

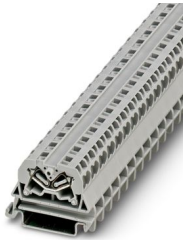
# MSDBV 2,5-NS 35 - Mini feed-through terminal block



3249211

<https://www.phoenixcontact.com/us/products/3249211>

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Mini feed-through terminal block, nom. voltage: 800 V, nominal current: 24 A, number of connections: 4, connection method: Spring-cage connection, 1 level, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.08 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- For mounting on NS 35 ... DIN rail
- Space saving thanks to compact design and mounting option on a 15 mm DIN rail
- Clear arrangement thanks to marking of all terminal points
- Easy potential distribution thanks to standardized plug-in bridges

## Commercial data

Item number	3249211
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE02
Product key	BE2163
Catalog page	Page 225 (C-1-2019)
GTIN	4046356166423
Weight per piece (including packing)	8.146 g
Weight per piece (excluding packing)	4.47 g
Customs tariff number	85369010
Country of origin	CN

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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## Technical data

### Product properties

Product type	Miniature terminal block
Number of connections	4
Number of rows	1
Potentials	2

### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

Rated surge voltage	8 kV
Maximum power dissipation for nominal condition	0.77 W

### Connection data

Number of connections per level	2
Nominal cross section	2.5 mm <sup>2</sup>

#### 1 level

Stripping length	8 mm
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	0.08 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Cross section AWG	28 ... 12 (converted acc. to IEC)
Conductor cross section flexible	0.08 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	28 ... 14 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup>
Nominal current	24 A
Maximum load current	30 A (with 4 mm <sup>2</sup> conductor cross section)
Nominal voltage	800 V
Nominal cross section	2.5 mm <sup>2</sup>
Connection in acc. with standard	IEC/EN 60079-7

### Dimensions

Width	10.4 mm
End cover width	4 mm
Height	42.7 mm
Depth	22 mm
Depth on NS 35/7,5	32 mm
Depth on NS 35/15	39.5 mm

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## Material specifications

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

Test voltage setpoint	9.8 kV
Result	Test passed

### Temperature-rise test

Requirement temperature-rise test	Increase in temperature $\leq 45$ K
Result	Test passed
	Test passed
Short-time withstand current 2.5 mm <sup>2</sup>	0.3 kA
Short-time withstand current 4 mm <sup>2</sup>	0.48 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	2 kV
Result	Test passed

## Mechanical properties

### Mechanical data

Open side panel	Yes
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## Mechanical tests

### Mechanical strength

Result	Test passed
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### Attachment on the carrier

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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DIN rail/fixing support	NS 32/NS 35
Test force setpoint	1 N
Result	Test passed

## Test for conductor damage and slackening

Rotation speed	10 (+/- 2) rpm
Revolutions	135
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
Result	Test passed

## Environmental and real-life conditions

### Aging

Temperature cycles	192
Result	Test passed

### 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 2, bogie-mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	6.12 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Acceleration	3.12g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis

### Shocks

Specification	DIN EN 50155 (VDE 0115-200):2008-03
Pulse shape	Half-sine
Acceleration	30g
Shock duration	18 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)

### Ambient conditions

Ambient temperature (operation)	-60 °C ... 110 °C (Operating temperature range incl. self-heating; for max. short-term operating temperature, see RTI Elec.)
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 %

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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Permissible humidity (storage/transport)	30 % ... 70 %
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## Standards and regulations

Connection in acc. with standard	IEC 60947-7-1
	IEC/EN 60079-7

## Mounting

Mounting type	NS 35/7,5
	NS 35/15

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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## Drawings

### Circuit diagram



# MSDBV 2,5-NS 35 - Mini feed-through terminal block





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## Approvals


To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3249211>

 <b>CSA</b> Approval ID: 13631				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B	600 V	20 A	28 - 12	-
Use group C	600 V	20 A	28 - 12	-
Use group D	600 V	20 A	28 - 12	-

 <b>IECEE CB Scheme</b> Approval ID: DE1-62820				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	800 V	24 A	-	0.2 - 2.5

 <b>EAC</b> Approval ID: RU C-DE.BL08.B.00644				
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 <b>VDE Zeichengenehmigung</b> Approval ID: 40029769				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	800 V	24 A	-	0.2 - 2.5

 <b>cULus Recognized</b> Approval ID: E60425				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B	600 V	20 A	28 - 12	-
Use group C	600 V	20 A	28 - 12	-
Use group D	600 V	5 A	28 - 12	-

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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## Classifications

### ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250101

### ETIM

ETIM 9.0	EC000897
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### UNSPSC

UNSPSC 21.0	39121400
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# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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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# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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<https://www.phoenixcontact.com/us/products/3249211>

## Accessories

**i** Note: Applying some accessories below might limit this product.

### ESB 2-MZDB - Insertion bridge

3029703

<https://www.phoenixcontact.com/us/products/3029703>

Insertion bridge, pitch: 6.2 mm, number of positions: 2, color: gray



**i** Max. current carrying capacity: 24 A

### D-MSBV 2,5 - End cover

3251018

<https://www.phoenixcontact.com/us/products/3251018>

End cover, depth: 20 mm, width: 4 mm, height: 32 mm, color: gray



# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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<https://www.phoenixcontact.com/us/products/3249211>

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

0801733

<https://www.phoenixcontact.com/us/products/0801733>



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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

0801681

<https://www.phoenixcontact.com/us/products/0801681>



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

# MSDBV 2,5-NS 35 - Mini feed-through terminal block

3249211

<https://www.phoenixcontact.com/us/products/3249211>



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

1204119

<https://www.phoenixcontact.com/us/products/1204119>



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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## NS 35/ 7,5 WH UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1204122

<https://www.phoenixcontact.com/us/products/1204122>



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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<https://www.phoenixcontact.com/us/products/3249211>

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

0801704

<https://www.phoenixcontact.com/us/products/0801704>



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

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

1206421

<https://www.phoenixcontact.com/us/products/1206421>



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

# MSDBV 2,5-NS 35 - Mini feed-through terminal block

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<https://www.phoenixcontact.com/us/products/3249211>



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

1206434

<https://www.phoenixcontact.com/us/products/1206434>



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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## NS 35/ 7,5 CU UNPERF 2000MM-VPE 10 - DIN rail, unperforated

0801762

<https://www.phoenixcontact.com/us/products/0801762>



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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<https://www.phoenixcontact.com/us/products/3249211>

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

1206560

<https://www.phoenixcontact.com/us/products/1206560>

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



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## NS 35/15 PERF 2000MM - DIN rail perforated

1201730

<https://www.phoenixcontact.com/us/products/1201730>



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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<https://www.phoenixcontact.com/us/products/3249211>

## NS 35/15 UNPERF 2000MM - DIN rail, unperforated

1201714

<https://www.phoenixcontact.com/us/products/1201714>



DIN rail, unperforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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## NS 35/15 WH PERF 2000MM - DIN rail perforated

0806602

<https://www.phoenixcontact.com/us/products/0806602>



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: white



# MSDBV 2,5-NS 35 - Mini feed-through terminal block

3249211

<https://www.phoenixcontact.com/us/products/3249211>



## NS 35/15 WH UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1204135

<https://www.phoenixcontact.com/us/products/1204135>



DIN rail, unperforated, Pack of 10 (20 m), similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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## NS 35/15 AL UNPERF 2000MM - DIN rail, unperforated

1201756

<https://www.phoenixcontact.com/us/products/1201756>



DIN rail, unperforated, similar to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



3249211

<https://www.phoenixcontact.com/us/products/3249211>

## NS 35/15 ZN PERF 2000MM - DIN rail perforated

1206599

<https://www.phoenixcontact.com/us/products/1206599>



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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## NS 35/15 ZN UNPERF 2000MM - DIN rail, unperforated

1206586

<https://www.phoenixcontact.com/us/products/1206586>



DIN rail, unperforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



3249211

<https://www.phoenixcontact.com/us/products/3249211>

## NS 35/15 CU UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1201895

<https://www.phoenixcontact.com/us/products/1201895>



DIN rail, unperforated, Pack of 10 (20 m), similar to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

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## NS 35/15 CAP - End cap

1206573

<https://www.phoenixcontact.com/us/products/1206573>

DIN rail end piece, for DIN rail NS 35/15



# MSDBV 2,5-NS 35 - Mini feed-through terminal block

3249211

<https://www.phoenixcontact.com/us/products/3249211>



## NS 35/15-2,3 UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1201798

<https://www.phoenixcontact.com/us/products/1201798>



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile 2.3 mm, color: silver

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

0808642

<https://www.phoenixcontact.com/us/products/0808642>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5.1 x 5.2 mm, Number of individual labels: 10

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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<https://www.phoenixcontact.com/us/products/3249211>

## ZBF 5 CUS - Zack Marker strip, flat

0825025

<https://www.phoenixcontact.com/us/products/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, Number of individual labels: 10

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

0808671

<https://www.phoenixcontact.com/us/products/0808671>



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

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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<https://www.phoenixcontact.com/us/products/3249211>

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

0808697

<https://www.phoenixcontact.com/us/products/0808697>



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: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

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

0810821

<https://www.phoenixcontact.com/us/products/0810821>



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: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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

0810863

<https://www.phoenixcontact.com/us/products/0810863>



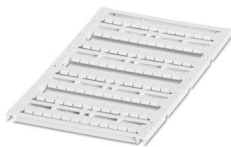
Zack Marker strip, flat, Strip, white, labeled, printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

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## UC-TMF 5 - Marker for terminal blocks

0818153

<https://www.phoenixcontact.com/us/products/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: snapped, for terminal block width: 5.2 mm, lettering field size: 4.6 x 5.1 mm, Number of individual labels: 96

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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<https://www.phoenixcontact.com/us/products/3249211>

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

0824638

<https://www.phoenixcontact.com/us/products/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, Number of individual labels: 96

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## UCT-TMF 5 - Marker for terminal blocks

0828744

<https://www.phoenixcontact.com/us/products/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: snapped, for terminal block width: 5.2 mm, lettering field size: 4.4 x 4.7 mm, Number of individual labels: 72



# MSDBV 2,5-NS 35 - Mini feed-through terminal block

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

0829658

<https://www.phoenixcontact.com/us/products/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, Number of individual labels: 72

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## CLIPFIX 35 - End bracket

3022218

<https://www.phoenixcontact.com/us/products/3022218>



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, width: 9.5 mm, color: gray

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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<https://www.phoenixcontact.com/us/products/3249211>

## CLIPFIX 35-5 - End bracket

3022276

<https://www.phoenixcontact.com/us/products/3022276>



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

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## E/NS 35 N - End bracket

0800886

<https://www.phoenixcontact.com/us/products/0800886>



End clamp, width: 9.5 mm, color: gray

# MSDBV 2,5-NS 35 - Mini feed-through terminal block



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## SZF 1-0,6X3,5 - Screwdriver

1204517

<https://www.phoenixcontact.com/us/products/1204517>



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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## ST-BW - Actuation tool

1207608

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



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

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