



Load Disconnect Switches and Motor Switches

Load Disconnect Switches and Motor Switches

Safety Switches

made of Polyester Resin 10, 12/16, 16, 20, 25, 40, 63/80, 80, 125/160, 180 A	8146/5-V37	596
made of Stainless Steel 16, 25, 40, 63/80, 125/160, 250 A	8150/5-V37	596

Motor Protection Circuit Breakers

Motor Protection Circuit Breakers up to 22.5 A	8146/5-V27	603
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Standard Motor Starters

Standard Motor Starters Ex d IIB made of Light Metal	CUBEx	8264	608
Standard Motor Starters Ex d IIC made of Sheet Steel	8220	610	

You will find further information on the Internet www.stahl.de

Load and Motor Switchgear

Load and Motor Switchgear 16, 25 A	8511
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Safety Switches

Safety Switch - Industrial Design	G537
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Safety Switches

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



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 0



WebCode 8146L

E7

ATEX / IECEx						NEC 505						NEC 506					
Zone						Zone						Division					
0	1	2	20	21	22	0	1	2	20	21	22	1	2	1	2	1	2
	x	x		x	x		x						x				

Selection Table

Version	Enclosure material	Equipment Colour	Additional device	Cable dia. range [mm]	Switch	Order number	Art. no.	PS	Weight kg
10 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-300-50-0050	220275 ◀	12	1.700
		red handle, yellow protective collar	--	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-300-50-1050	220277 ◀	12	1.700
12 / 16 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-301-50-0050	147855 ◀	12	0.962
			with N-terminal	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-301-50-0150	147857 ◀	12	0.982
		red handle, yellow protective collar	--	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-301-50-1050	147856 ◀	12	0.958
			with N-terminal	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-301-50-1150	147858 ◀	12	0.978

Selection Table									
Version	Enclosure material	Equipment	Additional device	Cable dia. range [mm]	Switch	Order number	Art. no.	PS	Weight kg
16 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-302-50-0050	201404 ◀	12	1.590
			with PTC resistor terminal	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-302-50-0250	222088	12	1.590
		red handle, yellow protective collar	--	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-302-50-1050	201405 ◀	12	1.590
			with N-terminal	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-302-50-1150	201406 ◀	12	1.590
			main contact on terminal	2 x 9 ... 21 (M32), 1 x 4 ... 13 (M20)	--	8146/5-V37-302-00-1510	226354	12	2.500
	stainless steel 1.4404	black handle, black protective collar	--	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8150/5-V37-302-50-0010	214171 ◀	12	3.250
red handle, yellow protective collar		--	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8150/5-V37-302-50-1010	222688 ◀	12	3.250	
16 A, 6-pole	Polyester resin	black handle, black protective collar	--	4 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	2 NO (1 x ON delayed - OFF leading)	8146/5-V37-602-60-0010	201420 ◀	12	2.640
		red handle, yellow protective collar	--	4 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	2 NO (1 x ON delayed - OFF leading)	8146/5-V37-602-60-1010	201421 ◀	12	2.640
20 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-303-50-0010	220278 ◀	12	2.020
		red handle, yellow protective collar	--	2 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-303-50-1010	220279 ◀	12	2.020
25 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 9 ... 21 (M32), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-304-50-0010	201422 ◀	12	1.960
		red handle, yellow protective collar	--	2 x 9 ... 21 (M32), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-304-50-1010	201423 ◀	12	2.020
			with N-terminal	2 x 9 ... 21 (M32), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8146/5-V37-304-50-1110	201462 ◀	12	2.020
	stainless steel 1.4404	black handle, black protective collar	--	2 x 9 ... 21 (M32), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8150/5-V37-304-50-0010	214172 ◀	12	3.300
red handle, yellow protective collar		--	2 x 9 ... 21 (M32), 1 x 4 ... 13 (M20)	1 NO (ON delayed - OFF leading)	8150/5-V37-304-50-1010	222691 ◀	12	3.300	
25 A, 6-pole	Polyester resin	black handle, black protective collar	--	4 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	2 NO (1 x ON delayed - OFF leading)	8146/5-V37-604-60-0010	201464 ◀	12	2.790
		red handle, yellow protective collar	--	4 x 7 ... 17 (M25), 1 x 4 ... 13 (M20)	2 NO (1 x ON delayed - OFF leading)	8146/5-V37-604-60-1010	201447 ◀	12	2.790

Selection Table

Version	Enclosure material	Equipment Colour	Additional device	Cable dia. range [mm]	Switch	Order number	Art. no.	PS	Weight kg
40 A, 3-pole	Polyester resin	black handle, black protective collar	---	2 x 12 ... 28 (M40), 1 x 4 ... 13 (M20)	---	8146/5-V37-305-00-0010-K	242415	12	5.560
					1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-305-51-0010-K	200206 ◀	12	5.560
		red handle, yellow protective collar	--	2 x 12 ... 28 (M40), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-305-51-1010-K	200207 ◀	12	4.620
			with N-terminal	2 x 12 ... 28 (M40), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-305-51-1110-K	200208 ◀	12	18.500
	main contact on terminal	---	2 x 12 ... 28 (M40), 1 x 4 ... 13 (M20)	---	8146/5-V37-305-00-1510	226355	12	7.500	
		stainless steel 1.4404	black handle, black protective collar	---	2 x 12 ... 28 (M40), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8150/5-V37-305-51-0010-K	214173 ◀	12
--	2 x 12 ... 28 (M40), 1 x 4 ... 13 (M20)			1 NO (1 x ON delayed - OFF leading), 1 NC	8150/5-V37-305-51-1010-K	222692 ◀	12	8.360	
40 A, 6-pole	Polyester resin	black handle, black protective collar	---	4 x 12 ... 28 (M40), 1 x 4 ... 13 (M20)	---	8146/5-V37-605-00-0010-K	200311	12	10.960
					1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-605-51-0010-K	200290 ◀	12	10.960
		red handle, yellow protective collar	---	4 x 12 ... 28 (M40), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-605-51-1010-K	200321	12	10.960
63 / 80 A, 3-pole	Polyester resin	black handle, black protective collar	---	2 x 16 ... 35 (M50), 1 x 4 ... 13 (M20)	---	8146/5-V37-306-00-0010	213115 ◀	12	8.060
					1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-0010	213395 ◀	12	7.960
		with brass plate	2 x 16 ... 35 (M50), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-0040	213398 ◀	12	11.800	
		red handle, yellow protective collar	--	2 x 16 ... 35 (M50), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-1010	213396 ◀	12	7.550
	with N-terminal	2 x 16 ... 35 (M50), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-1110	213397	12	7.550		
	main contact on terminal	---	2 x 16 ... 35 (M50), 1 x 4 ... 13 (M20)	---	8146/5-V37-306-00-1510	226356	12	10.700	
stainless steel 1.4404	black handle, black protective collar	---	2 x 16 ... 35 (M50), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8150/5-V37-306-51-0010-K	214174 ◀	12	12.600	
		--	2 x 16 ... 35 (M50), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8150/5-V37-306-51-1010-K	222693 ◀	12	12.600	
63 / 80 A, 3-pole, compact *)	Polyester resin	black handle, black protective collar	---	2 x 12 ... 28 (M40), 1 x 4 ... 13 (M20)	---	8146/5-V37-306-00-0010-K	242416	12	5.680
					1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-0010-K	200558 ◀	12	5.680
		red handle, yellow protective collar	--	2 x 16 ... 35 (M50), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-1010-K	200559 ◀	12	5.680
with N-terminal	2 x 16 ... 35 (M50), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-306-51-1110-K	200560 ◀	12	5.680			

Note

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

Selection Table										
Version	Enclosure material	Equipment		Cable dia. range [mm]	Switch	Order number	Art. no.	PS	Weight kg	
		Colour	Additional device							
63 / 80 A, 6-pole	Polyester resin	black handle, black protective collar	--	4 x 16 ... 35 (M50), 1 x 4 ... 13 (M20)	--	8146/5-V37-606-00-0010	200573 ◀	12	10.100	
					1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-606-51-0010	200574 ◀	12	10.100	
		red handle, yellow protective collar	--	4 x 16 ... 35 (M50), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-606-51-1010	200575	12	10.100	
80 A, 3-pole	Polyester resin	red handle, yellow protective collar	main contact on terminal	2 x 28 ... 48 (M63), 1 x 7 ... 17 (M25)	--	8146/5-V37-307-00-1510	226357	12	14.400	
125 / 160 A, 3-pole	Polyester resin	black handle, black protective collar	--	2 x 28 ... 48 M63, 1 x 4 ... 13 M20	--	8146/5-V37-308-00-0010	212478	12	18.500	
					1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-0010	212209 ◀	12	18.500	
			with brass plate	2 x 28 ... 48 M63, 1 x 4 ... 13 M20	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-0040	212212	12	22.770	
		red handle, yellow protective collar	--	2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-1010	212210	12	18.500	
				with N-terminal	2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-1110	212211 ◀	12	23.200
		125 / 160 A, 3-pole, compact ¹⁾	Polyester resin	black handle, black protective collar	--	2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	--	8146/5-V37-308-00-0010-K	201396 ◀	12
					1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-0010-K	201397 ◀	12	14.350	
with brass plate	2 x 28 ... 48 M63, 1 x 4 ... 13 M20				1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-0040-K	201400	12	21.260	
red handle, yellow protective collar	--			2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-1010-K	201398 ◀	12	14.350	
				with N-terminal	2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-308-51-1110-K	201399 ◀	12	14.350
stainless steel 1.4404	black handle, black protective collar			--	2 x 28 ... 48 M63, 1 x 4 ... 13 M20	2 NO (1 x ON delayed - OFF leading)	8150/5-V37-308-51-0010-K	201468	12	25.625
	red handle, yellow protective collar		--	2 x 28 ... 48 M63, 1 x 4 ... 13 M20	1 NO (1 x ON delayed - OFF leading), 1 NC	8150/5-V37-308-51-1010-K	222694	12	25.625	
125 / 160 A, 6-pole	Polyester resin		black handle, black protective collar	--	4 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	--	8146/5-V37-608-00-0010	201401 ◀	12	22.760
					1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-608-51-0010	201402	12	22.760	
		red handle, yellow protective collar	--	4 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-608-51-1010	201403	12	22.760	
				with N-terminal	4 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-608-51-1110	212766	12	22.760

Note ¹⁾ "K" versions with a smaller design size; see dimensional drawings

Safety Switches

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

Selection Table

Version	Enclosure material	Equipment Colour	Additional device	Cable dia. range [mm]	Switch	Order number	Art. no.	PS	Weight kg
180 A, 3-pole	Polyester resin	black handle, black protective collar	---	2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	---	8146/5-V37-310-00-0010	213482	12	19.560
					1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-0010	213483	12	19.560
		red handle, yellow protective collar	with brass plate	2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-0040	213486	12	22.770
			---	2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-1010	213484	12	19.560
			with N-terminal	2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-1110	213485	12	19.560
180 A, 3-pole, compact *)	Polyester resin	black handle, black protective collar	---	2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	---	8146/5-V37-310-00-0010-K	213475	12	14.360
					1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-0010-K	213476 ◀	12	14.360
		red handle, yellow protective collar	with brass plate	2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-0040-K	213479 ◀	12	15.140
			---	2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-1010-K	213477 ◀	12	14.360
			with N-terminal	2 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-310-51-1110-K	213478	12	14.360
180 A, 6-pole	Polyester resin	black handle, black protective collar	---	4 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	---	8146/5-V37-610-00-0010	213489	12	37.360
					1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-610-51-0010	213490	12	37.360
		red handle, yellow protective collar	with brass plate	4 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-610-51-0040	213493	12	
			---	4 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-610-51-1010	213491	12	37.360
			with N-terminal	4 x 28 ... 48 (M63), 1 x 4 ... 13 (M20)	1 NO (1 x ON delayed - OFF leading), 1 NC	8146/5-V37-610-51-1110	213492	12	37.360
250 A, 3-pole	Ex d housing: sheet steel, cover: light metal, Ex e housing: sheet steel	Handle grey enamel RAL 7032, protective collar umbra grey RAL 7022	---	---	1 NO (ON delayed - OFF leading)	8537/7-712-7000	147467	13	55.000

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

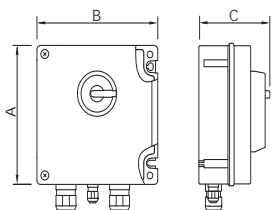
E7

Technical Data

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 [iaGa] mb q IIA, IIB, IIC T6, T5, T4 Gb 8150/5: Ex d e ia/ib [iaGa] 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: Ⓜ II 2 D Ex tb IIIA, IIIB, IIIC T80°C, T95°C, T130°C Db IP66 8150/5: Ⓜ II 2 D Ex tb IIIC T80°C, T95°C, T130°C, T135°C Db IP66 (marking on rating plate possible)																																																																																																		
Certifications and certificates																																																																																																			
Certificates	IECEX, ATEX, Kazakhstan (TR), Russia (TR), Belarus (TR)																																																																																																		
Ambient conditions																																																																																																			
Ambient temperature	-40 ... +40 °C (others see WebCode 8146L)																																																																																																		
Mechanical data																																																																																																			
Degree of protection	IP66 acc. to IEC/EN 60529																																																																																																		
Enclosure material	8146/5-V37: Polyester resin, glass fibre reinforced 8150/5-V37: stainless steel (1.4404)																																																																																																		
Enclosure cover	In ON position removable, in OFF position lockable																																																																																																		
Handle	Can be locked with 3 padlocks in 0-position																																																																																																		
Main contacts																																																																																																			
Electrical data																																																																																																			
Rated operational voltage	690 V AC (125, 63, 40, 20, 16, 12, 10 A) / 500 V AC (150, 80, 25 A)																																																																																																		
Rated operational current	10, 12 / 16, 16, 20, 25, 40, 63 / 80, 125 / 160, 180 A																																																																																																		
Switching capacity	Motor switching capacity AC-3 (in relation to the max. rated switching current)																																																																																																		
	<table border="1"> <tr> <td>AC-3</td> <td>10 A</td> <td>12 / 16 A</td> <td>16 A</td> <td>20 A</td> </tr> <tr> <td>U_e</td> <td>P</td> <td>P</td> <td>P</td> <td>P</td> </tr> <tr> <td>230 V</td> <td>2.2 kW</td> <td>3.0 / 4.0 W</td> <td>4.0 kW</td> <td>5.5 kW</td> </tr> <tr> <td>400 V</td> <td>4.0 kW</td> <td>5.5 / 7.5 kW</td> <td>7.5 kW</td> <td>7.5 kW</td> </tr> <tr> <td>440 V</td> <td>4.0 kW</td> <td>5.5 / 7.5 kW</td> <td>--</td> <td>11.0 kW</td> </tr> <tr> <td>500 V</td> <td>5.5 kW</td> <td>5.5 / 7.5 kW</td> <td>--</td> <td>11.0 kW</td> </tr> <tr> <td>690 V</td> <td>7.5 kW</td> <td>7.5 / 11.0 kW</td> <td>--</td> <td>18.5 kW</td> </tr> </table> <table border="1"> <tr> <td>AC-3</td> <td>25 A</td> <td>40 A</td> <td>63 A</td> <td>80 A</td> </tr> <tr> <td>U_e</td> <td>P</td> <td>P</td> <td>P</td> <td>P</td> </tr> <tr> <td>230 V</td> <td>5.5 kW</td> <td>11.0 kW</td> <td>18.5 kW</td> <td>22.0 kW</td> </tr> <tr> <td>400 V</td> <td>11.0 kW</td> <td>22.0 kW</td> <td>30.0 kW</td> <td>45.0 kW</td> </tr> <tr> <td>440 V</td> <td>11.0 kW</td> <td>22.0 kW</td> <td>37.0 kW</td> <td>45.0 kW</td> </tr> <tr> <td>500 V</td> <td>15.0 kW</td> <td>22.0 kW</td> <td>37.0 kW</td> <td>55.0 kW</td> </tr> <tr> <td>690 V</td> <td>22.0 kW (AC-23)</td> <td>37.0 kW</td> <td>55.0 kW</td> <td>--</td> </tr> </table> <table border="1"> <tr> <td>AC-3</td> <td>125 A</td> <td>150 A</td> <td>180 A</td> </tr> <tr> <td>U_e</td> <td>P</td> <td>P</td> <td>P</td> </tr> <tr> <td>230 V</td> <td>55.0 kW</td> <td>45.0 kW</td> <td>55.0 kW</td> </tr> <tr> <td>400 V</td> <td>55.0 kW</td> <td>75.0 kW</td> <td>90.0 kW</td> </tr> <tr> <td>440 V</td> <td>75.0 kW</td> <td>90.0 kW</td> <td>--</td> </tr> <tr> <td>500 V</td> <td>75.0 kW</td> <td>90.0 kW</td> <td>--</td> </tr> <tr> <td>690 V</td> <td>110.0 kW</td> <td>--</td> <td>--</td> </tr> </table>	AC-3	10 A	12 / 16 A	16 A	20 A	U _e	P	P	P	P	230 V	2.2 kW	3.0 / 4.0 W	4.0 kW	5.5 kW	400 V	4.0 kW	5.5 / 7.5 kW	7.5 kW	7.5 kW	440 V	4.0 kW	5.5 / 7.5 kW	--	11.0 kW	500 V	5.5 kW	5.5 / 7.5 kW	--	11.0 kW	690 V	7.5 kW	7.5 / 11.0 kW	--	18.5 kW	AC-3	25 A	40 A	63 A	80 A	U _e	P	P	P	P	230 V	5.5 kW	11.0 kW	18.5 kW	22.0 kW	400 V	11.0 kW	22.0 kW	30.0 kW	45.0 kW	440 V	11.0 kW	22.0 kW	37.0 kW	45.0 kW	500 V	15.0 kW	22.0 kW	37.0 kW	55.0 kW	690 V	22.0 kW (AC-23)	37.0 kW	55.0 kW	--	AC-3	125 A	150 A	180 A	U _e	P	P	P	230 V	55.0 kW	45.0 kW	55.0 kW	400 V	55.0 kW	75.0 kW	90.0 kW	440 V	75.0 kW	90.0 kW	--	500 V	75.0 kW	90.0 kW	--	690 V	110.0 kW	--	--
AC-3	10 A	12 / 16 A	16 A	20 A																																																																																															
U _e	P	P	P	P																																																																																															
230 V	2.2 kW	3.0 / 4.0 W	4.0 kW	5.5 kW																																																																																															
400 V	4.0 kW	5.5 / 7.5 kW	7.5 kW	7.5 kW																																																																																															
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500 V	15.0 kW	22.0 kW	37.0 kW	55.0 kW																																																																																															
690 V	22.0 kW (AC-23)	37.0 kW	55.0 kW	--																																																																																															
AC-3	125 A	150 A	180 A																																																																																																
U _e	P	P	P																																																																																																
230 V	55.0 kW	45.0 kW	55.0 kW																																																																																																
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Auxiliary contacts																																																																																																			
Electrical data																																																																																																			
Rated operational voltage U _e	10, 12 / 16 A: 400 V AC 20, 16, 25 A: 500 V AC ≥ 40 A: 250 V AC / DC 400 V AC, for equal potential of both contacts 500 V AC, when 1 NC + 1 NO and the same potential of both contact is used 250 V AC																																																																																																		
Rated operational current	6 A																																																																																																		

For further technical data, such as line cross-section and temperature class / perm. ambient temperature, see www.stahl.de (WebCode 8146L)

Dimensional Drawings (All Dimensions in mm) - Subject to Alterations



04120E00

			Dimensions [mm]		
			A	B	C
3-pole	10, 12 / 16 A	8146/5-V..-300-50-...	112.5	112.5	131
		8146/5-V..-301-50-...	112.5	112.5	131
	16 A	8146/5-V..-302-50-...	170	112.5	132
		8146/5-V..-302-...-5..	340.5	170	132
		8150/5-V..-302-50-...	176.5	176.5	132
		8146/5-V..-302-50-0250	227	112.5	172
		8146/5-V11-102	170	170	172
	20 A	8146/5-V..-303-50-...	170	170	132
	25 A	8146/5-V..-304-50-...	170	170	132
		8150/5-V..-304-50-...	176.5	176.5	132
		8146/5-V11-104	227	170	171
	40 A	8146/5-V..-305-...-K	340.5	170	176.5
		8146/5-V..-305-...-5..	340.5	340.5	195
		8150/5-V..-305-...-K	360	176.5	194
	63 / 80 A	8146/5-V..-306-...-K	340.5	170	195
8146/5-V..-306-...		340.5	340.5	195	
8146/5-V..-306-...-5..		681.5	340.5	195	
8150/5-V..-306-S1-...		360	360	196	
80 A	8146/5-V..-307-...-5..	681.5	340.5	195	
125 / 160 A	8146/5-V..-308-...-K	681.5	340.5	205	
	8146/5-V..-308-...	681.5	681.5	205	
180 A	8146/5-V..-310-...-K	681.5	340.5	205	
	8146/5-V..-310-...	681.5	681.5	205	
4-pole	16 A	8146/5-V11-402-...-...	170	112.5	131
	25 A	8146/5-V11-404-...-...	170	170	132
	40 A	8146/5-V11-405-...-...-K	340.5	340.5	195
	63 / 80 A	8146/5-V11-406-...-...-K	340.5	340.5	195
6-pole	16 A	8146/5-V..-602-60-...	170	170	172
	25 A	8146/5-V..-604-60-...	227	170	172
	40 A	8146/5-V..-605-...-K	340.5	340.5	205
	63 / 80 A	8146/5-V..-606-...	681.5	340.5	205
	125 / 160 A	8146/5-V..-608-...	1023	681.5	243
	180 A	8146/5-V..-610-...	1023	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



02966E00

- > For protection of Ex e and Ex d motors
- > Protects electric lines and plant equipment
- > Thermal overcurrent release, adjustable, phase failure sensitive
- > Electromagnetic quick release
- > Robust enclosure made of glass fibre reinforced polyester resin
- > Optionally available with
 - undervoltage release
 - shunt trip
 - ammeter
 - auxiliary contacts



WebCode 8146N

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

Version	Current adjustment range	Additional device	Order number	Art. no.	PS	Weight kg
Motor protection circuit breaker without accessories, Series 8146/5-V27	0.1 ... 0.16 A	without	8546/5-V27-101-015-00-2	147182	12	2.600
		1 NC + 1 NO	8146/5-V27-201-015-02-2	249238	12	2.600
	0.16 ... 0.25 A	without	8546/5-V27-101-025-00-2	147183	12	2.600
		1 NC + 1 NO	8146/5-V27-201-025-02-2	249239	12	2.600
	0.25 ... 0.4 A	without	8546/5-V27-101-035-00-2	147184	12	2.600
		1 NC + 1 NO	8146/5-V27-201-035-02-2	249240	12	2.600
	0.4 ... 0.63 A	without	8546/5-V27-101-045-00-2	147185 ◀	12	2.600
		1 NC + 1 NO	8146/5-V27-201-045-02-2	249241	12	2.600
	0.63 ... 1 A	without	8546/5-V27-101-055-00-2	147186 ◀	12	2.600
		1 NC + 1 NO	8146/5-V27-201-055-02-2	249242	12	2.600
	1 ... 1.6 A	without	8546/5-V27-101-065-00-2	147187 ◀	12	2.630
		1 NC + 1 NO	8146/5-V27-201-065-02-2	249243	12	2.630
	1.6 ... 2.5 A	without	8546/5-V27-101-075-00-2	147188 ◀	12	2.630
		1 NC + 1 NO	8146/5-V27-201-075-02-2	249244	12	2.630
	2.5 ... 4 A	without	8546/5-V27-101-085-00-2	147189 ◀	12	2.630
		1 NC + 1 NO	8146/5-V27-201-085-02-2	249245	12	2.630
	4 ... 6.3 A	without	8546/5-V27-101-095-00-2	147190 ◀	12	2.630
		1 NC + 1 NO	8146/5-V27-201-095-02-2	249246	12	2.630
	6.3 ... 9 A	without	8546/5-V27-101-105-00-2	147191 ◀	12	2.850
		1 NC + 1 NO	8146/5-V27-201-105-02-2	249247	12	2.850
9 ... 12.5 A	without	8546/5-V27-101-115-00-2	147192 ◀	12	3.200	
	1 NC + 1 NO	8146/5-V27-201-115-02-2	249248	12	3.200	
12.5 ... 16 A	without	8546/5-V27-101-125-00-2	147193	12	3.500	
	1 NC + 1 NO	8146/5-V27-201-125-02-2	249249	12	3.550	
16 ... 20 A	without	8546/5-V27-301-135-00-4	147203	12	4.200	
	1 NC + 1 NO	8146/5-V27-401-135-02-4	249250	12	4.250	
20 ... 22.5 A	without	8546/5-V27-301-145-00-4	147204	12	4.200	
	1 NC + 1 NO	8146/5-V27-401-145-02-4	249251	12	4.250	

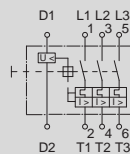
On request:

- Circuit breakers for the current adjustment range 25 ... 63 A (Type 8525)
- Further accessories e. g. shunt trip, ammeter, additional auxiliary contacts (2 NC + 2 NO)

E7

Selection Table

Version	Current adjustment range	Rated operational voltage U_e	Auxiliary contacts	Order number	Art. no.	PS	Weight
Motor protection circuit breaker with undervoltage release, Series 8146/5-V27	0.1 ... 0.16 A	230 V AC 50 / 60 Hz	without	8146/5-V27-107-015-10-2	249151	12	2.610
			1 NC + 1 NO	8146/5-V27-207-015-12-2	249192	12	2.610
		400 V AC 50 / 60 Hz	without	8146/5-V27-108-015-10-2	249152	12	2.610
			1 NC + 1 NO	8146/5-V27-208-015-12-2	249193	12	2.610
		500 V AC 50 / 60 Hz	without	8146/5-V27-110-015-10-2	249153	12	2.610
			1 NC + 1 NO	8146/5-V27-210-015-12-2	249194	12	2.610
	0.16 ... 0.25 A	230 V AC 50 / 60 Hz	without	8146/5-V27-107-025-10-2	249154	12	2.630
			1 NC + 1 NO	8146/5-V27-207-025-12-2	249195	12	2.630
		400 V AC 50 / 60 Hz	without	8146/5-V27-108-025-10-2	249155	12	2.630
			1 NC + 1 NO	8146/5-V27-208-025-12-2	249196	12	2.630
		500 V AC 50 / 60 Hz	without	8146/5-V27-110-025-10-2	249156	12	2.630
			1 NC + 1 NO	8146/5-V27-210-025-12-2	249197	12	2.630
	0.25 ... 0.4 A	230 V AC 50 / 60 Hz	without	8146/5-V27-107-035-10-2	249157	12	2.630
			1 NC + 1 NO	8146/5-V27-207-035-12-2	249198	12	2.630
		400 V AC 50 / 60 Hz	without	8146/5-V27-108-035-10-2	249158	12	2.630
			1 NC + 1 NO	8146/5-V27-208-035-12-2	249199	12	2.630
		500 V AC 50 / 60 Hz	without	8146/5-V27-110-035-10-2	249159	12	2.630
			1 NC + 1 NO	8146/5-V27-210-035-12-2	249200	12	2.630
	0.4 ... 0.63 A	230 V AC 50 / 60 Hz	without	8146/5-V27-107-045-10-2	249160	12	2.630
			1 NC + 1 NO	8146/5-V27-207-045-12-2	249201	12	2.630
		400 V AC 50 / 60 Hz	without	8146/5-V27-108-045-10-2	249161	12	2.630
			1 NC + 1 NO	8146/5-V27-208-045-12-2	249202	12	2.630
		500 V AC 50 / 60 Hz	without	8146/5-V27-110-045-10-2	249162	12	2.630
			1 NC + 1 NO	8146/5-V27-210-045-12-2	249203	12	2.630
0.63 ... 1 A	230 V AC 50 / 60 Hz	without	8146/5-V27-107-055-10-2	249163	12	2.630	
		1 NC + 1 NO	8146/5-V27-207-055-12-2	249204	12	2.630	
	400 V AC 50 / 60 Hz	without	8146/5-V27-108-055-10-2	249164	12	2.630	
		1 NC + 1 NO	8146/5-V27-208-055-12-2	249205	12	2.630	
	500 V AC 50 / 60 Hz	without	8146/5-V27-110-055-10-2	249165	12	2.630	
		1 NC + 1 NO	8146/5-V27-210-055-12-2	249206	12	2.630	

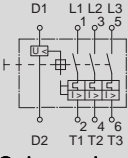


Motor Protection Circuit Breaker

Series 8146/5-V27



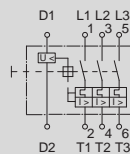
Selection Table

Version	Current adjustment range	Rated operational voltage U_e	Auxiliary contacts		Order number	Art. no.	PS	Weight
								kg
Motor protection circuit breaker with undervoltage release, Series 8146/5-V27	1 ... 1.6 A	230 V AC 50 / 60 Hz	without		8146/5-V27-107-065-10-2	249166	12	2.700
			1 NC + 1 NO		8146/5-V27-207-065-12-2	249207	12	2.700
		400 V AC 50 / 60 Hz	without		8146/5-V27-108-065-10-2	249167	12	2.700
			1 NC + 1 NO		8146/5-V27-208-065-12-2	249208	12	2.700
			without		8146/5-V27-110-065-10-2	249168	12	2.700
			1 NC + 1 NO		8146/5-V27-210-065-12-2	249209	12	2.700
	1.6 ... 2.5 A	230 V AC 50 / 60 Hz	without		8146/5-V27-107-075-10-2	249169	12	2.700
			1 NC + 1 NO		8146/5-V27-207-075-12-2	249210	12	2.700
		400 V AC 50 / 60 Hz	without		8146/5-V27-108-075-10-2	249170	12	2.700
			1 NC + 1 NO		8146/5-V27-208-075-12-2	249211	12	2.700
			without		8146/5-V27-110-075-10-2	249171	12	2.700
			1 NC + 1 NO		8146/5-V27-210-075-12-2	249212	12	2.700
	2.5 ... 4 A	230 V AC 50 / 60 Hz	without		8146/5-V27-107-085-10-2	249172	12	2.800
			1 NC + 1 NO		8146/5-V27-207-085-12-2	249213	12	2.800
		400 V AC 50 / 60 Hz	without		8146/5-V27-108-085-10-2	249173	12	2.800
			1 NC + 1 NO		8146/5-V27-208-085-12-2	249214	12	2.800
			without		8146/5-V27-110-085-10-2	249174	12	2.800
			1 NC + 1 NO		8146/5-V27-210-085-12-2	249215	12	2.800
	4 ... 6.3 A	230 V AC 50 / 60 Hz	without		8146/5-V27-107-095-10-2	249175	12	2.800
			1 NC + 1 NO		8146/5-V27-207-095-12-2	249216	12	2.800
		400 V AC 50 / 60 Hz	without		8146/5-V27-108-095-10-2	249176	12	2.800
			1 NC + 1 NO		8146/5-V27-208-095-12-2	249217	12	2.800
			without		8146/5-V27-110-095-10-2	249177	12	2.800
			1 NC + 1 NO		8146/5-V27-210-095-12-2	249218	12	2.800
6.3 ... 9 A	230 V AC 50 / 60 Hz	without		8146/5-V27-107-105-10-2	249178	12	3.000	
		1 NC + 1 NO		8146/5-V27-207-105-12-2	249219	12	3.000	
	400 V AC 50 / 60 Hz	without		8146/5-V27-108-105-10-2	249179	12	3.000	
		1 NC + 1 NO		8146/5-V27-208-105-12-2	249220	12	3.000	
		without		8146/5-V27-110-105-10-2	249180	12	3.000	
		1 NC + 1 NO		8146/5-V27-210-105-12-2	249221	12	3.000	
9 ... 12.5 A	230 V AC 50 / 60 Hz	without		8146/5-V27-107-115-10-2	249183	12	3.350	
		1 NC + 1 NO		8146/5-V27-207-115-12-2	249222	12	3.350	
	400 V AC 50 / 60 Hz	without		8146/5-V27-108-115-10-2	249185	12	3.350	
		1 NC + 1 NO		8146/5-V27-208-115-12-2	249223	12	3.350	
		without		8146/5-V27-110-115-10-2	249186	12	3.350	
		1 NC + 1 NO		8146/5-V27-210-115-12-2	249224	12	3.350	

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Selection Table

Version	Current adjustment range	Rated operational voltage U_e	Auxiliary contacts	Order number	Art. no.	PS	Weight kg
Motor protection circuit breaker with undervoltage release, Series 8146/5-V27	12.5 ... 16 A	230 V AC 50 / 60 Hz	without	8146/5-V27-107-125-10-2	249187	12	3.700
			1 NC + 1 NO	8146/5-V27-207-125-12-2	249225	12	3.700
		400 V AC 50 / 60 Hz	without	8146/5-V27-108-125-10-2	249188	12	3.700
			1 NC + 1 NO	8146/5-V27-208-125-12-2	249226	12	3.700
		500 V AC 50 / 60 Hz	without	8146/5-V27-110-125-10-2	249189	12	3.700
			1 NC + 1 NO	8146/5-V27-210-125-12-2	249227	12	3.700
	16 ... 20 A	230 V AC 50 / 60 Hz	without	8146/5-V27-307-135-10-4	249228	12	4.400
			1 NC + 1 NO	8146/5-V27-407-135-12-4	249232	12	4.400
		400 V AC 50 / 60 Hz	without	8146/5-V27-308-135-10-4	249229	12	4.400
			1 NC + 1 NO	8146/5-V27-408-135-12-4	249233	12	4.400
		500 V AC 50 / 60 Hz	without	8146/5-V27-310-135-10-4	249190	12	4.400
			1 NC + 1 NO	8146/5-V27-410-135-12-4	249234	12	4.400
20 ... 22.5 A	230 V AC 50 / 60 Hz	without	8146/5-V27-307-145-10-4	249230	12	4.400	
		1 NC + 1 NO	8146/5-V27-407-145-12-4	249235	12	4.400	
	400 V AC 50 / 60 Hz	without	8146/5-V27-308-145-10-4	249231	12	4.400	
		1 NC + 1 NO	8146/5-V27-408-145-12-4	249236	12	4.400	
	500 V AC 50 / 60 Hz	without	8146/5-V27-110-145-10-4	249191	12	4.400	
		1 NC + 1 NO	8146/5-V27-410-145-12-4	249237	12	4.400	



E7

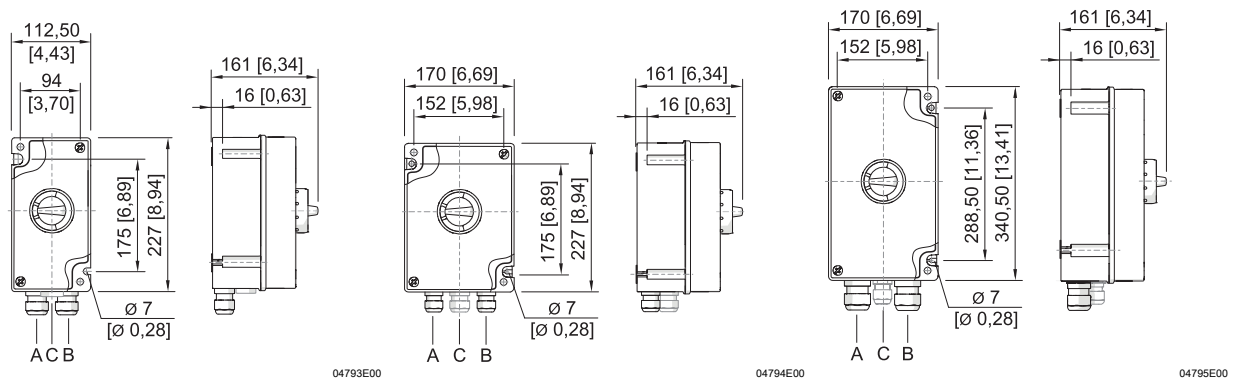
Technical Data

Explosion protection Global (IECEX) Gas and dust	IECEX PTB 06.0090 Ex d e ia ib [ja Ga] mb q IIA, IIB, IIC T6, T5, T4 Gb Ex tb IIIA, IIIB, IIIC T80°C, T95°C, T130°C Db			
Europe (ATEX) Gas and dust	PTB 01 ATEX 1024 ⊕ II 2 G Ex d e ia ib [ja Ga] mb q IIA, IIB, IIC T6, T5, T4 Gb ⊕ II 2 D Ex tb IIIA, IIIB, IIIC T80°C, T95°C, T130°C Db IP66			
Note	Type	Adjustment range	T_{Gas}	T_{Dust}
	8146/5-V27-1, 8146/5-V27-2	0.1 ... 0.25 A 0.25 ... 12.5 A 12.5 ... 16 A	T6 T5 T4	80 °C 95 °C 130 °C
	8146/5-V27-3, 8146/5-V27-4	0.1 ... 12.5 A 12.5 ... 22.5 A	T6 T5	80 °C 95 °C
	8146/5-V27-5, 8146/5-V27-6	0.1 ... 12.5 A	T6	80 °C
Certifications and certificates Certificates	IECEX, ATEX, Canada (CSA), Kazakhstan (TR), Korea (KCs), Russia (TR), Ukraine (TR), Belarus (TR)			

Technical Data

Degree of protection	IP66 acc. to IEC/EN 60529			
Switch insert	max. 690 V AC, 50 / 60 Hz			
Rated operational voltage	0.1 ... 22.5 A			
Rated operational current	depending on the selected adjustment range (AC)			
Switching capacity	230 V	400 V	500 V	690 V
	7.0 kW	12.4 kW	16 kW	22 kW
Thermal overcurrent release	depending on the adjustment range of the switch, adjustable on the switch			
Electromagnetic quick release	Current ranges		Operate value set at factory	
	0.16 ... 0.63 A	7.5 ... 12.0 I _n		
	1.0 ... 2.5 A	9.0 ... 14.0 I _n		
	2.5 ... 4.0 A	10.0 ... 15.0 I _n		
	4.0 ... 6.3 A	10.0 ... 15.0 I _n		
	9.0 ... 22.5 A	12.5 ... 17.5 I _n		
Switching handle	Designation: 0 - I; 3-times padlockable in position 0 Colour: Standard: black handle, black protective collar Special version: red handle, yellow protective collar (for EM-STOP function)			

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



8146/5-V27-1

8146/5-V27-2

8146/5-V27-3, 8146/5-V27-4

Cable entries

Type	Additional equipment	Cable glands series 8161		Stopping plugs series 8290
		M25 x 1.5	M32 x 1.5	M25 x 1.5
8146/5-V27-1	without	A + B	--	C
	with	A, B, C	--	--
8146/5-V27-2	without	A + B	--	C
	with	A, B, C	--	--
8146/5-V27-3, 8146/5-V27-4	without	--	A + B	C
	with	C	A + B	--