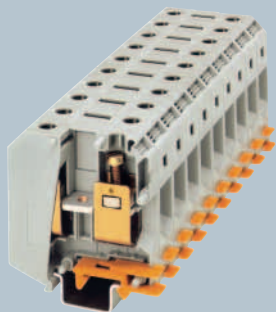


Screw Terminals

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11/2	Introduction
11/4	General data on 8WA
11/6	8WA through-type terminals¹⁾
11/12	8WH high-current terminals¹⁾
11/18	8WH bolt-type screw terminals
11/21	8WH flat terminals
11/25	8WA neutral isolating and branch terminals
11/27	8WA Insta or three-tier terminals
11/29	8WA two-tier terminals
11/31	8WA two-tier terminals with electronic components
11/33	8WA diode and isolating terminals
11/34	8WA terminals for components
11/35	8WA fuse terminals
11/36	8WA through-type terminals with soldered and plug-in connection
11/37	8WA measuring transformer terminals
11/42	8WA transformer terminals
11/43	8WH shield terminals
11/48	8WA support rails/ protective conductor busbars
11/49	General technical specifications

¹⁾ also available as PE version





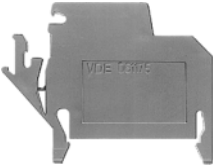
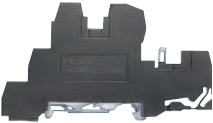
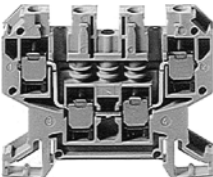
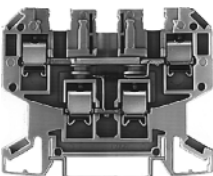
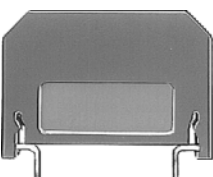
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ALPHA FIX Terminal Blocks

Screw Terminals

Introduction





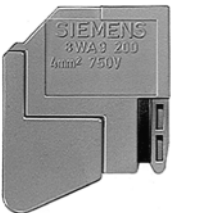

Overview

	Devices	Page	Function
	8WA through-type terminals	11/6	Connection of incoming and outgoing cables up to 70 mm ²
	8WH high-current terminals	11/12	Connection of incoming and outgoing cables from 50 to 240 mm ²
	8WH bolt-type screw terminals	11/18	Connection of incoming and outgoing cables for cable lugs according to DIN 46234 and DIN 46237
	8WH flat terminals	11/21	Connection of incoming and outgoing cables for cable lugs according to DIN 46234 and DIN 46237 from 25 to 240 mm ²
	8WA neutral isolating and branch terminals	11/25	Connection of neutral isolating terminal to neutral busbar 6 mm × 6 mm
	8WA Insta or three-tier terminals	11/27	These terminals have up to three terminal functions in one enclosure and may also have a neutral isolating terminal connection to a neutral busbar 6 mm × 6 mm. They are optimized for distribution board applications in installation technology
	8WA two-tier terminals	11/29	Compact design of the terminal blocks, which can accommodate installation of two connecting cables
	8WA two-tier terminals with solid-state components	11/31	Terminal blocks with integrated diodes
	8WA diode and isolating terminals	11/33	Terminal blocks with integrated diodes or isolation for testing purposes

ALPHA FIX Terminal Blocks

Screw Terminals

Introduction

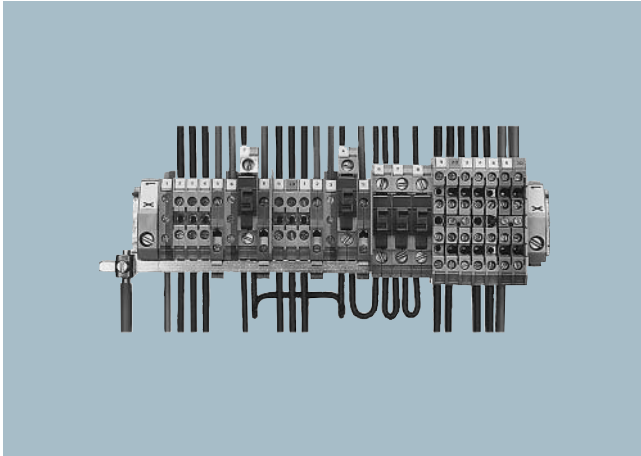
	Devices	Page	Function
	8WA terminals for components	11/34	Terminals that enable installation of components in the circuit
	8WA fuse terminals	11/35	Terminals that protect, e.g. control circuits
	8WA through-type terminals with soldered and plug-in connection	11/36	Terminals with connection for soldered or plug-in connection
	8WA measuring transformer terminals	11/37	Measuring transformer terminals can be used for testing and isolating circuits in switchgear installations, control rooms, etc. without interrupting operation
	8WA transformer terminals	11/42	Optimized terminals for transformers and rectifiers
	8WH shield terminals	11/43	Terminals for connection of shielded cables

ALPHA FIX Terminal Blocks

Screw Terminals

General data on 8WA

Overview



Terminal strips with different terminal blocks: 8WA1 011-1DG11 terminal blocks, 8WA1 011-1NG31 neutral isolating terminals with feeder terminal for neutral busbar 6 × 6 mm, 8WA1 011-1PG00 PE terminals, 8WA1 011-1SF12 fuse terminals, and various two-tier terminals. The EN 50022-35-compliant standard mounting rail serves as the PE bar.

Terminal blocks are used for the space-saving connection of incoming and outgoing lines in switchgear and distribution boards.

Standards

EN 60664-1,
EN 60999 and
IEC 60947-7-1 or
IEC 60947-7-2.

The terminals are finger-safe according to IEC 60529 and EN 50274 (except for bare terminals and soldering connections). Through-type terminals are resistant to earthquakes according to IEC 60068-2-6.

Rated short-time withstand current

Our screw terminals are able to withstand a rated short-time current corresponding to a current density of 120 A/mm² specific to the nominal cross-section for a duration of one second.

Colored terminal blocks

With colored wiring according to EN 60204-1, the connecting level can also be included in the colored markings:

- Red for control circuits with AC current
- Blue for control circuits with DC current or neutral conductor
- Orange for interlock circuits with AC or DC current which are fed from outside and are live when the main switch is turned off
- Green-yellow through-type terminals for protective conductors (without a link to the support rail).

Design

The terminal blocks are insulated on both sides, with the exception of two-tier, flat-type and bolt-type screw terminals, which are insulated on one side only.

The insulating material for terminal sizes up to 240 mm² is made of thermoplastic, polyamide 6.6.

The materials used are environment-friendly: For example, they are cadmium-free and contain no halogens or silicone.

The plastics used are flame-retardant and self-extinguishing according to EN 60695-2-2, VDE 0471 Part 2-2 and UL 94 V-2.

Clamping methods

The terminals are designed so that when the terminal screws are tightened, any tensile stress which occurs causes elastic deformation of the terminal bodies. This compensates for any creepage of the clamping conductor. The deformation of the threaded section prevents loosening of the clamping screw, even under heavy mechanical and thermal strain (for example vibration stress of 10 g or thermal cycles).

The following clamping methods are used: Terminal body with pressure plate for terminal sizes 16, 35 and 70 mm². Strain-relief clamps for terminal sizes 2.5, 4 and 6 mm². Screw with connection disk for fuse terminals and component terminals.

Terminal size

The terminal size corresponds to the nominal cross-section. According to EN 60947-7-1, a finely stranded copper conductor of nominal cross-section can be connected to any clamping point with or without end sleeve.

Mounting

The terminals are snapped onto 35 mm support rails according to IEC 60715 TH35 and secured against movement using end retainers.

A lateral mounting tolerance of 0.2 mm must be maintained between the terminals.

Connection of conductors

Except for flat and bolt-type versions, all terminals are designed so that solid, stranded and finely stranded conductors with or without end sleeves (according to DIN 46228) can be securely clamped (please observe cross-section).

Damage to the clamped conductors is prevented by pressure plates or strain-relief clamps. For the conductor cross-sections when 1 or 2 conductors are connected, see technical specifications.

ALPHA FIX Terminal Blocks

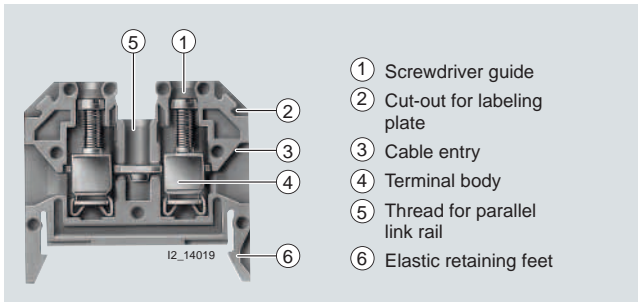
Screw Terminals

General data on 8WA

Connection of aluminum conductors

Siemens screw terminals are suitable for connecting aluminum conductors when the normal processing guidelines are complied with prior to connection, e.g. the brushing and greasing of conductors.

After a few days, the connection should be tightened again for safety reasons.



8WA1 through-type terminals with screw terminals at both ends, sectional view

PE and PEN terminals

In switchgear and controlgear systems the support rails for the terminal blocks are frequently used as protective ground busbars. The PE (protective ground) terminals provide the connection to the mounting rail.

The fact that there is no separate PE busbar means the PE terminals, the insulated main conductor terminals and neutral isolating terminals can be arranged according to user requirements. This makes the individual circuits clearly manageable.

The bare 8WA1 010-1PH01 PE terminals are primarily for connecting the shields of screened cables. They are normally mounted on a standard mounting rail, which is installed by means of an 8WA1 857 insulation carrier.

Accessories

Parallel link rails

The link rails are screwed into the terminals from above and allow parallel connection of up to 10 terminals up to terminal size 35 mm². The 10-pole link rails can be shortened as required. On 70 mm² terminals the link rails are two-pole. On the 50 mm² to 240 mm² terminals they are inserted in the clamping points. Link rails for flat-type and bolt-type screw terminals are not included in delivery.

Barriers

Barriers are yellow in color and project beyond the contours of the terminals. They serve the visual separation of groups of terminals, the electrical isolation of adjacent link rails and to improve the insulation rating for soldered and plug-type connections.

Insulation plates

8WA1 825 and 8WA1 022-7TK00 insulation plates can be used with different terminals for providing electrical insulation between link rails.

Test sockets and plugs

The 8WA1 854 test sockets for Ø 2.3 test plugs and reduction plugs with a Ø 4 mm borehole can be screwed into some terminals in place of the link rails.

Jumpers

The 8WA1 865 jumpers provide a detachable connection between two adjacent terminals sizes 2.5 to 6 mm².

Covers with lightning symbol

The purpose of these covers is to identify the power input terminals. At the same time, they provide additional touch protection.

End retainers and labeling plates



End retainers are available in thermoplastic or galvanized and chromated steel. The end labeling plate can be fitted in an 8WA1 808 end retainer or, in any of three positions, in an 8WA1 805 end retainer.

ALPHA FIX Terminal Blocks

Screw Terminals

8WA through-type terminals

Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/ P. unit Unit(s)	PG
General details						
<ul style="list-style-type: none"> • Thermoplastic insulating body • Screw terminals at both ends • Enclosed at both ends 						
Note	Section	Page				
For labeling accessories see ...	Accessories	16/13				
Terminal size 2.5 mm²						
Through-type terminals, terminal size 2.5 mm²						
<ul style="list-style-type: none"> • Rated uninterrupted current 24 A • Rated insulation voltage 800 V • Mounting width 6 mm • Terminal height 26 mm • Terminal length 41 mm •  AWG 22-12 •  AWG 18-12 						
Versions						
<ul style="list-style-type: none"> • Single terminals <ul style="list-style-type: none"> - Beige A 8WA1 011-1DF11 1 100 041 - Blue A 8WA1 011-1BF23 1 50 041 - Red C 8WA1 011-1BF21 1 50 041 - Orange C 8WA1 011-1BF22 1 50 041 - Yellow C 8WA1 011-1BF26 1 50 041 - Black C 8WA1 011-1BF24 1 50 041 - Green C 8WA1 011-1BF25 1 50 041 • Terminal blocks <ul style="list-style-type: none"> - Beige, 3-pole, width 18 mm A 8WA1 011-3DF21 1 10 041 - Beige, 10-pole, width 61 mm, labeled 1 ... 10 A 8WA1 011-0DF22 1 20 041 - Beige, 10-pole, width 61 mm, without inscription A 8WA1 011-0DF21 1 20 041 						
Accessories						
<ul style="list-style-type: none"> • Covers <ul style="list-style-type: none"> - With lightning symbol, for terminal sizes 1.5 to 2.5 mm² Accessories 11/10 C 8WA1 810 1 50 041 - White, facility for inscription, for terminal sizes 1.5 to 2.5 mm² Accessories 11/10 D 8WA1 860 1 50 041 - For link rails <ul style="list-style-type: none"> ◦ Transparent, for terminal size 2.5 to 6 mm² Accessories 11/10 D 8WA1 822-7AX01 1 10 041 ◦ White, facility for inscription, for terminal size 2.5 to 6 mm² Accessories 11/10 D 8WA1 822-7AX03 1 10 041 • Links, for terminal size 2.5 mm² Accessories 11/10 C 8WA1 822-7VF01 1 50 041 • Test sockets Accessories 11/11 D 8WA1 854 1 100 041 • Jumpers Accessories 11/11 D 8WA1 865 1 50 041 Note: Between terminals with terminal sizes 2.5 and 6 mm², two 8WH1 820 barriers are required. • Insulation plates, for terminal sizes 2.5 to 6 mm² Accessories 11/11 C 8WA1 825 1 50 041 • Link rails, for terminal size 2.5 mm² <ul style="list-style-type: none"> - For two terminals Accessories 11/11 A 8WA1 895 1 50 041 - For three terminals Accessories 11/11 A 8WA1 896 1 50 041 - For four terminals Accessories 11/11 C 8WA1 897 1 20 041 - For ten terminals Accessories 11/11 C 8WA1 898 1 10/200 041 • Barriers, for terminal sizes 1.5 to 4 mm² Accessories 11/11 A 8WA1 820 1 50 041 						
Through-type PE terminals, terminal size 2.5 mm²						
<ul style="list-style-type: none"> • Green-yellow • Mounting width 6 mm • Terminal height 26 mm • Terminal length 51 mm 						
Versions						
<ul style="list-style-type: none"> • One screw terminal A 8WA1 011-1PF01 1 50 041 • Two screw terminals A 8WA1 011-1PF00 1 50 041 						
Accessories						
<ul style="list-style-type: none"> • Barriers, for terminal sizes 1.5 to 4 mm² Accessories 11/11 A 8WA1 820 1 50 041 						



8WA1 011-1DF11



8WA1 011-3DF21



8WA1 011-0DF21






8WA1 011-1PF01

ALPHA FIX Terminal Blocks

Screw Terminals



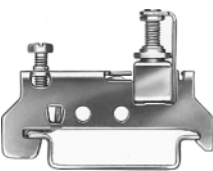

8WA through-type terminals

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/P. unit Unit(s)	PG
Terminal size 4 mm²						
	Through-type terminals, terminal size 4 mm²					
	<ul style="list-style-type: none"> Rated uninterrupted current 32 A Rated insulation voltage 800 V Mounting width 6.5 mm Terminal height 30 mm Terminal length 41 mm AWG 18-10 AWG 18-10 					
8WA1 011-1DG11	Versions					
	<ul style="list-style-type: none"> Single terminals <ul style="list-style-type: none"> - Beige A 8WA1 011-1DG11 1 100 041 - Blue A 8WA1 011-1BG11 1 50 041 - Red C 8WA1 011-1BG21 1 50 041 - Orange C 8WA1 011-1BG22 1 50 041 - Black C 8WA1 011-1BG24 1 50 041 Terminal blocks <ul style="list-style-type: none"> - Beige, 3-pole, width 19.5 mm A 8WA1 011-3DG21 1 10 041 - Beige, 10-pole, width 65.5 mm, with labeled 1 ... 10 A 8WA1 011-ODG22 1 20 041 - Beige, 10-pole, width 65.5 mm, without inscription A 8WA1 011-ODG21 1 20 041 					
	Accessories					
8WA1 011-ODG21	Section	Page				
	<ul style="list-style-type: none"> Covers <ul style="list-style-type: none"> - With lightning symbol, for terminal sizes 4 und 6 mm² Accessories 11/10 C 8WA1 811 1 50 041 - White, facility for inscription, for terminal sizes 4 and 6 mm² Accessories 11/10 D 8WA1 862 1 50 041 - For link rails <ul style="list-style-type: none"> o Transparent, for terminal sizes 2.5 to 6 mm² Accessories 11/10 D 8WA1 822-7AX01 1 10 041 o White, facility for inscription, for terminal size 2.5 to 6 mm² Accessories 11/10 D 8WA1 822-7AX03 1 10 041 Links, for terminal size 4 mm² Accessories 11/10 D 8WA1 822-7VG00 1 50 041 Terminal strips Accessories 11/11 X 8WA1 741-2X 1 5 041 Test sockets Accessories 11/11 D 8WA1 854 1 100 041 Jumpers Accessories 11/11 D 8WA1 865 1 50 041 <p>Note: Between terminals with terminal sizes 2.5 and 6 mm², two 8WH1 820 barriers are required.</p> Insulation plates, for terminal sizes 2.5 to 6 mm² Accessories 11/11 C 8WA1 825 1 50 041 Link rails, for terminal size 4 mm² <ul style="list-style-type: none"> - For two terminals Accessories 11/11 A 8WA1 850 1 50 041 - For three terminals Accessories 11/11 C 8WA1 851 1 50 041 - For four terminals Accessories 11/11 C 8WA1 852 1 20 041 - For ten terminals Accessories 11/11 C 8WA1 853 1 10 041 Barriers, for terminal sizes 1.5 to 4 mm² Accessories 11/11 A 8WA1 820 1 50 041 					
	Through-type PE terminals, terminal size 4 mm²					
	<ul style="list-style-type: none"> Green-yellow Mounting width 7.2 mm Terminal height 30 mm Terminal length 51 mm AWG 18-10 					
8WA1 011-1PG01	Versions					
	<ul style="list-style-type: none"> One screw terminal A 8WA1 011-1PG01 1 50 041 Two screw terminals A 8WA1 011-1PG00 1 50 041 					
	Accessories					
	Section	Page				
	Barriers, for terminal sizes 1.5 to 4 mm ² Accessories 11/11 A 8WA1 820 1 50 041					

ALPHA FIX Terminal Blocks

Screw Terminals








8WA through-type terminals

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/ P. unit Unit(s)	PG
Terminal size 6 mm²						
	Through-type terminals, terminal size 6 mm²					
	<ul style="list-style-type: none"> Rated uninterrupted current 41 A Rated insulation voltage 800 V Mounting width 8 mm Terminal height 33 mm Terminal length 41 mm • AWG 14-8 • AWG 16-8 					
8WA1 011-1DH11	Versions <ul style="list-style-type: none"> • Single terminals <ul style="list-style-type: none"> - Beige A 8WA1 011-1DH11 1 50 041 - Blue A 8WA1 011-1BH23 1 50 041 - Black C 8WA1 011-1BH24 1 50 041 • Terminal blocks <ul style="list-style-type: none"> - Beige, 3-pole, width 24.5 mm A 8WA1 011-3DH21 1 20 041 					
	Accessories					
8WA1 011-3DH21	Section	Page				
	<ul style="list-style-type: none"> • Covers <ul style="list-style-type: none"> - With lightning symbol, for terminal sizes 4 to 6 mm² Accessories 11/10 C 8WA1 811 1 50 041 - White, facility for inscription, for terminal sizes 4 and 6 mm² Accessories 11/10 D 8WA1 862 1 50 041 - For link rails, transparent, for terminal sizes 2.5 to 6 mm² Accessories 11/10 D 8WA1 822-7AX01 1 10 041 • Links, for terminal size 6 mm² Accessories 11/10 D 8WA1 822-7VH00 1 50 041 • Test sockets Accessories 11/11 D 8WA1 854 1 100 041 • Jumpers Accessories 11/11 D 8WA1 865 1 50 041 Note: Between terminals with terminal sizes 2.5 and 6 mm², two 8WH1 820 barriers are required. • Insulation plates, for terminal sizes 2.5 to 6 mm² Accessories 11/11 C 8WA1 825 1 50 041 • Link rails, for terminal size 6 mm² <ul style="list-style-type: none"> - For two terminals Accessories 11/11 A 8WA1 885 1 50 041 - For three terminals Accessories 11/11 C 8WA1 886 1 50 041 - For four terminals Accessories 11/11 C 8WA1 887 1 20 041 - For ten terminals Accessories 11/11 C 8WA1 888 1 10 041 • Barriers, for terminal sizes 6 and 16 mm² Accessories 11/11 A 8WA1 821 1 50 041 					
	Through-type PE terminals, terminal size 6 mm², one screw terminal					
	<ul style="list-style-type: none"> • Bare • Mounting width 6 mm • Terminal height 25 mm • Terminal length 44 mm • Also for use as shield terminal 					
8WA1 010-1PH01	Section	Page				
	<ul style="list-style-type: none"> • Barriers, for terminal sizes 6 and 16 mm² Accessories 11/11 A 8WA1 821 1 50 041 					
	Through-type PE terminals, terminal size 6 mm², two screw terminals					
	<ul style="list-style-type: none"> • Green-yellow • Mounting width 8 mm • Terminal height 33 mm • Terminal length 51 mm • • 					
8WA1 011-1PH00	Section	Page				
	<ul style="list-style-type: none"> • Barriers, for terminal sizes 6 and 16 mm² Accessories 11/11 A 8WA1 821 1 50 041 					

ALPHA FIX Terminal Blocks

Screw Terminals

8WA through-type terminals

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG
				Unit(s)	Unit(s)	
 <p>Terminal strips</p> <ul style="list-style-type: none"> • 6-pole • Labeled 1 to 6 	X	8WA1 741-2X		1	5	041
8WA1 741-2X						
 <p>Test sockets</p> <ul style="list-style-type: none"> • Ø 2.3 mm • Up to 10 A • Terminal size 2.5 to 6 mm² 	D	8WA1 854		1	100	041
8WA1 854						
 <p>Test plugs</p> <ul style="list-style-type: none"> • For 8WA1 and 8WA2 terminals with 2.3 mm Ø hole or 8WA1 854, 8WA1 884 test sockets • Uninterrupted current 10 A <p>Versions</p> <ul style="list-style-type: none"> • Red • Blue 	D A	8WA1 868 8WA1 870		1 1	10 10	041 041
8WA1 868						
 <p>Jumpers</p> <p>Up to 32 A</p> <p>Note</p> <p>Between terminals with terminal sizes 2.5 and 6 mm², two 8WH1 820 barriers are required.</p>	D	8WA1 865		1	50	041
8WA1 865						
 <p>Insulation plates</p> <p>Versions</p> <ul style="list-style-type: none"> • For terminal size 2.5 to 6 mm² • For terminal sizes 16 and 35 mm² 	C C	8WA1 825 8WA1 822-7TK00		1 1	50 50	041 041
8WA1 825						
 <p>Link rails</p> <p>Versions</p> <ul style="list-style-type: none"> • For terminal size 2.5 mm² <ul style="list-style-type: none"> - For two terminals - For three terminals - For four terminals - For ten terminals • For terminal size 4 mm² <ul style="list-style-type: none"> - For two terminals - For three terminals - For four terminals - For ten terminals • For terminal size 6 mm² <ul style="list-style-type: none"> - For two terminals - For three terminals - For four terminals - For ten terminals • For terminal size 16 mm² <ul style="list-style-type: none"> - For two terminals - For three terminals - For four terminals - For ten terminals • For terminal size 35 mm² <ul style="list-style-type: none"> - For two terminals - For three terminals - For ten terminals • For terminal size 70 mm² <ul style="list-style-type: none"> - For two terminals 	A A C C A C C C A C C C C C C A C C A C	8WA1 895 8WA1 896 8WA1 897 8WA1 898 8WA1 850 8WA1 851 8WA1 852 8WA1 853 8WA1 885 8WA1 886 8WA1 887 8WA1 888 8WA1 842 8WA1 845 8WA1 848 8WA1 802 8WA1 828 8WA1 803 8WA1 804 8WA1 216		1 1	50 50 20 10/200 50 50 20 10 50 50 20 10 20 20 10 20 20 10 20 20 20	041 041
8WA1 895						
 <p>Barriers</p> <p>Versions</p> <ul style="list-style-type: none"> • For terminal sizes 1.5 to 4 mm² • For terminal size 6 and 16 mm² • For terminal size 35 mm² • For terminal size 70 mm² 	A A C C	8WA1 820 8WA1 821 8WA1 823 8WA1 824		1 1 1 1	50 50 25 25	041 041 041 041
8WA1 820						

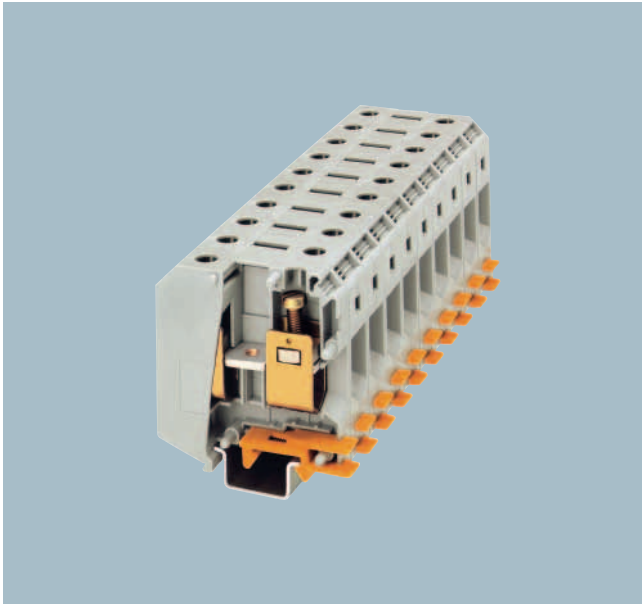
* You can order this quantity or a multiple thereof.

ALPHA FIX Terminal Blocks

Screw Terminals

8WH high-current terminals

Overview



The high-current terminals cover cross-sectional areas from 16 to 240 mm². A reliable cable connection is ensured through effective design measures, such as:

- Three-point centering of the conductor in the prismatic sleeve base
- Low contact resistance of the contact area through grooved surface
- Screw locking through spring-loaded elements
- Terminals enclosed at both ends.

The terminals have an insulating enclosure made of polyamide 6.6.

The terminals are available in gray and blue.

8WH labeling plates must be used for inscription purposes.

For terminals with terminal sizes up to 95 mm², green-yellow PE terminals are available.

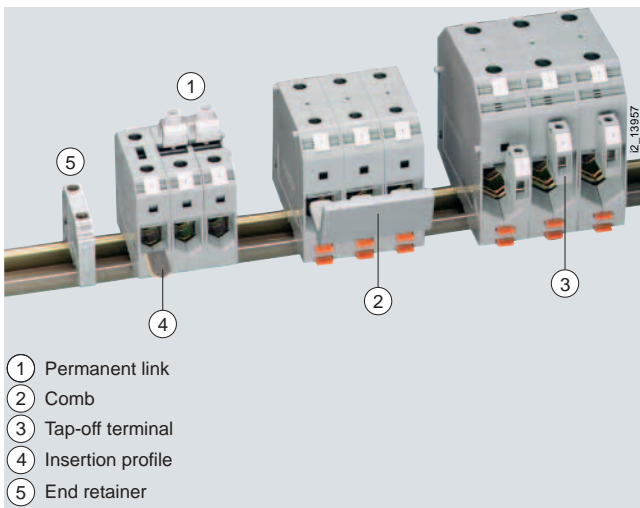
Mounting on support rails according to IEC 60715.

Note: For flat terminals with terminal bolts, see section [Flat terminals](#).

Benefits

- Larger connection up to 240 mm²
- The right terminal is always available – whatever the connection functions
- Simple inscription using 8WH standard
- Comprehensive range of accessories available
- Enclosed insulating body made of polyamide 6.6

Design



Assembled terminal blocks

Using the 50-mm² terminals, permanent links can be mounted in 2- and 3-pole versions. Combs are required with 95- to 240-mm² terminals.

ALPHA FIX Terminal Blocks

Screw Terminals

8WH high-current terminals

Technical specifications

	8WH1 000-0AN00 8WH1 000-0AN01	8WH1 000-0CN07	8WH1 000-0AQ00 8WH1 000-0AQ01
Dimensions			
• Width/length in mm	20 / 70.5		25 / 83
• Height (TS 35/7.5 / TS 35/15 / TS 32) in mm	-- / 83.5 / 81.5		-- / 97.5 / 95.5
Technical specifications acc. to IEC/DIN VDE			
• Max. load current in A / cross-section in mm ²	150 / 50		232 / 95
• Max. cross-section with comb (rigid/flexible) in mm ²	--		95 / 70
• Rated impulse withstand voltage in kV / pollution degree	8 / 3		
• Overvoltage category / insulating group	III / I		
Connection capacities			
• Flexible with end sleeve with/without plastic sleeve in mm ²	25 ... 50 / 25 ... 50		35 ... 95 / 35 ... 95
Multi-conductor connection (two conductors of same cross-section)			
• Rigid/flexible in mm ²	10 ... 16 / 10 ... 16		25 ... 35 / 25 ... 35
• Flexible without end sleeve with plastic sleeve in mm ²	10 ... 16		16 ... 35
Stripped length in mm	24		33
Plug gage (IEC 60947-1)	B10		B12
Screw thread	M 6	--	M 8
Tightening torque in Nm	6 ... 8	--	15 ... 20
Clamping point: screw thread / tightening torque in Nm	--	M 6 / 6 ... 8	--
Fixing: screw thread / tightening torque in Nm	--	M 6 / 6 ... 8	--
Insulation type	PA		
• Flammability class acc. to UL 94	V0		
Approval data (UL/CUL and CSA)			
• Rated voltage / current / cable sizes			
- UL/CUL: V / A / AWG	600 / 150 / 6 - 0	6 - 1 / 0	600 / 230 / 2 - 000
- CSA: V / A / AWG	600 / 125 / 6 - 0	--	600 / 230 / 1 - 000
Support rails/protective conductor busbars	--	See section 8WA support rails / protective conductor busbars	--

ALPHA FIX Terminal Blocks

Screw Terminals

8WH high-current terminals



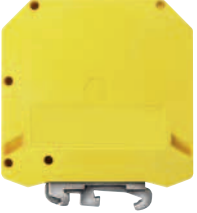



	8WH1 000-0CQ07	8WH1 000-0AS00 8WH1 000-0AS01	8WH1 000-0AU00 8WH1 000-0AU01
Dimensions			
• Width/length in mm	25 / 83	31 / 100	36 / 100
• Height (TS 35/7.5 / TS 35/15 / TS 32) in mm	-- / 99 / 96.5	-- / 118.5 / 116	-- / 131.5 / 129.5
Technical specifications acc. to IEC/DIN VDE			
• Max. load current in A / cross-section in mm ²	232 / 95	309 / 150	415 / 240
• Max. cross-section with comb (rigid/flexible) in mm ²	--	150 / 120	240 / 185
• Rated impulse withstand voltage in kV / pollution degree	8 / 3		
• Overvoltage category / insulating group	III / I		
Connection capacities			
• Flexible with end sleeve with/without plastic sleeve in mm ²		50 ... 150 / 50 ... 150	70 ... 185 / 70 ... 185
Multi-conductor connection (two conductors of same cross-section)			
• Rigid/flexible in mm ²	25 ... 35 / 25 ... 35	25...50 / 35...50	35...95 / 50...95
• Flexible without end sleeve with plastic sleeve in mm ²	16 ... 35	25 ... 50	35 ... 50
Stripped length in mm	30	40	
Plug gage (IEC 60947-1)	B12	B14	B15
Screw thread	--	M 10	
Tightening torque in Nm	--	25 ... 30	
Clamping point: screw thread / tightening torque in Nm	M8 / 15 ... 20 (hexagon socket-head screw)	--	--
Fixing: screw thread / tightening torque in Nm	M8 / 15 ... 20 (hexagon socket-head screw)	--	--
Insulation type	PA		
• Flammability class acc. to UL 94	V0		
Approval data (UL/CUL and CSA)			
• Rated voltage / current / cable sizes			
- UL/CUL: V / A / AWG	2 ... 4 / 0	600 / 285 / 2 AWG - 300 kcmil	600 / 380 / 00 - 500 kcmil
- CSA: V / A / AWG	2 ... 4 / 0	600 / 275 / 2 AWG - 300 kcmil	600 / 400 / 0 - 500 kcmil
Support rails/protective conductor busbars	See section 8WA support rails / protective conductor busbars	--	

ALPHA FIX Terminal Blocks

Screw Terminals

8WH high-current terminals





Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/P. unit Unit(s)	PG
Terminal size 50 mm²						
 <p>8WH1 000-0AN00</p>	High-current terminals, terminal size 50 mm²					
	<ul style="list-style-type: none"> Enclosed at both ends Terminal width 20 mm  IEC 60947-7-1 <ul style="list-style-type: none"> Rigid 16-50 mm² Flexible 25-50 mm² AWG 6-0 I = 150 A U = 1000 V EN 50019 <ul style="list-style-type: none"> Rigid 16-50 mm² Flexible 25-50 mm² AWG 6-0 I = 135 A U = 750 V 					
	Versions					
	<ul style="list-style-type: none"> Gray Blue 					
	Accessories					
	<ul style="list-style-type: none"> Tap-off terminals, for terminal size 50 mm² Insertion profiles, for terminal size 50 mm² Permanent links, for terminal size 50 mm² <ul style="list-style-type: none"> 2-pole 3-pole 					
	Section					
	Page					
	DT					
	Order No.					
Price per PU						
PU Unit(s)						
PS*/P. unit Unit(s)						
PG						
C		8WH1 000-0AN00		1	10	044
C		8WH1 000-0AN01		1	10	044
C		8WH9 120-0AA00		1	10	044
C		8WH9 020-3MA00		1	10	044
C		8WH9 020-6HC00		1	10	044
C		8WH9 020-6HD00		1	10	044
C		8WH1 000-0CN07		1	10	044
 <p>8WH1 000-0CN07</p>	High-current PE terminals, terminal size 50 mm²					
	<ul style="list-style-type: none"> Green-yellow Enclosed at both ends Terminal width 20 mm  IEC 60947-7-1 <ul style="list-style-type: none"> Rigid 16-50 mm² Flexible 25-50 mm² AWG 6-0 I = 150 A U = 1000 V EN 50019 <ul style="list-style-type: none"> Rigid 16-50 mm² Flexible 25-50 mm² AWG 6-0 I = 135 A U = 750 V 					
	Accessories					
	<ul style="list-style-type: none"> Insertion profiles, for terminal size 50 mm² 					
	Section					
	Page					
	DT					
	Order No.					
	Price per PU					
	PU Unit(s)					
PS*/P. unit Unit(s)						
PG						
C		8WH9 020-3MA00		1	10	044
Terminal size 95 mm²						
 <p>8WH1 000-0AQ00</p>	High-current terminals, terminal size 95 mm²					
	<ul style="list-style-type: none"> Enclosed at both ends Terminal width 25 mm  IEC 60947-7-1 <ul style="list-style-type: none"> Rigid 25-95 mm² Flexible 35-95 mm² AWG 4-000 I = 232 A U = 1000 V 					
	Versions					
	<ul style="list-style-type: none"> Gray Blue 					
	Accessories					
	<ul style="list-style-type: none"> Tap-off terminals, for terminal size 95 mm² Combs, for terminal size 95 mm² <ul style="list-style-type: none"> 2-pole 3-pole Insertion profiles, for terminal size 95 mm² 					
	Section					
	Page					
	DT					
	Order No.					
Price per PU						
PU Unit(s)						
PS*/P. unit Unit(s)						
PG						
C		8WH1 000-0AQ00		1	10	044
C		8WH1 000-0AQ01		1	10	044
C		8WH9 120-0BA00		1	10	044
C		8WH9 020-3AA00		1	10	044
C		8WH9 020-3BA00		1	10	044
C		8WH9 020-3NA00		1	10	044

ALPHA FIX Terminal Blocks

Screw Terminals





8WH high-current terminals

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/P. unit Unit(s)	PG
 <p>8WH1 000-0CQ07</p>		High-current PE terminals, terminal size 95 mm²				
			<ul style="list-style-type: none"> • Green-yellow • Enclosed at both ends • Terminal width 25 mm • C_{UL} US • IEC 60947-7-1 <ul style="list-style-type: none"> - Rigid 25-95 mm² - Flexible 35-95 mm² - AWG 4-000 - $I = 232$ A - $U = 1000$ V 			
Accessories	Section	Page				
<i>Insertion profiles, for terminal size 95 mm²</i>	<i>Accessories</i>	11/17	C	8WH9 020-3NA00	1	10 044
 <p>8WA1 010-1PQ00</p>		High-current PE terminals and high-current PEN terminals, terminal size 95 mm², two screw terminals				
			<ul style="list-style-type: none"> • Bare • For $I = 232$ A • Mounting width 16 mm • Terminal height 63 mm • Terminal length 75 mm • For 35 mm x 15 mm standard mounting rail only 			
Accessories	Section	Page				
<i>Insertion profiles, for terminal size 95 mm²</i>	<i>Accessories</i>	11/17	C	8WA1 010-1PQ00	1	5 041
Terminal size 150 mm²						
 <p>8WH1 000-0AS00</p>		High-current terminals, terminal size 150 mm²				
			<ul style="list-style-type: none"> • Enclosed at both ends • Terminal width 31 mm • C_{UL} US • IEC 60947-7-1 <ul style="list-style-type: none"> - Rigid 35-150 mm² - Flexible 50-150 mm² - AWG 2-300 - $I = 309$ A - $U = 1000$ V 			
Versions						
• Gray			C	8WH1 000-0AS00	1	10 044
• Blue			C	8WH1 000-0AS01	1	10 044
Accessories	Section	Page				
• <i>Tap-off terminals, for terminal size 150 to 240 mm²</i>	<i>Accessories</i>	11/17	C	8WH9 120-0CA00	1	10 044
• <i>Combs, for terminal size 150 mm²</i>						
- 2-pole	<i>Accessories</i>	11/17	C	8WH9 020-3CA00	1	10 044
- 3-pole	<i>Accessories</i>	11/17	C	8WH9 020-3DA00	1	10 044
• <i>Insertion profiles, for terminal size 150 and 240 mm²</i>	<i>Accessories</i>	11/17	C	8WH9 020-3PA00	1	10 044
Terminal size 240 mm²						
 <p>8WH1 000-0AU00</p>		High-current terminals, terminal size 240 mm²				
			<ul style="list-style-type: none"> • Enclosed at both ends • Terminal width 36 mm • C_{UL} US • IEC 60947-7-1 <ul style="list-style-type: none"> - Rigid 70-240 mm² - Flexible 70-240 mm² - AWG 00-500 - $I = 415$ A - $U = 1000$ V 			
Versions						
• Gray			C	8WH1 000-0AU00	1	10 044
• Blue			C	8WH1 000-0AU01	1	10 044
Accessories	Section	Page				
• <i>Tap-off terminals, for terminal size 150 to 240 mm²</i>	<i>Accessories</i>	11/17	C	8WH9 120-0CA00	1	10 044
• <i>Combs, for terminal size 240 mm²</i>						
- 2-pole	<i>Accessories</i>	11/17	C	8WH9 020-3EA00	1	10 044
- 3-pole	<i>Accessories</i>	11/17	C	8WH9 020-3FA00	1	10 044
• <i>Insertion profiles, for terminal size 150 and 240 mm²</i>	<i>Accessories</i>	11/17	C	8WH9 020-3PA00	1	10 044

ALPHA FIX Terminal Blocks

Screw Terminals

8WH high-current terminals

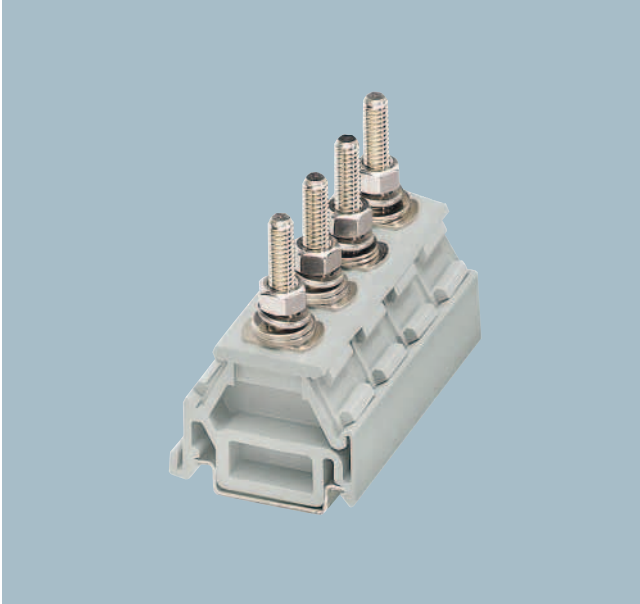
Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	
				Unit(s)	Unit(s)		
Accessories							
 8WH9 120-0AA00	Tap-off terminals		<ul style="list-style-type: none"> When wiring a pick-off with a smaller cross-section, always take into account the overload and short-circuit strength specified in VDE 0100 Part 430 I_{max}: 57 A Cross-section: 10 mm² 				
	Versions						
		C	8WH9 120-0AA00		1	10	044
		C	8WH9 120-0BA00		1	10	044
	C	8WH9 120-0CA00		1	10	044	
 8WH9 020-3AA00	Combs		<ul style="list-style-type: none"> Totally insulated Fitted in the clamping sleeve and latched with the terminal enclosure 				
	Versions						
		C	8WH9 020-3AA00		1	10	044
		C	8WH9 020-3BA00		1	10	044
		C	8WH9 020-3CA00		1	10	044
		C	8WH9 020-3DA00		1	10	044
		C	8WH9 020-3EA00		1	10	044
		C	8WH9 020-3FA00		1	10	044
	 8WH9 020-3MA00	Insertion profiles		Evens out the prismatic sleeve base when using flat conductors			
		Versions					
		C	8WH9 020-3MA00		1	10	044
		C	8WH9 020-3NA00		1	10	044
	C	8WH9 020-3PA00		1	10	044	
 8WH9 020-6HC00	Permanent links, for terminal size 50 mm²		<ul style="list-style-type: none"> For cross links Screw heads with insulating collar Remove partition first I_{max} = 150 A 				
	Versions						
		C	8WH9 020-6HC00		1	10	044
		C	8WH9 020-6HD00		1	10	044

ALPHA FIX Terminal Blocks

Screw Terminals

8WH bolt-type screw terminals

Overview



The bolt-type screw terminals complement the range of flat terminals. The bolt-type screw terminals for cable lugs according to DIN 46234 and DIN 46237 are available in M6, M8 and M10 versions. The screws are locked with spring washers. Large labels can be applied to the bolt on both sides of the support rail. A comprehensive range of accessories, such as the link rails for cross-linking, allow reliable, convenient wiring of the conductors.

The bolt can be labeled on both sides of the support rail with large clip-on labeling strips.

Mounting on support rails according to IEC 60715.

Technical specifications

	8WH1 070-0AN00	8WH1 070-0AQ00	8WH1 070-0AS00
Dimensions			
• Width / length / length of bolts in mm	18.4 / 43.5 / 25	24.5 / 43.5 / 25	32.6 / 43.5 / 25
• Height (TS 35/7.5) in mm	59	59 / 66.5	
• Height (TS 35/15) in mm	66.5		
Technical specifications acc. to IEC/DIN VDE			
• Rated impulse withstand voltage in kV / pollution degree	8 / 3		
• Overvoltage category / insulating group	III / II		
Connection capacities			
• Cable lugs, DIN 46235 in mm ² ¹⁾	6 ... 25	16 ... 25	16 ... 50
Screw thread	M 6	M 8	M 10
Tightening torque in Nm	3 ... 7	6 ... 15	10 ... 18
Insulation type			
• Flammability class acc. to UL 94	V0		




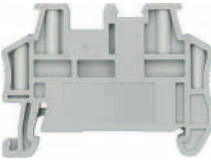
¹⁾ See also Table [page 11/22](#)

ALPHA FIX Terminal Blocks

Screw Terminals

8WH bolt-type screw terminals

Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/P. unit	PG																																																																					
Terminal size 50 mm²																																																																											
 <p>8WH1 070-0AN00</p>	C	8WH1 070-0AN00		1	50	044																																																																					
							Bolt-type screw terminals, terminal size 50 mm² <ul style="list-style-type: none"> • Gray • M6 • For mounting on support rail according to IEC 60715 • Terminal width 18.4 mm • I = 150 A • For inscription: labeling plates, front, for terminal width 10 and 12 mm (see page 16/9) 																																																																				
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 <p>8WH1 070-0AQ00</p>	C	8WH1 070-0AQ00		1	25	044																																																																					
							Bolt-type screw terminals, terminal size 95 mm² <ul style="list-style-type: none"> • Gray • M8 • For mounting on support rail according to IEC 60715 • Terminal width 24.5 mm • I = 232 A • For inscription: labeling plates, front, for terminal width 10 and 12 mm (see page 16/9) 																																																																				
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ALPHA FIX Terminal Blocks

Screw Terminals

8WH bolt-type screw terminals

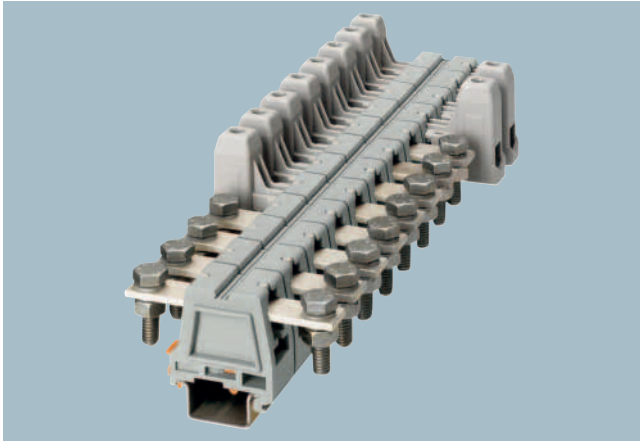
Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/ P. unit Unit(s)	PG
Links						
For cross-linking bolt-type screw terminals						
Versions						
• For bolt-type screw terminals with terminal size 50 mm ²						
- 2-pole	B	8WH9 030-5AC00		1	10	044
- 3-pole	B	8WH9 030-5AD00		1	10	044
• For bolt-type screw terminals with terminal size 95 mm ²						
- 2-pole	B	8WH9 030-5BC00		1	10	044
- 3-pole	B	8WH9 030-5BD00		1	10	044
• For bolt-type screw terminals with terminal size 150 mm ²						
- 2-pole	B	8WH9 030-5CC00		1	10	044
- 3-pole	B	8WH9 030-5CD00		1	10	044
Insulating plates, for bolt-type screw terminals without jumper	B	8WH9 070-3AA00		1	10	044
• Can be snapped on between the terminal bases						
• 81 mm wide						
• Gray						
Insulating plates, for bolt-type screw terminals with jumper	B	8WH9 070-3BA00		1	10	044
• Between the terminal blocks						
• For the use of jumpers						
• Gray						

ALPHA FIX Terminal Blocks

Screw Terminals

8WH flat terminals

Overview



The range of flat terminals cover cross-sectional areas from 4 to 240 mm². Each terminal size is available as a bolt terminal for cable lugs. The screws are secured on the bolt terminals using spring washers.

For mounting on support rails according to IEC 60715.

Technical specifications

	8WH1 060-0AL00	8WH1 060-0AN00	8WH1 060-0AQ00	8WH1 060-0AS00	8WH1 060-0AU00
Dimensions					
• Height / length / width in mm	53 / 88 / 26	54,5 / 95 / 32	56 / 110 / 40	56 / 110 / 46	58 / 125 / 53
Technical specifications acc. to IEC/DIN VDE					
• Max. load current in A / cross-section in mm ²	101 / 25	150 / 50	232 / 95	309 / 150	415 / 240
• Rated impulse withstand voltage in kV / pollution degree	8 / 3				
• Overvoltage category / insulating group	III / II				
Connection capacities					
• Flexible with end sleeve with/without plastic sleeve in mm ²	4 ... 25 / 4 ... 25	25 ... 50 / 25 ... 50	35 ... 95 / 35 ... 95	50 ... 150 / 50 ... 150	70 ... 185 / 70 ... 185
• Set of screws/terminal bolts	M 8	M 10	M 12		M 16
• Eye diameter / busbar in mm	8.4 / 15 x 3	10.5 / 20 x 3	13 / 30 x 5		17 / 40 x 5
• Cable lugs, DIN 46235 in mm ²	16 ... 25	16 ... 50	25 ... 95	25 ... 150	50 ... 185
• Flexible with end sleeve with/without plastic sleeve in mm ²	2.5 ... 25	6 ... 50	10 ... 95	10 ... 150	25 ... 240
Multi-conductor connection (two conductors of same cross-section)					
• Rigid/flexible in mm ²	2.5 ... 10 / 4 ... 10	10 ... 16 / 10 ... 16	25 ... 35 / 25 ... 35	25 ... 50 / 35 ... 50	35 ... 95 / 50 ... 95
• Flexible without end sleeve with plastic sleeve in mm ²	2.5 ... 10	10 ... 16	16 ... 35	25 ... 50	35 ... 50
Stripped length in mm	21	26	29	34	
Plug gage (IEC 60947-1)	B8	B10	B12	B14	B15
KH: screw thread / tightening torque in Nm	M 5 / 4 ... 4.5	M 6 / 6 ... 8	M 8 / 15 ... 20	M 10 / 25 ... 30	
Set of screws AS: Tightening torque in Nm	15 ... 20	25 ... 30			30 ... 35
Insulation type					
• Flammability class acc. to UL 94	PA-F				
Approval data (UL/CUL and CSA)					
• Rated voltage / current / cable sizes					
- UL/CUL: V / A / AWG	600 / 85 / 6 - 4	600 / 150 / 6 - 0	600 / 230 / 2 - 000	600 / 285 / 2 AWG - 300 kcmil	600 / 380 / 0 AWG - 500 kcmil
- CSA: V / A / AWG	600 / 100 / 6 - 4	600 / 125 / 6 - 0	600 / 200 / 2 - 000	600 / 275 / 2 AWG - 300 kcmil	600 / 400 / 0 AWG - 500 kcmil

Safe cable lug connection

The cable lugs in flat terminals are securely clamped with screws. The screws are secured with a spring washer. Connection of cable lugs according to DIN 46234 and DIN 46235 is permitted. Two-wire connection is also possible by clamping one conductor with cable lug underneath the current bar and the second on the current bar.

ALPHA FIX Terminal Blocks

Screw Terminals

8WH flat terminals





	Conductor cross-section in mm ²	Cable lug, DIN 46234:1980-03		Cable lug, DIN 46235:1983-07		
		Hole \varnothing d_2 in mm	Width d_3 in mm	Hole \varnothing d_2 in mm	Width b in mm	
M6	1.5	6.4	10	--	--	
	2.5	6.4	11	--	--	
	6	6.4	11	6.4	8.5	
	10	6.4	11	6.4	8.5	
	16	6.4	11	6.4	12	
	25	6.4	12	6.4	14	
	35	6.4	16	--	--	
	50	6.4	18	--	--	
	M8	2.5	8.4	14	--	--
		6	8.4	14	--	--
10		8.4	14	--	--	
16		8.4	14	8.4	13	
25		8.4	16	8.4	16	
35		8.4	16	8.4	17	
50		8.4	18	8.4	20	
70		8.4	22	8.4	24	
95		8.4	24	--	--	
120		8.4	24	--	--	
M10	6	10.5	18	--	--	
	10	10.5	18	--	--	
	16	10.5	18	10.5	17	
	25	10.5	18	10.5	17	
	35	10.5	18	10.5	19	
	50	10.5	18	10.5	22	
	70	10.5	22	10.5	24	
	95	10.5	24	10.5	28	
	120	10.5	24	10.5	32	
	150	10.5	30	10.5	34	
185	10.5	36	10.5	37		
240	10.5	38	--	--		
M12	10	13	22	--	--	
	16	13	22	--	--	
	25	13	22	13	19	
	35	13	22	13	21	
	50	13	22	13	24	
	70	13	22	13	24	
	95	13	24	13	28	
	120	13	24	13	32	
	150	13	30	13	34	
	185	13	36	13	37	
240	13	38	13	42		
M16	25	17	28	--	--	
	35	17	28	--	--	
	50	17	28	17	28	
	70	17	28	17	30	
	95	17	28	17	32	
	120	17	28	17	32	
	150	17	30	17	34	
	185	17	36	17	37	
	240	17	38	17	42	

ALPHA FIX Terminal Blocks

Screw Terminals

8WH flat terminals

Selection and ordering data






Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/P. unit	PG
Terminal size 25 mm²						
 <p>8WH1 060-0AL00</p>	C	8WH1 060-0AL00		1	10	044
Accessories						
• Partitions, for terminal size 25 to 50 mm ²	Accessories	11/24	C	8WH9 070-0VA00	1	10 044
• Link rails, for terminal size 25 mm ²	Accessories	11/24	C	8WH9 030-3AC00	1	10 044
- 2-pole	Accessories	11/24	C	8WH9 030-3AD00	1	10 044
- 3-pole	Accessories	11/24	C			
Terminal size 50 mm²						
 <p>8WH1 060-0AN00</p>	C	8WH1 060-0AN00		1	10	044
Accessories						
• Partitions, for terminal size 25 to 50 mm ²	Accessories	11/24	C	8WH9 070-0VA00	1	10 044
• Link rails, for terminal size 50 mm ²	Accessories	11/24	C	8WH9 030-3BC00	1	10 044
- 2-pole	Accessories	11/24	C	8WH9 030-3BD00	1	10 044
- 3-pole	Accessories	11/24	C			
Terminal size 95 mm²						
 <p>8WH1 060-0AQ00</p>	C	8WH1 060-0AQ00		1	10	044
Accessories						
• Partitions, for terminal size 95 to 240 mm ²	Accessories	11/24	C	8WH9 070-0WA00	1	10 044
• Link rails, for terminal size 95 mm ²	Accessories	11/24	C	8WH9 030-3CC00	1	10 044
- 2-pole	Accessories	11/24	C	8WH9 030-3CD00	1	10 044
- 3-pole	Accessories	11/24	C			
Terminal size 150 mm²						
 <p>8WH1 060-0AS00</p>	C	8WH1 060-0AS00		1	10	044
Accessories						
• Partitions, for terminal size 95 to 240 mm ²	Accessories	11/24	C	8WH9 070-0WA00	1	10 044
• Link rails, for terminal size 150 mm ²	Accessories	11/24	C	8WH9 030-3DC00	1	10 044
- 2-pole	Accessories	11/24	C	8WH9 030-3DD00	1	10 044
- 3-pole	Accessories	11/24	C			

* You can order this quantity or a multiple thereof.

ALPHA FIX Terminal Blocks

Screw Terminals

8WH flat terminals

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG			
				Unit(s)	Unit(s)				
Terminal size 240 mm²									
 <p>8WH1 060-0AU00</p>		Flat terminals, terminal size 240 mm²							
	C	8WH1 060-0AU00		1	5	044			
		<ul style="list-style-type: none"> • M16 terminal bolts • Double conductor run with set of screws • For busbar and cable lug connection • Flat clamp must be fitted • Terminal width 53 mm •  • Terminal sleeve 70-240 mm² • AWG kcmil 00-500 • IEC 60947-7-1 • Supply data: $I = 415 \text{ A}$, $U = 1000 \text{ V}$ • Height/length/width in mm: 56/125/53 • For inscription: labeling plates, front, for terminal width 10 and 12 mm (see page 16/9) 							
		Accessories	Section	Page					
		• Flat clamps, for terminal size 240 mm ²	Accessories	11/24	C	8WH9 140-0KA00	1	10	044
		• Partitions, for terminal size 95 to 240 mm ²	Accessories	11/24	C	8WH9 070-0VA00	1	10	044
		• Link rails, for terminal size 240 mm ²							
		- 2-pole	Accessories	11/24	C	8WH9 030-3EC00	1	10	044
		- 3-pole	Accessories	11/24	C	8WH9 030-3ED00	1	10	044
Accessories									
 <p>8WH9 140-0KA00</p>		Flat clamps, for terminal size 240 mm²							
	C	8WH9 140-0KA00		1	10	044			
		<ul style="list-style-type: none"> • Raises busbar 12 mm over surface • Required for engaging and releasing 8WH1 060-0AU00 terminal 							
 <p>8WH9 070-0VA00</p>		Partitions							
		<ul style="list-style-type: none"> • Gray • Can be snapped in without separation loss between the terminal mountings • 180 mm wide 							
		Versions							
		• For terminal size 25 to 50 mm ²			C	8WH9 070-0VA00	1	10	044
		• For terminal size 95 to 240 mm ²			C	8WH9 070-0VA00	1	10	044
 <p>8WH9 030-3AC00</p>		Link rails							
		For cross-linking high-current connectors with screw set AS							
		Versions							
		• For terminal size 25 mm ²							
		- 2-pole			C	8WH9 030-3AC00	1	10	044
		- 3-pole			C	8WH9 030-3AD00	1	10	044
		• For terminal size 50 mm ²							
		- 2-pole			C	8WH9 030-3BC00	1	10	044
		- 3-pole			C	8WH9 030-3BD00	1	10	044
		• For terminal size 95 mm ²							
		- 2-pole			C	8WH9 030-3CC00	1	10	044
		- 3-pole			C	8WH9 030-3CD00	1	10	044
		• For terminal size 150 mm ²							
		- 2-pole			C	8WH9 030-3DC00	1	10	044
		- 3-pole			C	8WH9 030-3DD00	1	10	044
		• For terminal size 240 mm ²							
		- 2-pole			C	8WH9 030-3EC00	1	10	044
		- 3-pole			C	8WH9 030-3ED00	1	10	044

ALPHA FIX Terminal Blocks

Screw Terminals

8WA neutral isolating and branch terminals

Overview

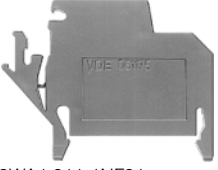
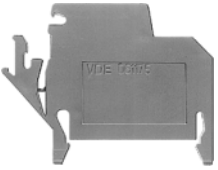
Neutral isolating terminals allow an insulation test to be performed without disconnecting the neutral conductor according to DIN VDE 0108 and DIN VDE 0100 (Standards for the installation of electric power equipment).

The branch terminals are used for the connection of lines (L), for example for power supplies, to the 6 mm x 6 mm busbar.

The rated voltage between two branch terminals (1 slide open) is 289 V.

When they are used as shield terminals according to DIN VDE 0160, they provide isolation between the central reference point (shield connection conductor) and the PE conductor.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS* / P. unit Unit(s)	PG			
General details <ul style="list-style-type: none"> With 1 screw terminal as well as connection to the neutral conductor bar or 6 mm x 6 mm busbar according to DIN 1761 Insulating body made of blue or beige thermoplastic Enclosed at both ends 									
Note		Section	Page						
For labeling accessories see ...		Accessories	16/13						
Terminal size 2.5 mm²									
 8WA1 011-1NF01	Neutral isolating terminals, terminal size 2.5 mm² <ul style="list-style-type: none"> Blue Rated uninterrupted current 24 A Rated insulation voltage 500 V Mounting width 6 mm Terminal height 35 mm Terminal length 55 mm With built-in test socket in the fixed part of the terminal AWG 22-12 AWG 22-12 		A	8WA1 011-1NF01	1	50	041		
	Accessories		Section	Page					
	Covers, for link rails		Accessories	11/26	D	8WA1 822-7AX00	1	10	041
	Neutral busbars, 6 x 6 mm		Accessories	11/26	A	8GF9 324-2	1	10	042
Label holders		Accessories	11/26	B	3TX4 210-0J	100	100	101	
Branch terminals, terminal size 2.5 mm²									
<ul style="list-style-type: none"> Beige Isolating distance 400 V Mounting width 6 mm Terminal height 35 mm Terminal length 55 mm With built-in test socket in the fixed part of the terminal Isolating distance AWG 22-12 AWG 22-12 		C	8WA1 011-1NF02	1	50	041			
Accessories		Section	Page						
Covers, for link rails		Accessories	11/26	D	8WA1 822-7AX00	1	10	041	
Neutral busbars, 6 mm x 6 mm		Accessories	11/26	A	8GF9 324-2	1	10	042	
Label holders		Accessories	11/26	B	3TX4 210-0J	100	100	101	
Terminal size 4 mm²									
 8WA1 011-1NG31	Neutral isolating terminals, terminal size 4 mm² <ul style="list-style-type: none"> Blue Rated uninterrupted current 32 A Rated insulation voltage 500 V Mounting width 6.5 mm Terminal height 35 mm Terminal length 55 mm With built-in test socket in the fixed part of the terminal AWG 18-10 AWG 18-10 		A	8WA1 011-1NG31	1	50	041		
	Accessories		Section	Page					
	Covers, for link rails		Accessories	11/26	D	8WA1 822-7AX00	1	10	041
	Feeder terminals, for neutral busbars		Accessories	11/26	C	8WA2 867	1	50	041
Neutral busbars, 6 mm x 6 mm		Accessories	11/26	A	8GF9 324-2	1	10	042	
Label holders		Accessories	11/26	B	3TX4 210-0J	100	100	101	

* You can order this quantity or a multiple thereof.

ALPHA FIX Terminal Blocks

Screw Terminals

8WA Insta or three-tier terminals

Overview

The Insta or three-tier terminals incorporate up to 3 different terminal functions in one insulating body of 6 mm width. The width of 3 Insta terminals corresponds to the hole pitch of 18 mm standardized in distribution board assembly. Tools are required to remove the terminals from the support rail.

All clamping points for incoming and outgoing cables have a notch for an 8WA8 8 labeling plate. The protective conductor connections are already marked green-yellow and the neutral conductor connections blue.

The neutral busbar has the same position for Insta terminals and neutral isolating terminals. This allows, for example, the use of a 16 mm² neutral isolating terminal as an infeed for the neutral busbar.

8WA1 011-3JF16, -3JF17 and -3JF18 allow the neutral busbar to be routed with a mounting depth of 42.5 mm.

Insta terminal PE, L, NT

The 8WA1 011-3JF20 terminal is the basic version for AC circuits. It comprises:

- Protective conductor connection
- Through-type connection for one phase conductor

- Neutral conductor connection that can be isolated from the 6 mm × 6 mm neutral busbar.

PE/ground, L, N Insta terminals

If no neutral isolation is required, the 8WA1 011-3JF17 terminal is used:

- Protective conductor connection
- Through-type connection for one phase conductor
- Through-type connection for the neutral conductor

Insta terminal PE, L, L

Design of 8WA1 011-3JF16 terminal as previous version. Instead of the through-type connection for the neutral conductor, a through-type connection for a second phase conductor is fitted.

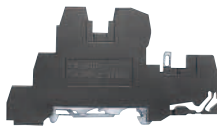
Insta terminal, L, L

8WA1 011-3JF18 terminal contains two through-type connections for two phase conductors. These are generally used for three-phase outgoing lines.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/P. unit Unit(s)	PG
General details						
<ul style="list-style-type: none"> • Thermoplastic insulating body • Screw terminals at both ends • Enclosed at both ends • Neutral terminal, 6 mm x 6 mm neutral conductor connection 						
Note	Section	Page				
For labeling accessories see ...	Accessories	16/13				

Terminal size 2.5 mm²



8WA1 011-3JF16

Insta terminals, terminal size 2.5 mm²

- Rated uninterrupted current 24 A
- Rated insulation voltage
 - 400 V between phase conductors
 - 250 V between phase and protective conductors and for neutral isolating distance
- Mounting width 6 mm
- Terminal height 42.5 mm
- Terminal length 87 mm
- Screw terminal with double conductor run
- AWG 22-12

Circuit diagram	Type		Order No.	PU	PS*/P. unit	PG	
	PE, L, L	A	8WA1 011-3JF16	1	50	041	
	PE, L, N	A	8WA1 011-3JF17	1	50	041	
	L, L	A	8WA1 011-3JF18	1	50	041	
	PE, L, NT	A	8WA1 011-3JF20	1	50	041	
Accessories	Section	Page					
Barriers, for Insta terminals, terminal size 2.5 mm and measuring transformer terminals, terminal size 6	Accessories	11/28	C	8WA1 822-7TH00	1	50	041

ALPHA FIX Terminal Blocks

Screw Terminals

8WA Insta or three-tier terminals

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/ P. unit Unit(s)	PG
Accessories						
Covers Up to three terminals side-by-side						
Versions						
• With lightning symbol, for terminal size 4 and 6 mm ²	C	8WA1 811		1	50	041
• White, facility for inscription, for terminal size 4 and 6 mm ²	D	8WA1 862		1	50	041
• For link rails, for terminal size 2.5 to 6 mm ²						
- Transparent	D	8WA1 822-7AX01		1	10	041
- White	D	8WA1 822-7AX03		1	10	041
Feeder terminals, for neutral busbars						
• 6 mm × 6 mm and 10 mm × 3 mm						
• Bare						
Versions						
• Connection up to 4 mm ²	C	8WA2 867		1	50	041
• Connection up to 25 mm ²	C	8WA2 868		1	50	041
• Connection up to 35 mm ²	C	8WA2 870		1	50	041
End retainers, thermoplastic Width 10 mm						
A 8WA1 808						
Device labels For end retainer, blank labeling plate						
B 3TX4 210-0H						
Insulation carriers, for mounting insulated support rails						
D 8WA1 857						
Blank labeling plates For terminal marking						
A 8WA8 848-2AY						
Neutral busbars, 6 mm × 6 mm						
• Rated uninterrupted current 125 A						
• 1109 mm long						
• For four-field						
Note						
Prices apply for orders from € 25.00. For orders below € 25.00, a processing charge of € 2.50 net is added.						
Link rails, for Insta terminals						
Versions						
• For two terminals	C	8WA1 822-7VF02		1	50	041
• For three terminals	D	8WA1 822-7VF03		1	50	041
• For four terminals	D	8WA1 822-7VF04		1	20	041
• For ten terminals	D	8WA1 822-7VF10		1	10	041
Barriers, for Insta terminals, terminal size 2.5 mm² and measuring transformer terminals, terminal size 6 mm²						
C 8WA1 822-7TH00						



8WA2 870 / 868 / 867



8WA1 808



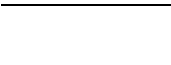
8WA1 857



8GF9 324-2



8WA1 822-7VF02



8WA1 822-7TH00

ALPHA FIX Terminal Blocks

Screw Terminals

8WA two-tier terminals

Overview

Two-tier terminals are a compact form of the terminal blocks. They are therefore open on one side. They can contain two connecting cables with two connections each or they can be laid out as terminal blocks with four connections on the same potential.

An advantage is the standardized front for mounting, linking and labeling.

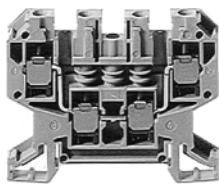
Technical specifications

	Rated voltage	
	AC	DC
Between link rails		
• With insulation plate	400 V	450 V
• With end plate or barrier	800 V	900 V
• With jumper opened	500 V	600 V
For alternately bent soldering tags	400 V	450 V
For adjacent terminals with soldering tags and insulated plugs	250 V	300 V

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG
				Unit(s)	Unit(s)	
General details						
<ul style="list-style-type: none"> Thermoplastic insulating body Screw terminals at both ends 						
Note	Section	Page				
For labeling accessories see ...	Accessories	16/13				

Terminal size 4 mm²



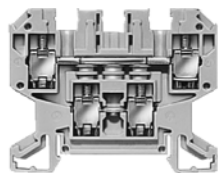
8WA1 011-6DG11

Two-tier terminals, terminal size 4 mm²

- Rated uninterrupted current 32 A
- Rated insulation voltage 690 V (with end plate 800 V)
- Mounting width 6.5 mm
- Terminal height 45 mm
- Terminal length 64 mm
- AWG 18-10
- AWG 18-10

Versions

- Beige
 - 1-pole
 - 2-pole, with two isolated connections
- Blue
 - 1-pole
 - 2-pole, with two isolated connections



8WA1 011-2DG11

Accessories







- Covers**
 - With lightning symbol, for terminal sizes 4 and 6 mm²
 - White, facility for inscription, for terminal sizes 4 and 6 mm²
 - For link rails, for terminal size 2.5 to 6 mm², transparent
- Links**
 - For upper tier of 2-pole terminals
 - For lower tier of 1- and 2-pole terminals
- Spacer sleeves**
- End plates**
- Test sockets**
 - For upper tier of 2-pole terminals
 - For lower tier of 1- and 2-pole terminals
- Jumpers**
- Insulation plates**
 - For upper tier of 2-pole terminals
 - For lower tier of 1- and 2-pole terminals
- Link rails**
 - For upper tier of 2-pole terminals
 - For two terminals
 - For three terminals
 - For four terminals
 - For ten terminals
 - For lower tier of 1- and 2-pole terminals
 - For two terminals
 - For ten terminals
- Barriers**

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG
	A	8WA1 011-6DG11		1	50	041
	A	8WA1 011-2DG11		1	50	041
	C	8WA1 011-6BG11		1	50	041
	C	8WA1 011-2BG11		1	50	041
	C	8WA1 811		1	50	041
	D	8WA1 862		1	50	041
	D	8WA1 822-7AX01		1	10	041
	D	8WA1 822-7VG00		1	50	041
	D	8WA1 822-7VG01		1	50	041
	X	8WA1 822-7VH11		1	100	041
	A	8WA1 817		1	50	041
	D	8WA1 854		1	100	041
	D	8WA1 884		1	100	041
	D	8WA1 865		1	50	041
	C	8WA1 825		1	50	041
	C	8WA1 825		1	50	041
	A	8WA1 850		1	50	041
	C	8WA1 851		1	50	041
	C	8WA1 852		1	20	041
	C	8WA1 853		1	10	041
	D	8WA1 835		1	50	041
	C	8WA1 838		1	10	041
	C	8WA1 823		1	25	041

ALPHA FIX Terminal Blocks

Screw Terminals

8WA two-tier terminals

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/ P. unit Unit(s)	PG
Accessories						
Covers						
Versions						
 8WA1 811		• With lightning symbol, for terminal size 4 and 6 mm ²	C	8WA1 811	1 50	041
 8WA1 862		• White, facility for inscription, for terminal size 4 and 6 mm ²	D	8WA1 862	1 50	041
 8WA1 822-7AX01		• For link rails, for terminal size 2.5 to 6 mm ² , transparent	D	8WA1 822-7AX01	1 10	041
Links						
• For link rails • For terminal size 4 mm ²						
Versions						
		• For upper tier of 2-pole terminals	D	8WA1 822-7VG00	1 50	041
		• For lower tier of 1- and 2-pole terminals	D	8WA1 822-7VG01	1 50	041
End plates, for two-tier terminals						
	A			8WA1 817	1 50	041
Test sockets						
Ø 2.3 mm						
Versions						
 8WA1 854		• For upper tier of 2-pole terminals	D	8WA1 854	1 100	041
		• For lower tier of 1- and 2-pole terminals	D	8WA1 884	1 100	041
Accessories						
	X	Spacer sleeves • For lower tier of 1- and 2-pole terminals • Suitable for 2.3 mm test socket		8WA1 822-7VH11	1 100	041
Jumpers						
 8WA1 865		For upper tier of 2-pole terminals	D	8WA1 865	1 50	041
Note						
The terminals must be fitted with end plates and must be fitted with the end plates facing each other.						
Insulation plates, for terminal size 2.5 to 6 mm²						
 8WA1 825			C	8WA1 825	1 50	041
Link rails						
Versions						
	A	• For upper tier of 2-pole terminals		8WA1 850	1 50	041
	C	- For two terminals		8WA1 851	1 50	041
	C	- For three terminals		8WA1 852	1 20	041
	C	- For four terminals		8WA1 853	1 10	041
	C	- For ten terminals				
	D	• For lower tier of 1- and 2-pole terminals		8WA1 835	1 50	041
	D	- For two terminals		8WA1 838	1 10	041
	C	- For ten terminals				
Barriers						
	C			8WA1 823	1 25	041

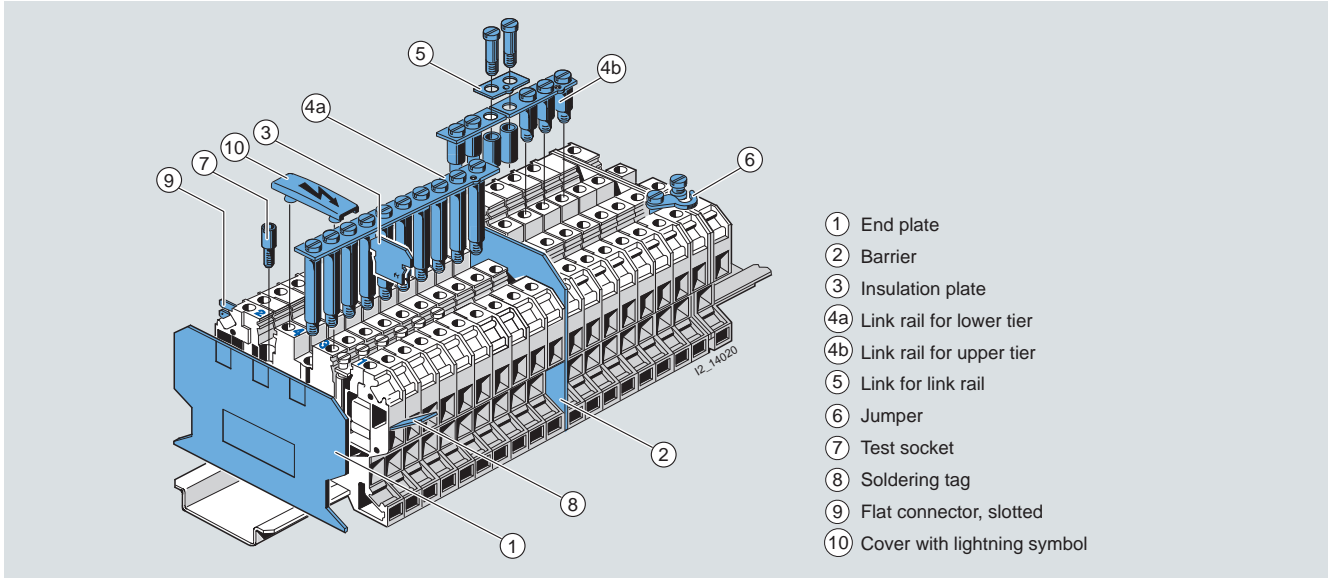
* You can order this quantity or a multiple thereof.

ALPHA FIX Terminal Blocks

Screw Terminals

8WA two-tier terminals
with electronic components

Design

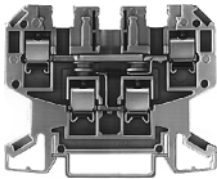


- ① End plate
- ② Barrier
- ③ Insulation plate
- ④a Link rail for lower tier
- ④b Link rail for upper tier
- ⑤ Link for link rail
- ⑥ Jumper
- ⑦ Test socket
- ⑧ Soldering tag
- ⑨ Flat connector, slotted
- ⑩ Cover with lightning symbol

Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/ P. unit Unit(s)	PG
General details <ul style="list-style-type: none"> • Thermoplastic insulating body • Screw terminals at both ends • Open on one side • Beige 						
Note		Section	Page			
For labeling accessories see ...		Accessories	16/13			

Terminal size 4 mm²



8WA1 011-6EG20

Diode terminals, terminal size 4 mm²

- Rated insulation voltage 250 V
- Mounting width 6.5 mm
- Terminal height 45 mm
- Terminal length 64 mm
- AWG 18-10
- No jumpering possible

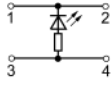
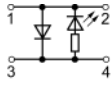
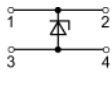
Type	DT	Order No.	Price per PU	PU Unit(s)	PS*/ P. unit Unit(s)	PG
	C	8WA1 011-6EG20		1	10	041
	C	8WA1 011-6EG21		1	10	041
	C	8WA1 011-6EG22		1	10	041
	C	8WA1 011-6EG23		1	10	041
	C	8WA1 011-6EG24		1	10	041
Accessories		Section	Page			
End plates, for two-tier terminals		Accessories	11/32	A	8WA1 817	1 50 041

* You can order this quantity or a multiple thereof.

ALPHA FIX Terminal Blocks

Screw Terminals

8WA two-tier terminals with electronic components

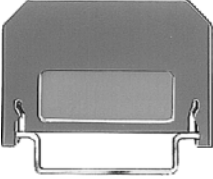



Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/ P. unit Unit(s)	PG
Terminals with red LED, terminal size 4 mm² <ul style="list-style-type: none"> Rated uninterrupted current 32 A Rated insulation voltage 24 V Mounting width 6.5 mm Terminal height 45 mm Terminal length 64 mm AWG 18-10 						
Type						
	• Without diode for current limitation	D	8WA1 011-6EG25	1	10	041
	• With diode for current limitation	D	8WA1 011-6EG26	1	10	041
Accessories		Section	Page			
End plates, for two-tier terminals		Accessories	11/32	A	8WA1 817	1 50 041
	Zener diode terminals, terminal size 4 mm² <ul style="list-style-type: none"> Mounting width 6.5 mm Terminal height 45 mm Terminal length 64 mm AWG 18-10 Let-through current 0.25 A Breakdown voltage $U_Z = 2.4 \text{ V}, \pm 5 \%$ 	D	8WA1 011-6EG44	1	10	041
Accessories		Section	Page			
End plates, for two-tier terminals		Accessories	11/32	A	8WA1 817	1 50 041
Accessories				A	8WA1 817	1 50 041
End plates, for two-tier terminals				A	8WA1 817	1 50 041

ALPHA FIX Terminal Blocks

Screw Terminals

8WA diode and isolating terminals

Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/ P. unit Unit(s)	PG
General details						
<ul style="list-style-type: none"> Thermoplastic insulating body Enclosed at both ends 						
Note	Section	Page				
For labeling accessories see ...	Accessories	16/13				
Terminal size 2.5 mm²						
 8WA1 011-1EF20	Diode terminals, terminal size 2.5 mm²		C	8WA1 011-1EF20	1	5 041
	<ul style="list-style-type: none"> Rated insulation voltage 250 V U_{RRM} Mounting width 6 mm Terminal height 26 mm Terminal length 41 mm Screw terminals on both sides with test possibility for Ø 2.3 mm test plug Rated uninterrupted current 1 A Peak blocking voltage 1000 V 					
Accessories		Section	Page			
<ul style="list-style-type: none"> Test plugs Barriers, for terminal size 1.5 to 4 mm² 		Accessories	11/33	D	8WA1 868	1 10 041
		Accessories	11/33	A	8WA1 820	1 50 041
 8WA1 501	Through-type terminals, terminal size 2.5 mm², with sectionalizing feature		C	8WA1 501	1	10 041
	<ul style="list-style-type: none"> Rated uninterrupted current 10 A Rated insulation voltage 380 V AC, 450 V DC (with alternate outgoing soldering tags) <ul style="list-style-type: none"> Open isolating distance 380 V AC, 450 V DC For use of barriers up to 750 V AC, 900 V DC Mounting width 6 mm Terminal height 29 mm Terminal length 41 mm With 2 holes for Ø 2.3 mm test plug With screw terminals on both sides 					
Note		Through-type terminals with sectionalizing feature allow easy isolation of the current path without disconnection of conductors. The sockets of the terminal screws allow actions, such as the measuring of the loop resistance or connection of an ammeter to the circuit. The use of connection combs reduces the conductor cross-section by one level.				
Accessories		Section	Page			
<ul style="list-style-type: none"> Test plugs, red Barriers, for terminal size 1.5 to 4 mm² 		Accessories	11/33	D	8WA1 868	1 10 041
		Accessories	11/33	A	8WA1 820	1 50 041
Accessories						
 8WA1 868	Test plugs		D	8WA1 868	1	10 041
	Red					
 8WA1 820	Barriers, for terminal size 1.5 to 4 mm²		A	8WA1 820	1	50 041

ALPHA FIX Terminal Blocks

Screw Terminals

8WA terminals for components

Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/ P. unit Unit(s)	PG
General details <ul style="list-style-type: none"> • Terminals for components • Screw terminal on both sides for 2 conductors each • Plugs with PCB for components • Enclosed at both ends 						
Note	Section	Page				
For labeling accessories see ...	Accessories	16/13				

Terminal size 1.5 mm²



8WA1 011-1EE00

Terminals for components, terminal size 1.5 mm² (enclosure only)

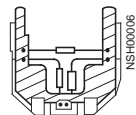
- Rated uninterrupted current 6.3 A
- Rated insulation voltage 500 V
- Mounting width 10 mm
- Terminal height 40 mm
- Terminal length 57 mm
- For self-fitting with components
- To next terminal, determined internally through customer's components

C **8WA1 011-1EE00** 1 5/50 041

8WA1 822-7EE00

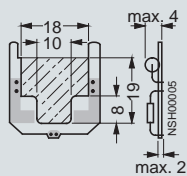
Plugs for components, terminal size 1.5 mm²

- Rated uninterrupted current 6.3 A
- Rated insulation voltage 500 V
- Mounting width 10 mm
- Plug height 29 mm
- Plug length 41 mm
- With PCB and labeling plate (20 mm × 9 mm)

C **8WA1 822-7EE00** 1 1 041

Plug, completely equipped, example

Dimensional drawings



Space for components

ALPHA FIX Terminal Blocks

Screw Terminals

8WA fuse terminals

Overview

8WA1 011-1SF12 fuse terminals are used to protect control circuits against short-circuits.

The fuse terminals are intended for 5 mm × 20 mm and 5 mm × 25 mm G fuse links up to 6.3 A and 250 V and for bridging links up to 16 A and 800 V and have a mounting for a replacement fuse link.

The fuse terminals are suitable for fuse links, sizes 1/4" × 1", 1/4" × 1 1/4" (6.3 mm × 32 mm) to 6.3 A and 250 V.

Fuse terminals are positive opening fuse-disconnectors.






The fuse links must be replaced at zero voltage. Finger safety is ensured in both closed and open positions.

The LED indicates the status of the disconnected fuse (residual current from 2 to 5 mA), but not if the plug is removed (floating).

The double connection is designed so that two conductors with different cross-sections can also be securely connected.

The fixing base of the G fuse terminal allows both centered and recessed mounting, allowing the unhindered routing of a 6 mm × 6 mm neutral busbar. The G fuse terminal can therefore be joined into a single group with the other terminals of a branch.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/P. unit	PG Unit(s)
General details <ul style="list-style-type: none"> With thermoplastic insulating body Screw terminal on both sides for 2 conductors each Enclosed at both ends 						
Note		Section	Page			
For labeling accessories see ...		Accessories	16/13			
Terminal size 1.5 mm²						
Fuse terminals, terminal size 1.5 mm² <ul style="list-style-type: none"> Rated uninterrupted current 6.3 A when using fuses Rated uninterrupted current 16 A when using the bridging link Rated insulation voltage 250 V when using fuses Rated insulation voltage 800 V when using the bridging link Mounting width 10 mm Terminal height 42 mm Terminal length 57 mm Open isolating distance 500 V AWG 18-14 AWG 18-14 						
8WA1 011-1SF12 						
8WA1 011-1SF13 						
8WA1 011-1SF15						
8WA1 011-1SF30						
8WA1 011-1SF31						
8WA1 011-1SF32						
Accessories						
G fuse links						
DIN 41660						
8WA1 822-7EF16 						
Quick, high breaking capacity						
<ul style="list-style-type: none"> Rated uninterrupted current 1 A Rated uninterrupted current 1.6 A Rated uninterrupted current 2.5 A 						
<ul style="list-style-type: none"> Rated uninterrupted current 4 A Rated uninterrupted current 6.3 A 						
Slow, low breaking capacity						
<ul style="list-style-type: none"> Rated uninterrupted current 1 A Rated uninterrupted current 1.6 A Rated uninterrupted current 2.5 A Rated uninterrupted current 4 A Rated uninterrupted current 6.3 A 						
Bridging links						
5 mm × 25 mm						
8WA1 891 						
Link rails						
<ul style="list-style-type: none"> Single-pole For 8WA1 011-1SF12 fuse terminal I = 104 mm, 10 connections 						
8WA1 822-7VD05 						

ALPHA FIX Terminal Blocks

Screw Terminals

8WA through-type terminals
with soldered and plug-in connection

Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/P. unit Unit(s)	PG
General details						
<ul style="list-style-type: none"> • With thermoplastic insulating body • Enclosed at both ends 						
Note	Section	Page				
For labeling accessories see ...	Accessories	16/13				

Terminal size 1.5 mm²



8WA1 221

Through-type terminals, terminal size 1.5 mm²

- Beige
- Rated uninterrupted current 18 A
- Rated insulation voltage 380 V AC, 450 V DC with alternately arranged terminals; when using barriers up to 800 V
- Mounting width 5.5 mm
- Terminal height 26 mm
- Terminal length 41 mm
- Soldering connection on both sides

Accessories

Covers

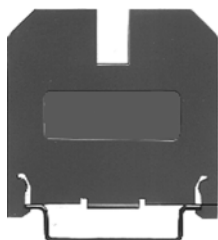
- With lightning symbol
- White, facility for inscription
- Barriers, for terminal size 1.5 to 4 mm²

Section

Page

C	8WA1 221		1	50	041
C	8WA1 810	Accessories 11/36	1	50	041
D	8WA1 860	Accessories 11/36	1	50	041
A	8WA1 820	Accessories 11/36	1	50	041

Terminal size 6 mm²



8WA1 232

Through-type terminals, terminal size 6 mm², with plug-in connection

- Beige
- Rated uninterrupted current 16 A per clamping point
- Rated insulation voltage 400 V, when using barriers up to 1000 V
- Mounting width 8 mm
- Flat terminal on both sides
- Four flat-type connections 6.3 - 0.8 mm

Accessories

Covers

- With lightning symbol
- White, facility for inscription

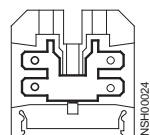
Link rails

- For two terminals
- For ten terminals
- Barriers, for terminal size 6 to 16 mm²

Section

Page

C	8WA1 232		1	50	041
C	8WA1 811	Accessories 11/36	1	50	041
D	8WA1 862	Accessories 11/36	1	50	041
D	8WA1 822-7VH12	Accessories 11/36	1	50	041
D	8WA1 822-7VH20	Accessories 11/36	1	10	041
A	8WA1 821	Accessories 11/36	1	50	041



8WA1 232

Accessories



8WA1 811

Covers

Versions

- With lightning symbol
 - For terminal sizes 1 to 2.5 mm²
 - For terminal size 6 mm²
- White, facility for inscription
 - For terminal sizes 1 to 2.5 mm²
 - For terminal size 6 mm²

C	8WA1 810		1	50	041
C	8WA1 811		1	50	041
D	8WA1 860		1	50	041
D	8WA1 862		1	50	041



8WA1 822-7VH12

Link rails, for through-type terminals, terminal size 6 mm², with plug-in connection

Versions

- For two terminals
- For ten terminals

D	8WA1 822-7VH12		1	50	041
D	8WA1 822-7VH20		1	10	041



8WA1 821

Barriers

Versions

- For terminal sizes 1.5 to 4 mm²
- For terminal sizes 6 to 16 mm²

A	8WA1 820		1	50	041
A	8WA1 821		1	50	041

ALPHA FIX Terminal Blocks

Screw Terminals

8WA measuring transformer terminals

Overview

Measuring transformer terminals can be used for testing and isolating circuits in switchgear installations, control rooms, etc. without interrupting operation.

The isolating and instrument isolating terminals contain an isolating device in the through-type connection. The isolating device permits electrical separation between the input and output of a terminal.

Test sockets for plugs with a diameter of 4 mm can be screwed into the front side of the through-type and isolating terminals. The rated insulation voltage between colored test sockets is 125 V. The rated insulation voltage between test sockets and link rails which are not connected to the terminal is 16 V (circuit 3, terminals 3 and 5).

Two adjacent terminals can be connected in parallel with the disconnecting link. The disconnecting link can be operated in any position of the isolating device.

Instrument set for one transformer

The instrument set for one transformer makes the basic circuit of the transformer terminal blocks clear. This basic circuit is also included in much larger instrument sets, which are extended by adding on equivalent circuits. Links between the basic circuits allow many kinds of tests to be carried out, parallel outgoing feeders to other measuring instruments, the connection of test equipment etc.

Instrument set for three transformers

The simplest version of an instrument set for a three-phase circuit consists of three basic circuits strung together without any continuing links or extensions. Instead of isolating terminals 1, 3 and 5, less expensive through-type terminals can also be used.

On the other hand, it is also possible to use instrument isolating terminals for this purpose so that the terminal versions are all the same.

Instrument set for three transformers with neutral point

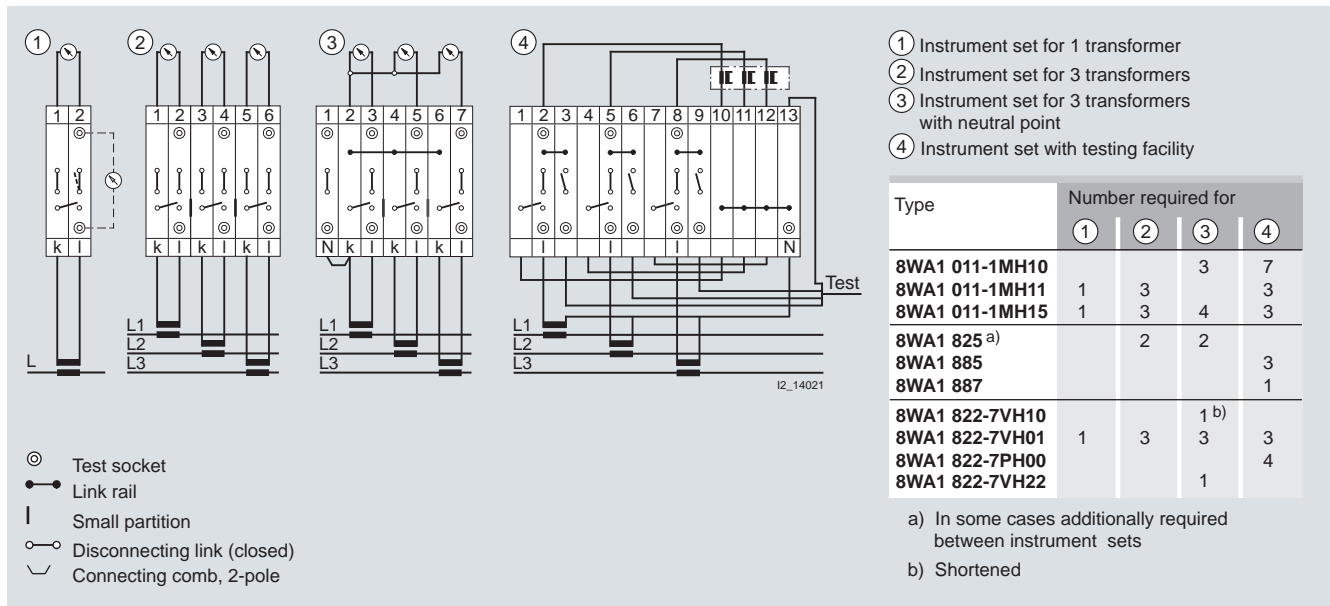
The instrument set with a neutral point is an extension of the previous circuit. Four instead of six lines are sufficient for connecting it to the measuring instruments. The neutral point is produced on the measuring instruments on the one hand, and using a shortened 8WA1 822-7VH10 link rail on the other. The instrument isolating terminal 1 is connected to the neutral point using a connection comb.

Note

The introduction of the 8WA1 011-1MH10 through-type terminals and their associated disconnecting links has made it considerably easier to configure terminal sets for current transformers. Now, instead of the 12 isolating or instrument isolating terminals used previously, only four instrument isolating terminals and three through-type terminals are required.

Instrument set with test facility

This instrument set represents a significant enhancement over previous types. In normal operation, terminals 2, 5 and 8 are closed. For testing a measuring instrument (e.g. a plotter), these terminals are opened and terminals 3, 6 and 9 are closed in order to feed in a test signal. The transformers first have to be short-circuited with the disconnecting links between terminals 1-2, 4-5 and 7-8. Wire bridges connect terminals 1, 4 and 7 with the neutral point. It is formed in terminals 10, 11, 12 and 13 with an 8WA1 887 link rail.



Connection possibility for measuring transformer terminals (instrument sets)

ALPHA FIX Terminal Blocks

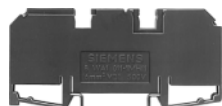
Screw Terminals

8WA measuring transformer terminals

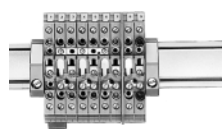
Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS* P. unit Unit(s)	PG
General details <ul style="list-style-type: none"> • With thermoplastic insulating body • Screw terminal on both sides and two holes for test sockets for Ø 4 mm test plug, insulated on both sides • Enclosed at both ends 						
Note	Section	Page				
For labeling accessories see ...	Accessories	16/13				

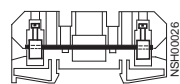
Terminal size 6 mm²



8WA1 011-1MH10



Example of circuits



8WA1 011-1MH10

Through-type terminals, terminal size 6 mm²

- Rated uninterrupted current 41 A
- Rated insulation voltage 500 V
- Mounting width 8 mm
- Terminal height 33 mm
- Terminal length 83 mm
- Without test sockets
- AWG 14-8
- AWG 16-10


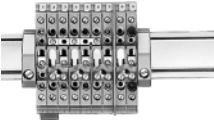







Accessories

Accessories	Section	Page	DT	Order No.	Price per PU	PU Unit(s)	PS* P. unit Unit(s)	PG
• Covers, for link rails								
- Transparent	Accessories	11/40	D	8WA1 822-7AX01		1	10	041
- White, facility for inscription	Accessories	11/40	D	8WA1 822-7AX03		1	10	041
• Test sockets								
- Rated voltage between test socket and by-passed link rail 16 V, recessed	Accessories	11/40	D	8WA1 822-7PH00		1	50	041
- Rated voltage between two test sockets: 125 V								
o Green	Accessories	11/40	D	8WA1 822-7PH03		1	50	041
o Black	Accessories	11/40	D	8WA1 822-7PH06		1	50	041
o Red	Accessories	11/40	D	8WA1 822-7PH08		1	50	041
• Test plugs	Accessories	11/40	D	8WA1 868		1	10	041
• Jumpers	Accessories	11/40	C	8WA1 822-7VH01		1	50	041
• Insulation plates, for terminal sizes 2.5 to 6 mm ²	Accessories	11/40	C	8WA1 825		1	50	041
• Connection combs								
- 10-pole for measuring transformer terminals, can be shortened as required	Accessories	11/41	D	8WA7 163		1	10	041
- 2-pole	Accessories	11/41	D	8WA1 822-7VH22		1	10	041
• Link rails, for terminal size 6 mm ²								
- Two terminals	Accessories	11/41	A	8WA1 885		1	50	041
- Three terminals	Accessories	11/41	C	8WA1 886		1	50	041
- Three terminals	Accessories	11/41	C	8WA1 887		1	20	041
- Ten terminals	Accessories	11/41	C	8WA1 888		1	10	041
- Unmounted for ten terminals	Accessories	11/41	C	8WA1 822-7VH10		1	50	041
• Barriers, for Insta terminals, terminal size 2.5 mm ² and measuring transformer terminals, terminal size 6 mm ²	Accessories	11/41	C	8WA1 822-7TH00		1	50	041

ALPHA FIX Terminal Blocks

Screw Terminals

8WA measuring transformer terminals

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	
				Unit(s)	Unit(s)		
 <p>8WA1 011-1MH15</p> <p>Example of circuits</p>  <p>8WA1 011-1MH15</p>	C	8WA1 011-1MH15		1	20	041	
Instrument isolating terminals, terminal size 6 mm²							
<ul style="list-style-type: none"> • Mounting width 8 mm • Terminal height 33 mm • Terminal length 83 mm • Open isolating distance • With recessed test sockets •  AWG 14-8 •  AWG 16-10 							
Accessories							
	Section	Page					
<ul style="list-style-type: none"> • Covers, for link rails <ul style="list-style-type: none"> - Transparent - White, facility for inscription 							
	Accessories	11/40	D	8WA1 822-7AX01	1	10	041
	Accessories	11/40	D	8WA1 822-7AX03	1	10	041
<ul style="list-style-type: none"> • Test sockets <ul style="list-style-type: none"> - Rated voltage between test socket and bypassed link rail 16 V, recessed - Rated voltage between two test sockets: 125 V <ul style="list-style-type: none"> ◦ Green ◦ Black ◦ Red 							
	Accessories	11/40	D	8WA1 822-7PH00	1	50	041
	Accessories	11/40	D	8WA1 822-7PH03	1	50	041
	Accessories	11/40	D	8WA1 822-7PH06	1	50	041
	Accessories	11/40	D	8WA1 822-7PH08	1	50	041
	Accessories	11/40	D	8WA1 868	1	10	041
	Accessories	11/40	C	8WA1 822-7VH01	1	50	041
	Accessories	11/40	C	8WA1 825	1	50	041
<ul style="list-style-type: none"> • Test plugs • Jumpers • Insulation plates, for terminal sizes 2.5 to 6 mm² • Connection combs <ul style="list-style-type: none"> - 10-pole for measuring transformer terminals, can be shortened as required - 2-pole • Link rails, for terminal size 6 mm² <ul style="list-style-type: none"> - Two terminals - Three terminals - Four terminals - Ten terminals - Unmounted for ten terminals • Barriers, for Insta terminals, terminal size 2.5 mm² and measuring transformer terminals, terminal size 6 mm² 							
	Accessories	11/41	D	8WA7 163	1	10	041
	Accessories	11/41	D	8WA1 822-7VH22	1	10	041
	Accessories	11/41	A	8WA1 885	1	50	041
	Accessories	11/41	C	8WA1 886	1	50	041
	Accessories	11/41	C	8WA1 887	1	20	041
	Accessories	11/41	C	8WA1 888	1	10	041
	Accessories	11/41	C	8WA1 822-7VH10	1	50	041
	Accessories	11/41	C	8WA1 822-7TH00	1	50	041
Accessories							
Covers, for link rails							
For through-type terminals, size 2.5 to 6 mm ²							
Versions							
			D	8WA1 822-7AX01	1	10	041
			D	8WA1 822-7AX03	1	10	041
Test sockets							
Ø 4 mm							
Versions							
			D	8WA1 822-7PH00	1	50	041
8WA1 822-7PH00							
			D	8WA1 822-7PH03	1	50	041
8WA1 822-7PH03			D	8WA1 822-7PH06	1	50	041
			D	8WA1 822-7PH08	1	50	041
			D	8WA1 868	1	10	041
8WA1 868							
			C	8WA1 822-7VH01	1	50	041
8WA1 822-7VH01							
			C	8WA1 825	1	50	041
8WA1 825							

* You can order this quantity or a multiple thereof.

ALPHA FIX Terminal Blocks

Screw Terminals

8WA transformer terminals

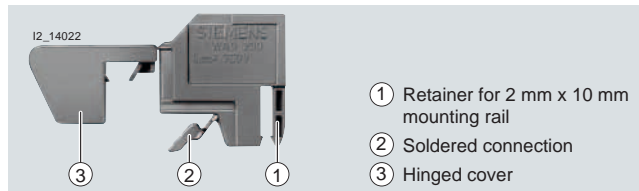
Overview

The 8WA9 200 terminals are used for transformers and rectifiers.

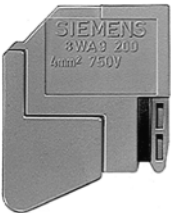

The terminals are insulated on both sides, and are finger-safe according to DIN VDE 0106 Part 100.

The normal labeling accessories can be used to label the transformer terminals.

In addition to the screw terminal, the 8WA9 terminals have a 6.3-0.8 flat connector. Once the conductor is soldered in place, the soldering connection is protected by a swiveling cover.



Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/P. unit Unit(s)	PG		
General details								
• Enclosed at both ends								
Terminal size 4 mm²								
 8WA9 200 (side view)	 8WA9 200 (plan view)	Transformer terminals, terminal size 4 mm²	C	8WA9 200	1	100	041	
		<ul style="list-style-type: none"> • Beige • Rated uninterrupted current 24 A • Rated insulation voltage according to DIN VDE 0110, Group C 690 V, 600 V to Ⓢ, 600 V to Ⓢ Group D • Mounting width 7.5 mm • Terminal height 34 mm • Terminal length 27 mm • With insulating body • Made of molded thermoplastic • For 2 mm x 10 mm mounting rail • Screw terminal: <ul style="list-style-type: none"> - Solid - 0.5 mm² to 6 mm² - Finely stranded - With or without - End sleeve - 0.5 mm² to 4 mm² - Stripped length 10 mm • Flat connector: 6.3-0.8 • Soldering connection: <ul style="list-style-type: none"> - Solid up to Ø 3 mm - Finely stranded up to 2.5 mm² - Stripped length 7 mm - Ⓢ18-10 AWG, Ⓢ18-10 AWG 						
Accessories		Section	Page					
• Labeling strips								
- Blank		Accessories	11/42	A	8WA8 848-2AY	100	100	041
- Any inscription		Accessories	11/42	D	8WA8 847-OXA	100	100	041
Accessories								
Labeling strips								
Versions								
• Blank				A	8WA8 848-2AY	100	100	041
• Any inscription				D	8WA8 847-OXA	100	100	041

ALPHA FIX Terminal Blocks

Screw Terminals

8WH shield terminals

Overview



In industrial process engineering, a high interference immunity is required for electrical instrumentation and control. It is a decisive factor in the availability of industrial equipment. When designing low-interference systems, great importance is placed on cable shielding and the respective shield ground. The critical point is where the cable shield is connected to the enclosure ground. The connection should have a low resistance and a low inductive reactance, while being quick and easy to set up. The shield terminals are ideally suited for this purpose and can be used with all common cable shields.

The effectiveness of cable shields depends to a large extent on the contact quality of the shield connection. The shield terminals have a large, low-impedance contact area with the shield, which reduces the voltage drop across it. Connected at one end only, shields can help reduce only low-frequency, capacitive interference, such as that caused by high-voltage installations.

To protect from the much more common inductive interference signals, the cable shield must be connected at both ends.

However, differences in the ground potential can cause a compensating current to flow through the cable shield.

To reduce this unwanted current, it is advisable to connect the shield at several points along its length. The shorter the spaces between the clamping points, the smaller the compensating currents in the cable shield. In systems where safety is especially important, triax shields are used. These consist of two braids that are insulated from each other, with the outer shield connected at both ends and the inner one at only one end. With this arrangement, the compensating currents and the inductive interference are conducted through the outer shield, and the capacitive interference dissipated through the inner shield.

Depending on the length of the terminal strip, two or more support brackets are fitted, which provides both an electrical and a mechanical connection from the busbar to the support rail and therefore to the enclosure ground. The shield terminal is simply fitted to the busbar after all wires have been connected.

A spring-loaded pressure plate regulates the force applied to the cable to ensure an optimum contact with the busbar at all times.

If the cable shield is to be connected at another point of the control cabinet instead of directly in front of the terminal strip, we recommend using support brackets made of molded plastic.

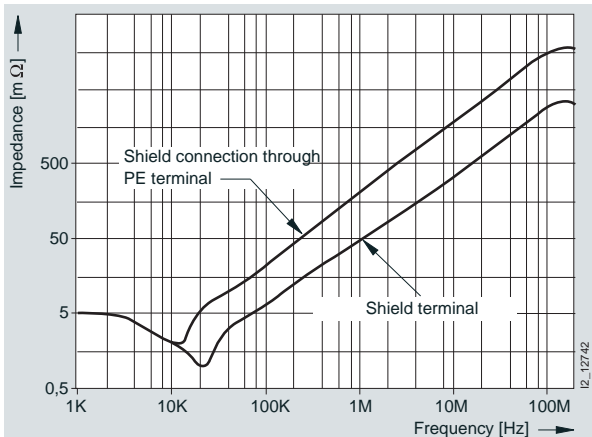
Technical specifications

	8WH9 130-0KA00	8WH9 130-0LA00	8WH9 130-0MA00	8WH9 130-0NA00	8WH9 130-0PA00
Dimensions	See dimensional drawing	See dimensional drawing	See dimensional drawing	See dimensional drawing	See dimensional drawing
Contact resistance in mΩ		< 1			
Supply data					
• Diameter	2 ... 5	3 ... 8	3 ... 14	3 ... 20	20 ... 35
• Tightening torque in Nm	0.4	0.6	0.8	0.8	1.5 ... 1.8
	8WH9 130-0AA00	8WH9 130-0BA00	8WH9 130-0CA00	8WH9 130-0DA00	
Dimensions	See dimensional drawing	See dimensional drawing	See dimensional drawing	See dimensional drawing	
Contact resistance in mΩ	The contact resistance is determined by the mounting area.				
Supply data					
• Diameter	3 ... 8	3 ... 14	3 ... 20	20 ... 35	
• Tightening torque in Nm	0.6	0.8	0.8	1.5 ... 1.8	

ALPHA FIX Terminal Blocks

Screw Terminals

8WH shield terminals



Comparison of shield connection through PE terminal and through shield terminal

Selection and ordering data

Version	DT	Order No.	Price per PU	PU Unit(s)	PS* / P. unit Unit(s)	PG	
General details							
Note							
<ul style="list-style-type: none"> The shield terminals must not be used for strain relief. Support blocks have galvanic connections from the busbar to the support rail or to the mounting block. Busbar 10 mm × 3 mm 							
Terminal diameter 3 ... 8 mm							
Shield terminals, terminal diameter 3 ... 8 mm							
Versions							
<ul style="list-style-type: none"> For direct screen attachment on conductive mounting plate - Sheet thickness 1 ... 2 mm For busbar 	C	8WH9 130-0AA00		1	10	044	
	C	8WH9 130-0LA00		1	10	044	
Accessories							
<ul style="list-style-type: none"> Support brackets <ul style="list-style-type: none"> For terminal diameters 8 to 35 mm², made of molded plastic and conductive connection For terminal diameters 8 to 20 mm², on support rail with distance of about 30 mm to the busbar For terminal diameters 8 to 20 mm², on support rail with distance of about 65 mm to the busbar Neutral busbars 10 mm × 3 mm 	Accessories	11/46	C	8WH9 140-0DA00	1	10	044
	Accessories	11/46	C	8WH9 140-0BA00	1	10	044
	Accessories	11/46	C	8WH9 140-0CA00	1	10	044
	Accessories	11/46	A	8WA2 842	1	1	041



8WH9 130-0AA00



8WH9 130-0LA00

ALPHA FIX Terminal Blocks

Screw Terminals

8WH shield terminals

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/P. unit Unit(s)	PG
Terminal diameter 3 ... 14 mm						
Shield terminals, terminal diameter 3 ... 14 mm						
Versions						
<ul style="list-style-type: none"> For direct screen attachment on conductive mounting plate - Sheet thickness 1 ... 2 mm For busbar 		C	8WH9 130-0BA00	1	10	044
		C	8WH9 130-0MA00	1	10	044
Accessories						
Support brackets						
<ul style="list-style-type: none"> For terminal diameters 8 to 35 mm², made of molded plastic and conductive connection 		Accessories	11/46	C	8WH9 140-0DA00	1 10 044
<ul style="list-style-type: none"> For terminal diameters 8 to 20 mm², on support rail with distance of about 30 mm to the busbar 		Accessories	11/46	C	8WH9 140-0BA00	1 10 044
<ul style="list-style-type: none"> For terminal diameters 8 to 20 mm², on support rail with distance of about 65 mm to the busbar 		Accessories	11/46	C	8WH9 140-0CA00	1 10 044
Terminal diameter 3 ... 20 mm						
Shield terminals, terminal diameter 3 ... 20 mm						
Versions						
<ul style="list-style-type: none"> For direct screen attachment on conductive mounting plate - Sheet thickness 1 ... 2 mm For busbar 		C	8WH9 130-0CA00	1	10	044
		C	8WH9 130-0NA00	1	10	044
Accessories						
Support brackets						
<ul style="list-style-type: none"> For terminal diameters 8 to 35 mm², made of molded plastic and conductive connection 		Accessories	11/46	C	8WH9 140-0DA00	1 10 044
<ul style="list-style-type: none"> For terminal diameters 8 to 20 mm², on support rail with distance of about 30 mm to the busbar 		Accessories	11/46	C	8WH9 140-0BA00	1 10 044
<ul style="list-style-type: none"> For terminal diameters 8 to 20 mm², on support rail with distance of about 65 mm to the busbar 		Accessories	11/46	C	8WH9 140-0CA00	1 10 044



8WH9 130-0BA00



8WH9 130-0MA00



8WH9 130-0CA00









8WH9 130-0NA00

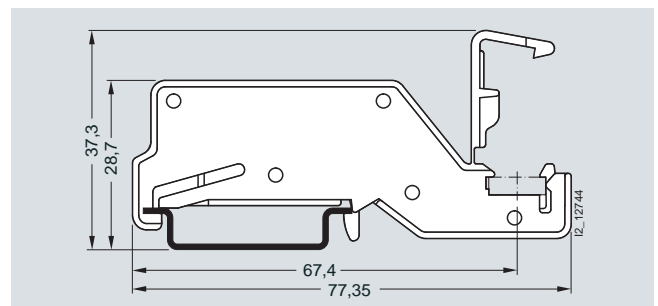
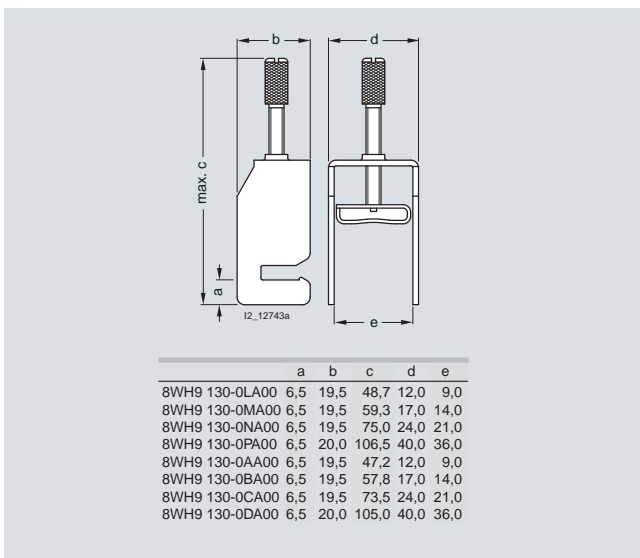
ALPHA FIX Terminal Blocks

Screw Terminals

8WH shield terminals

Version	DT	Order No.	Price per PU	PU Unit(s)	PS*/P. unit Unit(s)	PG
Terminal diameter 20 ... 35 mm²						
Shield terminals, terminal diameter 20 ... 35 mm²						
Versions						
• For direct screen attachment on conductive mounting plate - Sheet thickness 1 ... 2 mm	C	8WH9 130-0DA00		1	50	044
• For busbar	C	8WH9 130-0PA00		1	10	044
Accessories		Section	Page			
<i>Support bracket, for terminal diameters 8 to 35 mm², made of molded plastic and conductive connection</i>	C	8WH9 140-0DA00	<i>Accessories</i>	11/46	1	10 044
		8WH9 130-0DA00				
		8WH9 130-0PA00				
Accessories						
Support brackets						
Versions						
• For terminal diameters 8 to 35 mm ² , made of molded plastic and conductive connection - With retaining screw - For 10 x 3 mm busbars	C	8WH9 140-0DA00		1	10	044
• For terminal diameters 8 to 20 mm ² , on support rail with distance of about 30 mm to the busbar - For 10 x 3 mm busbars	C	8WH9 140-0BA00		1	10	044
• For terminal diameters 8 to 20 mm ² , on support rail with distance of about 65 mm to the busbar - For 10 x 3 mm busbars	C	8WH9 140-0CA00		1	10	044
		8WH9 140-0DA00				
		8WH9 140-0BA00				
		8WH9 140-0CA00				
	A	8WA2 842		1	1	041
Neutral busbars 10 mm x 3 mm						
• Tin-plated						
• 1000 mm long						

Dimensional drawings



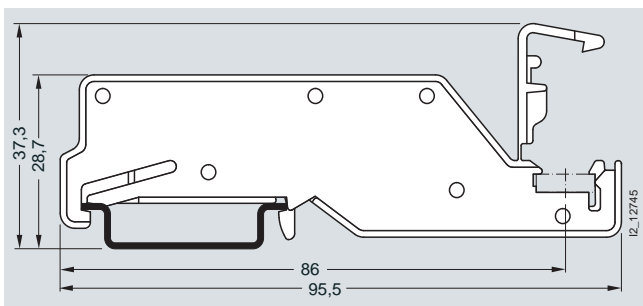
8WH9 140-0BA00

Shield terminals

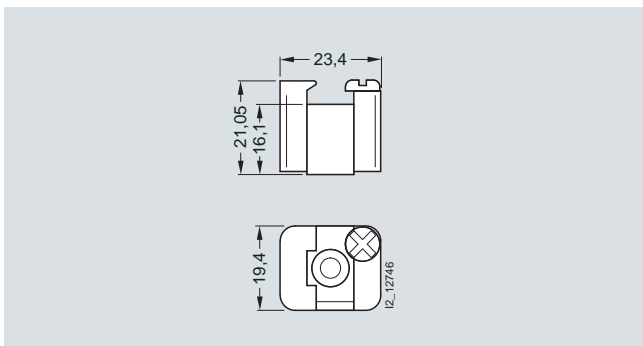
ALPHA FIX Terminal Blocks

Screw Terminals

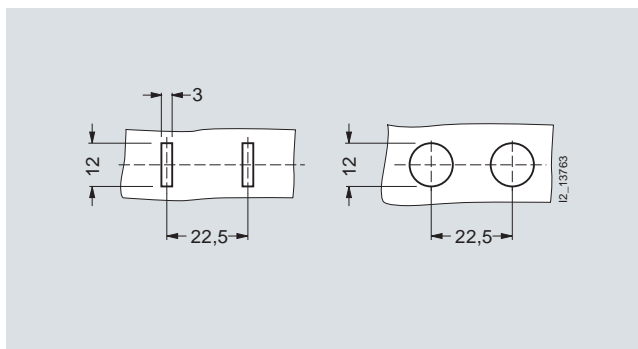
8WH shield terminals



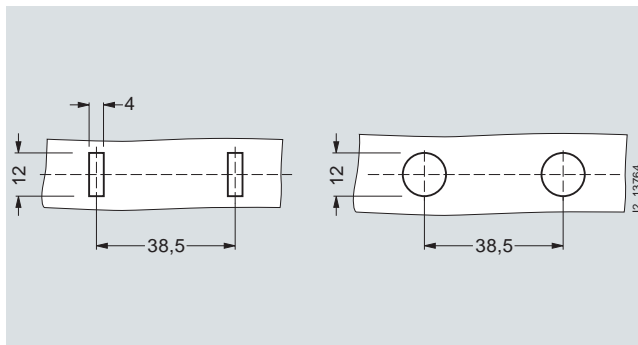
8WH 140-0CA00



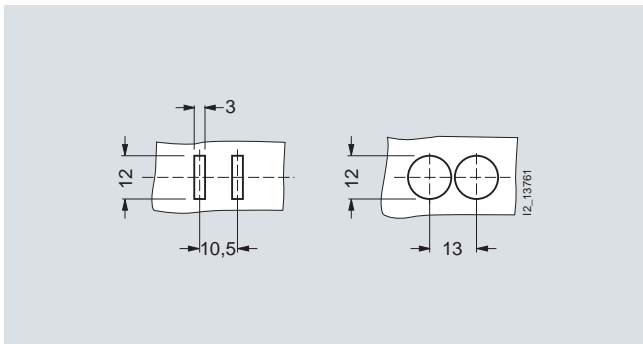
8WH 140-0DA00



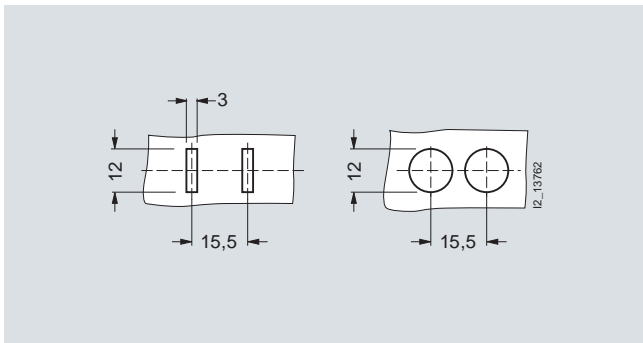
Punching template and drill plan for 8WH9 130-0CA00



Punching template and drill plan for 8WH9 130-0DA00



Punching template and drill plan for 8WH9 130-0AA00



Punching template and drill plan for 8WH9 130-0BA00

ALPHA FIX Terminal Blocks

Screw Terminals

8WA support rails/protective conductor busbars

Technical specifications

Support rail type							Excerpt from IEC 60947-7-2 / EN 60947-7-2 / VDE 0611 Part 3		
Width	Height	Thick-ness	Perforation type	Material	Surface	Rail profile	Short-circuit strength (Cu conductor)	Short-time withstand current, 1 s	Max. permissi-ble thermal rated current at PEN function
mm	mm	mm					mm ² ¹⁾	kA	A
35	7.5	1.5	Non-perforated	Steel	Chromated	Standard mounting rail, acc. to EN 60715 – 35 x 7.5	16	1.92	²⁾
35	7.5	1.5	Perforated	Steel	Chromated	Standard mounting rail, acc. to EN 60715 – 35 x 7.5	16	1.92	²⁾
35	7.5	1.5	Non-perforated	Steel	Galvanized	Standard mounting rail, dimensions acc. to EN 60715 – 35 x 7.5	16	1.92	²⁾
35	7.5	1.5	Perforated	Steel	Galvanized	Standard mounting rail, dimensions acc. to EN 60715 – 35 x 7.5	16	1.92	²⁾
35	7.5	1.5	Non-perforated	V2A high-grade steel	Chromated	Standard mounting rail, dimensions acc. to EN 60715 – 35 x 7.5	16	1.92	²⁾
35	7.5	1.5	Non-perforated	Copper	Chromated	Standard mounting rail, dimensions acc. to EN 60715 – 35 x 7.5	50	6.0	150
35	7.5	1.5	Non-perforated	Aluminum	Chromated	Standard mounting rail, dimensions acc. to EN 60715 – 35 x 7.5	35	4.2	125
35	15	2.3	Non-perforated	Steel	Chromated	Standard mounting rail, acc. to EN 60715 – 35 x 15	50	6.0	²⁾
35	15	1.5	Non-perforated	Steel	Chromated	Standard mounting rail, similar to EN 60715 – 35 x 15	35	4.2	²⁾
35	15	1.5	Perforated	Steel	Chromated	Standard mounting rail, similar to EN 60715 – 35 x 15	35	4.2	²⁾
35	15	1.5	Non-perforated	Steel	Galvanized	Standard mounting rail, similar to EN 60715 – 35 x 15	35	4.2	²⁾
35	15	1.5	Perforated	Steel	Galvanized	Standard mounting rail, similar to EN 60715 – 35 x 15	35	4.2	²⁾
35	15	1.5	Non-perforated	Copper	Chromated	Standard mounting rail, similar to EN 60715 – 35 x 15	95	11.4	232
35	15	1.5	Non-perforated	Aluminum	Chromated	Standard mounting rail, similar to EN 60715 – 35 x 15	70	8.4	192

¹⁾ Cross-sections calculated according to IEC 60439-1 / EN 60439-1 / EN 60439-1 / VDE 0660 Part 500.

²⁾ Steel protective conductor busbars are not permissible for PEN function.

ALPHA FIX Terminal Blocks

Screw Terminals

General technical specifications

Technical specifications

Continuous load at increased ambient temperatures

To 8WA1 terminal blocks, the full uninterrupted current can be applied at ambient temperatures of up to +55 °C. At higher ambient temperatures, a current reduction according to the following formula is required:

$$I_{th2'} = I_{th2} \cdot k$$

I_{th2} = Uninterrupted current according to selection tables, relative to the nominal cross-section

$I_{th2'}$ = Uninterrupted current at increased ambient temperature

k = Derating factor according to table

Ambient temperature	Derating factor k
60 °C	0.94
65 °C	0.88
70 °C	0.82
75 °C	0.75
80 °C	0.67
85 °C	0.58
90 °C	0.47
95 °C	0.33

The highest permissible clamping point overtemperature of 45 K specified in IEC 60947-7-1 is not exceeded at an ambient temperature of up to 100 °C.

Clamping points

Terminal size	Type ¹⁾	Thread diameter of terminal screws	Screwdriver blades according to DIN 5264 Form B	Tightening torque = test torque acc. to DIN VDE 0609 and DIN VDE 0611 Nm	Tensile forces according to IEC 60947-1 at max. conductor connection N	Stripped length mm
1.5	8WA1 011-.SF. . . 8WA1 011-1EE00	M3.5	0.8 × 4	0.8	40	10
2.5	8WA1 . . . 1, 8WA1 011-1BF11, 8WA1 011-1EF . . . 8WA1 011-. . . F . .	M2.5 and M3	0.5 × 3	0.5	50	11
		M2.5	0.8 × 4	0.5	50	11
4	8WA1 011-. . . G . . 8WA2 867	M3 M3.5	0.8 × 4	0.5 0.8 ... 1	60	11
6	8WA1 . . . 2, 8WA1 011-. . . H . .	M3.5	0.8 × 4	0.8	80	11
16	8WA1 . . . 4, 8WA1 011-. . . K . .	M4	0.8 × 4	1.2	100	13
25	8WA2 868	M5	1.2 × 6.5	2	135	
35	8WA1 . . . 5, 8WA1 011-. . . M . . 8WA2 870	M6	1.2 × 6.5	2.5	190	17
				2.5 ... 3		
50	8WH1 000-0AN00, 8WH1 000-0AN01, 8WH1 000-0CN07 8WH1 070-0AN00	M6	1.2 × 8	6 ... 8	--	24
		M6	--	3 ... 7	--	6 ... 25
70	8WA1 . . . 6	M8	4 hexagon socket-head	6	285	25
95	8WA1 010-1PQ00, 8WH1 000-0AQ00, 8WH1 000-0AQ01 8WH1 000-0CQ07 8WH1 070-0AQ00 8WH1 060-0AQ00	M8	6 hexagon socket-head	15 ... 20	--	30
		M8	6 hexagon socket-head	15 ... 20	--	33
		M8	6 hexagon socket-head	15 ... 20	--	30
		M8	--	6 ... 15	--	16 ... 25
		M8	--	25 ... 30	--	29
150	8WH1 000-0AS0, 8WH1 070-0AS00 8WH1 060-0AS00	M10	8 hexagon socket-head	25 ... 30	--	40
		M10	--	10 ... 18	--	10 ... 18
		M10	--	25 ... 30	--	34
240	8WH1 000-0AU0, 8WH1 060-0AU00	M10	10 hexagon socket-head	30 ... 35	--	40
		M10	--	30 ... 35	--	34

¹⁾ Tightening torque also applicable for accessories (socket, link rails, etc.)

Standard mounting rails as PEN rails

Only Cu busbars must be used.

They must have the same current carrying capacity as protective conductor busbars.

PEN busbars must carry only terminals, and no devices.

Standard mounting rail as protective conductor busbar

Protective conductors with a larger cross-section than the protective conductor busbar and with the same conductivity can be connected to standard mounting rails that are also protective conductor busbars and carry current only under fault conditions.

Standard mounting rail according to EN 50022-35 and IEC 60715 TH35	Material	Type	Max. permissible cross-section of connected protective conductor mm ²
35 × 7.5	Steel	5ST1 141	16
	Steel, perforated	5ST1 145	16
Similar to 35 × 15	Steel	5ST1 142	35
	Steel	--	50
	Copper	8WA7 551	150 ¹⁾

¹⁾ With 8WA1 010-1PQ00 terminal connection of up to 95 mm² finely stranded or 120 mm² stranded.

ALPHA FIX Terminal Blocks

Screw Terminals

General technical specifications

Rated impulse withstand voltage of terminal blocks

Values depend on the mains rated voltage \leq rated insulation voltage of terminal block; excerpt from EN 60947-1, table H.1. Terminal blocks are tested to overvoltage category III.

Rated mains voltage (\leq Rated insulating voltage of the device) RMS value V AC	Highest rated operational voltage to ground RMS value V AC or DC	Preferred values for rated impulse withstand voltage as 1.2/50 μ s-pulse Overvoltage category			
		I kV	II kV	III kV	IV kV
--	50	330	500	800	1500
66/115	100	500	800	1500	2500
120/208 127/220	150	800	1500	2500	4000
230/400 277/480	300	1500	2500	4000	6000
400/690	600	2500	4000	6000	8000
1000	1000	4000	6000	8000	12000

Connection

Terminal size mm ²	Type	Smallest conductor cross-section					Largest conductor cross-section				
		Solid mm ²	Stranded mm ²	Finely stranded mm ²	Finely stranded with end sleeve ¹⁾ mm ²	Size	Solid mm ²	Stranded mm ²	Finely stranded mm ²	Finely stranded with end sleeve ¹⁾ mm ²	Size
Single-conductor connection											
1.5	8WA1 011-SF... 8WA1 011-1EE00	1	--	--	0.75	0.75 ... 10	2.5	--	--	1.5	1.5 ... 10
2.5	8WA1 211, 8WA1 011-. .F. .	0.25 ²⁾	0.5	0.5	0.5	0.5 ... 10	4	2.5	2.5	2.5	2.5 ... 12 ⁴⁾
	8WA1 011-3JF . .	0.25 ²⁾	0.5	0.5	0.5	0.5 ... 10	4	2.5	2.5	2.5	2.5 ... 7
	8WA1 501, 8WA1 511, 8WA1 011-1EF. .	0.25 ²⁾	0.5	0.5	0.5	0.5 ... 10	4	2.5	2.5	2.5	1.5 ... 10
4	8WA9 200	0.5	1.5	1.5	0.75	0.75 ... 10	6	4	4	4	4
	8WA2 86. feeder terminal	1	1.5	1.5	0.75	0.75 ... 10	6	4	4	4	4 ... 12 ⁴⁾
	8WA1 011-. .G..	0.5	1.5	0.5	0.75	0.75 ... 10	6	4	4	4	4 ... 12 ⁴⁾
6	8WA1 011-1.H..	0.75	1.5	1.5	0.5	0.5 ... 10	10	6	6	6	6 ... 12
	8WA1 010-1PH01	0.5	1.5	1.5	0.5	0.5 ... 10	10	6	6	6	6 ... 15
16	8WA1 204, 8WA1 304, 8WA1 011-1BK11	1.5	2.5	2.5	1	1 ... 10 ³⁾	16	25	16	16	16 ... 12
	8WA1 604, 8WA1 011-1NK02	1.5	2.5	4	1.5	1 ... 10 ³⁾	16	25	16	16	16 ... 12
	8WA1 011-1PK00	1.5	2.5	4	1.5	1.5 ... 7 ⁶⁾	16	25	16	16	16 ... 15
	8WA2 86. feeder terminal	1.5	2.5	4	2.5	2.5 ... 12	16	16	10	10	10 ... 12
25	8WH1 060-0AL00	--	--	4	4	--	--	--	25	25	--
35	8WA1 205, 8WA1 305, 8WA1 011-1BM11	4	10	6	6	6 ... 15	16 ⁵⁾	50	35	35	35 ... 18 ⁷⁾
	8WA1 011-1PM00	4	10	10	6	6 ... 15	16 ⁵⁾	50	35	25	25 ... 15
	8JH4 114 feeder terminal	6	10	16	6	6 ... 15	16	35	25	25	25 ... 15
	8WA2 870	6	10	16	6	6 ... 15	16	35	25	25	25 ... 15
50	8WH1 000-0AN00	--	--	10	10	--	--	--	50	50	--
	8WH1 000-0AN01	--	--	10	10	--	--	--	50	50	--
	8WH1 000-0CN07	--	--	25	25	--	--	--	50	50	--
	8WH1 070-0AN00	--	--	6 ¹⁾	--	--	--	--	--	35 ¹⁾	--
	8WH1 060-0AN00	--	--	25	25	--	--	--	50	50	--
70	8WA1 206	10	16	16	16	16 ... 12 ⁶⁾	95	95	95	--	--
95	8WA1 010-1PQ00	--	50	50	--	--	--	95	95	--	--
	8WH1 000-0AQ00	--	--	35	35	--	--	--	95	95	--
	8WH1 000-0AQ01	--	--	35	35	--	--	--	95	95	--
	8WH1 000-0CQ07	--	--	35	35	--	--	--	35	95	--
	8WH1 070-0AQ00	--	--	--	16 ¹⁾	--	--	--	--	35 ¹⁾	--
	8WH1 060-0AQ00	--	--	35	35	--	--	--	95	95	--
	8WH1 000-0AS00, 8WH1 000-0AS01	--	--	50	50	--	--	--	150	150	--
8WH1 060-0AS00	--	--	50	50	--	--	--	150	150	--	
240	8WA1 011-1DU..	--	--	--	--	--	--	240	240	--	--
	8WH1 000-0AU00, 8WH1 000-0AU01	--	--	70	70	--	--	--	185	185	--
	8WH1 060-0AU00	--	--	--	--	--	--	--	--	--	--

¹⁾ End sleeves according to DIN 46228 Sheet 1 without insulation. Size corresponds to sleeve nominal size.

²⁾ 0.12/0.25 mm² corresponds to \varnothing 0.4/0.6 mm.

³⁾ For 0.75 mm² conductors, use end sleeves 1-10 and press on with insert E1 or PZ 1.5.

⁴⁾ At voltages > 500 V, shorten end sleeves with inserted conductor to 10 mm before pressing on.

⁵⁾ Tested up to 16 mm².

⁶⁾ Fit and press on two end sleeves behind one another (to stop).

⁷⁾ Voltage reduction to 630 V required.

⁸⁾ With screw terminals.

⁹⁾ With PZ 1.5 on top of each other .


¹⁰⁾ Stripped length 27 mm.

¹¹⁾ Cable lug according to DIN 46235.

ALPHA FIX Terminal Blocks

Screw Terminals

General technical specifications

Terminal size mm ²	Type	Smallest conductor cross-section					Largest conductor cross-section				
		Solid mm ²	Stranded mm ²	Finely stranded mm ²	Finely stranded with end sleeve ¹⁾ mm ²	Size	Solid mm ²	Stranded mm ²	Finely stranded mm ²	Finely stranded with end sleeve ¹⁾ mm ²	Size
Two-wire connection , 2 conductors each of same cross-section; with end sleeves the two rectangular sleeves must be inserted in the same position. 											
1.5	8WA1 011-. SF . ., -1EE00	2 × 1	--	--	2 × 0.75	1 ... 10 ³⁾	2 × 2.5	--	--	2 × 1.5	1.5 ... 10
2.5	8WA1 211, 8WA1 011-. F . .	2 × 0.12 ²⁾	2 × 0.5	2 × 0.5	2 × 0.5 ⁹⁾	0.75 ... 6	2 × 0.75	2 × 0.5	2 × 0.5	2 × 1.5 ⁹⁾	1.5 ... 10
	8WA1 501, 8WA1 511, 8WA1 011-1EF. .	2 × 0.12 ²⁾	2 × 0.5	2 × 0.25	--	--	2 × 0.75	2 × 0.5	2 × 0.75	--	--
4	8WA1 011-. G . ., -1DG11	2 × 0.5	2 × 1	2 × 1	2 × 0.5	0.5 × 10	2 × 1.5	2 × 1.5	2 × 1.5	2 × 1.5	1.5 ... 10
	8WA1 011-2DG11	2 × 0.5	2 × 1	2 × 1	2 × 0.5	0.5 × 10	2 × 1	2 × 1.5	2 × 1.5	2 × 1	1 ... 10
	8WA1 011-6DG11, top	2 × 0.5	2 × 1	2 × 1	2 × 0.5	0.5 × 10	2 × 1.5	2 × 1.5	2 × 1.5	2 × 1	1 ... 10
	8WA1 011-6DG11, bottom	2 × 0.5	2 × 1	2 × 1	2 × 0.5	0.5 × 10	2 × 1	2 × 1.5	2 × 1.5	2 × 1	1 ... 10
	8WA1 011-1PG00	2 × 0.5	2 × 1	2 × 1	2 × 0.5	0.5 × 10	2 × 1	2 × 1.5	2 × 1.5	2 × 1	1 ... 10
6	8WA1 011-1. H . ., -3DH21	2 × 0.5	2 × 0.75	2 × 0.75	2 × 0.5	0.5 × 10	2 × 1.5	2 × 1.5	2 × 1.5	2 × 1.5	1.5 ... 10
	8WA1 010-1PH01	2 × 0.5	2 × 0.75	2 × 0.75	2 × 0.5	0.5 × 10	2 × 1.5	2 × 1.5	2 × 1.5	2 × 0.75	1 ... 10
16	8WA1 204, 8WA1 304, 8WA1 604, 8WA1 011-1BK11	2 × 1	2 × 2.5	2 × 2.5	2 × 1	1 ... 10	2 × 4	2 × 4	2 × 4	2 × 4	4 ... 12
	8WA1 734	2 × 2.5s	--	--	2 × 1.5	1.5 ... 7 ⁶⁾	2 × 4	2 × 4	2 × 4	2 × 4	4 ... 12
35	8WA1 205, 8WA1 305, 8WA1 011-1BM11, 8WA1 735	2 × 4	2 × 10	2 × 6	2 × 6	6 ... 15	2 × 10	2 × 10	2 × 10	2 × 10	10 ... 15
50	8WH1 000-0AN00, 8WH1 000-0AN01 , 8WH1 000-0CN07	2 × 10	2 × 10	2 × 10	2 × 10	--	2 × 35	2 × 35	2 × 35	2 × 35	--
70	8WA1 206	2 × 10	2 × 10	2 × 10	2 × 10	10 ... 12 ⁶⁾	2 × 16	2 × 16	2 × 16	2 × 16	16 ... 12 ⁷⁾
95	8WH1 000-0AQ00, 8WH1 000-0AQ01, 8WH1 000-0CQ07	2 × 25	2 × 25	2 × 25	2 × 25	--	2 × 35	2 × 35	2 × 35	2 × 35	--
150	8WH1 000-0AS00, 8WH1 000-0AS01	2 × 25	2 × 25	2 × 25	2 × 25	--	2 × 50	2 × 50	2 × 50	2 × 50	--
240	8WH1 000-0AU00, 8WH1 000-0AU01	2 × 35	2 × 35	2 × 35	2 × 35	--	2 × 95	2 × 95	2 × 95	2 × 95	--

¹⁾ End sleeves according to DIN 46228 Sheet 1 without insulation. Size corresponds to sleeve nominal size.

²⁾ 0.12/0.25 mm² corresponds to Ø 0.4/0.6 mm.

³⁾ For 0.75 mm² conductors, use end sleeves 1-10 and press on with insert E1 or PZ 1.5.

⁴⁾ At voltages > 500 V, shorten end sleeves with inserted conductor to 10 mm before pressing on.

⁵⁾ Tested up to 16 mm².

⁶⁾ Fit and press on two end sleeves behind one another (to stop).

⁷⁾ Voltage reduction to 630 V required.

⁸⁾ With screw terminals.

⁹⁾ With PZ 1.5 on top of each other .

¹⁰⁾ Stripped length 27 mm.

Conductor cross-sections to AWG "American Wire Gauge"

AWG No.	Wire diameter mm	Cross-section mm ²	AWG No.	Wire diameter mm	Cross-section mm ²	AWG No.	Wire diameter mm	Cross-section mm ²
30	0.254	0.051	18	1.024	0.82	6	4.115	13.30
29	0.287	0.065	17	1.151	1.04	5	4.620	16.77
28	0.320	0.081	16	1.290	1.31	4	5.189	21.15
27	0.363	0.102	15	1.450	1.65	3	5.827	26.66
26	0.404	0.128	14	1.628	2.08	2	6.543	33.62
25	0.455	0.163	13	1.829	2.63	1	7.348	42.41
24	0.511	0.205	12	2.052	3.31	1/0	8.252	53.52
23	0.574	0.259	11	2.304	4.17	2/0	9.266	67.43
22	0.643	0.33	10	2.588	5.26	3/0	10.404	85.01
21	0.724	0.41	9	2.906	6.63	4/0	11.684	107.21
20	0.813	0.52	8	3.268	8.37	5/0	--	135.35
19	0.912	0.65	7	3.665	10.55	6/0	--	170.50

ALPHA FIX Terminal Blocks

Screw Terminals

General technical specifications

CS- and UR rating

Terminal size mm ²	Type	CSA rating AWG	Rated current		UR rating		
			I_n A	Rated voltage U_e V	AWG	Rated current I_n A	Rated voltage U_e V
1.5	8WA1 011-1SF12	18-14	6.3	600	18-14	6.3	600
	8WA1 011-1SF24, -2SF24, -4SF24	14	1	--	14-12	1	240 AC/60 DC
	8WA1 011-1SF25, -2SF25, -4SF25	14	2	--	14-12	2	240 AC/60 DC
	8WA1 011-1SF26, -2SF26, -4SF26	14	4	--	14-12	4	240 AC/60 DC
	8WA1 011-1SF27, -2SF27, -4SF27	14	6	--	14-12	6	240 AC/60 DC
2.5	8WA1 011-1SF28, -2SF28, -4SF28	14	10	--	14-12	10	240 AC/60 DC
	8WA1 011-1BF21, -1BF22, -1BF23, -1PF11	18-12	25	600	22-12	26	600
	8WA1 011-1DF11, -3DF21, -0DF21, -0DF22	18-12	25	600	22-12	26	600
	8WA1 011-1NF01, -1NF02	22-12	26	600	22-12	26	600
	8WA1 011-3JF..	--	--	--	22-12	26	300
4	8WA1 011-1PF00, 8WA1 011-1PF01	22-12	--	--	22-12	--	--
	8WA1 501	22-12	10	300 D	22-12	10	300
	8WA1 011-1PG00, 8WA1 011-1PG01	18-10	--	--	18-10	--	--
	8WA1 011-1BG11, -1BG21, -1BG22	18-10	40	600	18-10	35	600
	8WA1 011-1DG11, -3DG21, -0DG21, -0DG22	18-10	40	600	18-10	35	600
6	8WA1 011-1NG31, -1NG32	18-10	40	600	18-10	35	600
	8WA1 011-1PG11	18-10	40	600	--	--	--
	8WA1 011-2BG11, -2DG11	18-10	40	300	18-10	35	600
	8WA1 011-6BG11, -6DG11	18-10	40	300	18-10	35	600
	8WA1 011-6EG..	--	--	--	18-10	34	300
	8WA9 200	18-10	25	300	18-10	26	600
	8WA1 011-1PH00	--	--	--	14-8	--	--
	8WA1 011-1BH23, -1PH11	16-10	35	600	14-8	44	600
	8WA1 011-1DH11, -3DH21	16-8	35	600	14-8	44	600
	8WA1 011-1NH01, -1NH02	14-8	44	600	14-8	44	600
16	8WA1 011-1MH10, -1MH11, -1MH15	16-10	35/40	600/300 C/D	14-8	44	600/300
	8WA1 232	--	--	--	-- ¹⁾	24	600
	8WA1 011-1BK11	14-6	70	600	12-4	79	600
	8WA1 011-1NK02	--	--	--	12-4	73	300
25	8WA1 011-1PK00	12-4	--	--	12-4	--	--
	8WA1 012-1DK10	--	--	--	--	79	600
	8WA1 204, 8WA1 304	14-6	70	600	12-4	79	600
	8WA1 604	--	--	--	12-4	73	300
	8WH1 060-0AL00	6-4	100	600	6-4	85	600
35	8WA1 011-1BM11	12-2	100	600	10-1	120	600
	8WA1 011-1PM00	10-1	--	--	10-1	--	--
	8WA1 205, 8WA1 305	12-2	100	600	10-1	120	600
50	8WH1 000-0AN00, 8WH1 000-0AN01	6-0	125	600	6-0	150	600
	8WH1 000-0CN07	--	--	--	6-1	--	--
	8WH1 060-0AN00	6-0	125	600	6-0	150	600
	8WA1 012-1DP14	2/0-1	170	600	6-3/0	--	600
70	8WA1 206	8-1/0	150	600	8-3/0	220	600
	8WH1 000-0AQ00, 8WH1 000-0AQ01	1-000	220	600	2-000	230	600
	8WH1 000-0CQ07	2-4	--	--	2-4	--	--
95	8WH1 060-0AQ00	2-000	200	600	2-000	230	600
	8WH1 000-0AS0, 8WH1 000-0AS01	2 - 300 kcmil	275	600	2 - 300 kcmil	285	600
	8WH1 060-0AS00	2 - 300 kcmil	275	600	2 - 300 kcmil	285	600
240	8WH1 000-0AU00, 8WH1 000-0AU01	0 - 500 kcmil	400	600	0 - 500 kcmil	380	600
	8WH1 000-0AU00	0 - 500 kcmil	400	600	0 - 500 kcmil	380	600

¹⁾ Plug-in connection.