



## Non-explosive switch NS-01

 **Certificate: ATEX**



NS-01

### Application:

The non-explosive switch NS-01 is used according to its design as a cable emergency switch, a switch for reporting the achieved position or switching off in the end position and monitoring the conveyer belt swing-away. The non-explosive switch is intended for the mine environment with a higher methane explosion hazard. The switch is typically used for conveyer belts.

### Description and Functions:

The cabinet of the switch is a welded piece made of steel plate and consists of a body and a cover. An emergency stop pushbutton can be situated on the cabinet cover. The cabinet is made as a secure enclosure. In the cabinet body there is a shaft with mechanisms and momentary switches controlled by a cam mechanism. All the contacts are brought out to the connecting terminal block. The lever control mechanism is fixed to the shaft on the outer side of the cabinet body. Next to it, there is a blocking lever of the blocking mechanism. On the front side of the cabinet body there are two cable bushings next to each other. The non-explosive switch is produced in three basic designs: A cable switch, a lever end switch and a swing-away switch.

Cable emergency switches are intended for mounting a cable pull in two directions to the lever control mechanism. The maximum length of the cable to each side is 50 m. By pulling one of the cables the switch switches over and the system is automatically blocked. It is only possible to return it to the neutral position manually.

The lever end switch is activated by swinging the lever aside from the neutral position. The lever equipped with a roller can be mounted in four positions. When started in the area of the backstop, the switch is switched over to the initial position and/or it can be blocked at the backstop. It is only possible to return it to the neutral position manually.

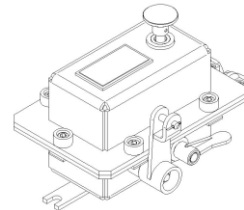
The swing-away switch is intended for being set along conveyer belts to minimize damage to the belt when it swings away. When the belt swings away from the expected trajectory, its edge affects a cylindrical lever of the switch. When the deviation angle is exceeded, the switch is activated (switched on).

### Technical parameters:

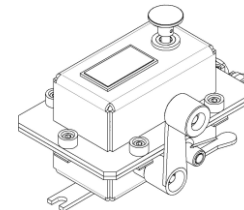
|                                   |                           |
|-----------------------------------|---------------------------|
| Design                            | I M2 Ex d I               |
| Contact load limit                | 10A max                   |
| Connected conductor cross-section | 0.5 to 2.5mm <sup>2</sup> |
| Temperature range                 | 0 to +40°C                |
| Relative humidity                 | 95% non-condensing        |
| Protection                        | IP54                      |
| Dimensions                        | 156 x 286 x 140mm         |
| Weight                            | 7.8kg                     |

|                                  |      |
|----------------------------------|------|
| Cable switch                     |      |
| Switching trajectory             | 34mm |
| Force necessary for switching on | 40N  |
| Lever end switch                 |      |
| Switching angle                  | 30°  |
| Maximum lever swing-away         | 75°  |
| Swing-away switch                |      |
| Switching angle                  | 25°  |
| Maximum lever swing-away         | 75°  |

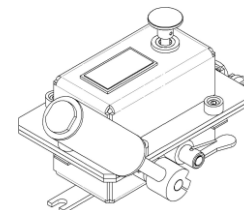
Cable switch NS-01-L...



Lever end switch NS-01-K...



Swing-away switch NS-01-V...

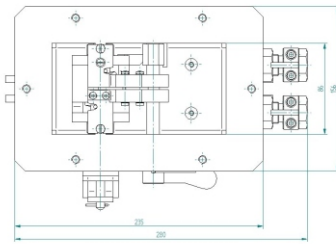
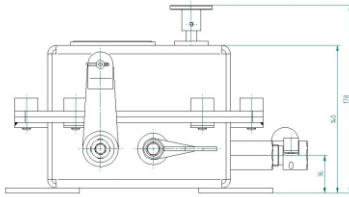


**The catalogue has only those selected important parameters for your final decision. For project designs always ask for the user's guide for this product and any engineering consultation about possible uses.**

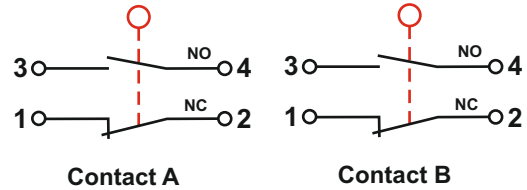


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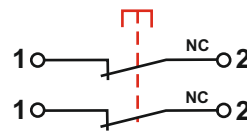
Dimensions of the non-explosive switch NS-01



Switch contacts



Emergency pushbutton contacts



Each of the three basic models of the non-explosive switch: the cable switch, the lever end switch and the swing-away switch has other alternative designs. This is an alternative with the emergency stop pushbutton situated in the upper side of the cover, the design with one or two switches, the design with mechanical blocking at start or without mechanical blocking at start. The design with the mechanical blocking at start can have the blocking lever of the blocking mechanism situated either on the side of the blocking mechanism, or on the opposite side of the cabinet. Possible designs are given in detail in the table below.

The order of contacts in the switch

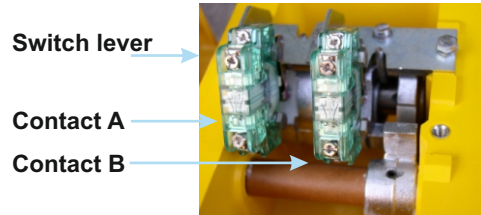


Table of non-explosive switch specifications

|                 |          |          |          |          |            |  |
|-----------------|----------|----------|----------|----------|------------|--|
| <b>NS - 01-</b> | <b>K</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>- 1</b> |  |
|                 |          |          |          |          | <b>0</b>   | - X  |
|                 |          |          |          |          | <b>X</b>   | - independent of the direction                               |
| <b>NS - 01-</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>- X</b> | <b>L</b> - switching elements to the left only               |
|                 |          |          |          |          |            | <b>P</b> - switching elements to the right only              |
| <b>NS - 01-</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>0</b>   | - without mechanical blocking at switch-on                   |
|                 |          |          |          |          | <b>1</b>   | - with mechanical blocking at switch-on                      |
|                 |          |          |          |          | <b>0</b>   | - the blocking lever on the side of the switching mechanism  |
|                 |          |          |          |          | <b>1</b>   | - the blocking lever on the opposite side of the cabinet     |
|                 |          |          |          |          | <b>0</b>   | - without a pushbutton on the upper part of the cover        |
|                 |          |          |          |          | <b>1</b>   | - with a pushbutton on the upper part of the cover           |
|                 |          |          |          | <b>1</b> |            | - one switch (1 switching-on and 1 switching-off contact)    |
|                 |          |          |          | <b>2</b> |            | - two switches (2 switching-on and 2 switching-off contacts) |
|                 | <b>L</b> |          |          |          |            | - cable switch   |
|                 | <b>K</b> |          |          |          |            | - lever end switch   |
|                 | <b>V</b> |          |          |          |            | - swing-away switch  |
|                 |          |          |          |          |            | - type series of the non-explosive switch                    |

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