

SP 4/ 1-R - Plug

3042816

<https://www.phoenixcontact.com/us/products/3042816>



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Plug, nom. voltage: 800 V, nominal current: 32 A, number of positions: 1, connection method: Spring-cage connection, Rated cross section: 4 mm², cross section: 0.08 mm²- 6 mm², color: gray

Product description

Connector element right, left housing with engagement pin, right closed with cover

Your advantages

- Cable housing can be snapped on to the plugs, see figure below
- The plug with spring-cage connection is assembled directly on site by snapping together single-position plug elements
- The ST-COMBI plugs for self-assembly provide solutions that users can implement themselves
- Tested for railway applications

Commercial data

Item number	3042816
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE02
Product key	BE2144
Catalog page	Page 345 (C-1-2019)
GTIN	4017918956110
Weight per piece (including packing)	4.74 g
Weight per piece (excluding packing)	4.2 g
Customs tariff number	85366990
Country of origin	PL

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Technical data

Product properties

Product type	Terminal plug
Number of positions	1
Pitch	6.2 mm

Insulation characteristics

Overvoltage category	III
Degree of pollution	3

Electrical properties

Rated surge voltage	8 kV
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Connection data

Nominal cross section	4 mm ²
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A4
Connection in acc. with standard	IEC 61984
Conductor cross section rigid	0.08 mm ² ... 6 mm ²
Cross section AWG	28 ... 10 (converted acc. to IEC)
Conductor cross section flexible	0.08 mm ² ... 4 mm ²
Conductor cross section, flexible [AWG]	28 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm ² ... 4 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	0.14 mm ² ... 4 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ² ... 1 mm ²
Nominal current	32 A
Maximum load current	32 A (with 6 mm ² conductor cross section)
Nominal voltage	800 V
Nominal cross section	4 mm ²

Dimensions

Width	6.2 mm
Height	21 mm
Depth	41.5 mm
Length	21 mm
Pitch	6.2 mm

Material specifications

Color	gray
Flammability rating according to UL 94	V0
Insulating material group	I
Insulating material	PA

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Static insulating material application in cold	-60 °C
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	130 °C
Relative insulation material temperature index (Elec., UL 746 B)	130 °C
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R26	HL 1 - HL 3
Calorimetric heat release NFPA 130 (ASTM E 1354)	28 MJ/kg
Surface flammability NFPA 130 (ASTM E 162)	passed
Specific optical density of smoke NFPA 130 (ASTM E 662)	passed
Smoke gas toxicity NFPA 130 (SMP 800C)	passed

Electrical tests

Surge voltage test

Result	Test passed
Short-time withstand current 4 mm ²	0.48 kA
Result	Test passed

Power-frequency withstand voltage

Test voltage setpoint	2 kV
Result	Test passed

Mechanical tests

Attachment on the carrier

Result	Test passed
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Environmental and real-life conditions

Needle-flame test

Time of exposure	30 s
Result	Test passed

Oscillation/broadband noise

Specification	DIN EN 50155 (VDE 0115-200):2018-05
Spectrum	Service life test category 1, class B, body mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
ASD level	0.964 (m/s ²) ² /Hz
Acceleration	0.58g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Result	Test passed

Shocks

Pulse shape	Half-sine
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Acceleration	5g
Shock duration	30 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Result	Test passed

Ambient conditions

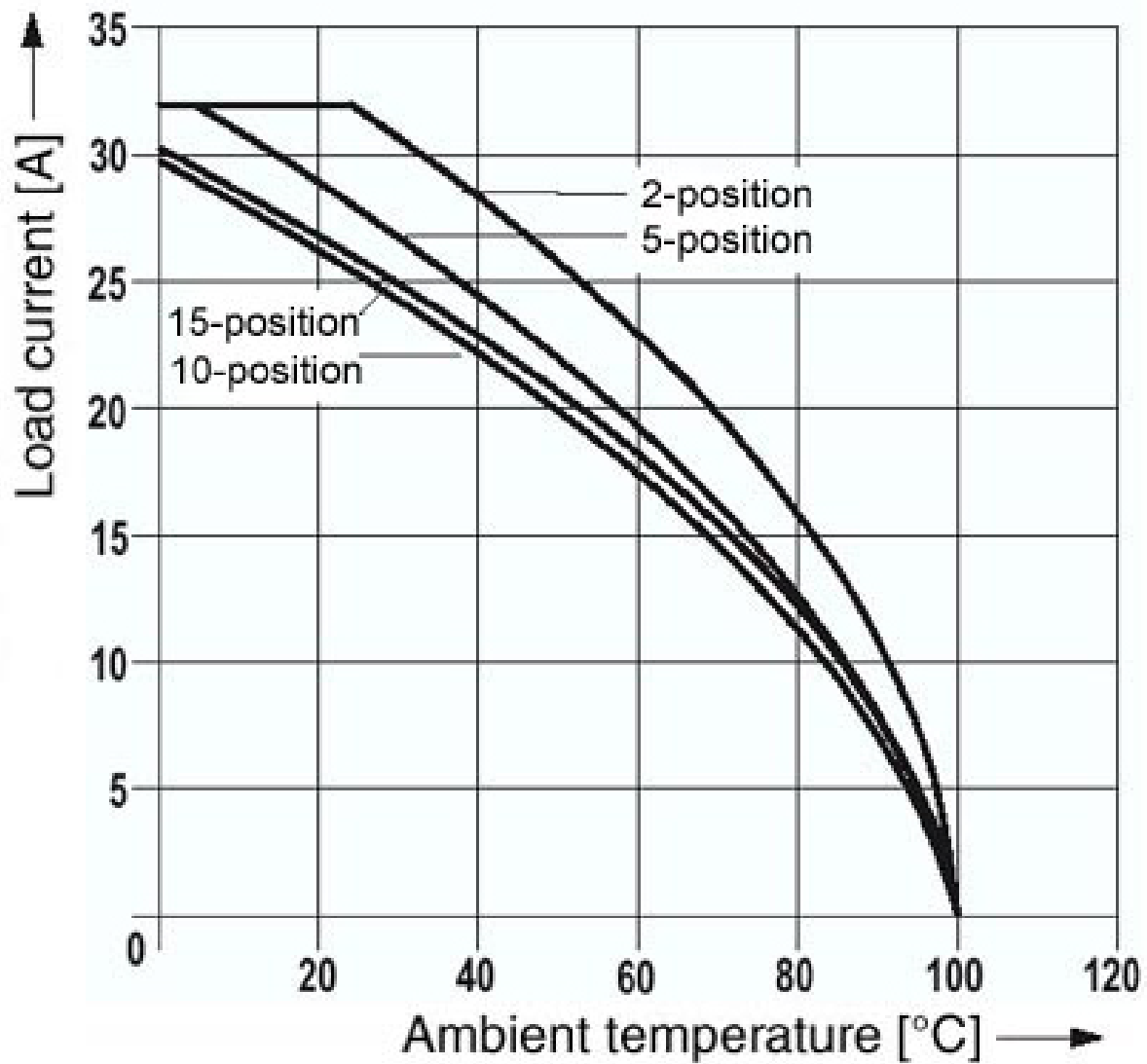
Ambient temperature (operation)	-60 °C (max. operating temperature see derating curve)
Ambient temperature (storage/transport)	-25 °C ... 60 °C (for a short time, no longer than 24 h, -60°C to +70°C)
Ambient temperature (assembly)	-5 °C ... 70 °C
Ambient temperature (actuation)	-5 °C ... 70 °C
Permissible humidity (operation)	20 % ... 90 %
Permissible humidity (storage/transport)	30 % ... 70 %

Standards and regulations

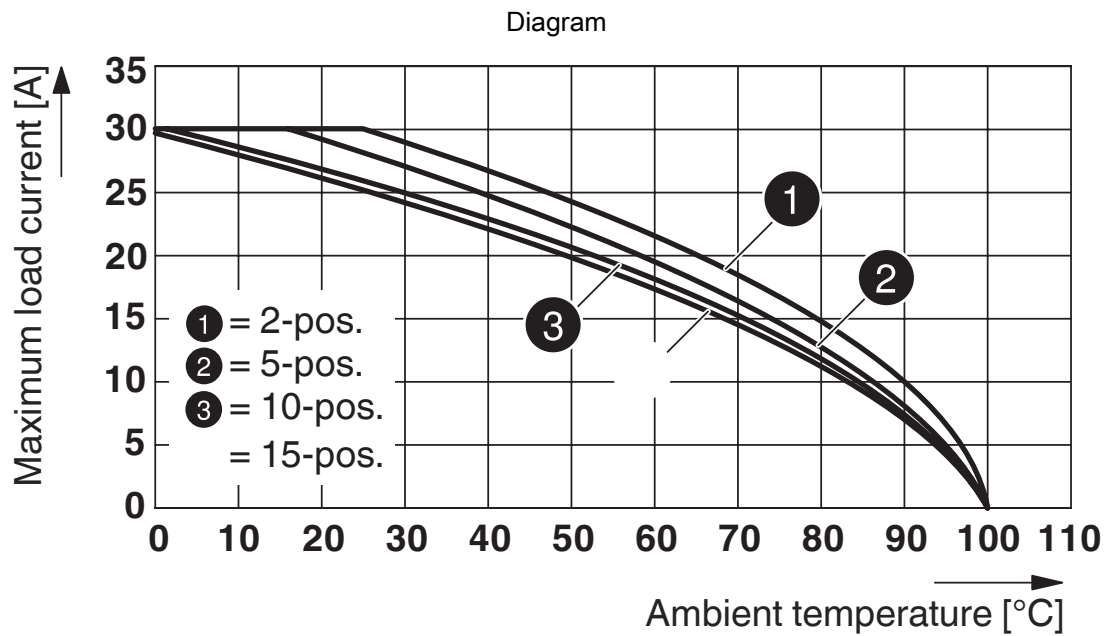
Connection in acc. with standard	IEC 61984
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Drawings

Diagram



Derating curve for the spring-cage terminal with all plug versions SP 4/... .



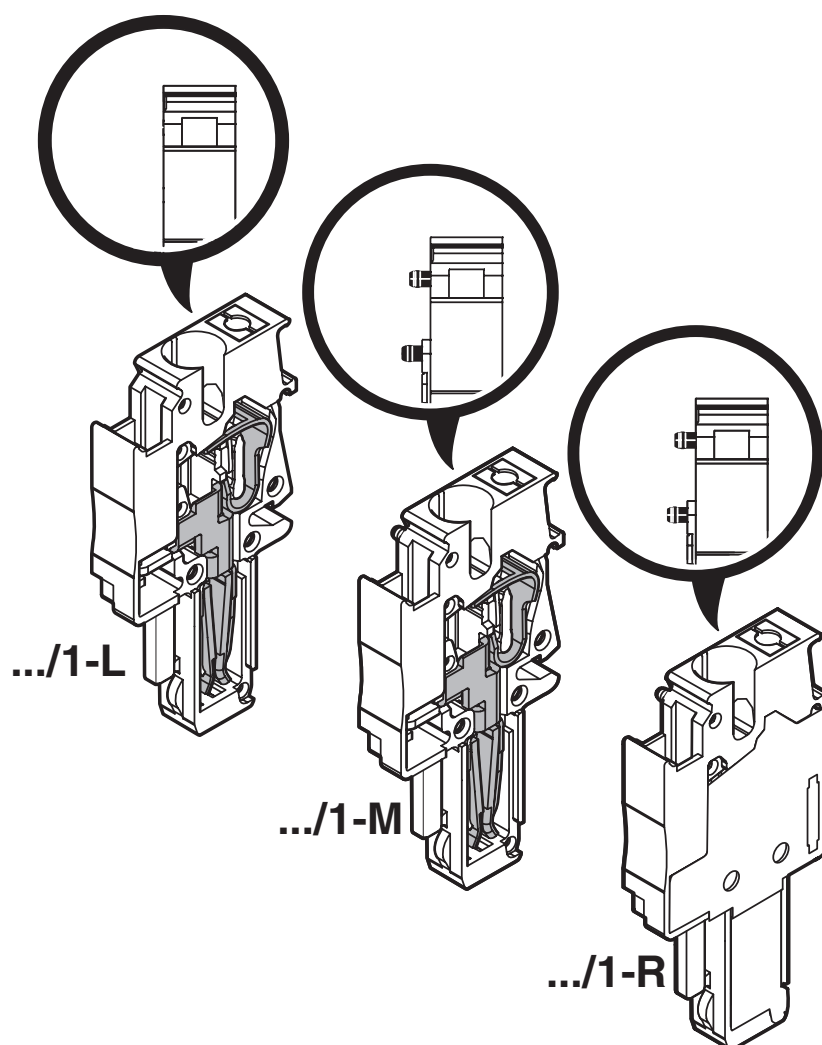
Derating curve for ST 4/ 1P and for all plug versions SP...

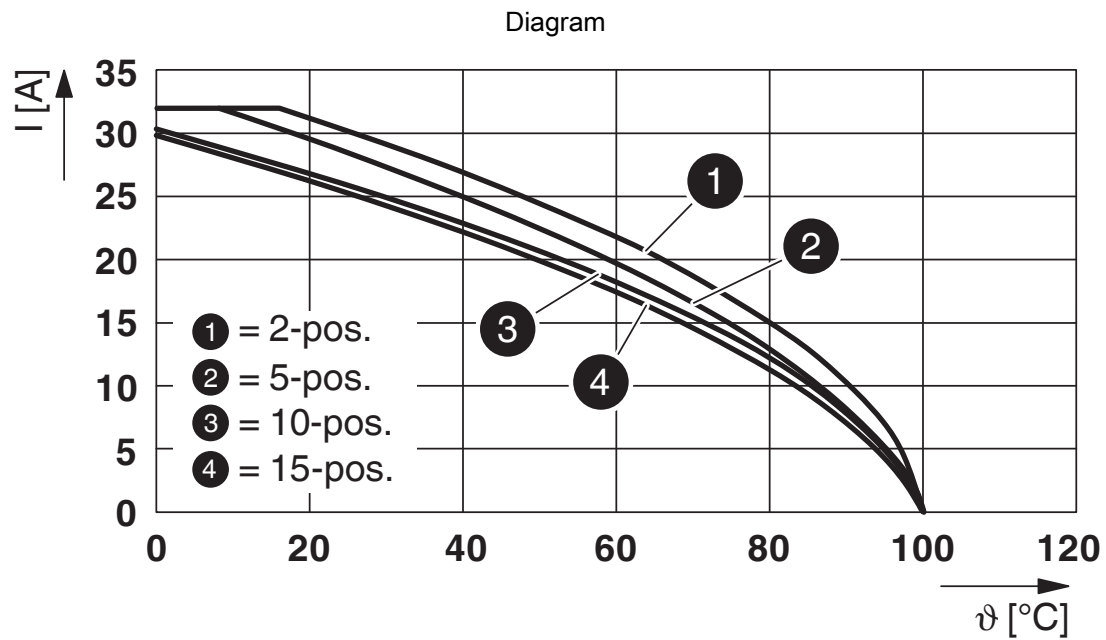
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Schematic diagram





Derating curve for spring-cage terminals ST 4/1P.. and ST 4/2P.. with all plug versions SP 4/... . The derating curves are determined by multiplying the values of the base curves by the factor 0.8.

Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3042816>

 CSA Approval ID: 13631				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	600 V	30 A	24 - 12	-
Use group C				
	600 V	30 A	24 - 12	-

 IECEE CB Scheme Approval ID: DE1-62736/B1/B2				
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 EAC Approval ID: RU C-DE.BL08.B.00511				
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 cULus Recognized Approval ID: E60425				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	600 V	30 A	28 - 10	-
Use group C				
	600 V	30 A	28 - 10	-

 VDE Zeichengenehmigung Approval ID: 40019518				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Only flexible conductors	800 V	-	-	0.2 - 4
Only rigid conductors	800 V	-	-	0.2 - 6

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Classifications

ECLASS

ECLASS-11.0	27141151
ECLASS-12.0	27141151
ECLASS-13.0	27250306

ETIM

ETIM 9.0	EC002021
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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Accessories

PZ/2 - Strain relief

3040627

<https://www.phoenixcontact.com/us/products/3040627>



Strain relief, width: 9.3 mm, height: 48.7 mm, number of positions: 2, color: black

PZ/4 - Strain relief

3040643

<https://www.phoenixcontact.com/us/products/3040643>



Strain relief, width: 19.6 mm, height: 48.7 mm, number of positions: 4, color: black

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PR - Latching

3040559

<https://www.phoenixcontact.com/us/products/3040559>



Latching, width: 4.4 mm, height: 29.8 mm, number of positions: 1, color: orange

PR/2 - Latching

3040630

<https://www.phoenixcontact.com/us/products/3040630>



Latching, width: 10 mm, height: 29.8 mm, number of positions: 2, color: orange

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PRT/2 - Latching

3040631

<https://www.phoenixcontact.com/us/products/3040631>



Latching, can only be released using a screwdriver, width: 9 mm, height: 23.2 mm, number of positions: 2, color: orange

PRZ - Latching

3040614

<https://www.phoenixcontact.com/us/products/3040614>



Latching, number of positions: 2, length: 64 mm, color: orange

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SP 4/ 1-L - Plug

3042751

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Plug, nom. voltage: 800 V, nominal current: 32 A, number of positions: 1, connection method: Spring-cage connection, Rated cross section: 4 mm², cross section: 0.08 mm²- 6 mm², color: gray

SP 4/ 1-L BU - Plug

3042764

<https://www.phoenixcontact.com/us/products/3042764>



Plug, nom. voltage: 800 V, nominal current: 32 A, number of positions: 1, connection method: Spring-cage connection, Rated cross section: 4 mm², cross section: 0.08 mm²- 6 mm², color: blue

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SP 4/ 1-L GNYE - Plug

3042777

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Plug, nom. voltage: 800 V, nominal current: 32 A, number of positions: 1, connection method: Spring-cage connection, Rated cross section: 4 mm², cross section: 0.08 mm²- 6 mm², color: green-yellow

SP 4/ 1-M - Plug

3042780

<https://www.phoenixcontact.com/us/products/3042780>



Plug, nom. voltage: 800 V, nominal current: 32 A, number of positions: 1, connection method: Spring-cage connection, Rated cross section: 4 mm², cross section: 0.08 mm²- 6 mm², color: gray

SP 4/ 1-R - Plug

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SP 4/ 1-M BU - Plug

3042793

<https://www.phoenixcontact.com/us/products/3042793>



Plug, nom. voltage: 800 V, nominal current: 32 A, number of positions: 1, connection method: Spring-cage connection, Rated cross section: 4 mm², cross section: 0.08 mm²- 6 mm², color: blue

SP 4/ 1-M GNYE - Plug

3042803

<https://www.phoenixcontact.com/us/products/3042803>



Plug, nom. voltage: 800 V, nominal current: 32 A, number of positions: 1, connection method: Spring-cage connection, Rated cross section: 4 mm², cross section: 0.08 mm²- 6 mm², color: green-yellow

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ZBF 6:UNBEDRUCKT - Zack Marker strip, flat

0808710

<https://www.phoenixcontact.com/us/products/0808710>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

ZBF 6 CUS - Zack Marker strip, flat

0825027

<https://www.phoenixcontact.com/us/products/0825027>



Zack Marker strip, flat, Strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

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UC-TMF 6 - Marker for terminal blocks

0818140

<https://www.phoenixcontact.com/us/products/0818140>



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.6 x 5.1 mm, Number of individual labels: 80

UC-TMF 6 CUS - Marker for terminal blocks

0824646

<https://www.phoenixcontact.com/us/products/0824646>



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 5.1 mm, Number of individual labels: 80

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UCT-TMF 6 - Marker for terminal blocks

0828746

<https://www.phoenixcontact.com/us/products/0828746>



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.4 x 4.7 mm, Number of individual labels: 60

UCT-TMF 6 CUS - Marker for terminal blocks

0829665

<https://www.phoenixcontact.com/us/products/0829665>



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.4 x 4.7 mm, Number of individual labels: 60

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ZBF 6,LGS:FORTL.ZAHLEN - Zack Marker strip, flat

0808749

<https://www.phoenixcontact.com/us/products/0808749>



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

ZBF 6,QR:FORTL.ZAHLEN - Zack Marker strip, flat

0808765

<https://www.phoenixcontact.com/us/products/0808765>



Zack Marker strip, flat, Strip, white, labeled, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

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ZBF 6,LGS:GERADE ZAHLEN - Zack Marker strip, flat

0810834

<https://www.phoenixcontact.com/us/products/0810834>



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive even numbers 2 ... 20, 22 ... 40, etc. up to 82 ... 100, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

ZBF 6,LGS:UNGERADE ZAHLEN - Zack Marker strip, flat

0810876

<https://www.phoenixcontact.com/us/products/0810876>



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

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B-STIFT - Marker pen

1051993

<https://www.phoenixcontact.com/us/products/1051993>



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

X-PEN 0,35 - Marker pen

0811228

<https://www.phoenixcontact.com/us/products/0811228>



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

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ST-BW - Actuation tool

1207608

<https://www.phoenixcontact.com/us/products/1207608>

Actuation tool, for all 2.5 mm² - 4.0 mm² spring-cages



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