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.

	ATEX / IECEx					
Zone	0	1	2	20	21	22
For use in		x	x		x	x

	NEC 505			NEC 506		
	Class I					
Zone	0	1	2	20	21	22
For use in		x				

	NEC 500					
	Class I		Class II		Class III	
Division	1	2	1	2	1	2
For use in		x				

WebCode 8146L

Explosion Protection

Global (IECEx)	
Gas and dust	8146/5: IECEx PTB 06.0090, 8150/5: IECEx PTB 09.0049 8146/5: Ex db eb [ia Ga] [ib] mb q IIA, IIB, IIC T6, T5, T4 Gb 8150/5: Ex db eb [ia Ga] [ib] mb q IIA, IIB, IIC T6, T5, T4 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 Db
Europe (ATEX)	
Gas and dust	8146/5: PTB 01 ATEX 1024, 8150/5: PTB 09 ATEX 1109 8146/5: Ⓔx II 2(1) G Ex db eb ia ib [ia Ga] mb q IIA, IIB, IIC T6, T5, T4 Gb 8150/5: Ⓔx II 2(1) G Ex db eb ia/ib [ia Ga] mb q IIA, IIB, IIC T6, T5, T4 Gb 8146/5: Ⓔx II 2 D Ex tb IIIA, IIIB, IIIC T80 °C, T95 °C, T130 °C Db 8150/5: Ⓔx II 2 D Ex tb IIIC T80 °C, T95 °C, T130 °C Db (marking on rating plate is possible)
Certifications and certificates	
Certificates	IECEx, ATEX, Kazakhstan (TR), Russia (TR), Belarus (TR)
Further parameters	
Further information	see respective certifcate and operating instructions

Selection Table

Version	Enclosure material	Equipment Colour	 Additional device	Cable dia. range [mm]	Switch	Order number	Weight kg
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
	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-V37-300-50-1050**	1.700

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

	AC-3	
U_e	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

	DC-1	DC-13 (L/R = 300 ms)	
U_e	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

Technical Data

Service life of electrical / mechanical parts	30,000 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	1.5 / 1.5 ... 2.5 / 4 mm² finely stranded / solid wire

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section 1) [mm²]		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)

*When using a conductor cross-section of min. 2.5 mm², the temperature class and ambient temperature are reduced to T4: -40 ... + 40 °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				kg
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

Technical Data

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

	AC-3		AC-3	
U_e	I	P	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

	DC-1	DC-13 (L/R = 300 ms)	
U_e	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

Service life of electrical / mechanical parts	30.000 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 mm² finely stranded / solid wire

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section [1)] [mm²]		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)]

*When using a conductor cross-section of min. 2.5 mm², the temperature class and ambient temperature are reduced to T4: -40 ... + 40 °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				kg
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 eading)	**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

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

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

Service life of electrical / mechanical parts	30.000 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	1.5 ... 6 mm^2 finely stranded / solid

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)]
*When using a conductor cross-section of min. 2.5 mm^2, the temperature class and ambient temperature are reduced to T4: -40 ... + 40 °C						

Type 8150/5-V..-						
302-...	3	1	16	2.5	6	**T6: -40 to +50 °C** T6: -40 to +65 °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				kg
20 A, 3-pole	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-V37-303-50-0010**	2.020
	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-V37-303-50-1010**	2.020

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

	AC-3	
U_e	I	P
230 V ~	20 A	5.5 kW
400 V ~	20 A	7.5 kW
440 V ~	20 A	11.0 W
500 V ~	20 A	11.0 kW
690 V ~	20 A	18.5 kW

	DC-1, DC-23	DC-13 (L/R = 300 ms)	
U_e	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

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

Service life of electrical / mechanical parts	30.000 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	6 A
Montage / Installation	
Terminals	1.5 ... 6 mm² finely stranded / solid

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section [1] [mm²]		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
*When using a conductor cross-section of min. 2.5 mm², the temperature class and ambient temperature are reduced to T4: -40 ... + 40 °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				kg
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

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

	AC-3	
U_e	I	P
230 V ~	25 A	5.5 kW
400 V ~	25 A	11.0 kW
440 V ~	25 A	11.0 kW
500 V ~	25 A	15.0 kW
690 V ~	25 A	22.0 kW

	DC-1, DC-23	DC-13 (L/R = 300 ms)	
U_e	I	U_e	I
220 V	25 A[3)]	250 V	1.1 A
120 V	25 A[2)]	125 V	2.2 A
60 V	25 A[1)]	60 V	5.0 A

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

Service life of electrical / mechanical parts	30.000 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	6 A
Montage / Installation	
Terminals	1.5 ... 6 mm² finely stranded / solid

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section [1)] [mm²]		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
*When using a conductor cross-section of min. 2.5 mm², the temperature class and ambient temperature are reduced to T4: -40 ... + 40 °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				kg
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

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

	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

	DC-23, DC-1
U_e	I
220 V	40 A[3)]
120 V	40 A[2)]
60 V	40 A[1)]

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

Service life of electrical / mechanical parts	30.000 operations
Max. short-circuit protection	80 A, tripping characteristic: gG acc. to IEC/EN 60291-1

Technical Data

Auxiliary contacts	
Electrical data	
Rated operating voltage	500 V AC
Rated operational current	6 A
Montage / Installation	
Terminals	0,75 ... 2,5 mm² finely stranded / solid

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section [1] [mm²]		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

Selection Table

Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Weight
		Colour	Additional device				kg
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 protecti-ve 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
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

	AC-3		AC-3	
U_e	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		

	DC-23, DC-1
U_e	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	30.000 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	0,75 ... 2,5 mm² finely stranded / solid

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section [1)] [mm²]		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)]

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section [1] [mm²]		Temperature class / Perm. ambient temperature
	Main contacts	Auxiliary contacts		min.	max.	
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]
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]

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section [1] [mm²]		Temperature class / Perm. ambient temperature
	Main contacts	Auxiliary contacts		min.	max.	
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]
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

Selection Table

Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Weight
		Colour	Additional device				kg
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

Selection Table

Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Weight
		Colour	Additional device				kg
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						

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

	AC-3		AC-3		AC-3	
U_e	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

	DC-23, DC-1
U_e	I
220 V	180 A[3)]
120 V	180 A[2)]
60 V	180 A[1)]

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

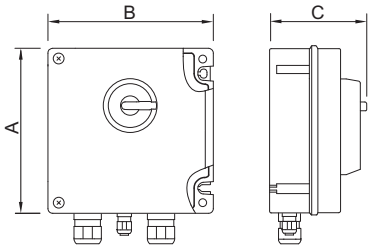
Service life of electrical / mechanical parts	30.000 operations
Max. short-circuit protection	125 A: max. 200 A / 690 V max. 250 A / 500 V 160 A / 180 A: max. 250 A / 400 V tripping characteristic: gG acc. to IEC/EN 60291-1
Auxiliary contacts	
Electrical data	
Rated operating voltage	500 V AC
Rated operational current	6 A
Montage / Installation	
Terminals	0,75 ... 2,5 mm^2 finely stranded / solid

Ambient condition

Type 8146/5-V..-	No. of poles		max. current [A]	Conductor cross-section [1] [mm²]		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

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



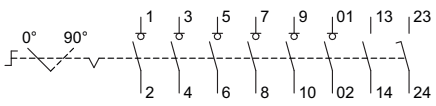
04120E00

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

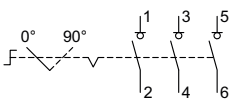
Type	**8146/5-V..**	**8150/5-V..**
Enclosure	Polyester resin, glass-fibre-reinforced, dark-grey, similar to RAL 7024 Impact resistance ≥ 7 J surface resistance ≤ 10^9 Ω flame retardant acc. IEC/EN 60695, UL 94, ASTM D635	stainless steel 1.4404 (AISI 316L), brush finished
Seal	silocone, foamed, optional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

Circuit diagrams



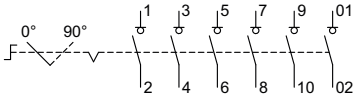
15622E00

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



15581E00

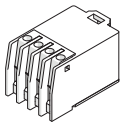
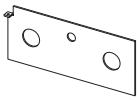
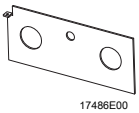
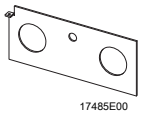
-V..-3..-00-..
3-pin



15579E00

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

Accessories and Spare Parts

Designation	Figure	Description		Art. no.	Weight kg
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**	0.081
	 04902E00	for 8146/5-V37-302	Size 041 A 2xM25 1xM20	**202079**	0.081
	 17481E00	for 8146/5-V37-303 for 8146/5-V37-304	Size. 051/061 2xM32 1xM20	**226934**	0.155
	 07097E00	for 8146/5-V37-305-..K	Size 073 A/B 2xM40, 1xM20	**200215**	0.190
	 17484E00	for 8146/5-V37-305	Size S73/83/93 2xM40 1xM20	**226935**	0.840
	 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.