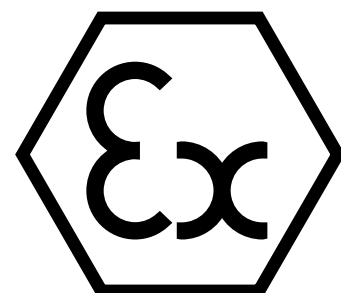


## Belt Conveyor - Pull Rope Switch

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**NTS EX II 2D**

**NTS EX II 3D**



## APPLICATION

Kiepe pull rope emergency stop switches Type NTS EX 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. With the pull rope system functionally aligned, the emergency stop signal can be triggered over a distance of up to 100 m for each switch. The KIEPE Pull rope switches Type NTS EX are suited for use in explosive atmosphere with conductive dust, Group II, category 2, in zone 21 and 22 (Type NTS EX II 2D) or categorie 3, only in zone 22 (Type NTS EX II 3D).

Kiepe pull rope emergency stop switches Type NTS EX comply with ATEX Directive 94/9/EG and Machinery Directive 2006/42/EC. The NTS EX glasfibre-reinforced plastic housing 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 EX can be used in safety circuits in accordance with DIN EN ISO 13849 up to Performance Level e (PLe).

Note:

The Pull Rope Switch must only be used in electrical control circuits.

## FUNCTION

The pull rope emergency stop switch is actuated by a pull rope **1** connected on both sides of the red actuator. The contacts are actuated by a spring supported cam disc (snap action function). At the same time, up to three NC and NO contacts can be operated. 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 release 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 of the pull rope switch must not cause the conveyor system to start up!

## TECHNICAL DATA

Designation	Pull rope switch Type NTS EX - Emergency Stop device with latching function- ATEX-Version	
Type of actuation	Bidirectional, by pull rope	
Complies with	DIN EN ISO 13850; DIN EN 60204-1; DIN EN 60947-5-5; DIN EN 60947-5-1; EN 620; BGI 710	
Suited for	control units and systems in accordance with DIN EN 60204	
<b>ATEX</b>		
Complies with ATEX Standard	EN 60079-0 ; EN 60079-31 „Protection by enclosure“	
Device group/category	II / 2D, 3D; flammable, conductive Dust	
ATEX-Identification		
for Zone 21, 22	NTS EX II 2D	⊕ II 2D Ex t IIIC T85°C Db IP67
for Zone 22	NTS EX II 3D	⊕ II 3D Ex t IIIC T85°C Dc IP67
ATEX-Certificate	EPS 12 ATEX 1 479 X	
<b>Mechanics</b>		
Enclosure	BMC-glasfibre-reinforced plastic, UV-stabilized	
Mounting	4 slotted holes for M8-Screws	
Installation position	Horizontal, tilt angle up to about 15°	
Pull rope lenth	Up to 2 x 50 m	
Weight	2,0 kg	
<b>Electric</b>		
Switching system	Up to 3 NC- and NO-contacts; cam operated positive-making switches	
Cable entry	2 Threaded holes M25x1,5 with each 2x Screw plug, 1x cable gland (added)	
Utilization category	AC-15: 230 V; 6 A DC-13: 110 V; 1,1 A	
Connection cross section	1 mm <sup>2</sup> up to 2,5 mm <sup>2</sup>	
Protective Conductor connection	Protection class II: double insulated enclosure	
Rated insulation voltage U <sub>i</sub>	400 V	
Rated impulse withstand voltage U <sub>imp</sub>	2,5 kV, overvoltage category II, degree of pollution 3	
Conventional thermal current I <sub>th</sub>	16 A	
Contact reliability	2,000,000 operations	

Ambient conditions	
Permissible ambient temperature	-25 °C ... +60 °C
Extended temperature range	-40 °C ... +60 °C (Types NTS EX 7xx)
Protection rating	IP 67 according to EN 60529
Safety data in accordance with DIN EN ISO 13849	
Safety functions	Emergency stop incl. latching Manual Reset
usable according to DIN EN ISO 13849-1	Up to PL e (depending on customer application)
B10d-value	24,000 actuations

## SELECTION CHART

Switch Type	Variant	Device-Group	Category	Explosive dust atmosphere	Order number
NTS EX	xxx	II	2D	occurs in normal operation occasionally	91.096.242.xxx
NTS EX	xxx	II	3D	not occurs in normal operation or infrequently add for a short time	91.096.253.xxx

## VARIANTS

Variant-Number xxx	Contact configuration		Extended Temperature-Range
	NC	NO	
001	1	1	
002	2	2	
023	1 (Au)	1 (Au)	
024	2 (Au)	2 (Au)	
701	1	1	-40°C...+60°C
702	2	2	-40°C...+60°C

Example: Order NTS EX 002 II 2D with order number 91.096.242.002

## Spare parts and accessories

EX-Cable gland ; M25 x 1,5 (sealing area 10 mm to 17 mm)	113.14.03.20.01
EX-Screw plug ; M25 x 1,5	113.43.87.20.02
Cover NTS incl. sealing and screws	93.067.319.001

### Important advice!

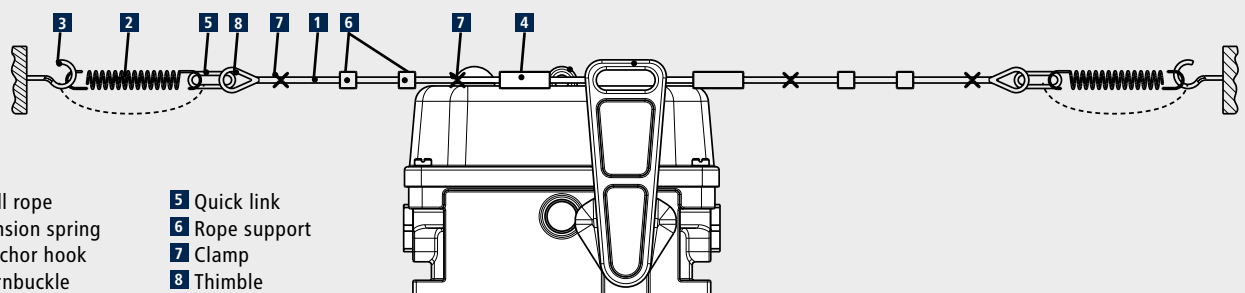
The cable gland and screw plugs are carried out according to EC-Type Examination Certificate. The use of other cable glands or screw plugs may void the device operation approval!

## MOUNTING

Pull rope emergency stop switches Type NTS EX are each fastened to the substructure in installation position with M8 screws and centered between the anchor hooks **3** of the pull rope system (see mounting diagram). 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.

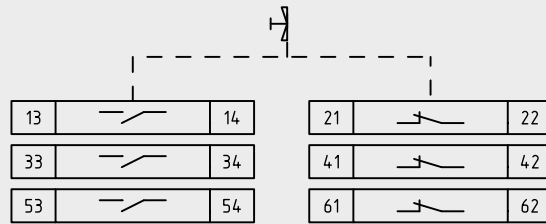
Electrical connection is performed with the device open using the ATEX-certificated screwed cable gland included in the delivery, directly on the screw joints of the switching elements.

## MOUNTING DIAGRAM

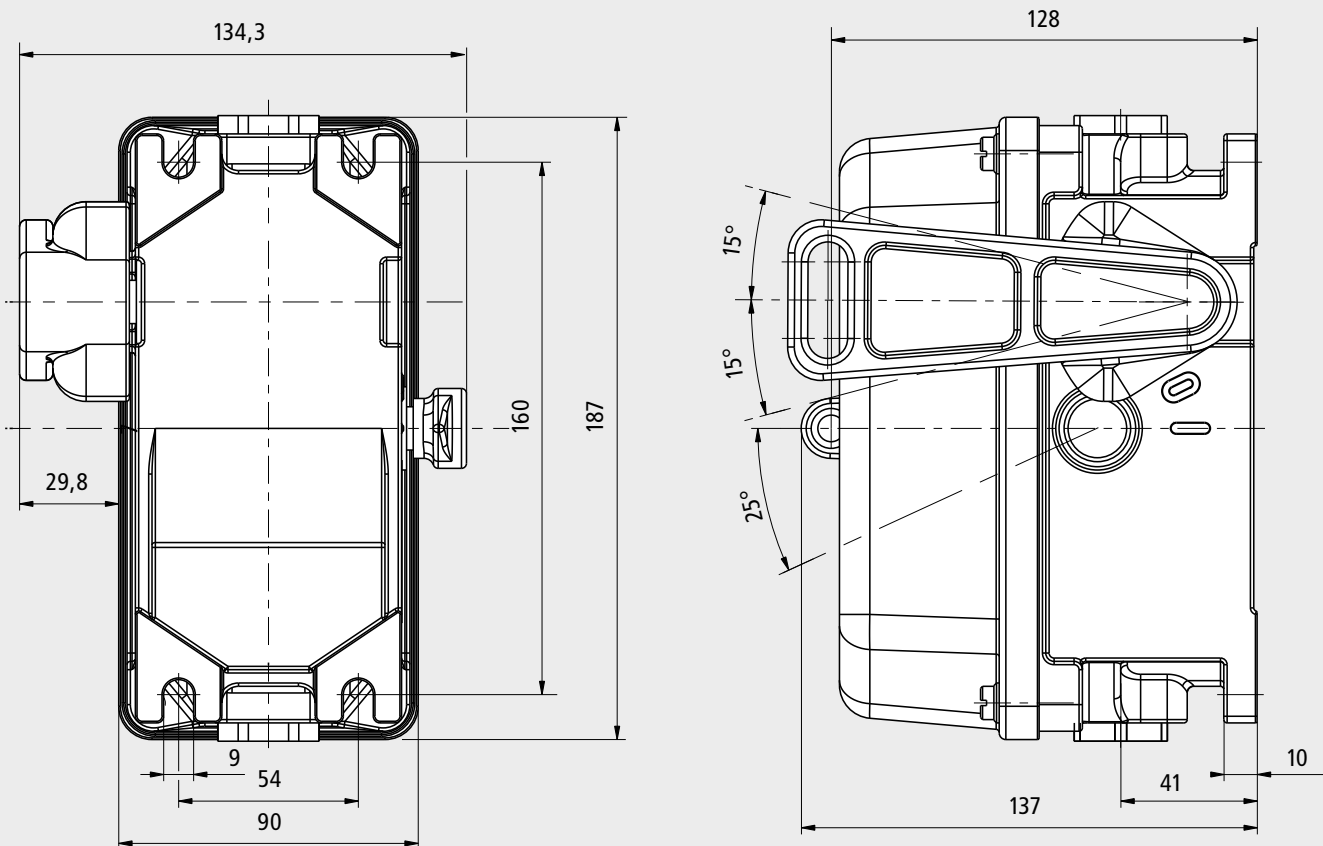


## CONNECTION DRAWING

Switching elements in accordance with DIN EN 60617  
(the maximum configuration is shown)



## DIMENSIONS



Subject to change without notice.