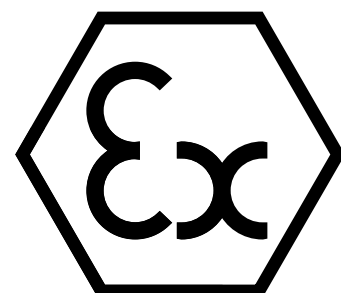


Belt Conveyor - Pull Rope Switch

HEN EX II 2D

HEN EX II 3D



APPLICATION

Kiepe pull-rope emergency stop switches Type HEN 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 HEN EX are suited for use in explosive atmosphere with conductive dust, Group II, category 2, in zone 21 and 22 (Type HEN EX II 2D) or categorie 3, only in zone 22 (Type HEN EX II 3D).

Kiepe pull-rope emergency stop switches Type HEN EX comply with ATEX Directive 94/9/EG and Machinery Directive 2006/42/EC. The HEN EX aluminum 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 HEN 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 HEN EX-Emergency stop device with latching function ; ATEX-Version	
Type of actuation		Bidirektional , 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	
ATEX			
Complies with ATEX Standard		EN 60079-0; EN 60079-31 „Protection by enclosure „t“	
Device group / category		II / 2D, 3D; flammable,conductive dust	
ATEX-Identification			
for Zone 21, 22	HEN EX II 2D	⊕ II 2D Ex t IIIC T85°C Db IP67	
for Zone 22	HEN EX II 3D	⊕ II 3D Ex t IIIC T85°C Dc IP67	
ATEX-Certificate		EPS 12 ATEX 1 479 X	
Mechanics			
Enclosure		Aluminium GK-AlSi 12 DD-paint yellow, RAL 1004	
Mounting		2 slotted holes for M8 screws	
Installation position		Horizontal , tilt angle up to about 15°	
Pull rope length		Up to 2 x 50 m	
Weight		2,0 kg	
Electric			
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 mm² up to 2,5 mm²	
Protective conductor connection		Protection class I: Protective earthing	
Rated insulation voltage U _i		400 V	
Rated impulse withstand voltage U _{imp}		2,5 kV, overvoltage category II, degree of pollution III	
Conventional thermal current I _{th}		16 A	
Contact reliability		2,000,000 operations	

Ambient conditions	
Permissible ambient temperature	–25 °C ... +60 °C
Extended temperature range	–40 °C ... +60 °C (Typen HEN EX 7xx)
Protection rating	IP 67 in accordance with 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
HEN EX	xxx	II	2D	occurs in normal operation occasionally	91.096 190.xxx
HEN EX	xxx	II	3D	not occurs in normal operation or infrequently ad for a short time	91.096.300.xxx

VARIANTS

Variant xxx	Contact configuration		Extended Temperatur- 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 HEN EX 002 II 2D with order number 91.096 190.002

Spare parts and accessories:

EX-Cable gland; M25 x 1,5 (sealing area Ø10 mm to Ø16 mm)	113.52.01.20.01
EX-Screws plug; M25 x 1,5	113.52.87.20.01

Important advice!

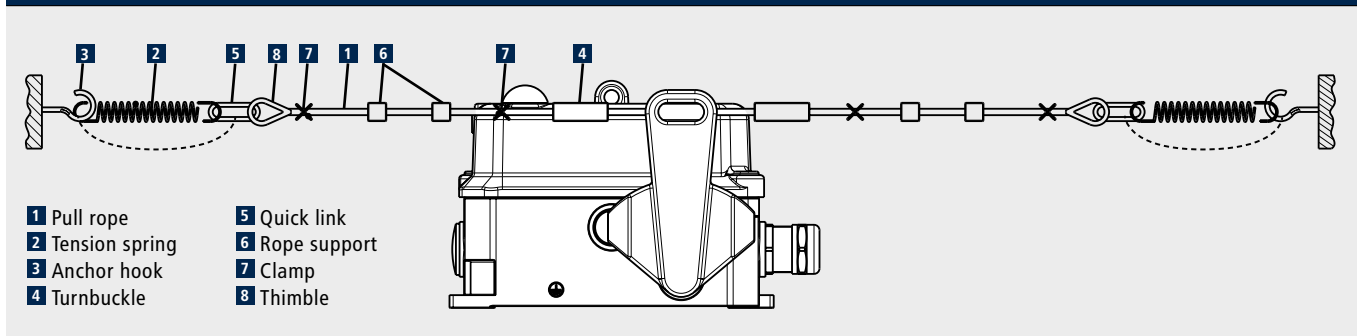
The cable gland and screw plugs are carried out according to EC-Type Examination Certificate.
The use of other cable glands or screw plugs may void the device operation approval!

MOUNTING

Pull-rope emergency stop switches Type HEN EX are each fastened to the substructure in installation position with M8 screws and centered between the anchor hook **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.

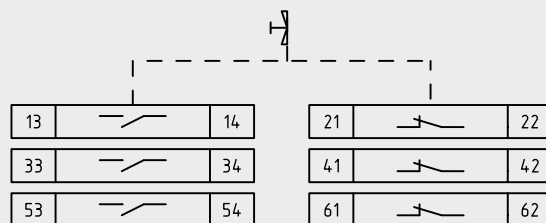
Electrical connection is performed with the device open using the ATEX-certificated screwed cable gland included in the delivery, directly on the screw joints of the switching elements.

MOUNTING DIAGRAM

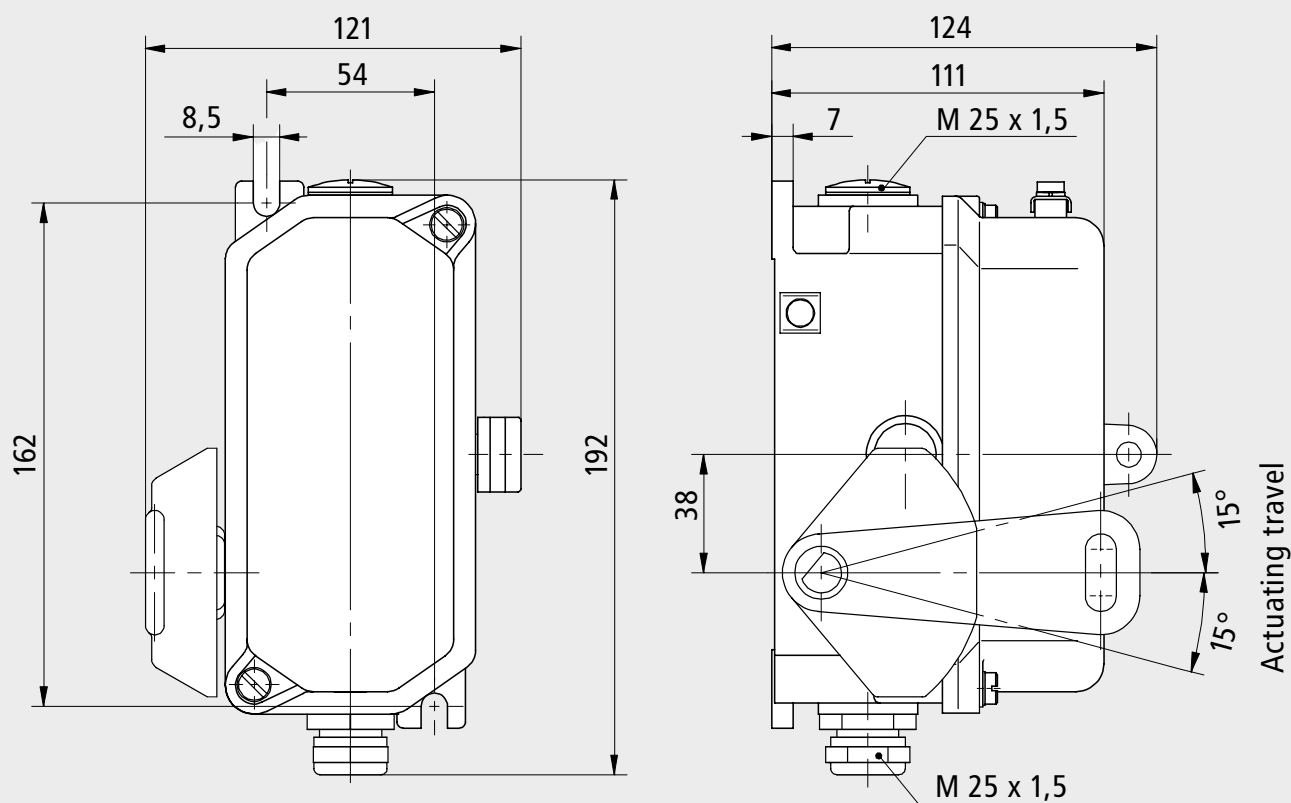


CONNECTION DRAWING

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



DIMENSIONS



Subject to change without notice.