

# PTFIX 2X1,5 VT - Monoblock

1045940

<https://www.phoenixcontact.com/us/products/1045940>

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Monoblock, Basic terminal block, nom. voltage: 450 V, nominal current: 17.5 A, number of connections: 2, connection method: Push-in connection, cross section: 0.14 mm<sup>2</sup> - 2.5 mm<sup>2</sup>, mounting type: for snapping onto a DIN rail adapter, Direct mounting with flange, Free-hanging, color: violet

## Commercial data

Item number	1045940
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE09
Product key	BEA111
Catalog page	Page 429 (C-1-2019)
GTIN	4055626639482
Weight per piece (including packing)	1.92 g
Weight per piece (excluding packing)	1.888 g
Customs tariff number	85369010
Country of origin	PL

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## Technical data

### Product properties

Product type	Distributor terminal block
Number of connections	2
Number of rows	1
Potentials	1

### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

Rated surge voltage	6 kV
Maximum power dissipation for nominal condition	0.56 W

### Connection data

Number of connections per level	2
Nominal cross section	1.5 mm <sup>2</sup>
Rated cross section AWG	14
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A1 / B1
Connection in acc. with standard	IEC 60998-2-2
Conductor cross section rigid	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Cross section AWG	26 ... 14 (converted acc. to IEC)
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	26 ... 16 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Nominal current	17.5 A
Maximum load current	21 A (with a 2.5 mm <sup>2</sup> conductor cross section)
Maximum total current	21 A
Nominal voltage	450 V

### Connection cross sections directly pluggable

Conductor cross section rigid	0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, rigid [AWG]	26 ... 14 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.34 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.34 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>

### Dimensions

Width	4.2 mm
Height	21.6 mm
Depth	17.7 mm

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## Material specifications

Color	violet
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	7.3 kV
Result	Test passed

### Temperature-rise test

Requirement temperature-rise test	Increase in temperature $\leq$ 45 K
Result	Test passed
Short-time withstand current 1.5 mm <sup>2</sup>	0.18 kA
Short-time withstand current 2.5 mm <sup>2</sup>	0.3 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	1.89 kV
Result	Test passed

## Mechanical properties

### Mechanical data

Open side panel	No
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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/NS 15
Test force setpoint	1 N
Result	Test passed

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Note	When aligning several blocks, the foot elements should be placed in a way that maximum 2 blocks are free-hanging in between. Flange elements should be placed after every 9 blocks and with engagement pins after every 12 blocks.
	Depending on the application case and mechanical load, other arrangements of the mounting accessory can also be chosen.
	One PTFIX 1,5-NS35 DIN rail adapter is suitable for a maximum of 13 blocks.

## 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
	1.5 mm <sup>2</sup> / 0.4 kg
	2.5 mm <sup>2</sup> / 0.7 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

Specification	DIN EN 50155 (VDE 0115-200):2018-05
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 ... 110 °C (Operating temperature range incl. self-heating; for max. short-term operating temperature, see RTI Elec.)
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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 60998-2-2
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## Mounting

Mounting type	for snapping onto a DIN rail adapter
	Direct mounting with flange
	Free-hanging

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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/1045940>

DNV Approval ID: TAE00002TT-04				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
	500 V	24 A	-	-

CSA Approval ID: 13631				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
Use group B	300 V	20 A	26 - 12	-
Use group C	150 V	20 A	26 - 12	-
Use group D	300 V	10 A	26 - 12	-

CB IECEE CB Scheme Approval ID: DE1-63083				
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EAC Approval ID: RU C-DE.BL08.B.00644				
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LR Approval ID: LR2002627TA				
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BV Approval ID: 59146/A0 BV				
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VDE Zeichengenehmigung Approval ID: 40047798				
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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	300 V	20 A	26 - 12	-
Use group C				

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	150 V	20 A	26 - 12	-
Use group F				
	500 V	20 A	26 - 12	-
Use group D				
	300 V	10 A	26 - 12	-

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## Classifications

### ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250118

### ETIM

ETIM 9.0	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 2-4 - Plug-in bridge

3030116

<https://www.phoenixcontact.com/us/products/3030116>



Plug-in bridge, pitch: 4.2 mm, number of positions: 2, color: red

 Max. current carrying capacity: 17.5 A

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### FBS 2-4 GY - Plug-in bridge

3030118

<https://www.phoenixcontact.com/us/products/3030118>



Plug-in bridge, pitch: 4.2 mm, number of positions: 2, color: gray

 Max. current carrying capacity: 17.5 A

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<https://www.phoenixcontact.com/us/products/1045940>




## FBS 2-4 BU - Plug-in bridge

3030117

<https://www.phoenixcontact.com/us/products/3030117>



Plug-in bridge, pitch: 4.2 mm, number of positions: 2, color: blue

 Max. current carrying capacity: 17.5 A

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## PTFIX 1,5-F - Flange

1049503

<https://www.phoenixcontact.com/us/products/1049503>



Flange, with screw-on fixing, mounting type: Screw mounting, color: gray

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## PTFIX 1,5-NS15A - DIN rail adapter

1049500

<https://www.phoenixcontact.com/us/products/1049500>

DIN rail adapter, depth: 10.85 mm, width: 8 mm, height: 21.6 mm



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## PTFIX 1,5-NS35 - DIN rail adapter

1049497

<https://www.phoenixcontact.com/us/products/1049497>

DIN rail adapter, depth: 11 mm, width: 21.6 mm, height: 58.1 mm



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## PTFIX 1,5-NS35AD - DIN rail adapter

1049498

<https://www.phoenixcontact.com/us/products/1049498>

DIN rail adapter, for NS 35 for accommodating two rows of PTFIX 1,5 distribution blocks, depth: 10.9 mm, width: 8 mm, height: 44.4 mm



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## PTFIX 1,5-RZF - Mounting adapter

1050613

<https://www.phoenixcontact.com/us/products/1050613>

Adapter for direct mounting



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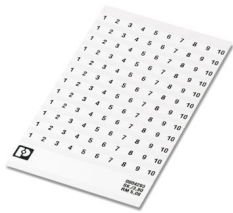
<https://www.phoenixcontact.com/us/products/1045940>



## SK 3,8 REEL P4,15 WH CUS - Marker card

0825990

<https://www.phoenixcontact.com/us/products/0825990>



Marker card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 4.15 mm, lettering field size: continuous x 3.8 mm

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## TML (EX3,8)R - Marker strip

0801837

<https://www.phoenixcontact.com/us/products/0801837>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, lettering field size: continuous x 3.8 mm, Number of individual labels: 12

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## TML (104X3,8)R - Marker strip

0801833

<https://www.phoenixcontact.com/us/products/0801833>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 104 mm, lettering field size: 104 x 3.8 mm, Number of individual labels: 2500

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## TML (104X2,8)R - Marker strip

0801832

<https://www.phoenixcontact.com/us/products/0801832>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 104 mm, lettering field size: 104 x 2.8 mm, Number of individual labels: 2500

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## TML (EX2,8)R - Marker strip

0801836

<https://www.phoenixcontact.com/us/products/0801836>



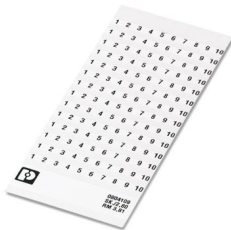
Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 30000 mm, lettering field size: continuous x 2.8 mm, Number of individual labels: 14

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## SK 2,8 REEL P4,15 WH CUS - Marker card

8199987

<https://www.phoenixcontact.com/us/products/8199987>



Marker card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 4.15 mm, lettering field size: continuous x 2.8 mm

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## US-TML (104X3,8) - Marker for terminal blocks

0830768

<https://www.phoenixcontact.com/us/products/0830768>



Marker for terminal blocks, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 104 x 3.8 mm, Number of individual labels: 22

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## US-TML (104X2,8) - Marker for terminal blocks

0830767

<https://www.phoenixcontact.com/us/products/0830767>



Marker for terminal blocks, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 104 x 2.8 mm, Number of individual labels: 26

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## SK U/3,8 WH:UNBEDRUCKT - Marker card

0803906

<https://www.phoenixcontact.com/us/products/0803906>



Marker card, Din A4, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 3.8 mm, Number of individual labels: 1440

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## SK U/2,8 WH:UNBEDRUCKT - Marker card

0803883

<https://www.phoenixcontact.com/us/products/0803883>



Marker card, Din A4, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 2.8 mm, Number of individual labels: 3600

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## MM-TML (EX3,8)R C1 WH/BK - Label

1092026

<https://www.phoenixcontact.com/us/products/1092026>



Label, Roll, white/black, unlabeled, can be labeled with: THERMOFOX, THERMOMARK GO, THERMOMARK GO.K, mounting type: adhesive, lettering field size: continuous x 2.8 mm, Number of individual labels: 1

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## ISH 1,5/0,2 - Insulating sleeve

3206131

<https://www.phoenixcontact.com/us/products/3206131>



Insulating sleeve, color: white

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<https://www.phoenixcontact.com/us/products/1045940>



## ISH 1,5/0,5 - Insulating sleeve

3031034

<https://www.phoenixcontact.com/us/products/3031034>



Insulating sleeve, color: gray

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## MPS-MT 1-S4-B RD - Accessories

1982800

<https://www.phoenixcontact.com/us/products/1982800>



Test plug terminal block, Accessories

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