

# Load Disconnect Switches and Motor Starters



Safety switch

63 A / 80 A

8146/5-V37-606-51-0010 Art. No. 200574



- Can be used with conventional drives and drives controlled by frequency converters
- Intelligent design: A single rotary actuator for actuating both main and auxiliary contacts,  $\geq 20$  ms leading auxiliary contact for safely disconnecting the frequency converter
- Version complies with IEC/EN 62626-1, Class 1
- The rotary actuator can be locked with 3 padlocks in the 0-position

MY R. STAHL 8146L



R. STAHL's 8146/5-V37 series safety switches safely disconnect the power supply to machinery and system components for cleaning and repair as prescribed. All of the installed load disconnect switches have an AC-3 switching capacity. The switches can be locked in the 0-position using padlocks.

## Technical Data

### Explosion Protection

|                                 |  |
|---------------------------------|--|
| Scope of validity               | European Union (ATEX)<br>IECEX   |
| Application range (zones)       | 1<br>2<br>21<br>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), China (NEPSI), IECEX (PTB), India (PESO)                                   |
| Declaration of Conformity       | ATEX (EUK), China (CCC)  |
| Notes                           | Product label may vary. Series devices have certification according to ATEX and IECEX. |

### Electrical Data

|                               |                 |
|-------------------------------|-----------------|
| Rated operational voltage AC  | 690 V / 500 V   |
| Rated operational current     | 63 A / 80 A     |
| Switching capacity AC-3 230 V | 18.5 kW / 22 kW |
| Switching capacity AC-3 400 V | 30 kW / 45 kW   |
| Switching capacity AC-3 440 V | 37 kW / 45 kW   |
| Switching capacity AC-3 500 V | 37 kW / 55 kW   |
| Switching capacity AC-3 690 V | 55 kW / -- kW   |
| Auxiliary contact NC          | 1 NC            |
| Auxiliary contact NO          | 1 NO/delayed    |

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## Electrical Data

|                 |            |
|-----------------|------------|
| Frequency range | 50 – 60 Hz |
|-----------------|------------|

## Ambient Conditions

|      |   |
|------|---|
| Note | Information regarding ambient conditions can be found on the Internet at r-stahl.com. MY R. STAHL 8146L |
|------|---|

## Ambient conditions

| Ambient conditions | Number of poles |                   | max. current (A) | Conductor cross-section <sup>1)</sup> (mm <sup>2</sup> ) |      | Temperature class / perm. ambient temperature                 |
|--------------------|-----------------|-------------------|------------------|--|------|---|
|                    | Main contacts   | Auxiliary contact |                  | min.   | max. |   |
|                    | 6               | 2                 | 50               | 10   | 50   | T6: -40 ... +41 °C<br>T5: -40 ... +56 °C <sup>2)</sup>        |
|                    |                 |                   | 63               | 16   | 50   | T6: -40 ... +41 °C<br>T5: -40 ... +56 °C <sup>2)</sup>        |
|                    |                 |                   | 63               | 25   | 50   | <b>T6: -40 ... +47 °C</b><br>T5: -40 ... +62 °C <sup>2)</sup> |
|                    |                 |                   | 80               | 25   | 50   | T5: -40 ... +51 °C <sup>2)</sup>                              |
|                    |                 |                   | 80               | 35   | 50   | <b>T6: -40 ... +43 °C</b><br>T5: -40 ... +58 °C <sup>2)</sup> |

<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:** Observe information on the type plate

## Mechanical Data

|  |   |
|--|---|
| Degree of protection (IP)                      | IP66  |
| Degree of protection note                      | acc. to EN/IEC 60529  |
| Enclosure material                             | Polyester resin, Glass fibre reinforced   |
| Min. solid conn. cr.-sect. AWG                 | AWG 4   |
| Connection terminal auxiliary contact min. AWG | AWG 18  |
| Connection cross section                       | 25 ... 50 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 operating instructions at r-stahl.com |
| Construction type                              | Standard  |
| Dimension A                                    | 681.5 mm  |
| Dimension A inch                               | 26.83 in  |
| Dimension B                                    | 340.5 mm  |
| Dimension B inch                               | 13.41 in  |
| Dimension C                                    | 205 mm  |
| Dimension C inch                               | 8.07 in   |
| Handle colour                                  | Black shroud and handle   |
| Seal   | Silicone, foamed  |
| Lockable in                                    | Three times in 0 position   |
| Detailed number of poles                       | 6-pole  |
| Weight   | 10.1 kg   |

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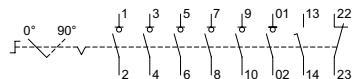
## Mechanical Data

|        |          |
|--------|----------|
| Weight | 22.27 lb |
|--------|----------|

## Components

|             |   |
|-------------|---|
| Entry type  | Standard 8161, moulded material               |
| Cable gland | 4 x M50 Ø 16 to 35 mm<br>1 x M20 Ø 4 to 13 mm |

## Technical Drawings – Subject to Alterations

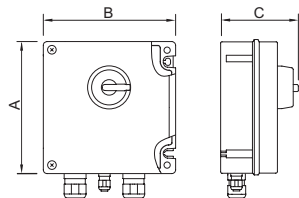


8146/5-V..6..51..

6-pole + 1 NO

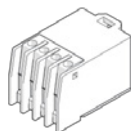
(ON delayed – OFF leading), 1 NC

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



## Accessories

### Auxiliary contact



|  | Art. No. |
|--|----------|
| 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   |

## Spare Parts

### Auxiliary contact key

Art. No.

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For removing installed auxiliary contacts

201909

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.