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EN Operating instructions..... pages 1 to 4
Translation of the original operating instructions

FR Vous trouverez la version actuelle du mode d'emploi dans votre langue nationale officielle sur l'Internet, www.schmersal.net.

ES Encontrará el manual de instrucciones actual en su idioma oficial de la UE en nuestra página de Internet www.schmersal.net.

NL U vindt de huidige versie van de gebruikshandleiding in uw officiële landstaal op het Internet, www.schmersal.net.

IT Il manuale d'istruzioni aggiornato nella vostra lingua (lingua ufficiale UE) è scaricabile in Internet all'indirizzo www.schmersal.net.

JP EU公用語で書かれた最新の取扱説明書は、インターネッ(www.schmersal.net)からダウンロードできます。

Content

1 About this document

1.1 Function

This operating instructions manual provides all the information you need for the mounting, set-up and commissioning to ensure the safe operation and disassembly of the safety switchgear. The operating instructions must be available in a legible condition and a complete version in the vicinity of the device.

1.2 Target group: authorised qualified personnel

All operations described in this operating instructions manual must be carried out by trained specialist personnel, authorised by the plant operator only.

Please make sure that you have read and understood these operating instructions and that you know all applicable legislations regarding occupational safety and accident prevention prior to installation and putting the component into operation.

The machine builder must carefully select the harmonised standards to be complied with as well as other technical specifications for the selection, mounting and integration of the components.

1.3 Explanation of the symbols used

Information, hint, note:
This symbol is used for identifying useful additional information.

Caution: Failure to comply with this warning notice could lead to failures or malfunctions.
Warning: Failure to comply with this warning notice could lead to physical injury and/or damage to the machine.

1.4 Appropriate use

The T3Z 068 pull-wire emergency stop switch meets the requirements of EN ISO 13850, IEC/EN 60947-5-1 and IEC/EN 60947-6-5. Pull-wire emergency stop switches are used on machinery and plants, where triggering the emergency stop command must be enabled at arbitrary points on the wire run.

The safety switchgear must be exclusively used in accordance with the versions listed below or for the applications authorised by the manufacturer. Detailed information regarding the range of applications can be found in the chapter "Product description".

1.5 General safety instructions

The user must observe the safety instructions in this operating instructions manual, the country-specific installation standards as well as all prevailing safety regulations and accident prevention rules.

Further technical information can be found in the Schmersal catalogues or in the online catalogue on the Internet: www.schmersal.net.

The information contained in this operating instructions manual is provided without liability. Subject to technical modifications.

There are no residual risks, provided that the safety instructions as well as the instructions regarding mounting, commissioning, operation and maintenance are observed.

1.6 Warning about misuse

In case of inadequate or improper use or manipulations of the safety switchgear, personal hazards or damage to machinery or plant components cannot be excluded. The relevant requirements of the standard EN 1088 must be observed.

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1.7 Exclusion of liability

We shall accept no liability for damages and malfunctions resulting from defective mounting or failure to comply with this operating instructions manual. The manufacturer shall accept no liability for damages resulting from the use of unauthorised spare parts or accessories.

For safety reasons, invasive work on the device as well as arbitrary repairs, conversions and modifications to the device are strictly forbidden; the manufacturer shall accept no liability for damages resulting from such invasive work, arbitrary repairs, conversions and/or modifications to the device.

2 Product description

2.1 Ordering code

This operating instructions manual applies to the following types:

T3Z 068-①YR② ③		
No.	**Option**	**Description**
①	11	1 NO contact / 1 NC contact
	22	2 NO contacts / 2 NC contacts
	33	3 NO contacts / 3 NC contacts
②		Reset by pull ring
	M	Reset by key
③		without indicator lamp
	G	with indicator lamp

⚠ Only if the information described in this operating instructions manual are realised correctly, the safety function and therefore the compliance with the Machinery Directive is maintained.

2.2 Special versions

For special versions, which are not listed in the order code below 2.1, these specifications apply accordingly, provided that they correspond to the standard version.

2.3 Destination and use

Pull-wire emergency stop switches are used wherever it must be possible to initiate the emergency stop command from any point on a machine, equipment or plant. The emergency stop command is triggered by pulling on the tensioned pull-wire.

2.4 Technical data

Standards:	IEC/EN 60947-5-1, IEC/EN 60947-5-5, EN ISO 13850
Enclosure:	Grey cast iron, painted
Cover:	Grey cast iron, painted
Protection class:	IP 65 to EN 60529
Contact material:	Silver
Contact types:	Change-over contact with double break, max. 3 NO and 3 NC contacts
Switching system:	⊖ IEC 60947-5-1 snap action, NC contacts with positive break
Termination:	Screw terminals
Cable section:	max. 1.5 mm^2, min. 0.75mm^2, solid and stranded wire with conductor ferrules
Cable entry:	2 x M20
U_{imp}:	4 kV
U_i:	250 VAC
I_{the}:	10 A
Utilisation category:	AC-15, DC-13
I_e/U_e:	2,5 A / 230 VAC; 6 A / 24 VDC
Max. fuse rating:	6 A gG D-fuse
Positive break torque:	1.8 Nm
Angle for positive break travel:	32°
Positive break force	50 N
Actuating force:	max. 50 N, (30 N in wire direction)
Ambient temperature:	-30 °C ... +90 °C
Mechanical life:	50000 operations
Indicator lamp:	yellow 230 VAC / 5 W, screw socket BA 15D
Max. wire length:	2 x 50 m
Features:	Wire pull and breakage detection

2.5 Safety classification

Standards:	EN ISO 13849-1
B_{10d} (NC contact):	100,000
Service life:	20 years

$$MTTF_d = \frac{B_{10d}}{0{,}1 \times n_{op}} \qquad n_{op} = \frac{d_{op} \times h_{op} \times 3600\ s/h}{t_{cycle}}$$

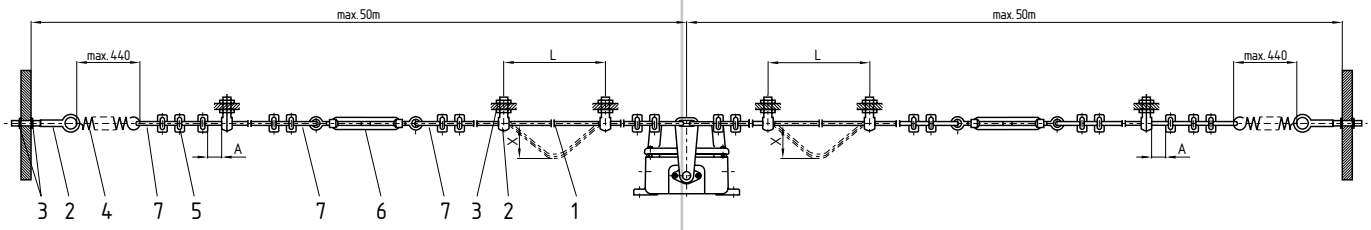
(Specifications can vary depending on the application-specific parameters h_{op}, d_{op} and t_{cycle} as well as the load.)

3 Mounting

3.1 General mounting instructions

The fitting may only be carried out by authorised personnel. The pull-wire emergency stop switch must be fitted in the middle of the plant. Four mounting holes are available. Mount the pull-wire emergency stop switch so that the device can be unlocked and reset by hand after an emergency stop command. The pull wire must be installed according to the specifications (Fig. 1).

Figure 1



Accessories:

① Pull-wire with red PVC sheath Ø 5 mm (steel core Ø 3 mm
② Eyebolt
③ Nuts
④ Stainless steel tension spring
⑤ Wire clamp
⑥ Tensioner
⑦ Wire thimble

Switch travel x : approx. 400 mm (L = 3 m)
Stroke limitation A: 70 mm
Distance between support points: max. 3 m

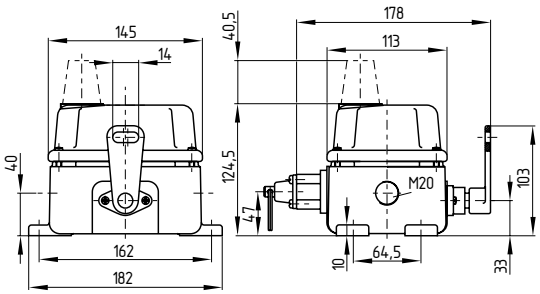
Equip the pull wire ① at the connection points with a thimble ⑦ and two wire clamps ⑤. The first wire clamp must be installed immediately behind the thimble. The PVC sheet of the pull wire must be stripped in the thimble area. Adjust the pre-tension of the springs ④ by means of the tensioner ⑥ so that the lever is in the middle position and the counter-side triggers the emergency stop command in case of wire breakage of slack wire. Then set the stroke limitation of both springs to A = 70 mm by means of the eyebolt ② and the wire clamp.

Please observe that external influences (temperature variations, aging) could cause the pull wire to be altered.

3.2 Dimensions

All measurements in mm.

Pull-wire emergency-stop switches



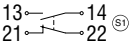
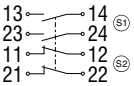
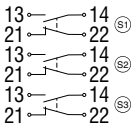
4 Electrical connection

4.1 General information for electrical connection

The electrical connection may only be carried out by authorised personnel in a de-energised condition.

For the cable entry, suitable cable glands with an appropriate degree of protection must be used. Non-used input openings must be sealed by means of threaded plugs. After wiring, the cover screws must be tightened uniformly. The optional indicator lamp must be connected with insulated push-on (faston) receptacles 6.35 x 0.8 mm.

4.2 Contact variants

1 NO contact / 1 NC contact	2 NO contacts / 2 NC contacts	3 NO contacts / 3 NC contacts
		
T3Z 068-11YR T3Z 068-11YRS	T3Z 068-22YR T3Z 068-22YRS	T3Z 068-33YR T3Z 068-33YRS

5 Set-up and maintenance

5.1 Functional testing

The safety function of the safety components must be tested. The following conditions must be previously checked and met:
1. Check the correct fitting of the pull-wire emergency stop switch
2. Check the integrity of the cable entry and connections
3. Check the functionality of the switch by actuating the wire

5.2 Maintenance

In case of correct fitting in accordance with the above-described instructions, the switch requires little maintenance. Under rough operating conditions, a regular check including the following steps is recommended:
1. Actuate the lever to check its free movement
2. Check the correct latching after actuation of the pull-wire emergency stop switch
3. Remove particles of dust and soiling
4. Check the pull wire for damages and correct fixing.
5 Check cable entry and connections

Damaged or defective components must be replaced.

6 Disassembly and disposal

6.1 Disassembly

The safety switchgear must be disassembled in a de-energised condition only.

6.2 Disposal

The safety switchgear must be disposed of in an appropriate manner in accordance with the national prescriptions and legislations.

7 Appendix

7.1 EC Declaration of conformity

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EC Declaration of conformity

Translation of the original declaration of conformity
valid as of December 29, 2009

K.A. Schmersal GmbH
Industrielle Sicherheitsschaltsysteme
Möddinghofe 30, D - 42279 Wuppertal
Germany
Internet: www.schmersal.com

We hereby certify that the hereafter described safety components both in its basic design and construction conforms to the applicable European Directives.

Name of the safety component / type:	T3Z 068
Description of the safety component:	Pull-wire emergency stop switch for safety functions
Harmonised EC-Directives:	2006/42/EC EC-Machinery Directive
Person authorized for the compilation of the technical documentation:	Ulrich Loss Möddinghofe 30 42279 Wuppertal
Place and date of issue:	Wuppertal, October 28, 2009

Authorised signature
Heinz Schmersal
Managing Director

T3Z 068-B-EN

Note
The currently valid declaration of conformity can be downloaded from the internet at www.schmersal.net.

CE

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