

# Load Disconnect Switches and Motor Starters



Safety switch

125 A / 160 A

8146/5-V37-308-51-1110 Art. No. 212211



- 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) IECEX
Application range (zones)	1 2 21 22
IECEX gas certificate	IECEX PTB 06.0090
IECEX gas explosion protection	Ex db eb IIC T6 / T5 Gb
IECEX dust certificate	IECEX PTB 06.0090
IECEX dust explosion protection	Ex tb IIIC T80 °C / T95 °C Db
ATEX gas certificate	PTB 01 ATEX 1024
ATEX gas explosion protection	Ex II 2 G Ex db eb IIC T6 / T5 Gb
ATEX dust certificate	PTB 01 ATEX 1024
ATEX dust explosion protection	Ex II 2 D Ex tb IIIC T80 °C / T95 °C Db
Certificates	ATEX (PTB), China (NEPSI), IECEX (PTB), India (PESO), Korea (KGS), Korea (KTL)
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 / 400 V
Rated operational current	125 A / 160 A
Switching capacity AC-3 230 V	37 kW / 45 kW
Switching capacity AC-3 400 V	55 kW / 90 kW
Switching capacity AC-3 440 V	75 kW / 90 kW
Switching capacity AC-3 500 V	75 kW / -- kW
Switching capacity AC-3 690 V	110 kW / -- kW
Auxiliary contact NC	1 NC
Auxiliary contact NO	1 NO/delayed

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## Electrical Data

Frequency range	50 – 60 Hz
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## Ambient Conditions

Note	Information regarding ambient conditions can be found on the Internet at r-stahl.com. 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 / perm. ambient temperature
	Main contacts	Auxiliary contact		min.	max.	
	3	1	125	95	150	<b>T6: -40 ... +47 °C</b> T5: -40 ... +62 °C <sup>2)</sup> T4: -40 ... +72 °C <sup>2)</sup>
			160	95	120	<b>T5: -40 ... +40 °C</b> T5: -40 ... +50 °C <sup>2)</sup> T4: -40 ... +55 °C <sup>2)</sup>
			160	120	120	T5: -40 ... +45 °C T5: -40 ... +49 °C T4: -40 ... +60 °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
Additional terminal	N-terminal
Min. solid conn. cr.-sect. AWG	AWG 3/0
Connection terminal auxiliary contact min. AWG	AWG 18
Connection cross section	95 ... 150 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	681.5 mm
Dimension B inch	26.83 in
Dimension C	205 mm
Dimension C inch	8.07 in
Handle colour	Yellow shroud, red handle
Seal	Silicone, foamed
Lockable in	Three times in 0 position
Detailed number of poles	3-pole

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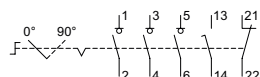
## Mechanical Data

Weight	23.2 kg
Weight	51.15 lb

## Components

Entry type	Standard 8161, moulded material
Cable gland	2 x M63 Ø 28 to 48 mm 1 x M20 Ø 4 to 13 mm

## Technical Drawings – Subject to Alterations

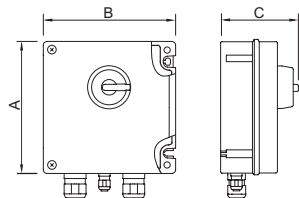


81.../5--V...-3...-51--

3-pole + 1S

(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)  
250 V AC/DC  
Max. 6 A  
1.5 to 2.5 mm<sup>2</sup>, solid/finely stranded  
The switching function of the auxiliary contact depends on the installation slot used.  
Left and right: Synchronising

Art. No.

168356

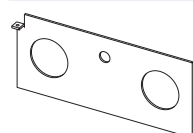
1 NC + 1 NO (8080/1-1)  
250 V AC/DC  
Max. 6 A  
1.5 to 2.5 mm<sup>2</sup>, solid/finely stranded  
The switching function of the auxiliary contact depends on the installation slot used.  
Left: Delayed (ON), leading (OFF)  
Right: Synchronising

168351

2 NO (8080/1-4)  
250 V AC/DC  
Max. 6 A  
1.5 to 2.5 mm<sup>2</sup>, solid/finely stranded  
The switching function of the auxiliary contact depends on the installation slot used.  
Left and right: Synchronising

168353

### Brass plate



size S73/083/093  
2 x M63, 1 x M20

Art. No.

227586

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## Spare Parts

Auxiliary contact key		Art. No.
	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.