p>269915</p>
	<p>Automatic retractor with 9 m oil- and petrol-resistant cable with robust, ergonomic grounding clamp made from stainless steel, and fast-action plug, plastic enclosure                      Installation in Zone 1, IIC, T6; Zone 21, IIIC, 135 °C                      Temperature range: -20 °C to +70 °C                      Degree of protection (IP): IP42                      Certificates: ATEX, IECEx</p>	<p>247660</p>

## Spare Parts

<p><b>Grounding clamp with fast-action plug</b> <span style="float: right;"><b>Art. No.</b></span></p>		
	<p>Robust, ergonomic grounding clamp with 150 mm cable and fast-action plug                      Spare part for automatic retractors (247660, 269915 and 247671), cable and spiral cable</p>	<p>247675</p>

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.