

Series 8146/5-V37 and Series 8150/5-V37

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14365E00

- > Clear assignment
 - safe technology
 - easy installation
- > Intelligent structure
 - only one rotary actuator for frequency-controlled drives
 - ≥ 20 ms leading auxiliary contact for safe motor disconnection
- > Forced opening of the main contacts (load break switch)
- > Can be locked with 3 padlocks in 0-position
- > High corrosion resistance of the outer components
- > Version according to IEC/EN 62626-1 class 1



Safety switches ensure that the machines and installations are inevitably disconnected from the energy supply during cleaning and repair work. The usual preparatory work that may only be carried out by qualified electricians can be omitted. The safety switches can be used with both conventional drives and drives controlled by frequency converters.

In addition to use with conventional drives, the safety switches are also suitable for use with drives controlled by frequency converters. When doing so, ensure that an auxiliary contact with these functions (NO: ON delayed; OFF leading) is used. The required time parameters must also be checked. The area of application lies in the frequency range from 5 to 400 Hz; the rated operating current must be adjusted accordingly.

E7

	ATEX / IECEx							NEC 505 Class I							NEC 500					
Zone	0	1	2	20	21	22	Zone	0	1	2	20	21	22	Division	1	2	1	2	1	2
For use in		x	x		x	x	For use in		x					For use in		x				

WebCode 8146L

Series 8146/5-V37 and Series 8150/5-V37

Explosion Protection

Global (IECEX)

Gas and dust

8146/5: IECEX PTB 06.0090, 8150/5: IECEX PTB 09.0049
 8146/5: Ex d e ia/ib [ia Ga] mb q IIA, IIB, IIC T6, T5, T4 Gb
 8150/5: Ex d e ia/ib [ia Ga] mb q IIA, IIB, IIC T6, T5, T4, T3 Gb
 8146/5: Ex tb IIIA, IIIB, IIIC T80 °C, T95 °C, T130 °C Db
 8150/5: Ex tb IIIC T80 °C, T95 °C, T130 °C, T135 °C Db

Europe (ATEX)

Gas and dust

8146/5: PTB 01 ATEX 1024, 8150/5: PTB 09 ATEX 1109
 8146/5: Ⓜ II 2 G Ex d e ia/ib [ia Ga] mb q IIA, IIB, IIC T6, T5, T4 Gb
 8150/5: Ⓜ II 2 G Ex d e ia/ib [ia Ga] mb q IIA, IIB, IIC T6, T5, T4, T3 Gb
 8146/5: E II 2 D Ex tb IIIA, IIIB, IIIC T80 °C, T95 °C, T130 °C Db IP66
 8150/5: E II 2 D Ex tb IIIC T80 °C, T95 °C, T130 °C, T135 °C Db IP66
 (marking on rating plate is possible)

Certifications and certificates

Certificates

IECEX, ATEX, Kazakhstan (TR), Russia (TR), Belarus (TR)

Further parameters

Further information

see respective certificate and operating instructions

Selection Table

Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Weight
		Colour	Additional device				
10 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-300-50-0050	1.700 kg
	Polyester resin	red handle, yellow protective collar	--	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)		

Technical Data

Design

10 A

Mechanical data

Degree of protection

IP66 acc. to IEC/EN 60529

Enclosure cover

V37: In switching position ON removable, in OFF position locked

Handle

Can be locked with 3 padlocks in 0-position

Montage / Installation

Cable entries

Standard: In polyamide, Series 8161
 Special: In metal

Main contacts

Electrical data

Rated operational voltage

690 V AC

Rated insulation voltage

750 V

Rated impulse withstand voltage

6 kV

Rated operational current

10 A

Switching capacity

acc. to IEC/EN 60947-3; DIN VDE 0660, part 107

U _e	AC-3	
	I	P
230 V ~	10 A	2.2 kW
400 V ~	10 A	4.0 kW
440 V ~	10 A	4.0 kW
500 V ~	10 A	5.5 kW
690 V ~	10 A	7.5 kW

U _e	DC-1		DC-13 (L/R = 300 ms)	
	I	U _e	I	
220 V	6 A ³⁾	230 V	0.4 A	
110 V	6 A ²⁾			
60 V	6 A ¹⁾			
24 V	10 A ¹⁾			

- ¹⁾ 1 conducting path
²⁾ 2 conducting paths in series
³⁾ 3 conducting paths in series

Series 8146/5-V37 and Series 8150/5-V37

Technical Data

Service life of electrical / mechanical parts	40,000 operations
Max. short-circuit protection	16 A, tripping characteristic: gG acc. to IEC/EN 60291-1
Auxiliary contacts	
Electrical data	
Rated operating voltage	400 V AC
Rated operational current	6 A
Mechanical data	
Switch	1 NO (ON delayed - OFF advanced)
Montage / Installation	
Terminals	2,5 ... 4 mm ² finely stranded / solid wire

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section ¹⁾ [mm ²]		Temperature class / Perm. ambient temperature
	Main contacts	Auxiliary contacts		min.	max.	
300-...	3	1	10	2.5	4	T6: -40 to +51 °C T6: -40 to +54 °C ²⁾ T5: -40 to +69 °C ²⁾

¹⁾ 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.

²⁾ only with heat-resistant cable > 70 °C on cable entries or/and > 85 °C on clamping points

Grease: specified on rating plate

Selection Table

Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Weight
		Colour	Additional device				
12 / 16 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-301-50-0050	0.962
	Polyester resin	black handle, black protective collar	with N-terminal	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-301-50-0150	0.982
	Polyester resin	red handle, yellow protective collar	--	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-301-50-1050	0.958
	Polyester resin	red handle, yellow protective collar	with N-terminal	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-301-50-1150	0.978

Technical Data

Design	12 / 16 A
Mechanical data	
Degree of protection	IP66 acc. to IEC/EN 60529
Enclosure cover	V37: In switching position ON removable, in OFF position locked
Handle	Can be locked with 3 padlocks in 0-position
Montage / Installation	
Cable entries	Standard: In polyamide, Series 8161 Special: In metal
Main contacts	
Electrical data	
Rated operational voltage	690 V AC
Rated insulation voltage	750 V
Rated impulse withstand voltage	6 kV
Rated operational current	12 / 16 A

E7

Series 8146/5-V37 and Series 8150/5-V37

Technical Data

Switching capacity	acc. to IEC/EN 60947-3; DIN VDE 0660, part 107				
	U_e	AC-3 I	P	AC-3 I	P
	230 V ~	12 A	3.0 kW	16 A	4.0 kW
	400 V ~	12 A	5.5 kW	16 A	7.5 kW
	440 V ~	12 A	5.5 kW	16 A	7.5 kW
	500 V ~	12 A	7.5 kW	16 A	7.5 kW
	690 V ~	12 A	7.5 kW	16 A	11.0 kW
	U_e	DC-1 I	DC-13 (L/R = 300 ms) U_e	I	
	220 V	6 A ³⁾	230 V	0.4 A	
	110 V	6 A ²⁾			
	60 V	6 A ¹⁾			
	24 V	10 A ¹⁾			
Service life of electrical / mechanical parts	40.000 operations				
Max. short-circuit protection	25 A ($I_e = 16$ A); 16 A ($I_e = 12$ A), tripping characteristic: gG acc. to IEC/EN 60291-1				
Auxiliary contacts					
Electrical data					
Rated operating voltage	400 V AC				
Rated operational current	6 A				
Mechanical data					
Switch	1 NO (ON delayed - OFF advanced)				
Montage / Installation					
Terminals	1.5 / 1.5 ... 2.5 / 4 mm ² finely stranded / solid wire				

- ¹⁾ 1 conducting path
²⁾ 2 conducting paths in series
³⁾ 3 conducting paths in series

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section ¹⁾ [mm ²]		Temperature class / Perm. ambient temperature
	Main contacts	Auxiliary contacts		min.	max.	
301-...	3	1	12 / 16	2.5	4	T6: -40 to +51 °C T6: -40 to +54 °C ²⁾ T5: -40 to +69 °C ²⁾

¹⁾ 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.

²⁾ only with heat-resistant cable > 70 °C on cable entries or/and > 85 °C on clamping points

Grease: specified on rating plate

Series 8146/5-V37 and Series 8150/5-V37

Selection Table

Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Weight
		Colour	Additional device				
16 A, 3-pole	stainless steel 1.4404	black handle, black protective collar	--	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8150/5-V37-302-50-0010	3.250
	stainless steel 1.4404	red handle, yellow protective collar	--	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8150/5-V37-302-50-1010	3.250
	Polyester resin	black handle, black protective collar	--	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-302-50-0050	1.590
	Polyester resin	black handle, black protective collar	with brass plate	for 2 x M25, 1 x M20	1 NO (ON delayed - OFF leading)	8146/5-V37-302-50-0040	1.530
	Polyester resin	red handle, yellow protective collar	--	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-302-50-1050	1.590
	Polyester resin	red handle, yellow protective collar	with N-terminal	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-302-50-1150	1.590
16 A, 6-pole	Polyester resin	red handle, yellow protective collar	--	4 x 7 to 17 (M25), 1 x 4 to 13 (M20)	2 NO (1 x ON delayed - OFF leading)	8146/5-V37-602-60-1010	2.640
	Polyester resin	black handle, black protective collar	--	4 x 7 to 17 (M25), 1 x 4 to 13 (M20)	2 NO (1 x ON delayed - OFF leading)	8146/5-V37-602-60-0010	2.640

Technical Data

Design	16 A
Mechanical data	
Degree of protection	IP66 acc. to IEC/EN 60529
Enclosure cover	V37: In switching position ON removable, in OFF position locked
Handle	Can be locked with 3 padlocks in 0-position
Montage / Installation	
Cable entries	Standard: In polyamide, Series 8161 Special: In metal
Main contacts	
Electrical data	
Rated operational voltage	690 V AC
Rated insulation voltage	690 V
Rated impulse withstand voltage	6 kV
Rated operational current	16 A

E7

Series 8146/5-V37 and Series 8150/5-V37

Technical Data

Switching capacity	acc. to IEC/EN 60947-3; DIN VDE 0660, part 107			
	AC-3			
	U_e	I	P	
	230 V ~	16 A	4.0 kW	
	400 V ~	16 A	7.5 kW	
	440 V ~	16 A	7.5 kW	
	500 V ~	16 A	7.5 kW	
	690 V ~	16 A	11.0 kW	
	DC-1, DC-23		DC-13 (L/R = 300 ms)	
	U_e	I	U_e	I
	220 V	16 A ³⁾	250 V	1.1 A
	120 V	16 A ²⁾	125 V	2.2 A
	60 V	16 A ¹⁾	60 V	5.0 A
Service life of electrical / mechanical parts	40.000 operations			
Max. short-circuit protection	25 A, tripping characteristic: gG acc. to IEC/EN 60291-1			
Auxiliary contacts				
Electrical data				
Rated operating voltage	400 V AC			
Rated operational current	10 A			
Mechanical data				
Switch	3-pole: 1 NO (ON delayed - OFF advanced) 6-pole: 2 NO (1 x ON delayed - OFF advanced / 1 x switching normally)			
Montage / Installation				
Terminals	2.5 ... 10 mm ² finely stranded / solid			

1) 1 conducting path
2) 2 conducting paths in series
3) 3 conducting paths in series

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section ¹⁾ [mm ²]		Temperature class / Perm. ambient temperature
	Main contacts	Auxiliary contacts		min.	max.	
302-...	3	1	16	2.5	6	T6: -40 to +51 °C T6: -40 to +54 °C ²⁾ T5: -40 to +69 °C ²⁾
302-...-5	3	0	16	2.5	10	T4: -40 to +60 °C
602-...	6	2	16	2.5	6	T6: -40 to +47 °C T5: -40 to +62 °C ²⁾

Type 8150/5-V..-

302-...	3	1	16	2.5	6	T6: -40 to +50 °C T6: -40 to +65 °C ²⁾
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¹⁾ 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.

²⁾ only with heat-resistant cable > 70 °C on cable entries or/and > 85 °C on clamping points

Grease: specified on rating plate

Selection Table

Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Weight
		Colour	Additional device				
20 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-303-50-0010	2.020
	Polyester resin	red handle, yellow protective collar	--	2 x 7 to 17 (M25), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-303-50-1010	2.020

Series 8146/5-V37 and Series 8150/5-V37

Technical Data																									
Design	20 A																								
Mechanical data																									
Degree of protection	IP66 acc. to IEC/EN 60529																								
Enclosure cover	V37: In switching position ON removable, in OFF position locked																								
Handle	Can be locked with 3 padlocks in 0-position																								
Montage / Installation																									
Cable entries	Standard: In polyamide, Series 8161 Special: In metal																								
Main contacts																									
Electrical data																									
Rated operational voltage	690 V AC																								
Rated insulation voltage	690 V																								
Rated operational current	20 A																								
Switching capacity	acc. to IEC/EN 60947-3; DIN VDE 0660, part 107																								
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U _e	DC-1, DC-23		DC-13 (L/R = 300 ms)																						
	I		U _e	I																					
220 V	20 A ³⁾		250 V	1.1 A																					
120 V	20 A ²⁾		125 V	2.2 A																					
60 V	20 A ¹⁾		60 V	5.0 A																					
Service life of electrical / mechanical parts	40.000 operations																								
Max. short-circuit protection	35 A, tripping characteristic: gG acc. to IEC/EN 60291-1																								
Auxiliary contacts																									
Electrical data																									
Rated operating voltage	500 V AC																								
Rated operational current	10 A																								
Montage / Installation																									
Terminals	4 ... 6 mm ² finely stranded / solid																								

- ¹⁾ 1 conducting path
²⁾ 2 conducting paths in series
³⁾ 3 conducting paths in series

Series 8146/5-V37 and Series 8150/5-V37

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section ¹⁾ [mm ²]		Temperature class / Perm. ambient temperature
	Main contacts	Auxiliary contacts		min.	max.	
303-...	3	1	20	4	6	T6: -40 to +40 °C T5: -40 to +55 °C ²⁾
603-...	6	2	20	4	6	T6: -40 to +41 °C T5: -40 to +56 °C ²⁾
	6	2	20	6	6	T6: -40 to +42 °C T5: -40 to +50 °C T5: -40 to +57 °C ²⁾
	6	0	20	4	6	T6: -40 to +46 °C T5: -40 to +61 °C ²⁾ T5: -40 to +52 °C
	6	0	20	6	6	T5: -40 to +52 °C ²⁾ T5: -40 to +48 °C

Type 8150/5-V..-						
303-...	3	1	20	4	6	T6: -40 to +42 °C T5: -40 to +57 °C ²⁾
	3	1	20	6	6	T6: -40 to +43 °C T5: -40 to +58 °C ²⁾ T5: -40 to +53 °C

¹⁾ 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.

²⁾ only with heat-resistant cable > 70 °C on cable entries or/and > 85 °C on clamping points

Grease: specified on rating plate

Selection Table

Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Weight
		Colour	Additional device				
25 A, 3-pole	stainless steel 1.4404	black handle, black protective collar	--	2 x 9 to 21 (M32), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8150/5-V37-304-50-0010	3.300
	stainless steel 1.4404	red handle, yellow protective collar	--	2 x 9 to 21 (M32), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8150/5-V37-304-50-1010	3.300
	Polyester resin	black handle, black protective collar	--	2 x 9 to 21 (M32), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-304-50-0010	1.960
	Polyester resin	red handle, yellow protective collar	--	2 x 9 to 21 (M32), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-304-50-1010	2.020
	Polyester resin	red handle, yellow protective collar	with N-terminal	2 x 9 to 21 (M32), 1 x 4 to 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-304-50-1110	2.020
25 A, 6-pole	Polyester resin	black handle, black protective collar	--	4 x 7 to 17 (M25), 1 x 4 to 13 (M20)	2 NO (1 x ON delayed - OFF leading)	8146/5-V37-604-60-0010	2.790
	Polyester resin	red handle, yellow protective collar	--	4 x 7 to 17 (M25), 1 x 4 to 13 (M20)	2 NO (1 x ON delayed - OFF leading)	8146/5-V37-604-60-1010	2.790

Series 8146/5-V37 and Series 8150/5-V37

Technical Data																																			
Design	25 A																																		
Mechanical data																																			
Degree of protection	IP66 acc. to IEC/EN 60529																																		
Enclosure cover	V37: In switching position ON removable, in OFF position locked																																		
Handle	Can be locked with 3 padlocks in 0-position																																		
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Cable entries	Standard: In polyamide, Series 8161 Special: In metal																																		
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Auxiliary contacts																																			
Electrical data																																			
Rated operating voltage	500 V AC																																		
Rated operational current	10 A																																		
Montage / Installation																																			
Terminals	4 ... 6 mm ² finely stranded / solid																																		

- ¹⁾ 1 conducting path
²⁾ 2 conducting paths in series
³⁾ 3 conducting paths in series

Series 8146/5-V37 and Series 8150/5-V37

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section ¹⁾ [mm ²]		Temperature class / Perm. ambient temperature
	Main contacts	Auxiliary contacts		min.	max.	
304-...	3	1	25	4	6	T6: -40 to +40 °C T5: -40 to +55 °C ²⁾
604-...	6	2	25	4	6	T5: -40 to +49 °C ²⁾
	6	2	25	6	6	T6: -40 to +42 °C T5: -40 to +50 °C T5: -40 to +57 °C ²⁾
	6	0	25	4	6	T5: -40 to +45 °C
	6	0	25	6	6	T5: -40 to +52 °C ²⁾ T5: -40 to +48 °C

Type 8150/5-V..-

304-...	3	1	25	4	6	T5: -40 to +50 °C ²⁾
	3	1	25	6	6	T6: -40 to +43 °C T5: -40 to +58 °C ²⁾ T5: -40 to +53 °C

¹⁾ 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.

²⁾ only with heat-resistant cable > 70 °C on cable entries or/and > 85 °C on clamping points

Grease: specified on rating plate

Selection Table

Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Weight	
		Colour	Additional device					
40 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 12 to 28 (M40), 1 x 4 to 13 (M20)	--	8146/5-V37-305-00-0010-K	5.560	
	Polyester resin	black handle, black protective collar	--	2 x 12 to 28 (M40), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-305-51-0010-K	5.560	
	Polyester resin	red handle, yellow protective collar	--	2 x 12 to 28 (M40), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-305-51-1010-K	4.620	
	stainless steel 1.4404	black handle, black protective collar	--	2 x 12 to 28 (M40), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8150/5-V37-305-51-0010-K	8.360	
	stainless steel 1.4404	red handle, yellow protective collar	--	2 x 12 to 28 (M40), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8150/5-V37-305-51-1010-K	8.360	
	Polyester resin	red handle, yellow protective collar	with N-terminal	--	2 x 12 to 28 (M40), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-305-51-1110-K	18.500
	Polyester resin	red handle, yellow protective collar	main contact on terminal	--	2 x 12 to 28 (M40), 1 x 4 to 13 (M20)	--	8146/5-V37-305-00-1510	7.500
40 A, 6-pole	Polyester resin	black handle, black protective collar	--	4 x 12 to 28 (M40), 1 x 4 to 13 (M20)	--	8146/5-V37-605-00-0010-K	10.960	
	Polyester resin	black handle, black protective collar	--	4 x 12 to 28 (M40), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-605-51-0010-K	10.960	
	Polyester resin	red handle, yellow protective collar	--	4 x 12 to 28 (M40), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-605-51-1010-K	10.960	

Series 8146/5-V37 and Series 8150/5-V37

Technical Data																						
Design	40 A																					
Mechanical data																						
Degree of protection	IP66 acc. to IEC/EN 60529																					
Enclosure cover	V37: In switching position ON removable, in OFF position locked																					
Handle	Can be locked with 3 padlocks in 0-position																					
Montage / Installation																						
Cable entries	Standard: In polyamide, Series 8161 Special: In metal																					
Main contacts																						
Electrical data																						
Rated operational voltage	690 V AC																					
Rated insulation voltage	750 V																					
Rated operational current	40 A																					
Switching capacity	acc. to IEC/EN 60947-3; DIN VDE 0660, part 107																					
	<table border="1"> <thead> <tr> <th colspan="3">AC-3</th> </tr> <tr> <th>U_e</th> <th>I</th> <th>P</th> </tr> </thead> <tbody> <tr> <td>240 V ~</td> <td>40 A</td> <td>11.0 kW</td> </tr> <tr> <td>400 V ~</td> <td>40 A</td> <td>22.0 kW</td> </tr> <tr> <td>440 V ~</td> <td>40 A</td> <td>22.0 kW</td> </tr> <tr> <td>500 V ~</td> <td>40 A</td> <td>22.0 kW</td> </tr> <tr> <td>690 V ~</td> <td>40 A</td> <td>37.0 kW</td> </tr> </tbody> </table>	AC-3			U _e	I	P	240 V ~	40 A	11.0 kW	400 V ~	40 A	22.0 kW	440 V ~	40 A	22.0 kW	500 V ~	40 A	22.0 kW	690 V ~	40 A	37.0 kW
AC-3																						
U _e	I	P																				
240 V ~	40 A	11.0 kW																				
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500 V ~	40 A	22.0 kW																				
690 V ~	40 A	37.0 kW																				
	<table border="1"> <thead> <tr> <th colspan="2">DC-23, DC-1</th> </tr> <tr> <th>U_e</th> <th>I</th> </tr> </thead> <tbody> <tr> <td>220 V</td> <td>40 A³⁾</td> </tr> <tr> <td>120 V</td> <td>40 A²⁾</td> </tr> <tr> <td>60 V</td> <td>40 A¹⁾</td> </tr> </tbody> </table>	DC-23, DC-1		U _e	I	220 V	40 A ³⁾	120 V	40 A ²⁾	60 V	40 A ¹⁾											
DC-23, DC-1																						
U _e	I																					
220 V	40 A ³⁾																					
120 V	40 A ²⁾																					
60 V	40 A ¹⁾																					
Service life of electrical / mechanical parts	40.000 operations																					
Max. short-circuit protection	80 A, tripping characteristic: gG acc. to IEC/EN 60291-1																					
Auxiliary contacts																						
Electrical data																						
Rated operating voltage	500 V AC																					
Rated operational current	6 A																					
Montage / Installation																						
Terminals	1.5 ... 2.5 mm ² finely stranded / solid																					

1) 1 conducting path
2) 2 conducting paths in series
3) 3 conducting paths in series

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section ¹⁾ [mm ²]		Temperature class / Perm. ambient temperature
	Main contacts	Auxiliary contacts		min.	max.	
305-...-K	3	2	40	10	25	T6: -40 to +48 °C T6: -40 to +51 °C ²⁾ T5: -40 to +66 °C ²⁾
305-00-...-K	3	0				
305-...-5	3	0	40	10	35	T4: -40 to +60 °C
605-...-K	6	2	40	10	25	T6: -40 to +47 °C T5: -40 to +51 °C T5: -40 to +62 °C ²⁾
605-00-...-K	6	0				

Type 8150/5-V..-

305-...-K	3	2	40	10	25	T6: -40 to +45 °C T5: -40 to +49 °C T5: -40 to +60 °C ²⁾
605-...-K	6	2	40	10	25	T6: -40 to +46 °C T5: -40 to +48 °C T5: -40 to +61 °C ²⁾

¹⁾ 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.

²⁾ only with heat-resistant cable > 70 °C on cable entries or/and > 85 °C on clamping points

Grease: specified on rating plate

Series 8146/5-V37 and Series 8150/5-V37

Selection Table

Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Weight kg
		Colour	Additional device				
63 / 80 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 16 to 35 (M50), 1 x 4 to 13 (M20)	--	8146/5-V37-306-00-0010	8.060
	Polyester resin	black handle, black protective collar	--	2 x 16 to 35 (M50), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-0010	7.960
	Polyester resin	black handle, black protective collar	with brass plate	2 x 16 to 35 (M50), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-0040	11.800
	Polyester resin	red handle, yellow protective collar	--	2 x 16 to 35 (M50), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-1010	7.550
	Polyester resin	red handle, yellow protective collar	with N-terminal	2 x 16 to 35 (M50), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-1110	7.550
	stainless steel 1.4404	black handle, black protective collar	--	2 x 16 to 35 (M50), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8150/5-V37-306-51-0010-K	12.600
	stainless steel 1.4404	red handle, yellow protective collar	--	2 x 16 to 35 (M50), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8150/5-V37-306-51-1010-K	12.600
	Polyester resin	red handle, yellow protective collar	main contact on terminal	2 x 16 to 35 (M50), 1 x 4 to 13 (M20)	--	8146/5-V37-306-00-1510	10.700
63 / 80 A, 3-pole, compact *)	Polyester resin	black handle, black protective collar	--	2 x 16 to 35 (M50), 1 x 4 to 13 (M20)	--	8146/5-V37-306-00-0010-K	5.680
	Polyester resin	black handle, black protective collar	--	2 x 16 to 35 (M50), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-0010-K	5.680
	Polyester resin	red handle, yellow protective collar	--	2 x 16 to 35 (M50), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-1010-K	5.680
	Polyester resin	red handle, yellow protective collar	with N-terminal	2 x 16 to 35 (M50), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-1110-K	5.680
63 / 80 A, 6-pole	Polyester resin	black handle, black protective collar	--	4 x 16 to 35 (M50), 1 x 4 to 13 (M20)	--	8146/5-V37-606-00-0010	10.100
	Polyester resin	black handle, black protective collar	--	4 x 16 to 35 (M50), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-606-51-0010	10.100
	Polyester resin	red handle, yellow protective collar	--	4 x 16 to 35 (M50), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-606-51-1010	10.100

Note *) "K" versions with a smaller design size; see dimensional drawings

Technical Data

Design	63 / 80 A
Mechanical data	
Degree of protection	IP66 acc. to IEC/EN 60529
Enclosure cover	V37: In switching position ON removable, in OFF position locked
Handle	Can be locked with 3 padlocks in 0-position
Montage / Installation	
Cable entries	Standard: In polyamide, Series 8161 Special: In metal

Series 8146/5-V37 and Series 8150/5-V37

Technical Data

Main contacts

Electrical data

Rated operational voltage	500 V AC (80 A) / 690 V AC (63 A)
Rated insulation voltage	750 V
Rated operational current	63 / 80 A
Switching capacity	acc. to IEC/EN 60947-3; DIN VDE 0660, part 107

U _e	AC-3		AC-3	
	I	P	I	P
230 V ~	63 A	18.5 kW	80 A	22.0 kW
400 V ~	63 A	30.0 kW	80 A	45.0 kW
440 V ~	63 A	37.0 kW	80 A	45.0 kW
500 V ~	63 A	37.0 kW	80 A	55.0 kW
690 V ~	63 A	55.0 kW		

U _e	DC-23, DC-1	
	I	
220 V	80 A ³⁾	
120 V	80 A ²⁾	
60 V	80 A ¹⁾	

- ¹⁾ 1 conducting path
- ²⁾ 2 conducting paths in series
- ³⁾ 3 conducting paths in series

Service life of electrical / mechanical parts	40.000 operations
Max. short-circuit protection	63 A: 125 A, 80 A: 160 A, tripping characteristic: gG according to IEC/EN 60291-1

Auxiliary contacts

Electrical data

Rated operating voltage	500 V AC
Rated operational current	6 A

Montage / Installation

Terminals	1.5 ... 2.5 mm ² finely stranded / solid
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Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section ¹⁾ [mm ²]		Temperature class / Perm. ambient temperature
	Main contacts	Auxiliary contacts		min.	max.	
306-...-K	3	2	50	10	25	T6: -40 to +43 °C
	3	2	63	16	25	T6: -40 to +42 °C T5: -40 to +57 °C ²⁾
	3	2	80	25	25	T6: -40 to +40 °C T5: -40 to +44 °C T5: -40 to +55 °C ²⁾
306-00-...-K	3	0	50	10	25	T6: -40 to +43 °C
	3	0	63	16	25	T6: -40 to +42 °C T5: -40 to +57 °C ²⁾
	3	0	80	25	25	T6: -40 to +40 °C T5: -40 to +44 °C T5: -40 to +55 °C ²⁾
306-...	3	2	63	35	50	T6: -40 to +58 °C T5: -40 to +73 °C ²⁾
	3	2	63	50	50	T6: -40 to +60 °C T5: -40 to +75 °C ²⁾
	3	2	80	35	50	T6: -40 to +48 °C T5: -40 to +53 °C T5: -40 to +63 °C ²⁾
	3	2	80	50	50	T6: -40 to +53 °C T5: -40 to +57 °C T5: -40 to +68 °C ²⁾

E7

Series 8146/5-V37 and Series 8150/5-V37

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section ¹⁾ [mm ²]		Temperature class / Perm. ambient temperature
	Main contacts	Auxiliary contacts		min.	max.	
306-00-...	3	0	63	35	50	T6: -40 to +58 °C T5: -40 to +73 °C ²⁾
	3	0	63	50	50	T6: -40 to +60 °C T5: -40 to +75 °C ²⁾
	3	0	80	35	50	T6: -40 to +48 °C T5: -40 to +53 °C T5: -40 to +63 °C ²⁾
	3	0	80	50	50	T6: -40 to +53 °C T5: -40 to +57 °C T5: -40 to +68 °C ²⁾
306-...-5	3	0	63	25	95	T4: -40 to +60 °C
307-...-5	3	0	80	50	150	T4: -40 to +60 °C
406-...-K	4	0	63	35	50	T6: -40 to +55 °C T5: -40 to +70 °C ²⁾
	4	0	63	50	50	T6: -40 to +57 °C T5: -40 to +72 °C ²⁾
	4	0	80	35	50	T6: -40 to +45 °C T5: -40 to +50 °C T5: -40 to +60 °C ²⁾
	4	0	80	50	50	T6: -40 to +50 °C T5: -40 to +54 °C T5: -40 to +65 °C ²⁾
606-...	6	2	50	10	50	T6: -40 to +41 °C T5: -40 to +56 °C ²⁾
	6	2	63	16	50	T6: -40 to +41 °C T5: -40 to +56 °C ²⁾
	6	2	63	25	50	T6: -40 to +47 °C T5: -40 to +62 °C ²⁾
	6	2	80	25	50	T5: -40 to +51 °C ²⁾
	6	2	80	35	50	T6: -40 to +43 °C T5: -40 to +58 °C ²⁾
606-00-...	6	0	50	10	50	T6: -40 to +41 °C T5: -40 to +56 °C ²⁾
	6	0	63	16	50	T6: -40 to +41 °C T5: -40 to +56 °C ²⁾
	6	0	63	25	50	T6: -40 to +47 °C T5: -40 to +62 °C ²⁾
	6	0	80	25	50	T5: -40 to +51 °C ²⁾
	6	0	80	35	50	T6: -40 to +43 °C T5: -40 to +58 °C ²⁾

Series 8146/5-V37 and Series 8150/5-V37

Type 8150/5-V..-						
306-...-K	3	2	63	16	50	T5: -40 to +50 °C ²⁾ T5: -40 to +46 °C
	3	2	63	25	50	T6: -40 to +42 °C T5: -40 to +51 °C T5: -40 to +57 °C ²⁾
	3	2	80	25	50	T5: -40 to +47 °C ¹⁾ T5: -40 to +43 °C
	3	2	80	25	50	T6: -40 to +40 °C T5: -40 to +41 °C T5: -40 to +55 °C ¹⁾
606-...	6	2	50	16	50	T6: -40 to +45 °C T5: -40 to +60 °C ²⁾
	6	2	63	16	50	T5: -40 to +46 °C ²⁾ T5: -40 to +42 °C
	6	2	63	25	50	T6: -40 to +43 °C T5: -40 to +47 °C T5: -40 to +58 °C ²⁾
	6	2	80	25	50	T5: -40 to +41 °C

¹⁾ 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.

²⁾ only with heat-resistant cable > 70 °C on cable entries or/and > 85 °C on clamping points

Grease: specified on rating plate

Series 8146/5-V37 and Series 8150/5-V37

Selection Table

Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Weight kg
		Colour	Additional device				
125 / 160 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 28 to 48 M63, 1 x 4 to 13 M20	--	8146/5-V37-308-00-0010	18.500
	Polyester resin	black handle, black protective collar	--	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-0010	18.500
	Polyester resin	black handle, black protective collar	with brass plate	2 x 28 to 48 M63, 1 x 4 to 13 M20	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-0040	22.770
	Polyester resin	red handle, yellow protective collar	--	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-1010	18.500
	Polyester resin	red handle, yellow protective collar	with N-terminal	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-1110	23.200
125 / 160 A, 3-pole, compact *)	Polyester resin	black handle, black protective collar	--	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	--	8146/5-V37-308-00-0010-K	14.350
	Polyester resin	black handle, black protective collar	--	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-0010-K	14.350
	stainless steel 1.4404	black handle, black protective collar	--	2 x 28 to 48 M63, 1 x 4 to 13 M20	2 NO (1 x ON delayed - OFF leading)	8150/5-V37-308-51-0010-K	25.625
	Polyester resin	black handle, black protective collar	with brass plate	2 x 28 to 48 M63, 1 x 4 to 13 M20	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-0040-K	21.260
	Polyester resin	red handle, yellow protective collar	--	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-1010-K	14.350
	stainless steel 1.4404	red handle, yellow protective collar	--	2 x 28 to 48 M63, 1 x 4 to 13 M20	1 NO (1 x ON delayed - OFF leading), 1 NC	8150/5-V37-308-51-1010-K	25.625
	Polyester resin	red handle, yellow protective collar	with N-terminal	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-1110-K	14.350
125 / 160 A, 6-pole	Polyester resin	black handle, black protective collar	--	4 x 28 to 48 (M63), 1 x 4 to 13 (M20)	--	8146/5-V37-608-00-0010	22.760
	Polyester resin	black handle, black protective collar	--	4 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-608-51-0010	22.760
	Polyester resin	red handle, yellow protective collar	--	4 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-608-51-1010	22.760
	Polyester resin	red handle, yellow protective collar	with N-terminal	4 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-608-51-1110	22.760

Series 8146/5-V37 and Series 8150/5-V37

Selection Table

Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Weight kg
		Colour	Additional device				
180 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	--	8146/5-V37-310-00-0010	19.560
	Polyester resin	black handle, black protective collar	--	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-0010	19.560
	Polyester resin	black handle, black protective collar	with brass plate	2 x 28 to 48 M63, 1 x 4 to 13 M20	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-0040	22.770
	Polyester resin	red handle, yellow protective collar	--	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-1010	19.560
	Polyester resin	red handle, yellow protective collar	with N-terminal	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-1110	19.560
180 A, 3-pole, compact *)	Polyester resin	black handle, black protective collar	--	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	--	8146/5-V37-310-00-0010-K	14.360
	Polyester resin	black handle, black protective collar	--	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-0010-K	14.360
	Polyester resin	black handle, black protective collar	with brass plate	2 x 28 to 48 M63, 1 x 4 to 13 M20	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-0040-K	15.140
	Polyester resin	red handle, yellow protective collar	--	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-1010-K	14.360
	Polyester resin	red handle, yellow protective collar	with N-terminal	2 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-1110-K	14.360
180 A, 6-pole	Polyester resin	black handle, black protective collar	--	4 x 28 to 48 (M63), 1 x 4 to 13 (M20)	--	8146/5-V37-610-00-0010	37.360
	Polyester resin	black handle, black protective collar	--	4 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-610-51-0010	37.360
	Polyester resin	black handle, black protective collar	with brass plate	4 x 28 to 48 M63, 1 x 4 to 13 M20	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-610-51-0040	
	Polyester resin	red handle, yellow protective collar	--	4 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-610-51-1010	37.360
	Polyester resin	red handle, yellow protective collar	with N-terminal	4 x 28 to 48 (M63), 1 x 4 to 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-610-51-1110	37.360
Note	*) "K" versions with a smaller design size; see dimensional drawings						

Series 8146/5-V37 and Series 8150/5-V37

Technical Data																																																	
Design	125 / 160 / 180 A																																																
Mechanical data																																																	
Degree of protection	IP66 acc. to IEC/EN 60529																																																
Enclosure cover	V37: In switching position ON removable, in OFF position locked																																																
Handle	Can be locked with 3 padlocks in 0-position																																																
Montage / Installation																																																	
Cable entries	Standard: In polyamide, Series 8161 Special: In metal																																																
Main contacts																																																	
Electrical data																																																	
Rated operational voltage	400 V AC (180 A) / 500 V AC (150 A) / 690 V AC (125 A)																																																
Rated insulation voltage	750 V																																																
Rated operational current	125 / 160 / 180 A																																																
Switching capacity	acc. to IEC/EN 60947-3; DIN VDE 0660, part 107																																																
	<table border="1"> <thead> <tr> <th rowspan="2">U_e</th> <th colspan="2">AC-3</th> <th colspan="2">AC-3</th> <th colspan="2">AC-3</th> </tr> <tr> <th>I</th> <th>P</th> <th>I</th> <th>P</th> <th>I</th> <th>P</th> </tr> </thead> <tbody> <tr> <td>230 V ~</td> <td>180 A</td> <td>55.0 kW</td> <td>160 A</td> <td>45.0 kW</td> <td>125 A</td> <td>37.0 kW</td> </tr> <tr> <td>400 V ~</td> <td>180 A</td> <td>90.0 kW</td> <td>160 A</td> <td>90.0 kW</td> <td>125 A</td> <td>55.0 kW</td> </tr> <tr> <td>440 V ~</td> <td></td> <td></td> <td>160 A</td> <td>90.0 kW</td> <td>125 A</td> <td>75.0 kW</td> </tr> <tr> <td>500 V ~</td> <td></td> <td></td> <td></td> <td></td> <td>125 A</td> <td>75.0 kW</td> </tr> <tr> <td>690 V ~</td> <td></td> <td></td> <td></td> <td></td> <td>125 A</td> <td>110.0 kW</td> </tr> </tbody> </table>	U _e	AC-3		AC-3		AC-3		I	P	I	P	I	P	230 V ~	180 A	55.0 kW	160 A	45.0 kW	125 A	37.0 kW	400 V ~	180 A	90.0 kW	160 A	90.0 kW	125 A	55.0 kW	440 V ~			160 A	90.0 kW	125 A	75.0 kW	500 V ~					125 A	75.0 kW	690 V ~					125 A	110.0 kW
U _e	AC-3		AC-3		AC-3																																												
	I	P	I	P	I	P																																											
230 V ~	180 A	55.0 kW	160 A	45.0 kW	125 A	37.0 kW																																											
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	I																																																
220 V	180 A ³⁾																																																
120 V	180 A ²⁾																																																
60 V	180 A ¹⁾																																																
Service life of electrical / mechanical parts	40.000 operations																																																
Max. short-circuit protection	125 A: max. 200 A / 690 V max. 250 A / 500 V 160 A / 180 A: max. 250 A / 400 V tripping characteristic: gG acc. to IEC/EN 60291-1																																																
Auxiliary contacts																																																	
Electrical data																																																	
Rated operating voltage	500 V AC																																																
Rated operational current	6 A																																																
Montage / Installation																																																	
Terminals	1.5 ... 2.5 mm ² finely stranded / solid																																																

- ¹⁾ 1 conducting path
²⁾ 2 conducting paths in series
³⁾ 3 conducting paths in series

Series 8146/5-V37 and Series 8150/5-V37

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section ¹⁾ [mm ²]		Temperature class / Perm. ambient temperature
	Main contacts	Auxiliary contacts		min.	max.	
308-...-K	3	1	125	95	120	T6: -40 to +46 °C T5: -40 to +62 °C ²⁾ T4: -40 to +72 °C ²⁾
	3	1	125	120	120	T6: -40 to +50 °C T5: -40 to +65 °C ²⁾ T4: -40 to +72 °C ²⁾
308-...	3	1	125	95	150	T6: -40 to +47 °C T5: -40 to +62 °C ²⁾ T4: -40 to +72 °C ²⁾
608-...	6	2	125	95	150	T6: -40 to +40 °C T5: -40 to +55 °C ²⁾ T4: -40 to +72 °C ²⁾

Type 8150/5-V..-

308-...-K	3	1	125	95	120	T5: -40 to +50 °C T4: -40 to +63 °C ²⁾
	3	1	125	120	120	T5: -40 to +44 °C T5: -40 to +59 °C ²⁾ T4: -40 to +68 °C ²⁾

Type 8146/5-V..-

308-...-K	3	1	160	95	120	T5: -40 to +40 °C T5: -40 to +50 °C ²⁾ T4: -40 to +55 °C ²⁾
	3	1	160	120	120	T5: -40 to +45 °C T5: -40 to +49 °C T4: -40 to +60 °C ²⁾
308-...	3	1	160	95	150	T5: -40 to +40 °C T5: -40 to +47 °C ²⁾ T4: -40 to +55 °C ²⁾
	3	1	160	120	150	T5: -40 to +45 °C T5: -40 to +51 °C ²⁾ T4: -40 to +60 °C ²⁾
608-...	6	2	160	95	150	T4: -40 to +40 °C T4: -40 to +55 °C ²⁾
	6	2	160	120	150	T4: -40 to +45 °C T4: -40 to +55 °C ²⁾

Type 8150/5-V..-

308-...-K	3	1	160	95	120	T4: -40 to +44 °C ²⁾
	3	1	160	120	120	T5: -40 to +41 °C ²⁾ T5: -40 to +51 °C ²⁾

Type 8146/5-V..-

310-...-K	3	1	180	95	120	T4: -40 to +40 °C ²⁾
	3	1	180	120	120	T4: -40 to +50 °C ²⁾
310-...	3	1	180	95	150	T4: -40 to +40 °C ²⁾
	3	1	180	120	150	T4: -40 to +50 °C ²⁾
610-...	6	2	180	120	150	T4: -40 to +50 °C ²⁾

¹⁾ Engineering note:

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

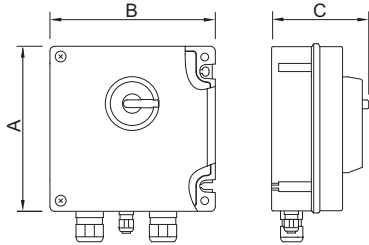
The minimum bending radius was assumed to be 4 x outer diameter in accordance with VDE 0298-3.

²⁾ only with heat-resistant cable > 70 °C on cable entries or/and > 85 °C on clamping points

Grease: specified on rating plate

Series 8146/5-V37 and Series 8150/5-V37

Dimensional Drawings (All dimensions in mm) – Subject to alterations



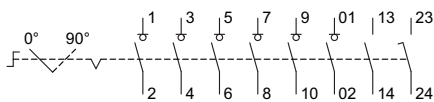
04120E00

			Dimensions [mm]		
			A	B	C
3-pin	10, 12 / 16 A	8146/5-V37-300-50-...	112.5	112.5	131
		8146/5-V37-301-50-...	112.5	112.5	131
	16 A	8146/5-V37-302-50-...	170	112.5	132
		8146/5-V37-302-...-5..	340.5	170	132
		8150/5-V37-302-50-...	176.5	176.5	132
		8146/5-V37-302-50-0250	227	112.5	172
	20 A	8146/5-V37-303-50-...	170	170	132
	25 A	8146/5-V37-304-50-...	170	170	132
		8150/5-V37-304-50-...	176.5	176.5	132
	40 A	8146/5-V37-305-...-K	340.5	170	176.5
		8146/5-V37-305-...-5..	340.5	340.5	195
		8150/5-V37-305-...-K	360	176.5	194
63 / 80 A	8146/5-V37-306-...-K	340.5	170	195	
	8146/5-V37-306-...	340.5	340.5	195	
	8146/5-V37-306-...-5..	681.5	340.5	195	
	8150/5-V37-306-S1-...	360	360	196	
80 A	8146/5-V37-307-...-5..	681.5	340.5	195	
125 / 160 A	8146/5-V37-308-...-K	681.5	340.5	205	
	8146/5-V37-308-...	681.5	681.5	205	
180 A	8146/5-V37-310-...-K	681.5	340.5	205	
	8146/5-V37-310-...	681.5	681.5	205	
6-pin	16 A	8146/5-V37-602-60-...	170	170	172
	25 A	8146/5-V37-604-60-...	227	170	172
	40 A	8146/5-V37-605-...-K	340.5	340.5	205
	63 / 80 A	8146/5-V37-606-...	681.5	340.5	205
	125 / 160 A	8146/5-V37-608-...	1,023	681.5	243
	180 A	8146/5-V37-610-...	1,023	681.5	243

Enclosure and sealing material

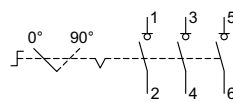
Type	8146/5-V..	8150/5-V..
Enclosure	Polyester resin, glass-fibre-reinforced, dark-grey, similar to RAL 7024 Impact resistance ≥ 7 J surface resistance $\leq 10^9 \Omega$ flame retardant acc. IEC/EN 60695, UL 94, ASTM D635	stainless steel 1.4404 (AISI 316L), brush finished
Seal	silicone, foamed, optional EPDM	silicone, foamed

Circuit diagrams



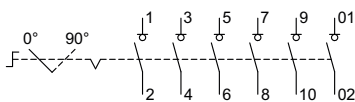
15622E00

-V..-6..-60-..
6-pin + 1 NO (1x ON delayed - OFF leading / 1 x switching normally)



15581E00

-V..-3..-00-..
3-pin

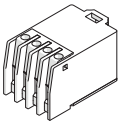









15579E00

-V..-6..-00-..
6-pin

Series 8146/5-V37 and Series 8150/5-V37

Accessories and Spare Parts

Designation	Figure	Description	Note	Art. no.	Weight
Auxiliary contact (for the versions 40 A and higher)	 12446E00	2 NC contacts (8080/1-3) ²⁾	--	168356	0.026
		1 NC contact + 1 NO contact (8080/1-1) ¹⁾	--	168351	0.026
		2 NO contacts (8080/1-4) ²⁾	--	168353	0.026
		The switching function of the auxiliary contact depends on the installation slot used. ¹⁾ Left: delayed (ON), leading (OFF); Right: synchronising ²⁾ Left and right: synchronising	Note: The auxiliary contacts can only be retrofitted for 40A, 63/80A, 80A, 125A, 160A and 180A versions. For all other versions, the auxiliary contact must be ordered separately when placing the order. Retrofitting is not possible for this.		
Auxiliary contact key	 14151E00	for removing the mounted auxiliary contact	--	201909	0.035
Brass plates	 17483E00	for 8146/5-V37-300, 8146/5-V37-301	-- Size 031 2xM25, 1xM20	148207	0.355
	 04902E00	for 8146/5-V37-302	-- Size 041 A 2xM25 1xM20	202079	0.081
	 07097E00	for 8146/5-V37-305	-- Size 073 A/B 2xM40, 1xM20	200215	0.190
	 07098E00	for 8146/5-V37-306	-- Size 073 A/B 2xM50, 1xM20	201948	0.370
	 17486E00	for 8146/5-V37-306	-- Size S73/083/093 2xM50, 1xM20	226936	0.800
	 17485E00	for 8146/5-V37-308, 8146/5-V37-310	-- Size S73/083/093 2xM63, 1xM20	227586	0.750

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.