
TZ1LE024RC18VAB (ORDER NO. 084242)

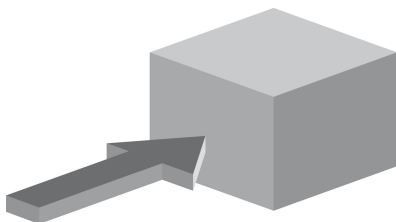
Safety switch TZ, plug connector RC18

- ▶ Auxiliary release on the front
- ▶ Two LED indicators, red and green
- ▶ Plug connector M23 (RC18)
- ▶ Actuating head fitted left



DESCRIPTION

Approach direction



Figure

Horizontal

Can be adjusted in 90° steps

Solenoid operating voltage and LED function display

- ▶ 24 V AC/DC -15%, +10%

Guard locking type

TZ1 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

Switching elements

SK For monitoring the door/actuator position

ÜK For monitoring the guard locking (built-in solenoid)

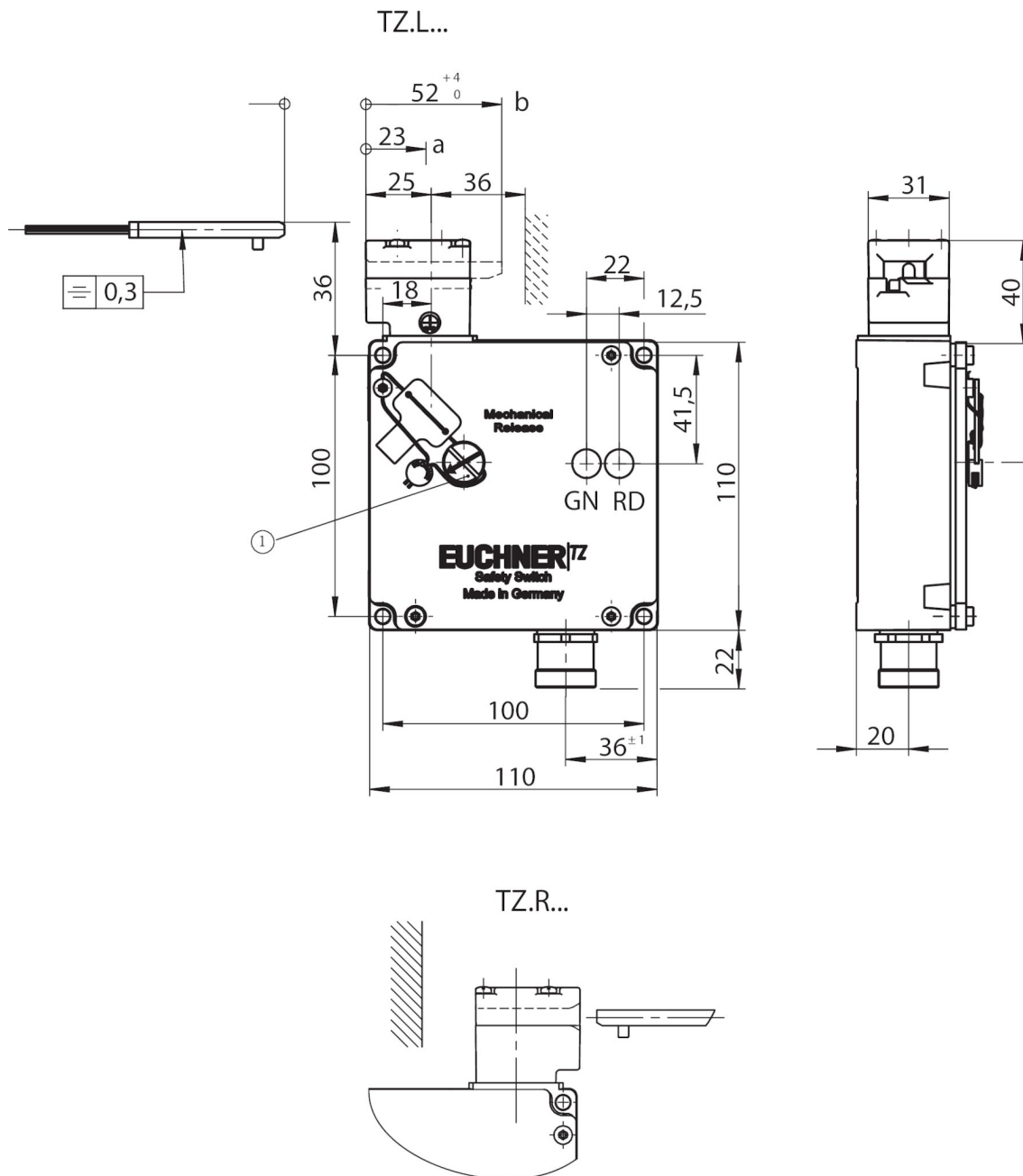
2131H Slow-action switching contact 3 NC \rightarrow + 1 NO

3131H Slow-action switching contact 2 NC \rightarrow + 2 NO

Auxiliary release

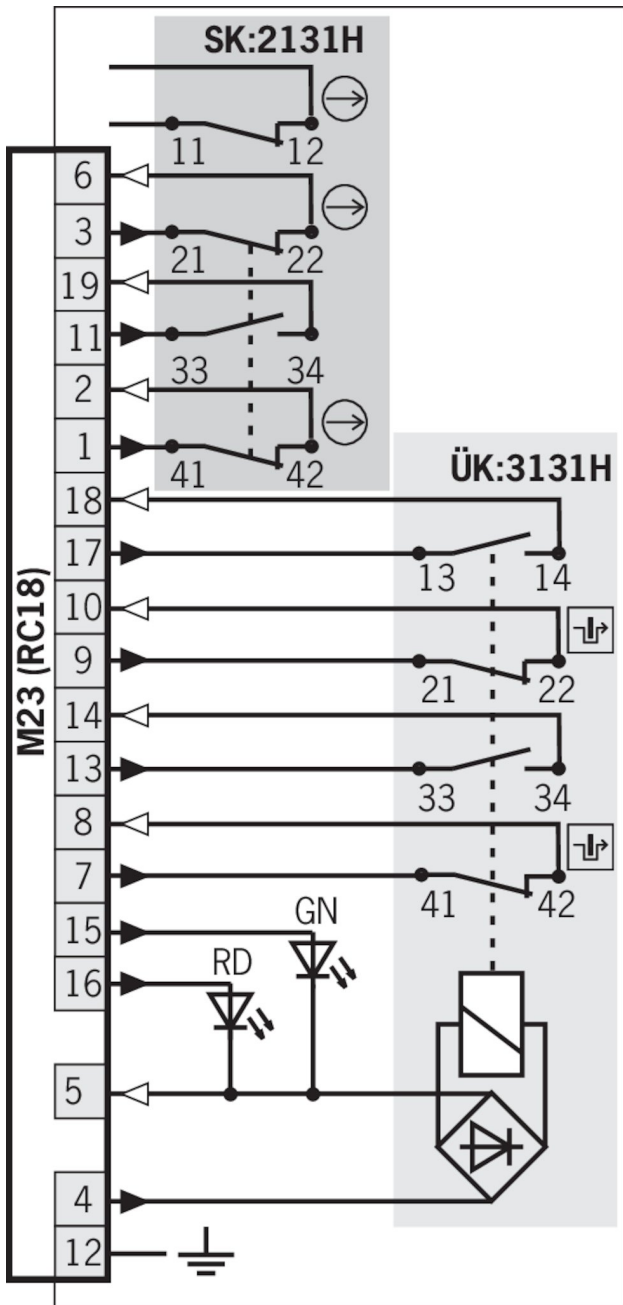
Is used for releasing the guard locking with the aid of a tool. Sealing can be fitted to protect against tampering. Lead seal kit and tool included (already pre-assembled on versions with plug connectors).

Dimension drawing



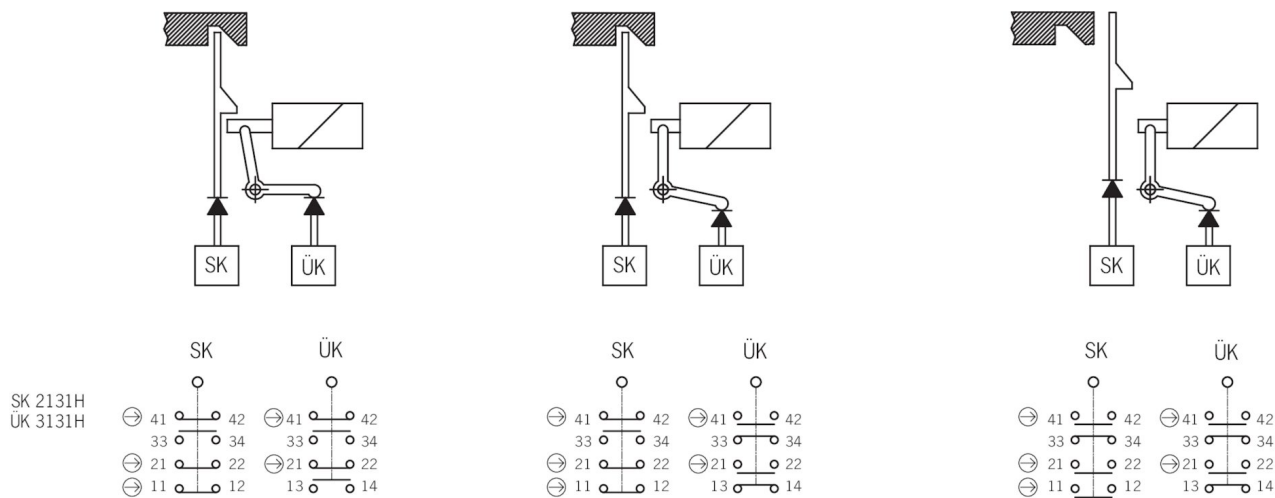
1 Auxiliary release

SK:2131H/ÜK:3131HRC18VAB



- Solenoid monitoring
- Door monitoring

Switching functions



TECHNICAL DATA

Approvals



Mechanical values and environment

Housing material

	Housing	Anodized die-cast alloy
Weight	Net	1,2 kg
Ambient temperature		-25 ... 80 °C
Degree of protection		IP65
Mechanical life		1 x 10 ⁶
Contact material		Silver alloy, gold flashed
Switching principle		Slow-action switching contact
Installation orientation		Any
Number of door position positively driven contacts		2
Number of door position NO contacts		1
Number of guard lock monitoring positively driven contacts		2
Number of guard lock monitoring NO contacts		2
Connection		
	1 x	Plug connector RC18 (18 + PE)
Approach speed		max.20 m/min
Actuation frequency		max.1200 1/h
Guard locking principle		Closed-circuit current principle
Locking force F _{max}		2000 N
Locking force F _{Zh}		1500 N
Retention force		10 N
Extraction force		30 N
Actuating force		35 N
Insertion depth		min.52 mm
Lid		Black

Electrical connection ratings

Thermal rated current I_{th}	4 A ($>70^{\circ}\text{C} \Rightarrow 2\text{A}$)
Utilization category according to EN 60947-5-1	
	AC-15 4A 110V ($>70^{\circ}\text{C} \Rightarrow 2\text{A}$)
	DC-13 4A 24V ($>70^{\circ}\text{C} \Rightarrow 2\text{A}$)
Solenoid operating voltage	
	AC/DC 24 V -15% ... +10%
Short circuit protection according to IEC 60269-1	4A gG ($>70^{\circ}\text{C} \Rightarrow 2\text{A gG}$)
Rated insulation voltage U_i	110 V
Rated impulse withstand voltage U_{imp}	1,5 kV
Switching voltage	
	Min. at 10mA 12 V
Switching current	
	Min. at 24V 1 mA
Power consumption	10 W
Solenoid duty cycle	100 %
LED indicator	Operating voltage corresponds to the solenoid voltage (2 LEDs; green, red)

Reliability values according to EN ISO 13849-1

	Monitoring of guard locking and the safety guard position
$B10_D$	3×10^6
	Control of the guard locking
Category	Depending on external control of guard locking (LEDs have the same ground potential as the guard locking solenoid.)
Performance Level	Depending on external control of guard locking (LEDs have the same ground potential as the guard locking solenoid.)
PFH_D	Depending on external control of guard locking (LEDs have the same ground potential as the guard locking solenoid.)

In combination with Actuator BETAETIGER-Z-GN

Mechanical values and environment

Overtravel	16 mm
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In combination with Actuator BETAETIGER-Z-G

Mechanical values and environment

Overtravel	4 mm
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ACCESSORIES

Actuator

Actuators for safety switches NZ.VZ, NZ.VZ.VS and TZ



097436
BETAETIGER-Z-GME

- ▶ Made of solid stainless steel
- ▶ Two stainless safety screws per actuator



074411
BETAETIGER-Z-G/V25

- ▶ Two stainless safety screws per actuator
- ▶ Packaging unit 25 pieces



016849
BETAETIGER-Z-G

- ▶ Two stainless safety screws per actuator



072251
BETAETIGER-Z-GN

- ▶ Two stainless safety screws per actuator

Hinged actuator bottom for safety switches NZ.VZ, NZ.VZ.VS and TZ



074414
RADIUSBETAETIGER-Z-U/V25

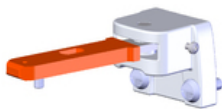
- ▶ Two stainless safety screws per actuator
- ▶ Packaging unit 25 pieces



048850
RADIUSBETAETIGER-Z-U

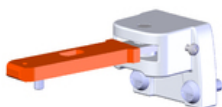
- ▶ Two stainless safety screws per actuator

Hinged actuator left for safety switches NZ.VZ, NZ.VZ.VS and TZ



024298
RADIUSBETAETIGER-Z-L

- ▶ Two stainless safety screws per actuator



074413
RADIUSBETAETIGER-Z-L/V25

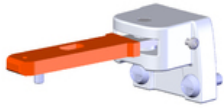
- ▶ Two stainless safety screws per actuator
- ▶ Packaging unit 25 pieces



100407
RADIUSBETAETIGER-Z-L-C2194

- ▶ Two stainless safety screws per actuator
- ▶ Smaller door radii

Hinged actuator right for safety switches NZ.VZ, NZ.VZ.VS and TZ



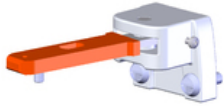
074412
RADIUSBETAETIGER-Z-R/V25

- ▶ Two stainless safety screws per actuator
 - ▶ Packaging unit 25 pieces
-



100406
RADIUSBETAETIGER-Z-R-C2194

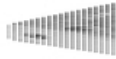
- ▶ Two stainless safety screws per actuator
 - ▶ Smaller door radii
-



024299
RADIUSBETAETIGER-Z-R

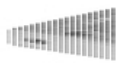
- ▶ Two stainless safety screws per actuator
-

Hinged actuator top for safety switches NZ.VZ, NZ.VZ.VS and TZ



057950
RADIUSBETAETIGER-Z-O

- ▶ Two stainless safety screws per actuator
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074415
RADIUSBETAETIGER-Z-O/V25

- ▶ Two stainless safety screws per actuator
 - ▶ Packaging unit 25 pieces
-

Bolt

Bolt BTC-TZ00... without escape release for safety switch TZ



106280
BTC-TZ00-C-TH-00-X

- ▶ Aluminum bolt
- ▶ For doors hinged on the left
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included

Bolt TZ-C... for safety switches TZ



057737
RIEGEL TZ-C

- ▶ Steel bolt
- ▶ For doors hinged on the left
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included



079799
RIEGEL TZ-C-NIRO

- ▶ Stainless steel bolt
- ▶ For doors hinged on the left
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included



096058
RIEGEL TZ-C-NIRO-C2101

- ▶ Stainless steel bolt
- ▶ For doors hinged on the left
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included



117194
RIEGEL TZ-C-NIRO-C2392

- ▶ Stainless steel bolt
- ▶ For doors hinged on the left
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included

Bolts NZ/TZ-S1 and NZ/TZ-S2 for safety switches NZ.VZ, NZ.VZ.VS and TZ



028357
RIEGEL NZ/TZ-S1

- ▶ Aluminum bolt
- ▶ For doors hinged on the left or right. Cone grip bottom.
- ▶ Spring catch in open position
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included



028359
RIEGEL NZ/TZ-S2

- ▶ Aluminum bolt
- ▶ For doors hinged on the left or right. Cone grip top.
- ▶ Spring catch in open position
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included

Connection material

Connection cable with plug connector M23 with option C1825, 1.5m, angled



092906
C-M23F19-19XDIFPU01,5-MA-092906

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 1.5 m
- ▶ With flying lead



092907
C-M23F19-19XDIFPU01,5-MA-092907

- ▶ Cores color-coded
- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 1.5 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 1.5m, straight



092761
C-M23F19-19XDIFPU01,5-MA-092761

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 1.5 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 3m, angled



092908
C-M23F19-19XDIFPU03,0-MA-092908

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 3 m
- ▶ With flying lead
- ▶ Cores color-coded



092909
C-M23F19-19XDIFPU03,0-MA-092909

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 3 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 6m, angled



077018
C-M23F19-19XDIFPU06,0-MA-077018

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 6 m
- ▶ With flying lead
- ▶ Cores color-coded



085194
C-M23F19-19XDIFPU06,0-MA-085194

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 6 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 6m, straight



077014
C-M23F19-19XDIFPU06,0-MA-077014

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 6 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 8m, angled



077019
C-M23F19-19XDIFPU08,0-MA-077019

- ▶ RC18 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable



085195
C-M23F19-19XDIFPU08,0-MA-085195

- ▶ Cable length 8 m
- ▶ With flying lead
- ▶ Cores color-coded
- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 8 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 8m, straight



077015
C-M23F19-19XDIFPU08,0-MA-077015

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 8 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 10m, angled



092901
C-M23F19-19XDIFPU10,0-MA-092901

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead



092902
C-M23F19-19XDIFPU10,0-MA-092902

- ▶ Cores color-coded
- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 10m, straight



092898
C-M23F19-19XDIFPU10,0-MA-092898

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 15m, angled



077020
C-M23F19-19XDIFPU15,0-MA-077020

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 15 m
- ▶ With flying lead



085196
C-M23F19-19XDIFPU15,0-MA-085196

- ▶ Cores color-coded
- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 15 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 15m, straight



077016
C-M23F19-19XDIFPU15,0-MA-077016

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable



- ▶ PUR cable
- ▶ Cable length 15 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 20m, angled



092910
C-M23F19-19XDIFPU20,0-MA-092910

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 20 m
- ▶ With flying lead
- ▶ Cores color-coded



092911
C-M23F19-19XDIFPU20,0-MA-092911

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 20 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 20m, straight



092726
C-M23F19-19XDIFPU20,0-MA-092726

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 20 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 25m, angled



092912
C-M23F19-19XDIFPU25,0-MA-092912

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 25 m
- ▶ With flying lead
- ▶ Cores color-coded



092913
C-M23F19-19XDIFPU25,0-MA-092913

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 25 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 25m, straight



092727
C-M23F19-19XDIFPU25,0-MA-092727

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 25 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23 with option C1825, 30m, straight



095993
C-M23F19-19XDIFPU30,0-MA-095993

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 30 m
- ▶ With flying lead
- ▶ Cores color-coded

Connection cable with plug connector M23, 19-pin, 1.5m, straight



110301
C-M23F19-19XDIFPU01,5-MA-110301

- ▶ M23 female plug, 19-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 1.5 m
- ▶ With flying lead
- ▶ Cores numbered, black

Connection cable with plug connector M23, 19-pin, 3m, straight



110302
C-M23F19-19XDIFPU03,0-MA-110302

- ▶ M23 female plug, 19-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 3 m
- ▶ With flying lead
- ▶ Cores numbered, black

Connection cable with plug connector M23, 19-pin, 6m, straight



110303
C-M23F19-19XDIFPU06,0-MA-110303

- ▶ M23 female plug, 19-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 6 m
- ▶ With flying lead
- ▶ Cores numbered, black

Connection cable with plug connector M23, 19-pin, 10m, straight



110304
C-M23F19-19XDIFPU10,0-MA-110304

- ▶ M23 female plug, 19-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead
- ▶ Cores numbered, black

Connection cable with plug connector M23, 19-pin, 15m, straight



110305
C-M23F19-19XDIFPU15,0-MA-110305

- ▶ M23 female plug, 19-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 15 m
- ▶ With flying lead
- ▶ Cores numbered, black

Connection cable with plug connector M23, 19-pin, 20m, straight



110306
C-M23F19-19XDIFPU20,0-MA-110306

- ▶ M23 female plug, 19-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 20 m
- ▶ With flying lead
- ▶ Cores numbered, black

Connection cable with plug connector M23, 19-pin, 25m, straight



110307
C-M23F19-19XDIFPU25,0-MA-110307

- ▶ M23 female plug, 19-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 25 m
- ▶ With flying lead
- ▶ Cores numbered, black

Female connector RC18 angled with option C1825



077026
RC18WF-C1825

- ▶ Plug connector M23, angled
- ▶ Number of pins: 19-pin with shield spring



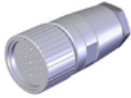
Female plug RC18 angled



074617
RC18WF

- ▶ Plug connector M23, angled
- ▶ Number of pins: 19-pin with shield spring

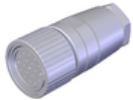
Female plug RC18 straight



074616
RC18EF

- ▶ Plug connector M23, straight
- ▶ Number of pins: 19-pin with shield spring

Female plug RC18 straight with option C1825



077025
RC18EF-C1825

- ▶ Plug connector M23, straight
- ▶ Number of pins: 19-pin with shield spring

Function expansion

Adapter NZ/TZ 45/30



079033
ADAPTER NZ/TZ 45/30

- ▶ The adapter NZ/TZ 45/30 is used to compensate for different profiles, doors/frame 45/30

Lockout mechanism NZ.VZ/TZ, 3 holes



091305
SPERREINSATZ MIT KETTE

- ▶ Prevents unintentional closing of the door
- ▶ Can be secured with padlocks



046730
SPERREINSATZ-Z-046730

- ▶ Prevents unintentional closing of the door
- ▶ Can be secured with padlocks

Lockout mechanism NZ.VZ/TZ, 5 holes

086538
SPERREINSATZ-Z-086538

- ▶ Prevents unintentional closing of the door
- ▶ Can be secured with padlocks

Protective plate NZ.VZ/TZ

059136
SCHUTZBLECH NZ/TZ

Mounting accessories

Mounting plates EMP-B1 for actuators for safety switches CTP, TP...A, STA, STP, TX and TZ



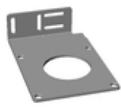
093457
EMP-B1

Mounting plates EMP-B2 for actuators for safety switches CTP, TP...A, STA, STP, TX and TZ



093458
EMP-B2

Mounting plates EMP-SA for safety switches TZ



094401
EMP-SA

- ▶ For vertical and horizontal mounting of safety switch TZ

Safety screws M5 x 10

073455
M5X10-NIRO/V100 NZ/TZ

- ▶ Safety screws M5 x 10
- ▶ Packaging unit 100 pieces

Safety screws M5 x 16

073456
M5X16/V100

- ▶ Safety screws M5 x 16
- ▶ Packaging unit 100 pieces

Safety screws for actuators, M5 x 25

073457
M5X25/V100

- ▶ Safety screws M5 x 25
- ▶ Packaging unit 100 pieces

Spare parts

048257
PLOMBENSATZ TZ

Contacts

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