

ALPHA FIX Terminal Blocks

ALPHA FIX 8WA and 8WH Terminals with Screw Connection

Circuit-breaker terminals for auxiliary circuits

Overview

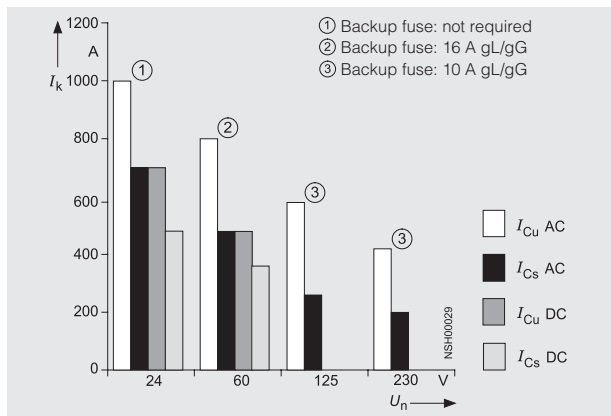
Circuit-breaker terminals are used for short-circuit protection or for protection against overloading and short-circuiting in auxiliary and control circuits after control transformers.

Advantages

- Space-saving construction in terminal blocks design
- Clear arrangement on the terminal rail (35 mm standard mounting rail)
- Unambiguous indication of switch position or "released" status
- No fuses
- Switch/isolating point function
- Signals through built-in auxiliary switches
- Floating through-type connection parallel to the switching contacts
- Double connection to all terminals possible
- Inscription with terminal block labeling accessories

Standards

DIN VDE 0660 Part 101 and IEC 60947-2, insofar as they relate to circuit-breaker terminals. Finger-safe according to EN 50274.



Rated short-circuit, switch-on and switch-off capacities according to DIN VDE 0660 Part 101 for 8WA1 011-.SF circuit-breaker terminal.

Selection instructions

When selecting circuit-breaker terminals, the different release characteristics must be taken into account.

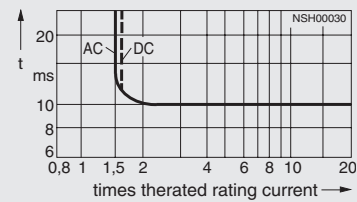
Inductive AC current loads such as contactor coils and solenoid valves have inrush peaks up to ten times the continuous current. Circuit-breaker terminals with short-circuit releases are to be selected such that they do not release as a consequence of inrush peaks.

With regard to circuit-breaker terminals with overload and short-circuit release, a low rated uninterrupted current can be chosen because the short-circuit releases only respond when the levels are high.

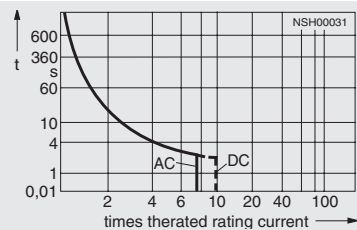
Ordering examples

Existing unit: Solenoid valve, 50 Hz, 24 V AC, 20 VA.	
1. Required: Circuit-breaker terminal with <u>short-circuit release</u> .	Selected unit: Circuit-breaker terminal 10 A Order No. 8WA1 011-1SF28
Selection according to making current: Continuous current = 20 VA; 24 V = 0.83 A Making current = 10 x continuous current = 8.3 A	
2. Required: Circuit-breaker terminal with <u>overload and short-circuit release</u> .	Selected unit: Circuit-breaker terminal 2 A Order No. 8WA1 011-2SF25
Check: The making current equals 10 x continuous current = 8.3 A. This is 4.15 times the rated continuous current of 2 A. The short-circuit release has not yet tripped.	

Characteristic curves



Characteristic curve of short-circuit releases



Characteristic curve of combined overload and short-circuit releases at ambient temperature 40 °C

Technical specifications






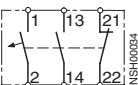
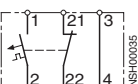
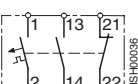
Rated operational voltage	max. 250 V AC 50/60 Hz max. 60 V DC
Minimum operational voltage	24 V UC
Heat dissipation	max. 1 W
Rated impulse withstand voltage	4 kV
Pollution degree (EN 60664-1)	3
Rated operational current of auxiliary contact	1 A
Rated current of the through-type connection	16 A
Mech. stability under load Electr. stability under load	8000 switching operations 4000 switching operations
Polarity under direct current	Any
Mounting position	As required
Vibration resistance	10 g at ≤ 70 Hz
Terminal capacities	
• Solid	1 or 2 × (0.75-1.5) mm ²
• Finely stranded with end sleeve	1 or 2 × (1-2.5) mm ²
Tightening torque	0.8 Nm
Stripped length	10 mm

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Selection and ordering data





Version	Order No.	Price	PG	PS* P. unit
		1 unit		Unit(s)
General details <ul style="list-style-type: none"> • With thermoplastic insulating base • Screw terminal on both sides for 2 conductors each • Enclosed on both sides 				
Note For labeling accessories see ...		Section Accessories	Page 6/2	
Terminal size 1.5 mm²				
Circuit-breaker terminals, terminal size 1.5 mm² <ul style="list-style-type: none"> • Max. rated operational voltage 250 V AC, 60 V DC • Mounting width 12.5 mm • Terminal height 96 mm • Terminal length 89 mm •  AWG 14-12 •  AWG 14 				
Versions <ul style="list-style-type: none"> • With short-circuit release <ul style="list-style-type: none"> - rated uninterrupted current $I_N = 1$ A - rated uninterrupted current $I_N = 2$ A - rated uninterrupted current $I_N = 4$ A - rated uninterrupted current $I_N = 6$ A - rated uninterrupted current $I_N = 10$ A • With overload and short-circuit release <ul style="list-style-type: none"> - rated uninterrupted current $I_N = 1$ A - rated uninterrupted current $I_N = 2$ A - rated uninterrupted current $I_N = 4$ A - rated uninterrupted current $I_N = 6$ A - rated uninterrupted current $I_N = 10$ A 				
 5SK9 011-1KK24				
 5SK9 011-1KK2.				
 5SK9 011-2KK2.				
Accessories		Section Accessories	Page 1/42	
Feeder terminals				
Link rails, single-pole <ul style="list-style-type: none"> • 9 connections • 18 connections 		Accessories	Page 1/42	5ST1 822-7KK00 5ST1 822-7KK07 5ST1 822-7KK06
Terminal size 2.5 mm²				
Circuit-breaker terminals, terminal size 2.5 mm² <ul style="list-style-type: none"> • Max. rated operational voltage 250 V AC, 60 V DC • Mounting width 22.5 mm • Terminal height 96 mm • Terminal length 89 mm 				
Versions <ul style="list-style-type: none"> • With short-circuit release, auxiliary contact with 1 NO contact and 1 NC contact <ul style="list-style-type: none"> - rated uninterrupted current $I_N = 1$ A - rated uninterrupted current $I_N = 2$ A - rated uninterrupted current $I_N = 4$ A - rated uninterrupted current $I_N = 6$ A - rated uninterrupted current $I_N = 10$ A • With overload and short-circuit release, auxiliary contact and through-type connection <ul style="list-style-type: none"> - rated uninterrupted current $I_N = 1$ A - rated uninterrupted current $I_N = 2$ A - rated uninterrupted current $I_N = 4$ A - rated uninterrupted current $I_N = 6$ A - rated uninterrupted current $I_N = 10$ A • With overload and short-circuit release, auxiliary contact with 1 NO contact and 1 NC contact <ul style="list-style-type: none"> - rated uninterrupted current $I_N = 0.5$ A - rated uninterrupted current $I_N = 1$ A - rated uninterrupted current $I_N = 2$ A - rated uninterrupted current $I_N = 4$ A - rated uninterrupted current $I_N = 6$ A - rated uninterrupted current $I_N = 10$ A 				
 5SK9 011-6KK2.				
 5SK9 011-4KK2.				
 5SK9 011-8KK2.				
Accessories		Section Accessories	Page 1/42	
Feeder terminals				
Link rails, single-pole <ul style="list-style-type: none"> • 5 connections • 10 connections 		Accessories	Page 1/42	5ST1 822-7KK00 5ST1 822-7KK02 5ST1 822-7KK01
Link rails, two-pole <ul style="list-style-type: none"> • 5 connections/pole • 9 connections/pole 		Accessories	Page 1/42	5ST1 822-7KK04 5ST1 822-7KK03

* See pages 7/9 through 7/12 for 5SK & 5ST package size requirements.

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Version	Order No.	Price 1 unit	PG	PS* P. unit Unit(s)
Accessories				
Feeder terminals <ul style="list-style-type: none"> • For circuit-breaker terminals • Rated uninterrupted current 76 A • Connection up to 16 mm² • For terminals: <ul style="list-style-type: none"> - 8WA1 011-1SF2. - 8WA1 011-2SF2. - 8WA1 011-4SF2. - 8WA1 011-6SF2. - 8WA1 011-8SF2. 	5ST1 822-7KK00		041	10
 5ST1 822-7KK01  5ST1 822-7KK02	Link rails, single-pole <ul style="list-style-type: none"> • For circuit-breaker terminals • Rated uninterrupted current 65 A Versions <ul style="list-style-type: none"> • 5 connections <ul style="list-style-type: none"> - length 104 mm - for terminals: 8WA1 011-4SF2. / 8WA1 011-6SF2. / 8WA1 011-8SF2. • 9 connections <ul style="list-style-type: none"> - length 104 mm - for terminals: 8WA1 011-1SF2. / 8WA1 011-2SF2. • 10 connections <ul style="list-style-type: none"> - length 206 mm - for terminals: 8WA1 011-4SF2. / 8WA1 011-6SF2. / 8WA1 011-8SF2. • 18 connections <ul style="list-style-type: none"> - length 206 mm - for terminals: 8WA1 011-1SF2. / 8WA1 011-2SF2. 			
	5ST1 822-7KK02		041	20
	5ST1 822-7KK07		041	20
	5ST1 822-7KK01		041	20
	5ST1 822-7KK06		041	20
 5ST1 822-7KK03  5ST1 822-7KK04	Link rails, two-pole <ul style="list-style-type: none"> • For circuit-breaker terminals • Rated uninterrupted current 120 A • For 8WA1 011-4SF2 terminal Versions <ul style="list-style-type: none"> • 5 connections/pole <ul style="list-style-type: none"> - length 104 mm • 9 connections/pole <ul style="list-style-type: none"> - length 206 mm 			
	5ST1 822-7KK04		041	10
	5ST1 822-7KK03		041	10