

# PTRV 8-FE /YEBK - Potential distributors



3270148

<https://www.phoenixcontact.com/sg/products/3270148>

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Potential distributors, nom. voltage: 250 V, nominal current: 17.5 A, connection method: Push-in connection, 1st, 2nd, 3rd, 4th, 5th, 6th, 7th and 8th level, Rated cross section: 1.5 mm<sup>2</sup>, cross section: 0.14 mm<sup>2</sup> - 2.5 mm<sup>2</sup>, mounting: NS 35/7,5, NS 35/15, color: gray, color of connection elements: yellow, black

## Your advantages

- Potential distributor in black-yellow version for marking the functional ground
- Tool-free wiring in a confined space thanks to compact size
- Individual color assignment of cable and terminal point to ensure error-free, safe operation
- High contact quality thanks to push-in technology as a replacement for Wire-Wrap®, TERMI-POINT®, etc.
- The 2.3 mm test pick-off enables testing between the conductors with commercially available test probes

## Commercial data

Item number	3270148
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	*****
Product key	BE6211
Catalog page	Page 51 (C-1-2019)
GTIN	4046356796217
Weight per piece (including packing)	33.36 g
Weight per piece (excluding packing)	33.36 g
Customs tariff number	85369010
Country of origin	PL

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## Technical data

### Product properties

Product type	Potential distributor
Number of positions	2
Number of connections	32
Number of rows	8
Potentials	1

### Data management status

Article revision	02
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### Insulation characteristics

Overvoltage category	III
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### Electrical properties

Rated surge voltage	4 kV
Maximum power dissipation for nominal condition	0.56 W

### Connection data

Number of connections per level	4
Nominal cross section	1.5 mm <sup>2</sup>

#### 1st, 2nd, 3rd, 4th, 5th, 6th, 7th and 8th level

Stripping length	8 mm ... 10 mm
Connection in acc. with standard	IEC 60947-7-1
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	20 A (in case of a 2.5 mm <sup>2</sup> conductor cross section, the maximum load current must not be exceeded by the total current of all connected conductors.)
Nominal voltage	250 V
Nominal cross section	1.5 mm <sup>2</sup>

#### 1st, 2nd, 3rd, 4th, 5th, 6th, 7th and 8th level 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]	20 ... 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

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Width	8.3 mm
Height	100 mm
Depth on NS 35/7,5	87.5 mm
Depth on NS 35/15	95 mm

## Material specifications

Color	gray (RAL 7042)
Color of connection elements	yellow (4x top)
	black (4x bottom)
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))	125 °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)	27,5 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	4.8 kV
Result	Test passed

### Temperature-rise test

Requirement temperature-rise test	Increase in temperature $\leq$ 45 K
Result	Test passed
Short-time withstand current 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	1.5 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
Test force setpoint	1 N
Result	Test passed

### 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):2008-03
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):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.)
Result	Test passed

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## 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

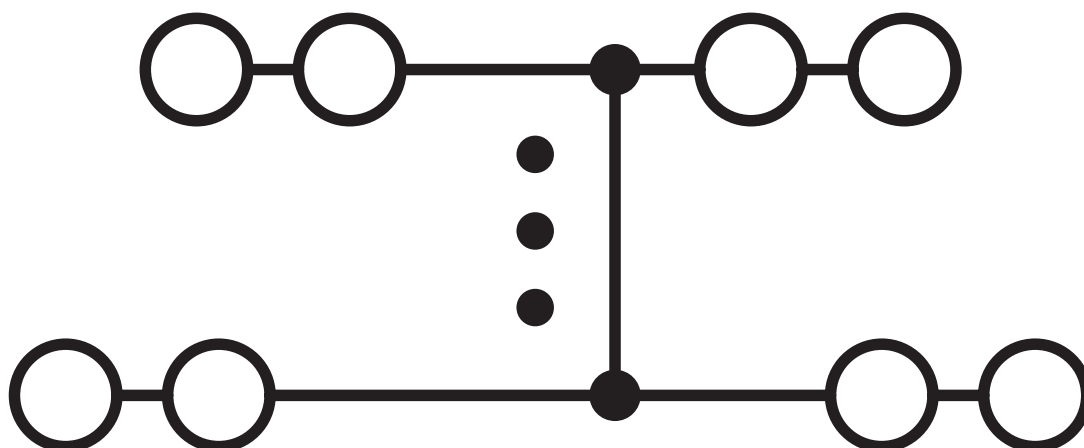
Connection in acc. with standard	IEC 60947-7-1
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## Mounting

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

Drawings

Circuit diagram



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## Approvals


To download certificates, visit the product detail page: <https://www.phoenixcontact.com/sg/products/3270148>


 <b>CSA</b> Approval ID: 2030668				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
Use group B	300 V	10 A	26 - 14	-
Use group D	300 V	10 A	26 - 14	-

 <b>IECEE CB Scheme</b> Approval ID: NL-58817				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
	250 V	8 A	-	-

 <b>EAC</b> Approval ID: RU C-DE.BL08.B.00682				
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 <b>cULus Recognized</b> Approval ID: E60425				
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 <b>KEMA-KEUR</b> Approval ID: 71-102890				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
Only flexible conductors	250 V	8 A	-	0.14 - 1.5
Only rigid conductors	250 V	8 A	-	0.14 - 2.5

 <b>cULus Recognized</b> Approval ID: E60425				
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<b>DNV</b> Approval ID: TAE000016Y				
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 <b>cULus Recognized</b> Approval ID: E60425				
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## Classifications

### ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250105

### ETIM

ETIM 9.0	EC000897
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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
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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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