

# Load disconnect switches and motor starters

STAHL

## Safety switch

10 A

8146/5-V37-300-50-1050 Art. No. 220277



- Large current range from 10 A to 180 A
- Can be used with conventional drives or with variable-frequency drives
- Intelligent design: A single rotary actuator for actuating the main and auxiliary contacts,  $\geq 20$  ms leading auxiliary contact for safe disconnection
- Designed in accordance with IEC/EN 62626-1, class 1
- The rotary actuator can be locked in the 0-position with three padlocks
- Cover can only be removed in the I-position

MY R. STAHL 8146L



R. STAHL Series 8146/5-V37 safety switches safely disconnect machines and system parts from the energy supply for cleaning and repair as prescribed. All of the installed load disconnect switches have AC-3 switching capacity. The switches can be locked in the 0-position using padlocks.

## Technical Data

### Explosion Protection

|                                 |                                                                          |
|---------------------------------|--------------------------------------------------------------------------|
| Area of application             | European Union (ATEX)<br>IECEx                                           |
| Application range (zones)       | 1, 2, 21, 22                                                             |
| IECEx gas certificate           | IECEx PTB 06.0090                                                        |
| IECEx gas explosion protection  | Ex db eb IIC T6 Gb                                                       |
| IECEx dust certificate          | IECEx PTB 06.0090                                                        |
| IECEx dust explosion protection | Ex tb IIIC T80 °C Db                                                     |
| ATEX gas certificate            | PTB 01 ATEX 1024                                                         |
| ATEX gas explosion protection   | Ex II 2 G Ex db eb IIC T6 Gb                                             |
| ATEX dust certificate           | PTB 01 ATEX 1024                                                         |
| ATEX dust explosion protection  | Ex II 2 D Ex tb IIIC T80 °C Db                                           |
| Certificates                    | ATEX (PTB), IECEx (PTB), India (PESO), Korea (KTL)                       |
| Declaration of conformity       | ATEX (EUK), China (CCC)                                                  |
| Notes                           | Product label may vary. Series devices are labelled with ATEX and IECEx. |

### Electrical Data

|                               |              |
|-------------------------------|--------------|
| Rated operational voltage AC  | 690 V        |
| Rated operational current     | 10 A         |
| Frequency range               | 50 – 60 Hz   |
| Switching capacity AC-3 230 V | 2.2 kW       |
| Switching capacity AC-3 400 V | 4 kW         |
| Switching capacity AC-3 440 V | 4 kW         |
| Switching capacity AC-3 500 V | 5.5 kW       |
| Switching capacity AC-3 690 V | 7.5 kW       |
| Auxiliary contact NC          | without      |
| Auxiliary contact NO          | 1 NO/delayed |

### Ambient Conditions

|      |                                                                                                                                   |
|------|-----------------------------------------------------------------------------------------------------------------------------------|
| Note | You can find information about the ambient temperature online at <a href="http://r-stahl.com">r-stahl.com</a> . MY R. STAHL 8146L |
|------|-----------------------------------------------------------------------------------------------------------------------------------|

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## Ambient conditions

| Ambient conditions | Number of poles |                    | Max. current (A) | Conductor cross-section <sup>1)</sup> (mm <sup>2</sup> ) |      | Temperature class/<br>perm. ambient temperature                                                |
|--------------------|-----------------|--------------------|------------------|----------------------------------------------------------|------|------------------------------------------------------------------------------------------------|
|                    | Main contacts   | Auxiliary contacts |                  | min.                                                     | max. |                                                                                                |
|                    | 3               | 1                  | 10               | 2.5                                                      | 4    | <b>T6: -40 to +51 °C</b><br>T6: -40 to +54 °C <sup>2)</sup><br>T5: -40 to +69 °C <sup>2)</sup> |

When using a conductor cross-section of min. 1.5 mm<sup>2</sup>, the temperature class and ambient temperature are reduced to T4: -40 °C to + 40 °C

<sup>1)</sup> Project engineering note:

The maximum conductor cross-sections given were determined using the H07V.

The minimum bending radius was assumed to be 4 x outer diameter in accordance with VDE 0298-3.

<sup>2)</sup> Only with heat-resistant conductor > 70 °C at cable entries and/or > 85 °C at clamping units

**Bold:** Information on the rating plate

## Mechanical Data

|                                                |                                                                                                            |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Degree of protection (IP)                      | IP66                                                                                                       |
| Degree of protection note                      | according to EN/IEC 60529                                                                                  |
| Enclosure material                             | Polyester resin, Glass fibre reinforced                                                                    |
| Min. solid conn. cr.-sect. AWG                 | AWG 14                                                                                                     |
| Min. f.stra. con. cr.-sec. AWG                 | AWG 14                                                                                                     |
| F.stranded conn. cr.-sect. AWG                 | AWG 12                                                                                                     |
| Connection terminal auxiliary contact min. AWG | AWG 16                                                                                                     |
| Seal                                           | Silicone, foamed                                                                                           |
| Detailed number of poles                       | 3-pole                                                                                                     |
| Connection cross section                       | 2.5 ... 4 mm <sup>2</sup>                                                                                  |
| Auxiliary connection connection terminals      | 1.5 ... 1.5 mm <sup>2</sup>                                                                                |
| Connection cross-section note                  | Depending on the application; for more detailed information, see the operating instructions at r-stahl.com |
| Construction type                              | Standard                                                                                                   |
| Dimension A                                    | 112.5 mm                                                                                                   |
| Dimension A inch                               | 4.43 in                                                                                                    |
| Dimension B                                    | 112.5 mm                                                                                                   |
| Dimension B inch                               | 4.43 in                                                                                                    |
| Dimension C                                    | 131 mm                                                                                                     |
| Dimension C inch                               | 5.16 in                                                                                                    |
| Handle colour                                  | Yellow shroud, red handle                                                                                  |
| Lockable in                                    | Three times in 0 position                                                                                  |
| Weight                                         | 1.7 kg                                                                                                     |
| Weight                                         | 3.75 lb                                                                                                    |

## Components

|                   |                                                |
|-------------------|------------------------------------------------|
| Additional device | Drilled brass plate                            |
| Entry type        | Standard 8161, moulded material                |
| Cable gland       | 2 x M25 Ø 7 ... 17 mm<br>1 x M20 Ø 4 ... 13 mm |

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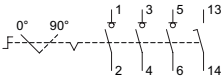


Safety switch

10 A

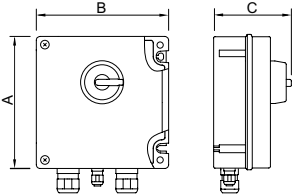
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Technical Drawings – Subject to Alterations

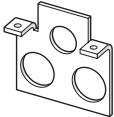


81../5--V...-3...-50-..  
3-pole + 1 NO  
(ON delayed – OFF leading)

Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



Accessories

| Brass plate                                                                       |                            | Art. No. |
|-----------------------------------------------------------------------------------|----------------------------|----------|
|  | SZ 031<br>2 x M25, 1 x M20 | 148207   |

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.