

## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

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Sensor/actuator terminal block, nom. voltage: 250 V, nominal current: 18 A, connection method: Spring-cage connection, number of connections: 5, cross section: 0.08 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 28 - 12, width: 5.2 mm, color: gray, mounting type: NS 35/7,5, NS 35/15

### Your advantages

- Upper level for signal wiring



### Key Commercial Data

Packing unit	50 pc
Minimum order quantity	50 pc
GTIN	 4 046356 143301
GTIN	4046356143301
Weight per Piece (excluding packing)	11.120 g
Custom tariff number	85369010
Country of origin	Turkey

### Technical data

#### General

Number of levels	3
Number of connections	5
Nominal cross section	2.5 mm <sup>2</sup>
Color	gray
Insulating material	PA
Flammability rating according to UL 94	V0
Rated surge voltage	4 kV
Degree of pollution	3
Overvoltage category	III
Insulating material group	I
Maximum power dissipation for nominal condition	0.77 W (the value is multiplied when connecting multiple levels)

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## Technical data

### General

Connection in acc. with standard	IEC 60947-7-1
Nominal current $I_N$	18 A
Maximum load current	18 A (with 4 mm <sup>2</sup> conductor cross section)
Nominal voltage $U_N$	250 V
Open side panel	Yes
Shock protection test specification	DIN EN 50274 (VDE 0660-514):2002-11
Back of the hand protection	guaranteed
Finger protection	guaranteed
Result of surge voltage test	Test passed
Surge voltage test setpoint	4.8 kV
Result of power-frequency withstand voltage test	Test passed
Power frequency withstand voltage setpoint	1.5 kV
Checking the mechanical stability of terminal points (5 x conductor connection)	Test passed
Result of bending test	Test passed
Bending test rotation speed	10 rpm
Bending test turns	135
Bending test conductor cross section/weight	0.08 mm <sup>2</sup> / 0.1 kg
	2.5 mm <sup>2</sup> / 0.7 kg
	4 mm <sup>2</sup> / 0.9 kg
Tensile test result	Test passed
Conductor cross section tensile test	0.08 mm <sup>2</sup>
Tractive force setpoint	5 N
Conductor cross section tensile test	2.5 mm <sup>2</sup>
Tractive force setpoint	50 N
Conductor cross section tensile test	4 mm <sup>2</sup>
Tractive force setpoint	60 N
Result of tight fit on support	Test passed
Tight fit on carrier	NS 35
Setpoint	1 N
Result of voltage-drop test	Test passed
Requirements, voltage drop	≤ 3.2 mV
Result of temperature-rise test	Test passed
Short circuit stability result	Test passed
Conductor cross section short circuit testing	2.5 mm <sup>2</sup>
Short-time current	0.3 kA
Result of aging test	Test passed
Ageing test for screwless modular terminal block temperature cycles	192
Result of thermal test	Test passed
Proof of thermal characteristics (needle flame) effective duration	30 s
Relative insulation material temperature index (Elec.; UL 746 B)	130 °C

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## Technical data

### General

Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	130 °C
Static insulating material application in cold	-60 °C
Behavior in fire for rail vehicles (DIN 5510-2)	Test passed
Flame test method (DIN EN 60695-11-10)	V0
Oxygen index (DIN EN ISO 4589-2)	>32 %
NF F16-101, NF F10-102 Class I	2
NF F16-101, NF F10-102 Class F	2
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
Calorimetric heat release NFPA 130 (ASTM E 1354)	28 MJ/kg
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

### Dimensions

Width	5.2 mm
Length	92.3 mm
Height NS 35/7,5	44.5 mm
Height NS 35/15	52 mm

### Connection data

Connection method	Spring-cage connection
Conductor cross section solid min.	0.08 mm <sup>2</sup>
Conductor cross section solid max.	4 mm <sup>2</sup>
Conductor cross section flexible min.	0.08 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	28
Conductor cross section AWG max.	12
Conductor cross section flexible, with ferrule without plastic sleeve min.	0.14 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve max.	2.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve min.	0.14 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve max.	2.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, TWIN ferrules with plastic sleeve, max.	0.5 mm <sup>2</sup>
Stripping length	8 mm ... 10 mm

### Standards and Regulations

Connection in acc. with standard	CUL
	IEC 60947-7-1
Flammability rating according to UL 94	V0

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## Technical data

### Standards and Regulations

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
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### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Classifications

### eCl@ss

eCl@ss 4.0	27141118
eCl@ss 4.1	27141118
eCl@ss 5.0	27141118
eCl@ss 5.1	27141100
eCl@ss 6.0	27141100
eCl@ss 7.0	27141128
eCl@ss 8.0	27141128
eCl@ss 9.0	27141128

### ETIM

ETIM 2.0	EC000900
ETIM 3.0	EC000900
ETIM 4.0	EC000900
ETIM 5.0	EC000900
ETIM 6.0	EC000900
ETIM 7.0	EC000900

### UNSPSC

UNSPSC 6.01	30211811
UNSPSC 7.0901	39121410
UNSPSC 11	39121410
UNSPSC 12.01	39121410
UNSPSC 13.2	39121410

## Approvals

### Approvals

Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized

# Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

## Approvals

Ex Approvals

### Approval details

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 60425
	B	C	D
Nominal voltage UN	300 V	150 V	300 V
Nominal current IN	10 A	18 A	10 A
mm <sup>2</sup> /AWG/kcmil	28-12	28-12	28-12

cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 60425
	B	C	D
Nominal voltage UN	300 V	150 V	300 V
Nominal current IN	10 A	18 A	10 A
mm <sup>2</sup> /AWG/kcmil	28-12	28-12	28-12

EAC		EAC-Zulassung
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cULus Recognized	
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## Accessories

Accessories

Cover

Group cover marker - BST 2,5 - 3061282



Cover for actuation shaft, 5-pos., for spring-cage terminal blocks with width of 5.2 mm

DIN rail

## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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DIN rail, unperforated - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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DIN rail perforated - NS 35/ 7,5 WH PERF 2000MM - 1204119



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

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DIN rail, unperforated - NS 35/ 7,5 WH UNPERF 2000MM - 1204122



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

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DIN rail, unperforated - NS 35/ 7,5 AL UNPERF 2000MM - 0801704



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Aluminum, uncoated, length: 2000 mm, color: silver

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## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

DIN rail perforated - NS 35/ 7,5 ZN PERF 2000MM - 1206421



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

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DIN rail, unperforated - NS 35/ 7,5 ZN UNPERF 2000MM - 1206434



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

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DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

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End cap - NS 35/ 7,5 CAP - 1206560



DIN rail end piece, for DIN rail NS 35/7.5

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### Documentation

Mounting material - ST-IL - 3039900

Operating decal for the ST terminal block



### End block

## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

End clamp - E/AL-NS 35 - 1201662



End clamp, for end support of UKH 50 to UKH 240, is pushed onto DIN rail NS 35 and fixed with 2 screws, width: 10 mm, color: aluminum

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### End cover

End cover - D-STIO 2,5/4 - 3209125



End cover, length: 92.3 mm, width: 2.2 mm, height: 36.8 mm, color: gray

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### Filler plug

Filler plugs - CEC 2,5 - 3062757



Cover for conductor shaft, 10-pos., for spring cage terminal blocks (ST) and terminal blocks with push-in technology (PT) with a width of 5.2 mm

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### Jumper

Plug-in bridge - FBS 2-5 - 3030161



Plug-in bridge, pitch: 5.2 mm, length: 22.7 mm, width: 9 mm, number of positions: 2, color: red

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Plug-in bridge - FBS 3-5 - 3030174



Plug-in bridge, pitch: 5.2 mm, length: 22.7 mm, width: 14.2 mm, number of positions: 3, color: red



## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

Plug-in bridge - FBS 4-5 - 3030187



Plug-in bridge, pitch: 5.2 mm, length: 22.7 mm, width: 19.4 mm, number of positions: 4, color: red

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Plug-in bridge - FBS 5-5 - 3030190



Plug-in bridge, pitch: 5.2 mm, length: 22.7 mm, width: 24.6 mm, number of positions: 5, color: red

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Plug-in bridge - FBS 10-5 - 3030213



Plug-in bridge, pitch: 5.2 mm, length: 22.7 mm, width: 50.6 mm, number of positions: 10, color: red

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Plug-in bridge - FBS 20-5 - 3030226



Plug-in bridge, pitch: 5.2 mm, number of positions: 20, color: red

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Plug-in bridge - FBS 50-5 - 3038930



Plug-in bridge, pitch: 5.2 mm, number of positions: 50, color: red

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## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

Plug-in bridge - FBS 2-5 BU - 3036877



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, color: blue

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Plug-in bridge - FBS 3-5 BU - 3036880



Plug-in bridge, pitch: 5.2 mm, number of positions: 3, color: blue

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Plug-in bridge - FBS 4-5 BU - 3036893



Plug-in bridge, pitch: 5.2 mm, number of positions: 4, color: blue

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Plug-in bridge - FBS 5-5 BU - 3036903



Plug-in bridge, pitch: 5.2 mm, number of positions: 5, color: blue

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Plug-in bridge - FBS 10-5 BU - 3036916



Plug-in bridge, pitch: 5.2 mm, number of positions: 10, color: blue

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## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

Plug-in bridge - FBS 20-5 BU - 3036929



Plug-in bridge, pitch: 5.2 mm, number of positions: 20, color: blue

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Plug-in bridge - FBS 50-5 BU - 3032114



Plug-in bridge, pitch: 5.2 mm, number of positions: 50, color: blue

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Plug-in bridge - FBS 2-5 GY - 3038969



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, color: gray

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Plug-in bridge - FBS 3-5 GY - 3038972



Plug-in bridge, pitch: 5.2 mm, number of positions: 3, color: gray

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Plug-in bridge - FBS 4-5 GY - 3038985



Plug-in bridge, pitch: 5.2 mm, number of positions: 4, color: gray

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## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

Plug-in bridge - FBS 5-5 GY - 3038998



Plug-in bridge, pitch: 5.2 mm, number of positions: 5, color: gray

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Plug-in bridge - FBS 10-5 GY - 3039007



Plug-in bridge, pitch: 5.2 mm, number of positions: 10, color: gray

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Plug-in bridge - FBS 20-5 GY - 3038671



Plug-in bridge, pitch: 5.2 mm, number of positions: 20, color: gray

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Plug-in bridge - FBS 50-5 GY - 3032127



Plug-in bridge, pitch: 5.2 mm, number of positions: 50, color: gray

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Plug-in bridge - FBSR 2-5 - 3033702



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, color: red

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## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

Plug-in bridge - FBSR 3-5 - 3001591



Plug-in bridge, pitch: 5.2 mm, number of positions: 3, color: red

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Plug-in bridge - FBSR 4-5 - 3001592



Plug-in bridge, pitch: 5.2 mm, number of positions: 4, color: red

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Plug-in bridge - FBSR 5-5 - 3001593



Plug-in bridge, pitch: 5.2 mm, number of positions: 5, color: red

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Plug-in bridge - FBSR 10-5 - 3033710



Plug-in bridge, pitch: 5.2 mm, number of positions: 10, color: red

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### Labeled terminal marker

Warning cover - WST 2,5 - 3030941



Warning cover, 5-pos., for terminal width: 5.2 mm

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## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

Zack marker strip - ZB 5 CUS - 0824962



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm

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Zack marker strip - ZB 5,LGS:FORTL.ZAHLEN - 1050017



Zack marker strip, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm

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Zack marker strip - ZB 5,QR:FORTL.ZAHLEN - 1050020



Zack marker strip, white, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm

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Zack marker strip - ZB 5,LGS:GLEICHE ZAHLEN - 1050033



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: Identical numbers 1 or 2, etc. up to 100, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm

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Zack marker strip - ZB 5,LGS:L1-N,PE - 1050415



Zack marker strip, Strip, white, labeled, Horizontal: L1, L2, L3, N, PE, L1, L2, L3, N, PE, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm

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## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

#### Marker for terminal blocks - UC-TM 5 CUS - 0824581



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 10.5 x 4.6 mm

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#### Marker for terminal blocks - UCT-TM 5 CUS - 0829595



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 4.6 x 10.5 mm

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#### Zack Marker strip, flat - ZBF 5 CUS - 0825025



Zack Marker strip, flat, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm

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#### Zack Marker strip, flat - ZBF 5,LGS:FORTL.ZAHLEN - 0808671



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm

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#### Zack Marker strip, flat - ZBF 5,QR:FORTL.ZAHLEN - 0808697



Zack Marker strip, flat, Strip, white, labeled, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm

## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

Zack Marker strip, flat - ZBF 5,LGS:GERADE ZAHLEN - 0810821



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive numbers 2 ... 20, 22 ... 40, etc. up to 82 ... 100, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm

Zack Marker strip, flat - ZBF 5,LGS:UNGERADE ZAHLEN - 0810863



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm

Marker for terminal blocks - UC-TMF 5 CUS - 0824638



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: 5.2 mm, lettering field size: 4.6 x 5.1 mm

Marker for terminal blocks - UCT-TMF 5 CUS - 0829658



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: 5.2 mm, lettering field size: 4.4 x 4.7 mm

### Screwdriver tools

Screwdriver - ST-BW - 1207608



Actuation tool, for all 2.5 mm<sup>2</sup> - 4.0 mm<sup>2</sup> spring-cages

### Terminal marking



## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

Zack marker strip - ZB 5 :UNBEDRUCKT - 1050004



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.1 x 10.5 mm

Marker for terminal blocks - UC-TM 5 - 0818108



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 10.5 x 4.6 mm

Marker for terminal blocks - UCT-TM 5 - 0828734



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: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 4.6 x 10.5 mm

Zack Marker strip, flat - ZBF 5:UNBEDRUCKT - 0808642



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.1 x 5.2 mm

Marker for terminal blocks - UC-TMF 5 - 0818153



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 5.2 mm, lettering field size: 4.6 x 5.1 mm

## Sensor/actuator terminal block - STIO 2,5/4-3B/L - 3209057

### Accessories

Marker for terminal blocks - UCT-TMF 5 - 0828744



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: snap into flat marker groove, for terminal block width: 5.2 mm, lettering field size: 4.4 x 4.7 mm

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### Additional products

Power terminal block - STIO-IN 2,5/4 OG - 3209206



Power terminal block, nom. voltage: 250 V, nominal current: 30 A, connection method: Spring-cage connection, number of connections: 5, cross section: 0.08 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 28 - 12, width: 10.4 mm, color: orange, mounting type: NS 35/7,5, NS 35/15