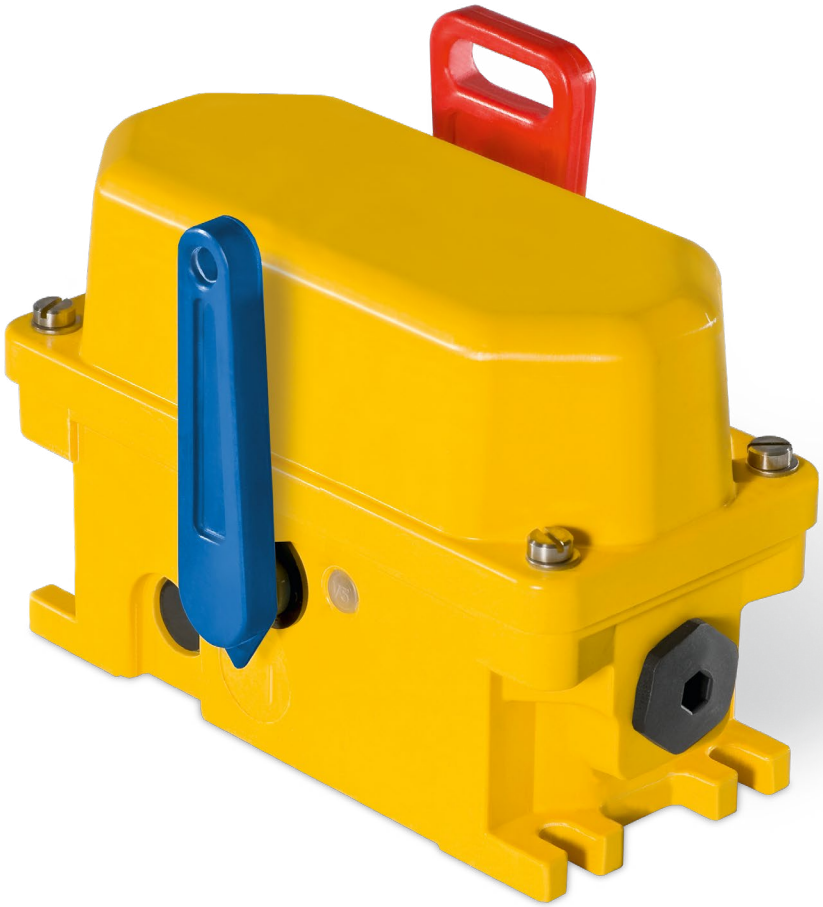
kiepe.INDUSTRY

EMERGENCY STOP SWITCH

NTS

 # 91.064 084.xxx



APPLICATION

Kiepe pull-rope emergency stop switches type NTS are used in accordance with the requirements of EN 620 as well as BGI 710 and in conformity with DIN EN ISO 13850 as emergency stop devices as supplementary safety measures on conveyor belt systems. The pull rope is symmetrically tensioned on both sides of the red release lever.

The devices are suitable for outdoor use and applications where the ambient temperature varies considerably.

With the pull-rope system functionally aligned, the emergency stop signal can be triggered over a distance of up to 2 x 125 m for each switch.

Kiepe pull-rope emergency stop switch types NTS comply with Machinery Directive 2006/42/EC and UKCA conformity is available.

They must only be used in control electrical circuits.

The NTS thermoset housing (BMC) offers space for up to 3 simultaneously switching NO and NC contacts. Taking into consideration the safety data and maintenance recommendations, the pull-rope emergency stop switch type NTS can be used in safety circuits in accordance with **DIN EN ISO 13849 up to Performance Level d (PLd)**.

FUNCTION

The pull-rope emergency stop switch is actuated by a pull rope 1 connected on both sides of the red release lever. The contacts are actuated by a spring supported cam disc (snap action function). At the same time, up to three NC and NO contacts are actuated simultaneously and a cross comparison of the contacts can be performed with an external control unit. The emergency stop signal is performed with positive-making normally closed (NC) contacts in accordance with the closed circuit principle.

After the emergency stop function is triggered, the switching mechanism is locked in the shut-off position "0". When the blue reset lever is actuated in switch position "1", the switching contacts are reactivated and the conveyor belt is prepared for being turned back on again.

Note: Resetting the pull-rope emergency stop switch must not cause the conveyor system to start up.

TECHNICAL DATA

Designation	Pull-rope emergency stop switch type NTS – emergency stop device with latching function	
Type of actuation	Bidirectional (double-side)	
Complies with	DIN EN 60947-5-5; IEC 60947 -5-5	
Suited for	Control circuits in accordance with DIN EN 60204-1	
Mechanics		
Enclosure	Thermoset housing (BMC)	
Color	Enclosure – yellow (RAL 1004), release lever – red (RAL 3000), reset lever – blue (RAL 5010)	
Mounting	4 x M8	
Pull-rope length (approved, max.)	2 x 125 m (dependent from design of external tension springs and max. temperature change)	
Actuation force	30 N ± 10 N	
Weight	1.7 kg	
Electrical system		
Switching system	Up to 3 NC and NO contacts; cam operated positve-opening switches (EN 60947-5-1)	
Cable entry (included in scope of supply)	2 x M25 x 1,5, with red transport lock (1x screwed cable gland: sealing area Ø9 mm to Ø17 mm; 1x dummy screw)	
Utilization category	AC-15: 230 V / 6 A DC-13: 125 V / 0,8 A DC-13: 24 V / 2 A	
Connection cross section (max.)	2.5 mm^2	
Protective conductor connection	Protection class II / Protective insulation	
Rated insulation voltage U_i	400 V	
Rated impulse withstand voltage U_{imp}	2.5 kV, degree of pollution 3	
Conventional thermal current I_{th}	16 A	
Ambient conditions in accordance with DIN EN 60947-5-5		
Permissible ambient temperature	–25 °C ...+70 °C	
Extended ambient temperature range	–40 °C ...+70 °C (type NTS 7xx)	
Protection rating (EN 60529)	IP 67	
Reliability and Safety Data		
Safety classification Depending upon system architecture	DIN EN ISO 13849 -1 (up to PLd) DIN EN 62061 (up to SIL 2)	
Electrical Reliability	bei DC-13: 24 V / 2 A bei AC-15: 230 V / 6 A	B10d > 25.000 Zyklen B10d >25.000 Zyklen

SELECTION TABLE

Switch type	Contact configuration Ö	S	Signal light LED BA15d	Temperature range -40 °C ... +70 °C	Ventilation membran	Order number
NTS 001	1	1				91.064 084.001
NTS 002	2	2				91.064 084.002
NTS 004	1	1	LED 230 V			91.064 084.004
NTS 005	2	2	LED 230 V			91.064 084.005
NTS 018	2	2			x	91.064 084.018
NTS 061	2 (Au)	2 (Au)	LED 24 V		x	91.064 084.061
NTS 701	1	1		x		91.064 084.701
NTS 702	2	2		x		91.064 084.702

Further models available on request

Equipment options on request:

Gold-plated contacts (Au), Ventilation membran, Reset with square instead of lever, LED signal lamps with different AC/DC options, BA15d, Devices for two-wire bus line

Spare parts and accessories:	
Screwed cable gland M25 x 1.5 (sealing area 9 mm to 17 mm)	113.51.00.20.10
Screw plug M25 x 1.5	113.43.87.20.01
Replacement lamp: LED AC/DC 230 V / 1,3 W	338.04.01.02.01
Replacement lamp: LED AC/DC 24-28 V / 0,8 W	338.04.01.02.02
Ventilation membran M12 x 1,5	113.61.99.05.01
Cover NTS incl. seal and screws	93.067.319.001
Mounting Kit, Steel, Support distance 2,5 m, 2 x 50 m	95.064 096.101
Mounting Kit, Stainless Steel AISI 304, Support distance 2,5 m, 2 x 50 m	95.064 096.501
Quick Clamp Mounting Kit, Stainless Steel AISI 304, Support Distance 3,5 m, 2x100m	95. 303 191.502
Fixing Foot S2	96.038 986.120

MOUNTING

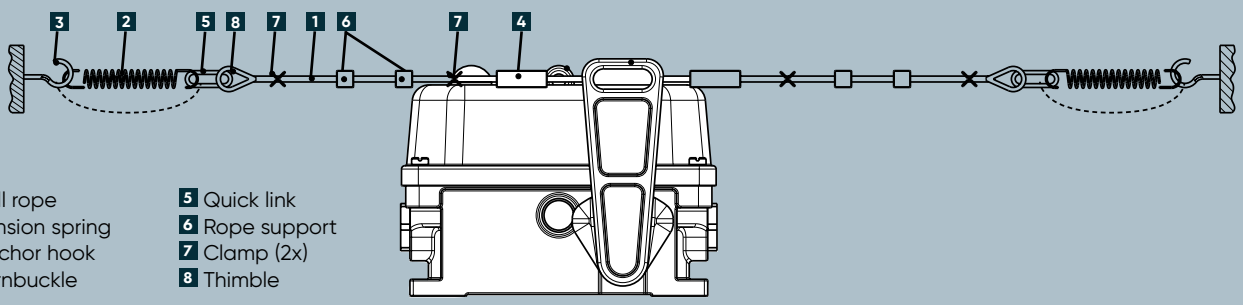
Pull-rope emergency stop switches of types NTS are each fastened to the substructure in installation position with 4 M8 screws, centered between the anchor hook 3 of the pull-rope system (see the mounting diagram).

Electrical connection is performed with the device open using the screwed cable gland included in the delivery, directly on the screw joints of the switching elements. The pull-rope 1 is tensioned by tension springs 2 between the anchor hooks 3 and fastened at the red release lever.

After the tension springs 2 have been adjusted, the actuation force and path for triggering the switch must be tested to ensure compliance with specified requirements.

***Note**:*
The tension springs are designed for cable systems with Kiepe devices at recommended temperature changes in a straight installation. Deviations from this may require a different spring design or an adjusted tension of the spring for wire break detection.

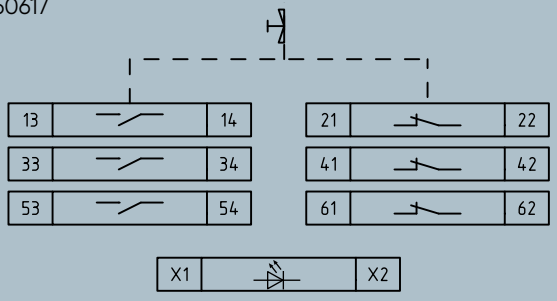
MOUNTING DIGAGRAM



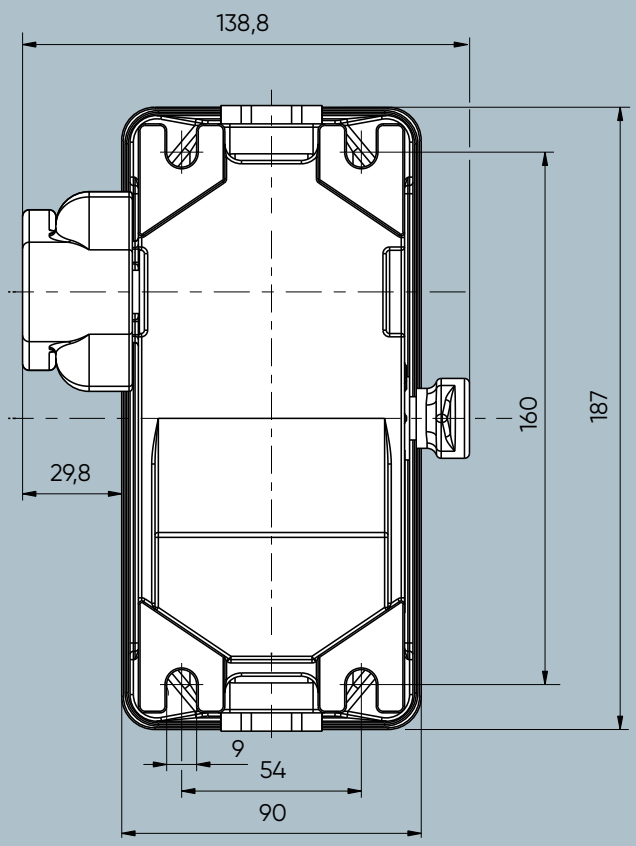
1 Pull rope
2 Tension spring
3 Anchor hook
4 Turnbuckle
5 Quick link
6 Rope support
7 Clamp (2x)
8 Thimble

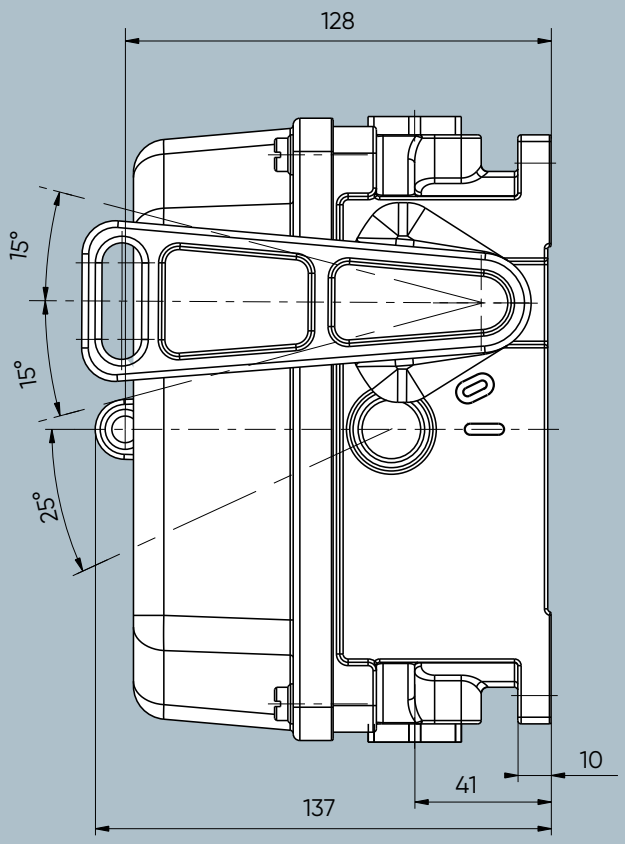
CONNECTION DRAWING

Switching elements according to DIN EN 60617
(the maximum configuration is shown)



DIMENSIONS





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