

# PTV 2,5 BK - Feed-through terminal block



1291482

<https://www.phoenixcontact.com/us/products/1291482>

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Feed-through terminal block, nom. voltage: 800 V, nominal current: 24 A, number of connections: 2, number of positions: 1, connection method: Push-in connection, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: black

## Your advantages

- Clear wiring, thanks to lateral conductor entry
- The compact design enables wiring in a confined space
- The Push-in connection terminal blocks are characterized by the system features of the CLIPLINE complete system
- In addition to the testing facility in the double function shaft, all terminal blocks provide an additional test connection

## Commercial data

Item number	1291482
Packing unit	1 pc
Minimum order quantity	100 pc
Sales key	BE23
Product key	BE2311
GTIN	4063151524302
Weight per piece (including packing)	6.01 g
Weight per piece (excluding packing)	22.22 g
Customs tariff number	85369010
Country of origin	CN

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## Technical data

### Product properties

Product type	Feed-through terminal block
Product family	PTV
Number of positions	1
Area of application	Railway industry
	Machine building
	Plant engineering
	Process industry
Number of connections	2
Number of rows	1
Potentials	1

### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

Maximum power dissipation for nominal condition	0.77 W
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### Connection data

Number of connections per level	2
Nominal cross section	2.5 mm <sup>2</sup>
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A3
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Cross section AWG	26 ... 12 (converted acc. to IEC)
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	26 ... 12 (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>
Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve)	0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup>
Nominal current	24 A (at 2.5 mm <sup>2</sup> )
Maximum load current	28 A (with 4 mm <sup>2</sup> conductor cross section, rigid)
Nominal voltage	800 V
Nominal cross section	2.5 mm <sup>2</sup>

### Connection cross sections directly pluggable

Conductor cross section rigid	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section, rigid [AWG]	20 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	1.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	1.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>

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## Ex data

### Rated data (ATEX/IECEX)

Identification	Ⓜ II 2 G Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	1088746 D-PTV 2,5/4
	3030721 ATP-ST 4
	1204517 SZF 1-0,6X3,5
	3022276 CLIPFIX 35-5
List of bridges	Plug-in bridge / FBS 2-5 / 3030161
	Plug-in bridge / FBS 3-5 / 3030174
	Plug-in bridge / FBS 4-5 / 3030187
	Plug-in bridge / FBS 5-5 / 3030190
	Plug-in bridge / FBS 10-5 / 3030213
	Plug-in bridge / FBS 20-5 / 3030226
	Plug-in bridge / FBS 50-5 / 3038930
Bridge data	20.5 A / 2.5 mm <sup>2</sup>
Ex temperature increase	40 K (20.7 A / 2.5 mm <sup>2</sup> )
Rated voltage	550 V
for bridging with bridge	550 V
- At bridging between non-adjacent terminal blocks	352 V
- At cut-to-length bridging	275 V
- At cut-to-length bridging with cover	275 V
- At cut-to-length bridging with partition plate	550 V
Rated insulation voltage	500 V
output	(Permanent)

### Ex level General

Rated current	20.5 A (2.5 mm <sup>2</sup> )
Maximum load current	24.5 A (4 mm <sup>2</sup> )
Contact resistance	0.8 mΩ

### Ex connection data General

Nominal cross section	2.5 mm <sup>2</sup>
Rated cross section AWG	14
Connection capacity rigid	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Connection capacity AWG	26 ... 12
Connection capacity flexible	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Connection capacity AWG	26 ... 12

## Dimensions

Width	5.2 mm
End cover width	2.2 mm
Height	50.8 mm
Depth	35.3 mm

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Depth on NS 35/7,5	36.8 mm
Depth on NS 35/15	44.3 mm

## Material specifications

Color	black
Flammability rating according to UL 94	V0
Insulating material group	I
Insulating material	PA
Static insulating material application in cold	-60 °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
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
Short-time withstand current 2.5 mm <sup>2</sup>	0.3 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

DIN rail/fixing support	NS 35
Result	Test passed

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## Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross section/weight	0.14 mm <sup>2</sup> / 0.2 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
Result	Test passed

### Shocks

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.)
Result	Test passed

### Ambient conditions

Ambient temperature (operation)	-60 °C ... 105 °C (max. short-term operating temperature RTI Elec.)
Ambient temperature (storage/transport)	-25 °C ... 60 °C (for a short time, not exceeding 24 h, -60 °C to +70 °C)
Ambient temperature (assembly)	-5 °C ... 70 °C
Ambient temperature (actuation)	-5 °C ... 70 °C
Permissible humidity (storage/transport)	30 % ... 70 %

## Standards and regulations

Connection in acc. with standard	IEC 60947-7-1
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## Mounting

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

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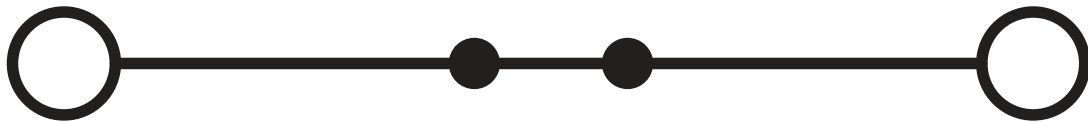
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## Drawings

### Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1291482>


 <b>CSA</b> Approval ID: 158887				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B	600 V	20 A	26 - 12	-
Use group C	600 V	20 A	26 - 12	-

 <b>IECEE CB Scheme</b> Approval ID: DE1-67139				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	800 V	24 A	-	0.2 - 4

 <b>EAC</b> Approval ID: RU C-DE.BL08.B.00644				
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 <b>cULus Recognized</b> Approval ID: E60425				
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 <b>cULus Recognized</b> Approval ID: E60425				
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 <b>VDE Zeichengenehmigung</b> Approval ID: 40056318				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	800 V	24 A	-	0.2 - 4

 <b>IECEX</b> Approval ID: IECEXPTB20.0037U				
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 <b>IECEX</b> Approval ID: IECEXPTB20.0037U				
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 <b>ATEX</b> Approval ID: PTB20ATEX1016U				
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**CCC**

Approval ID: 2021122313114374



**UKCA-EX**

Approval ID: CSAE 22UKEX1099U

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## Classifications

### ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250101

### ETIM

ETIM 8.0	EC000897
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance


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

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## Accessories

 Note: Applying some accessories below might limit this product.


### FBS 2-5 - Plug-in bridge

3030161

<https://www.phoenixcontact.com/us/products/3030161>



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, length: 23 mm, color: red

 Max. current carrying capacity: 24 A

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### FBS 3-5 - Plug-in bridge

3030174

<https://www.phoenixcontact.com/us/products/3030174>



Plug-in bridge, pitch: 5.2 mm, number of positions: 3, length: 23 mm, color: red

 Max. current carrying capacity: 24 A

# PTV 2,5 BK - Feed-through terminal block

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<https://www.phoenixcontact.com/us/products/1291482>



## FBS 4-5 - Plug-in bridge

3030187

<https://www.phoenixcontact.com/us/products/3030187>



Plug-in bridge, pitch: 5.2 mm, number of positions: 4, length: 23 mm, color: red

 Max. current carrying capacity: 24 A

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## FBS 5-5 - Plug-in bridge

3030190

<https://www.phoenixcontact.com/us/products/3030190>



Plug-in bridge, pitch: 5.2 mm, number of positions: 5, length: 23 mm, color: red

 Max. current carrying capacity: 24 A

# PTV 2,5 BK - Feed-through terminal block

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## FBS 10-5 - Plug-in bridge

3030213

<https://www.phoenixcontact.com/us/products/3030213>



Plug-in bridge, pitch: 5.2 mm, number of positions: 10, length: 23 mm, color: red

 Max. current carrying capacity: 24 A

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## FBS 20-5 - Plug-in bridge

3030226

<https://www.phoenixcontact.com/us/products/3030226>



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

 Max. current carrying capacity: 24 A

# PTV 2,5 BK - Feed-through terminal block

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## FBSR 2-5 - Plug-in bridge

3033702

<https://www.phoenixcontact.com/us/products/3033702>



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

 Max. current carrying capacity: 17.5 A

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## FBSR 3-5 - Plug-in bridge

3001591

<https://www.phoenixcontact.com/us/products/3001591>



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

 Max. current carrying capacity: 17.5 A

# PTV 2,5 BK - Feed-through terminal block

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## FBSR 4-5 - Plug-in bridge

3001592

<https://www.phoenixcontact.com/us/products/3001592>



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

 Max. current carrying capacity: 17.5 A

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## FBSR 5-5 - Plug-in bridge

3001593

<https://www.phoenixcontact.com/us/products/3001593>



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

 Max. current carrying capacity: 17.5 A



# PTV 2,5 BK - Feed-through terminal block

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## FBSR 10-5 - Plug-in bridge

3033710

<https://www.phoenixcontact.com/us/products/3033710>



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

 Max. current carrying capacity: 17.5 A

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## RB ST 6-(2,5/4) - Reducing bridge

3030860

<https://www.phoenixcontact.com/us/products/3030860>



Reducing bridge, pitch: 9 mm, number of positions: 2, length: 30 mm, color: red

 Max. current carrying capacity: 35 A

# PTV 2,5 BK - Feed-through terminal block

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## RB ST 10-(2,5/4) - Reducing bridge

3030873

<https://www.phoenixcontact.com/us/products/3030873>



Reducing bridge, pitch: 10 mm, number of positions: 2, length: 36 mm, color: red

 Max. current carrying capacity: 35 A

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## RB ST 16-(2,5/4) - Reducing bridge

3030886

<https://www.phoenixcontact.com/us/products/3030886>



Reducing bridge, pitch: 11 mm, number of positions: 2, length: 37 mm, color: red

 Max. current carrying capacity: 35 A

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## RB ST 35-(2,5/4) - Reducing bridge

3030899

<https://www.phoenixcontact.com/us/products/3030899>



Reducing bridge, pitch: 11 mm, number of positions: 2, color: red

 Max. current carrying capacity: 35 A

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## RB UT 6-ST(2,5/4) - Reducing bridge

3047264

<https://www.phoenixcontact.com/us/products/3047264>



Reducing bridge, pitch: 9.5 mm, number of positions: 2, length: 33 mm, color: red

 Max. current carrying capacity: 35 A

# PTV 2,5 BK - Feed-through terminal block

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## RB UT 35-ST(2,5/4) - Reducing bridge

3047280

<https://www.phoenixcontact.com/us/products/3047280>



Reducing bridge, pitch: 10.8 mm, number of positions: 2, color: red

 Max. current carrying capacity: 40 A

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## RB UT 10-ST(2,5/4) - Reducing bridge

3047086

<https://www.phoenixcontact.com/us/products/3047086>



Reducing bridge, pitch: 10.2 mm, number of positions: 2, length: 33 mm, color: red

 Max. current carrying capacity: 40 A

# PTV 2,5 BK - Feed-through terminal block

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<https://www.phoenixcontact.com/us/products/1291482>



## RB UT 16-ST(2,5/4) - Reducing bridge

3047099

<https://www.phoenixcontact.com/us/products/3047099>



Reducing bridge, pitch: 11 mm, number of positions: 2, length: 41 mm, color: red

 Max. current carrying capacity: 40 A

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## ATP-ST 4 - Partition plate

3030721

<https://www.phoenixcontact.com/us/products/3030721>



Partition plate, length: 59.8 mm, width: 2 mm, height: 59.8 mm, color: gray

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## PAI-4 - Test adapter

3030925

<https://www.phoenixcontact.com/us/products/3030925>



Test adapter, Touch proof against unintentional direct contact according to DIN EN 50274 when plugged in, for 4 mm test plug and terminal blocks with 4.2 mm pitch, number of positions: 1, color: gray

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## CLIPFIX 35-5 V0 - End clamp

3032350

<https://www.phoenixcontact.com/us/products/3032350>



Quick-fit end bracket, inflammability class V0 according to UL 94, for DIN rail NS 35/7,5 or NS 35/15, can be marked with UC-TM 5, UC-TMF 5, KLM 2, KLM3, and KML3L, parking for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

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## STP 5-2-ZB - Marker carriers

3037643

<https://www.phoenixcontact.com/us/products/3037643>



Marker carriers, snaps into ST 2,5 spring-cage terminal blocks, can be marked with UC-TM 5, UC-TMF 5, UCT-TM 5, UCT-TMF 5, ZB 5, or ZBF 5, gray, unlabeled, mounting type: snapped

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## PAI-4-FIX-5/6 BU - Test adapter

3035975

<https://www.phoenixcontact.com/us/products/3035975>



4 mm test adapter, for terminal blocks with 5.2 mm and 6.2 mm pitch

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## PAI-4-FIX-5/6 OG - Test adapter

3035974

<https://www.phoenixcontact.com/us/products/3035974>



4 mm test adapter, for terminal blocks with 5.2 mm and 6.2 mm pitch

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## PAI-4-FIX-5/6 YE - Test adapter

3035977

<https://www.phoenixcontact.com/us/products/3035977>



4 mm test adapter, for terminal blocks with 5.2 mm and 6.2 mm pitch



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## PAI-4-FIX-5/6 RD - Test adapter

3035976

<https://www.phoenixcontact.com/us/products/3035976>



4 mm test adapter, for terminal blocks with 5.2 mm and 6.2 mm pitch

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## PAI-4-FIX-5/6 GN - Test adapter

3035978

<https://www.phoenixcontact.com/us/products/3035978>



4 mm test adapter, for terminal blocks with 5.2 mm and 6.2 mm pitch

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## PAI-4-FIX-5/6 BK - Test adapter

3035980

<https://www.phoenixcontact.com/us/products/3035980>



4 mm test adapter, for terminal blocks with 5.2 mm and 6.2 mm pitch

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## PAI-4-FIX-5/6 GY - Test adapter

3035982

<https://www.phoenixcontact.com/us/products/3035982>



4 mm test adapter, for terminal blocks with 5.2 mm and 6.2 mm pitch

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## PAI-4-FIX-5/6 VT - Test adapter

3035979

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4 mm test adapter, for terminal blocks with 5.2 mm and 6.2 mm pitch

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## PAI-4-FIX-5/6 BN - Test adapter

3035981

<https://www.phoenixcontact.com/us/products/3035981>



4 mm test adapter, for terminal blocks with 5.2 mm and 6.2 mm pitch

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## PAI-4-FIX-5/6 WH - Test adapter

3035983

<https://www.phoenixcontact.com/us/products/3035983>



4 mm test adapter, for terminal blocks with 5.2 mm and 6.2 mm pitch

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## CLIPFIX 35 - End clamp

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

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