

# Load disconnect switches and motor starters

STAHL

## Safety switch

40 A

8146/5-V37-305-51-1110-K Art. No. 200208



- 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   | II 2 G Ex db eb IIC T6 Gb                                                |
| ATEX dust certificate           | PTB 01 ATEX 1024                                                         |
| ATEX dust explosion protection  | II 2 D Ex tb IIIC T80 °C Db                                              |
| Certificates                    | ATEX (PTB), IECEx (PTB), India (PESO), Korea (KGS), 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     | 40 A         |
| Frequency range               | 50 – 60 Hz   |
| Switching capacity AC-3 230 V | 11 kW        |
| Switching capacity AC-3 400 V | 22 kW        |
| Switching capacity AC-3 440 V | 22 kW        |
| Switching capacity AC-3 500 V | 22 kW        |
| Switching capacity AC-3 690 V | 37 kW        |
| Auxiliary contact NC          | 1 NC         |
| 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               | 2                  | 40               | 10                                                       | 25   | <b>T6: -40 to +48 °C</b><br>T6: -40 to +51 °C <sup>2)</sup><br>T5: -40 to +66 °C <sup>2)</sup> |
| <sup>1)</sup> Project engineering note:<br>The maximum conductor cross-sections given were determined using the H07V.<br>The minimum bending radius was assumed to be 4 x outer diameter in accordance with VDE 0298-3.<br><sup>2)</sup> Only with heat-resistant conductor > 70 °C at cable entries and/or > 85 °C at clamping units<br><b>Bold:</b> 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                                                                    |
| Additional terminal                            | N-terminal                                                                                                 |
| Min. solid conn. cr.-sect. AWG                 | AWG 8                                                                                                      |
| Min. f.stra. con. cr.-sec. AWG                 | AWG 8                                                                                                      |
| F.stranded conn. cr.-sect. AWG                 | AWG 4                                                                                                      |
| Connection terminal auxiliary contact min. AWG | AWG 18                                                                                                     |
| Seal                                           | Silicone, foamed                                                                                           |
| Detailed number of poles                       | 3-pole                                                                                                     |
| Connection cross section                       | 10 ... 25 mm <sup>2</sup>                                                                                  |
| Auxiliary connection connection terminals      | 0.75 ... 2.5 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                              | Compact design                                                                                             |
| Dimension A                                    | 340.5 mm                                                                                                   |
| Dimension A inch                               | 13.41 in                                                                                                   |
| Dimension B                                    | 170 mm                                                                                                     |
| Dimension B inch                               | 6.69 in                                                                                                    |
| Dimension C                                    | 176.5 mm                                                                                                   |
| Dimension C inch                               | 6.95 in                                                                                                    |
| Handle colour                                  | Yellow shroud, red handle                                                                                  |
| Lockable in                                    | Three times in 0 position                                                                                  |
| Weight                                         | 5.9 kg                                                                                                     |
| Weight                                         | 13.01 lb                                                                                                   |

### Components

|             |                                                 |
|-------------|-------------------------------------------------|
| Entry type  | Standard 8161, moulded material                 |
| Cable gland | 2 x M40 Ø 12 ... 28 mm<br>1 x M20 Ø 4 ... 13 mm |

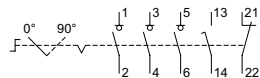
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### Technical Drawings – Subject to Alterations

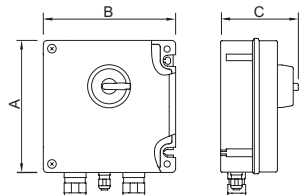


81../5--V...-3...-51...

3-pole + 1 NO

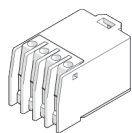
(1x ON delayed – OFF leading), 1 NC

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



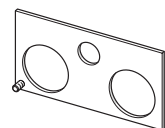
## Accessories

### Auxiliary contact



|                                                                                                                                                                                                                                                                |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 2 NC (8080/1-3)<br>250 V AC/DC<br>Max. 6 A<br>1.5 to 2.5 mm <sup>2</sup> , solid/finely stranded<br>The switching function of the auxiliary contact depends on the installation slot used.<br>Left and right: Synchronising                                    | 168356 |
| 1 NC + 1 NO (8080/1-1)<br>250 V AC/DC<br>Max. 6 A<br>1.5 to 2.5 mm <sup>2</sup> , solid/finely stranded<br>The switching function of the auxiliary contact depends on the installation slot used.<br>Left: Delayed (ON), leading (OFF)<br>Right: Synchronising | 168351 |
| 2 NO (8080/1-4)<br>250 V AC/DC<br>Max. 6 A<br>1.5 to 2.5 mm <sup>2</sup> , solid/finely stranded<br>The switching function of the auxiliary contact depends on the installation slot used.<br>Left and right: Synchronising                                    | 168353 |

### Brass plate

SZ 071 A/B  
2 x M40, 1 x M20

### Art. No.

200215

## Spare Parts

### Auxiliary contact key



For removing installed auxiliary contacts

### Art. No.

201909

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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.