


Selection table for safety switch TX with guard locking and guard locking monitoring

Release feature, front									
HE		Mechanical release on the front							
Release feature, rear									
FE		Escape release on the rear							
Connection									
		M	Thread M20x1.5 for cable glands						
		NPT $\frac{1}{2}$ "	Thread $\frac{1}{2}$ " for cable glands						
		BH10	Plug connector 9-pin + PE						
		SR11	Plug connector 11-pin + PE						
		M23 (RC18)	Plug connector 18-pin + PE						
		M12	Plug connector 5-pin						
Switching element									
		2 NC \ominus / 1 NO + 1 NC or							
		4 contacts 2 NC \ominus / 1 NO + 1 NO or							
		2 NC \ominus + 2 NC \ominus							



Manual release		Connection						Switching element	With version	Page
HE	FE	M	NPT $\frac{1}{2}$ "	BH10	SR11	M23 (RC18)	M12	4 contacts		
●		●	●					●		92
●				●		●		●		93
●		●						●		94
●					●	●		●		95
●	●	●						●	C1991/C2161	96
●	●					●		●	C1991	97
●							●	●	C2129	98

Safety switch TX with guard locking and guard locking monitoring



- ▶ Mechanical release on the front
- ▶ With door monitoring contact
- ▶ Plug connector optional



Approach direction



Horizontally and vertically adjustable in 90° steps

Mechanical release

Is used for releasing the guard locking with the aid of a tool. The mechanical release must be sealed to prevent tampering (for example with sealing lacquer).

Solenoid operating voltage

- ▶ AC/DC 24 V +10%, -15%

LED function display

The switch has a function display (2 LEDs, red and green). The LED voltage is same as the solenoid operating voltage.

Guard locking types

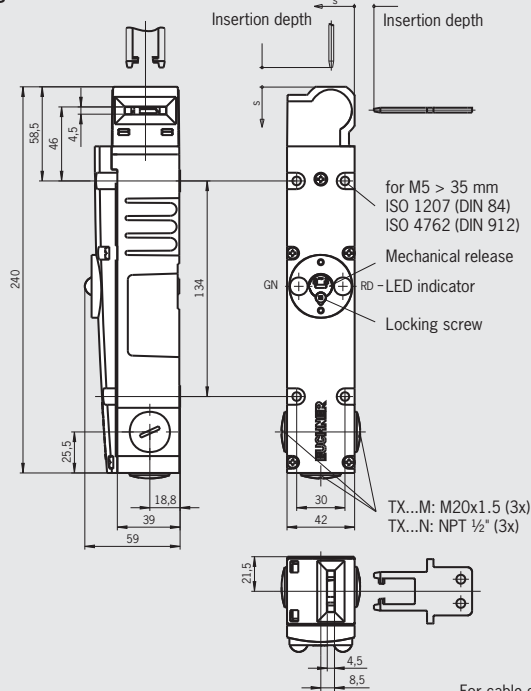
- TX1** Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.
- TX2** Open-circuit current principle, guard locking by applying voltage to the solenoid. Release by spring force.

Switching elements (see also page 14)

- ▶ **ETX B** Slow-action switching contact
2 NC \ominus / 1 NO + 1 NC (door monitoring contact)
- ▶ **ETX C** Slow-action switching contact
2 NC \ominus / 1 NO + 1 NO (door monitoring contact)
- ▶ **ETX D** Slow-action switching contact
2 NC \ominus + 2 NC \ominus (door monitoring contacts)

Cable entry M20 x 1.5 / cable entry NPT 1/2"

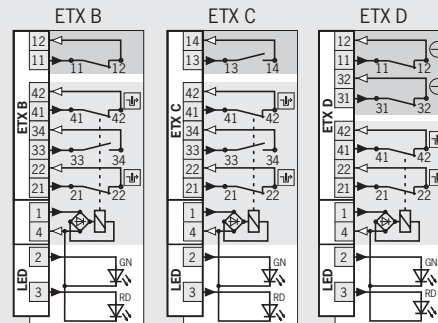
Dimension drawing



Please order actuator separately (see page 12092)

For cable glands, see page 132

Wiring diagrams actuator inserted and locked



- Solenoid monitoring
- Door monitoring

For switching functions, see technical data on page 185

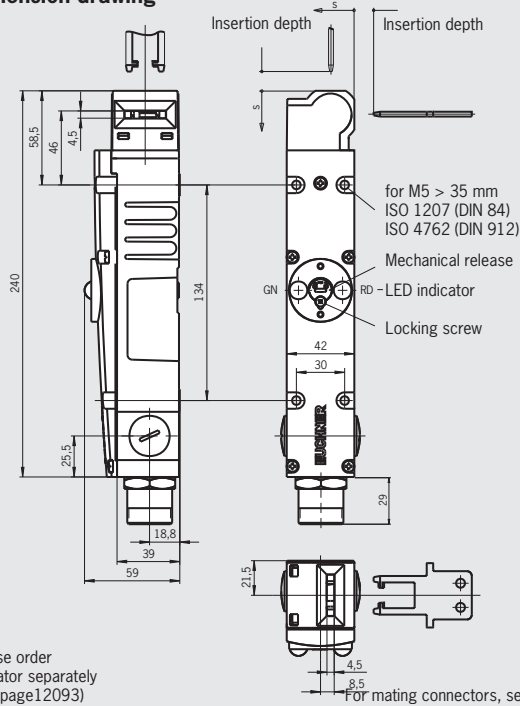
Ordering table

Series	Connection	Guard locking	Switching element	Solenoid operating voltage	
				AC/DC	24 V
TX	M Cable entry 3 x M20 x 1.5	1 Mechanical	ETX B 2 NC \ominus / 1 NO + 1 NC	082921	TX1B-A024M
			ETX C 2 NC \ominus / 1 NO + 1 NO	082922	TX1C-A024M
			ETX D 2 NC \ominus + 2 NC \ominus	095025	TX1D-A024MC2081
		2 Electrical	ETX B 2 NC \ominus / 1 NO + 1 NC	082927	TX2B-A024M
			ETX C 2 NC \ominus / 1 NO + 1 NO	082928	TX2C-A024M
			ETX D 2 NC \ominus + 2 NC \ominus	095026	TX2D-A024MC2081
	N Cable entry 3 x NPT 1/2"	1 Mechanical	ETX B 2 NC \ominus / 1 NO + 1 NC	082944	TX1B-A024N
			ETX C 2 NC \ominus / 1 NO + 1 NO	082945	TX1C-A024N
			ETX D 2 NC \ominus + 2 NC \ominus	082946	TX2B-A024N
		2 Electrical	ETX B 2 NC \ominus / 1 NO + 1 NC	082946	TX2B-A024N
			ETX C 2 NC \ominus / 1 NO + 1 NO	082947	TX2C-A024N
			ETX D 2 NC \ominus + 2 NC \ominus	082947	TX2C-A024N



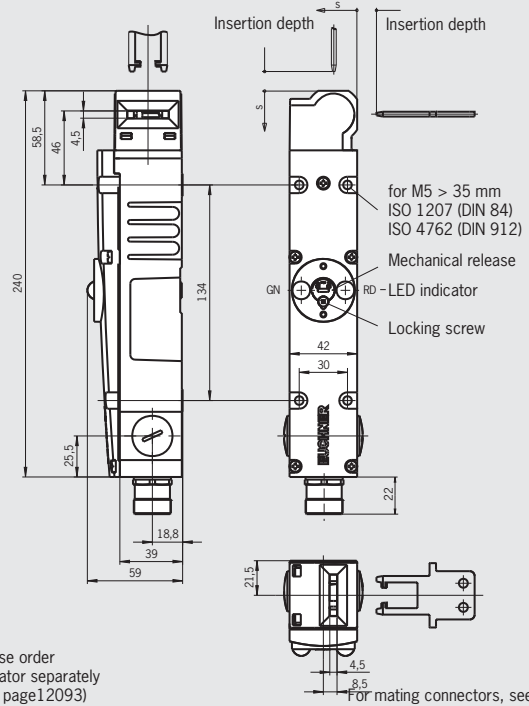
Plug connector BH10 9-pin + PE

Dimension drawing

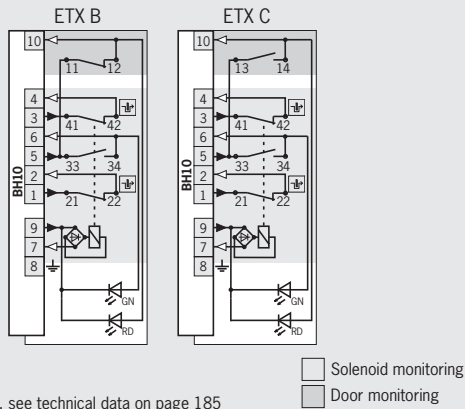


Plug connector M23 (RC18) 18-pin + PE

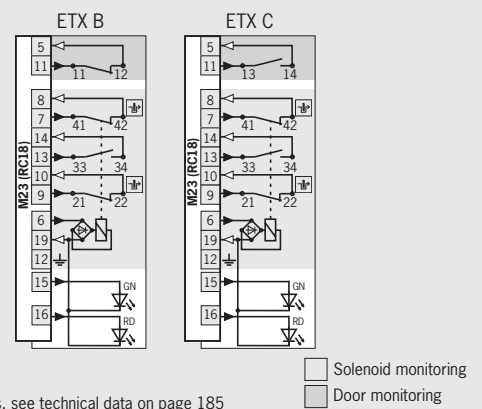
Dimension drawing



Wiring diagrams actuator inserted and locked



For switching functions, see technical data on page 185



For switching functions, see technical data on page 185

Ordering table

Series	Connection	Guard locking	Switching element	Solenoid operating voltage	
				AC/DC	24 V
TX	Plug connector BH10	1 Mechanical	ETX B 2 NC $\overline{\text{+}}$ / 1 NO + 1 NC	085380	TX1B-A024BH10
		2 Electrical	ETX B 2 NC $\overline{\text{+}}$ / 1 NO + 1 NC	085381	TX2B-A024BH10
	Plug connector M23 (RC18)	1 Mechanical	ETX B 2 NC $\overline{\text{+}}$ / 1 NO + 1 NC	082933	TX1B-A024RC18
			ETX C 2 NC $\overline{\text{+}}$ / 1 NO + 1 NO	082934	TX1C-A024RC18
		2 Electrical	ETX B 2 NC $\overline{\text{+}}$ / 1 NO + 1 NC	082939	TX2B-A024RC18
			ETX C 2 NC $\overline{\text{+}}$ / 1 NO + 1 NO	082940	TX2C-A024RC18

Safety switch TX with guard locking and guard locking monitoring



- ▶ Mechanical release on the front
- ▶ Release under load possible
- ▶ With door monitoring contact
- ▶ Plug connector optional



Approach direction



Horizontally and vertically adjustable in 90° steps

Mechanical release

Is used for releasing the guard locking with the aid of a tool. The mechanical release must be sealed to prevent tampering (for example with sealing lacquer).

Solenoid operating voltage

- ▶ AC/DC 24 V +10%, -15%

LED function display

The switch has a function display (2 LEDs, red and green). The LED voltage is same as the solenoid operating voltage.

Guard locking types

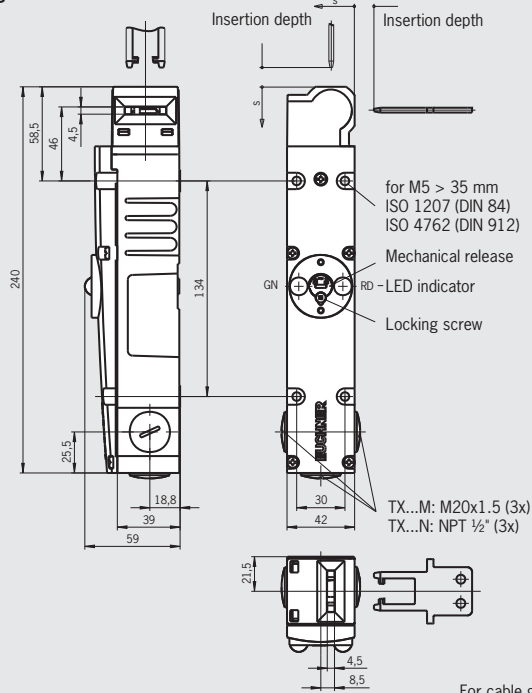
TX3 Closed-circuit current principle, guard locking by spring force, guard locking by spring force. Release by applying voltage to the solenoid. Release under load possible.

Switching elements (see also page 14)

- ▶ **ETX B** Slow-action switching contact
2 NC \ominus / 1 NO + 1 NC (door monitoring contact)
- ▶ **ETX C** Slow-action switching contact
2 NC \ominus / 1 NO + 1 NO (door monitoring contact)

Cable entry M20 x 1.5 / cable entry NPT 1/2"

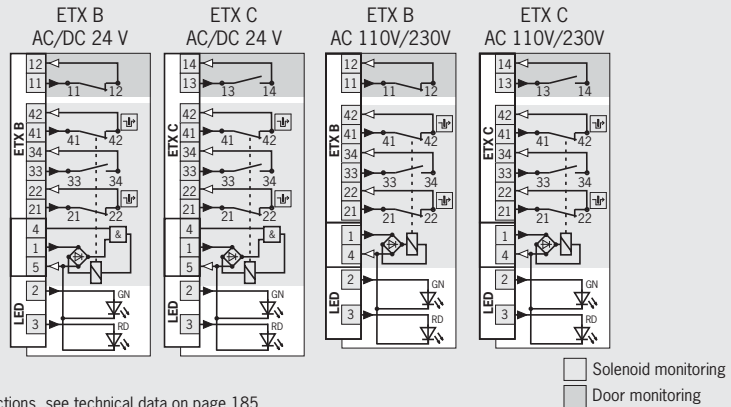
Dimension drawing



Please order actuator separately (see page 12094)

For cable glands, see page 132

Wiring diagrams actuator inserted and locked



For switching functions, see technical data on page 185

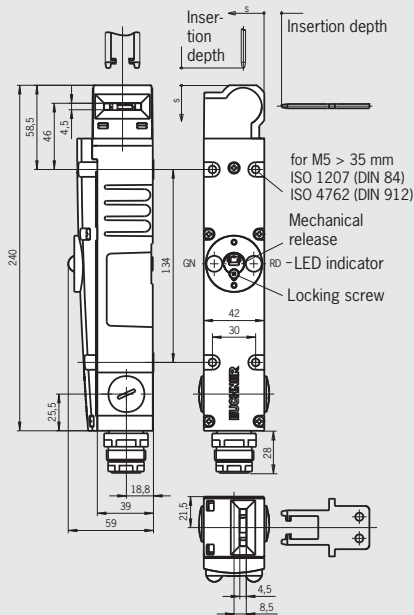
Ordering table

Series	Connection	Guard locking	Switching element	Solenoid operating voltage
				AC/DC 24 V
TX	M Cable entry 3 x M20 x 1.5	3 Mechanical	ETX B 2 NC \ominus / 1 NO + 1 NC	082952 TX3B-A024M
			ETX C 2 NC \ominus / 1 NO + 1 NO	082953 TX3C-A024M



Plug connector SR11 11-pin + PE

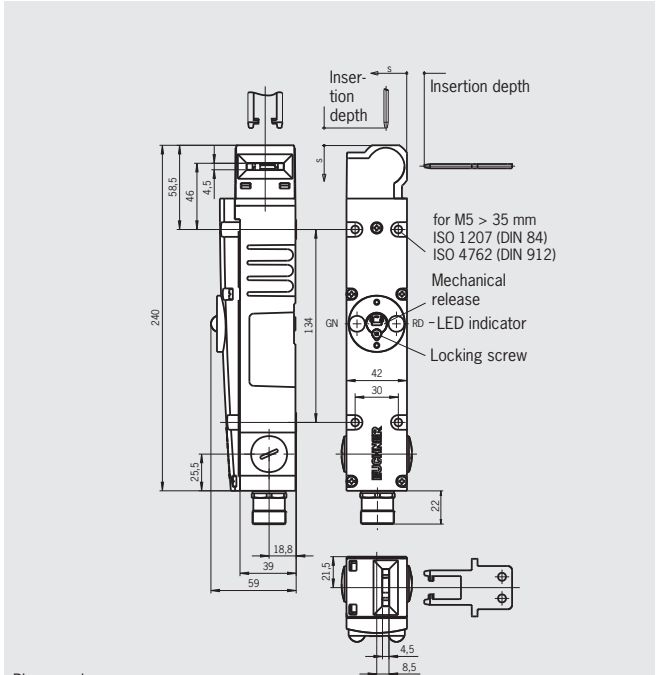
Dimension drawing



Please order actuator separately (see page 12095)

For mating connectors, see page 128

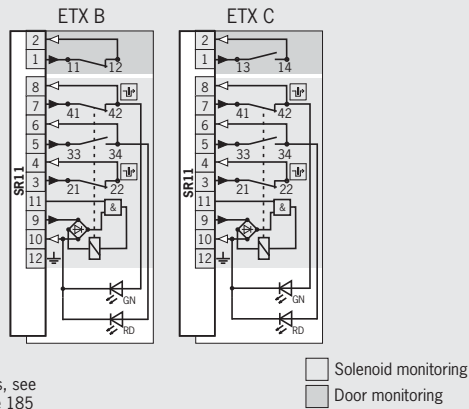
Plug connector M23 (RC18) 18-pin + PE



Please order actuator separately (see page 12095)

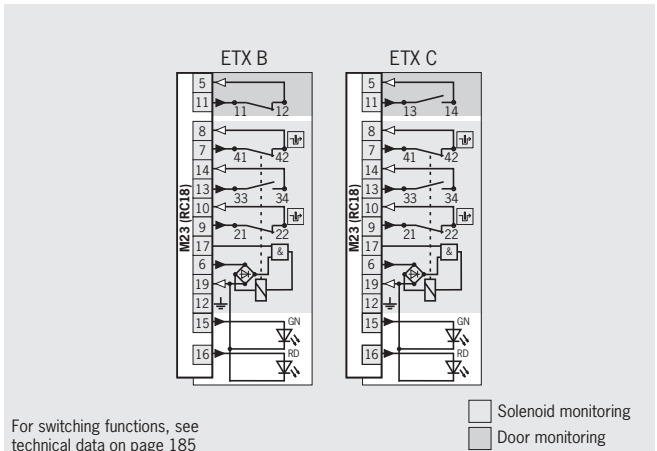
For mating connectors, see page 129

Wiring diagrams actuator inserted and locked



For switching functions, see technical data on page 185

- Solenoid monitoring
- Door monitoring



For switching functions, see technical data on page 185

- Solenoid monitoring
- Door monitoring

Ordering table

Series	Connection	Guard locking	Switching element	Solenoid operating voltage	
				AC/DC 24 V	
TX	Plug connector SR11	3 Mechanical	ETX B 2 NC $\overline{+}$ / 1 NO + 1 NC	085396 TX3C-A024SR11	
			ETX C 2 NC $\overline{+}$ / 1 NO + 1 NO		
	Plug connector M23 (RC18)	3 Mechanical	ETX B 2 NC $\overline{+}$ / 1 NO + 1 NC	082964 TX3B-A024RC18	
			ETX C 2 NC $\overline{+}$ / 1 NO + 1 NO		

For technical data, see page 163

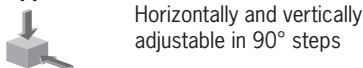
Safety switch TX with guard locking and guard locking monitoring



- ▶ Escape release on the rear
- ▶ Release under load possible (only TX3 version)
- ▶ With door monitoring contact
- ▶ Plug connector optional



Approach direction



Horizontally and vertically adjustable in 90° steps

Escape release

This is used for manual release of guard locking from within the danger zone without tools. With identification of On/Off position.

Solenoid operating voltage

- ▶ AC/DC 24 V +10%, -15%

LED function display

The switch has a function display (2 LEDs, red and green). The LED voltage is same as the solenoid operating voltage.

Guard locking types

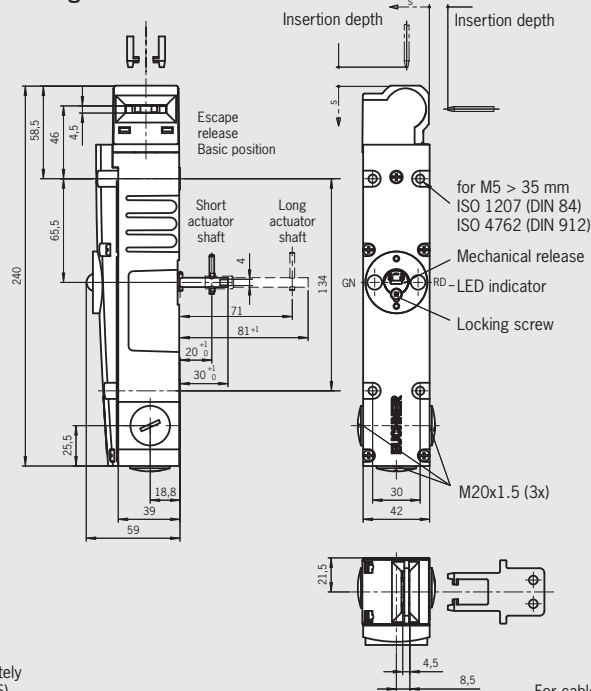
- TX1** Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.
- TX3** Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid. Release under load possible.

Switching elements (see also page 14)

- ▶ **ETX B** Slow-action switching contact
2 NC \ominus / 1 NO + 1 NC (door monitoring contact)
- ▶ **ETX C** Slow-action switching contact
2 NC \ominus / 1 NO + 1 NO (door monitoring contact)
- ▶ **ETX D** Slow-action switching contact
2 NC \ominus + 2 NC \ominus (door monitoring contacts)

Cable entry M20 x 1.5

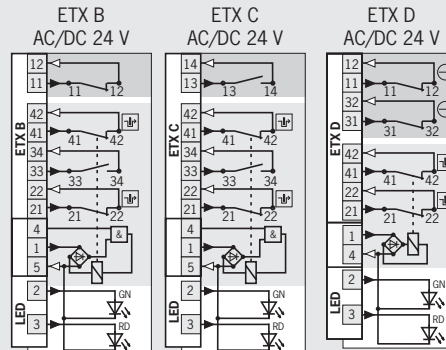
Dimension drawing



Please order actuator separately (see page 12096)

For cable glands, see page 132

Wiring diagrams actuator inserted and locked



For switching functions, see technical data on page 185

- Solenoid monitoring
- Door monitoring

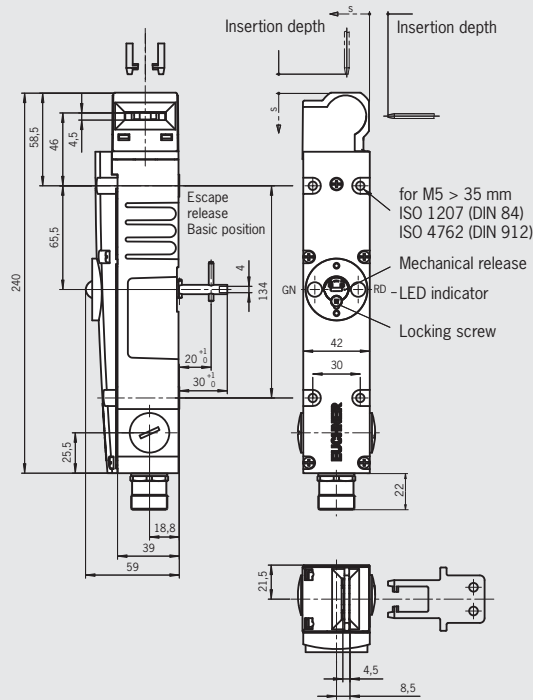
Ordering table

Series	Connection	Guard locking	Switching element	Version	Solenoid operating voltage
					AC/DC 24 V
TX	M Cable entry 3 x M20 x 1.5	1 Mechanical	ETX C 2 NC \oplus / 1 NO + 1 NO	C2161 Long actuator shaft	099489 TX1C-A024MC2161
			ETX D 2 NC \oplus + 2 NC \ominus	C1991 Short actuator shaft	096173 TX1D-A024MC1991
			ETX B 2 NC \oplus / 1 NO + 1 NC	C1991 Short actuator shaft	085391 TX3B-A024MC1991
		3 Mechanical	ETX C 2 NC \oplus / 1 NO + 1 NO	C1991 Short actuator shaft	093118 TX3C-A024MC1991
			ETX B 2 NC \oplus / 1 NO + 1 NC	C1991 Short actuator shaft	098946 TX3C-A024MC2161
			ETX C 2 NC \oplus / 1 NO + 1 NO	C2161 Long actuator shaft	



Plug connector M23 (RC18)
18-pin + PE

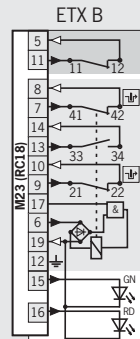
Dimension drawing



Please order actuator separately (see page 12097)

For mating connectors, see page 129

Wiring diagrams actuator inserted and locked



- Solenoid monitoring
- Door monitoring

For switching functions, see technical data on page 185

Ordering table

Series	Connection	Guard locking	Switching element	Version	Solenoid operating voltage
					AC/DC 24 V
TX	Plug connector M23 (RC18)	3 Mechanical	ETX B 2 NC / 1 NO + 1 NC	C1991 Short actuator shaft	093559 TX3B-A024RC18C1991

Safety switch TX with guard locking and guard locking monitoring



- ▶ Mechanical release on the front
- ▶ With door monitoring contact
- ▶ Separate plug connector for solenoid monitoring and door monitoring with solenoid operating voltage
- ▶ For direct connection to PROFIsafe inputs/outputs



Approach direction



Horizontally and vertically adjustable in 90° steps

Mechanical release

Is used for releasing the guard locking with the aid of a tool. The mechanical release must be sealed to prevent tampering (for example with sealing lacquer).

Solenoid operating voltage

- ▶ AC/DC 24 V +10%, -15%

LED function display

The switch has a function display (2 LEDs, red and green). The LED voltage is same as the solenoid operating voltage.

Guard locking types

TX1 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

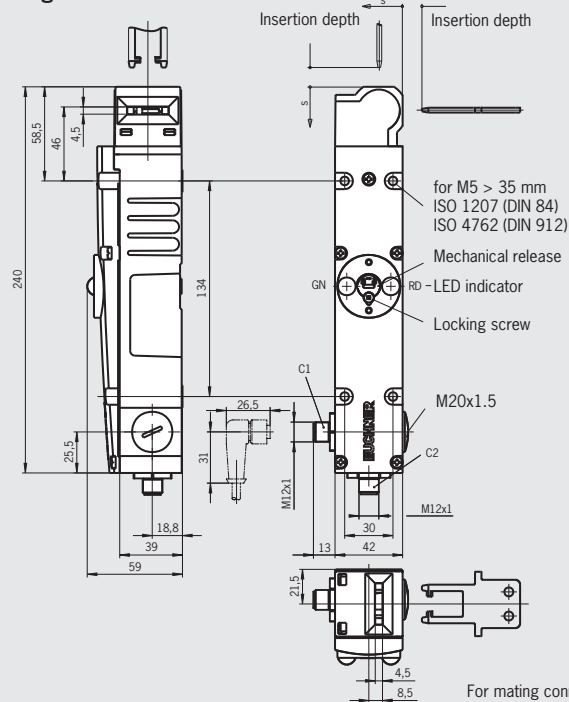
Switching elements (see also page 14)

- ▶ **ETX B** Slow-action switching contact
2 NC \ominus / 1 NO + 1 NC (door monitoring contact)

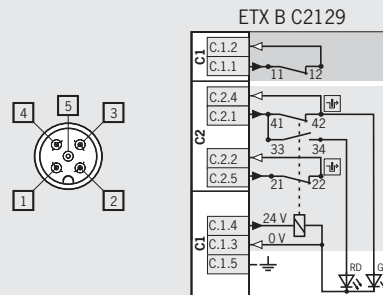
Plug connector M12

2 plug connectors, 5-pin

Dimension drawing



Wiring diagrams actuator inserted and locked



For switching functions, see technical data on page 185

Ordering table

Series	Connection	Guard locking	Switching element	Version	Solenoid operating voltage
					AC/DC 24 V
TX	Plug connector 2 x M12	1 Mechanical	ETX B 2 NC \ominus / 1 NO + 1 NC	C2129	097623 TX1B-A024MC2129