

Plug - PP-H 2,5/1-M

3210091

<https://www.phoenixcontact.com/pc/products/3210091>



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Plug, nom. voltage: 500 V, nominal current: 24 A, connection method: Push-in connection, 1 level, Rated cross section: 2.5 mm², cross section: 0.14 mm² - 4 mm², color: gray

Product Description

Connector element center, left housing with engagement pin, right opened without cover

Your advantages

- Large-surface labeling option
- The Push-in technology COMBI plugs for self-assembly provide solutions that users can implement themselves
- Tested for railway applications

Plug - PP-H 2,5/1-M

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Commercial Data

| | |
|--------------------------------------|---------------------|
| Item number | 3210091 |
| Packing unit | 50 pc |
| Minimum order quantity | 1 pc |
| Product Key | BE2244 |
| Catalog Page | Page 299 (C-1-2019) |
| GTIN | 4046356333504 |
| Weight per Piece (including packing) | 3.56 g |
| Weight per Piece (excluding packing) | 3.5 g |
| Customs tariff number | 85366990 |
| Country of origin | PL |

Plug - PP-H 2,5/1-M

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Technical Data

Product properties

| | |
|-----------------------|-------------------|
| Product type | Terminal plug |
| Number of positions | 1 |
| Pitch | 5.2 mm |
| Area of application | Railway industry |
| | Machine building |
| | Plant engineering |
| Number of connections | 1 |
| 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 | 0.77 W |

Connection data

| | |
|---------------------------------|---------------------|
| Number of connections per level | 1 |
| Nominal cross section | 2.5 mm ² |

1 level

| | |
|---|---|
| Stripping length | 8 mm ... 10 mm |
| Internal cylindrical gage | A3 |
| Conductor cross section solid | 0.14 mm ² ... 4 mm ² |
| Cross section AWG | 26 ... 12 |
| Conductor cross section flexible | 0.14 mm ² ... 2.5 mm ² |
| Conductor cross section, flexible [AWG] | 26 ... 14 |
| Flexible conductor cross section flexible (ferrule, w/o plastic sleeve) | 0.14 mm ² ... 2.5 mm ² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.14 mm ² ... 2.5 mm ² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm ² |
| Nominal current | 24 A |
| Maximum load current | 24 A (with 4 mm ² conductor cross section) |
| Nominal voltage | 500 V |
| Nominal cross section | 2.5 mm ² |

1 level Connection cross sections directly pluggable

| | |
|---|--|
| Conductor cross section solid | 0.34 mm ² ... 4 mm ² |
| Flexible conductor cross section flexible (ferrule, w/o plastic sleeve) | 0.34 mm ² ... 2.5 mm ² |

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| | |
|--|--|
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.34 mm ² ... 2.5 mm ² |
|--|--|

Dimensions

| | |
|--------|---------|
| Width | 5.2 mm |
| Height | 40.2 mm |
| Length | 15.8 mm |
| Pitch | 5.2 mm |

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 |

Mechanical properties

Mechanical data

| | |
|-----------------|----|
| Open side panel | No |
|-----------------|----|

Environmental and real-life conditions

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 61984 |
|----------------------------------|-----------|

Mounting

| | |
|-----------------------|--|
| Assembly instructions | Use of a parallel pressing tool is recommended for easy latching |
|-----------------------|--|

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of the COMBI connector and coupling elements for self-assembly

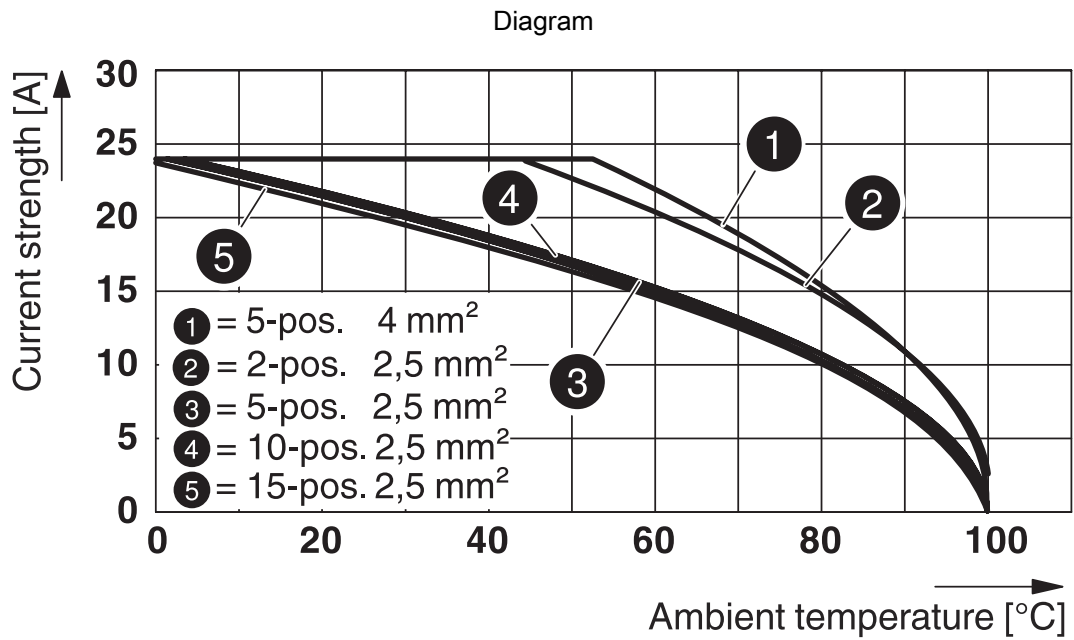
Plug - PP-H 2,5/1-M

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Drawings

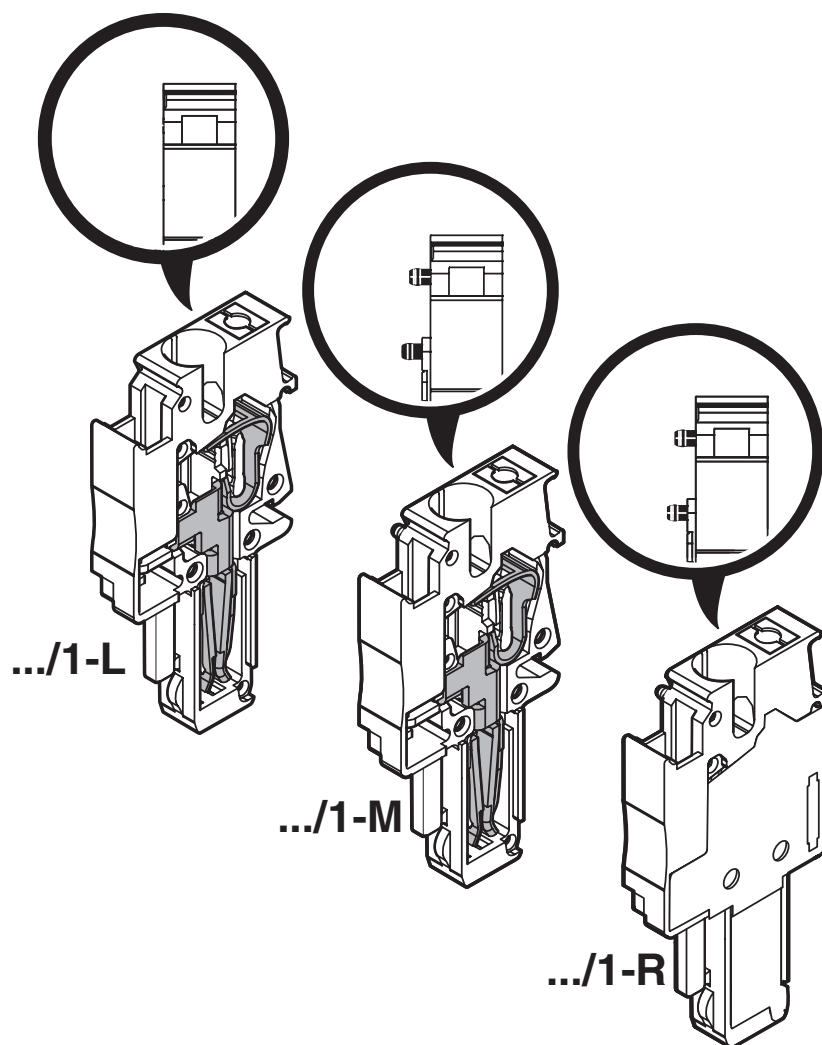


Plug - PP-H 2,5/1-M

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Schematic diagram



Plug - PP-H 2,5/1-M

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Circuit diagram



Plug - PP-H 2,5/1-M



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Approvals

DNV

Approval ID: TAE00003JE



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 | 300 V | 20 A | 26 - 12 | - |



EAC

Approval ID: RU C-DE.BL08.B.00511



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 | 300 V | 20 A | 26 - 12 | - |
| Use group D | 600 V | 5 A | 26 - 12 | - |



LR

Approval ID: 12/20038 (E3)



NK

Approval ID: 14ME0912



RS

Approval ID: 17.00013.272



BV

Approval ID: 25278/B0 BV

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | | | - | - |

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ABS

Approval ID: 21-2192245-PDA



LR

Approval ID: 14/20056

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Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-9.0 | 27141151 |
| ECLASS-10.0.1 | 27141151 |
| ECLASS-11.0 | 27141151 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002021 |
|----------|----------|

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

Actuation tool

Actuation tool - ST-BW - 1207608

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

Actuation tool, for all 2.5 mm² - 4.0 mm² spring-cages



Flange cover

Flange cover - DF-SP-H 2,5 - 3209824

<https://www.phoenixcontact.com/pc/products/3209824>

Flange cover, length: 35.8 mm, width: 4.5 mm, height: 24.7 mm, color: gray



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Flange cover

Flange cover - DFS-SP-H 2,5 - 3061431

<https://www.phoenixcontact.com/pc/products/3061431>



Flange cover, length: 35.8 mm, width: 4.5 mm, height: 24.7 mm, color: gray

Zack Marker strip, flat

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

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



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

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Zack Marker strip, flat

Zack Marker strip, flat - ZBF 5 CUS - 0825025

<https://www.phoenixcontact.com/pc/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

Zack Marker strip, flat

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

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

Plug - PP-H 2,5/1-M

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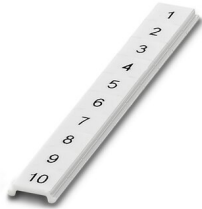
<https://www.phoenixcontact.com/pc/products/3210091>



Zack Marker strip, flat

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

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

Zack Marker strip, flat

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

<https://www.phoenixcontact.com/pc/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: 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

Plug - PP-H 2,5/1-M

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<https://www.phoenixcontact.com/pc/products/3210091>



Zack Marker strip, flat

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

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

Latching

Latching - PR - 3040559

<https://www.phoenixcontact.com/pc/products/3040559>



Latching, length: 29.8 mm, width: 4.4 mm, number of positions: 1, color: orange

Plug - PP-H 2,5/1-M

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<https://www.phoenixcontact.com/pc/products/3210091>



Latching

Latching - PR/2 - 3040630

<https://www.phoenixcontact.com/pc/products/3040630>



Latching, length: 29.8 mm, width: 10 mm, number of positions: 2, color: orange

Latching

Latching - PRT/2 - 3040631

<https://www.phoenixcontact.com/pc/products/3040631>



Latching, can only be released using a screwdriver, length: 23.2 mm, width: 9 mm, number of positions: 2, color: orange

Plug - PP-H 2,5/1-M

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<https://www.phoenixcontact.com/pc/products/3210091>



Latching

Latching - PRZ - 3040614

<https://www.phoenixcontact.com/pc/products/3040614>



Latching, color: orange

Strain relief

Strain relief - PZ/2 - 3040627

<https://www.phoenixcontact.com/pc/products/3040627>



Strain relief, length: 48.7 mm, width: 9.3 mm, number of positions: 2, color: black

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Strain relief

Strain relief - PZ/4 - 3040643

<https://www.phoenixcontact.com/pc/products/3040643>

Strain relief, length: 48.7 mm, width: 19.6 mm, number of positions: 4, color: black



Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663

<https://www.phoenixcontact.com/pc/products/0201663>

Insulating sleeve, color: white



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Insulating sleeve

Insulating sleeve - MPS-IH RD - 0201676

<https://www.phoenixcontact.com/pc/products/0201676>

Insulating sleeve, color: red

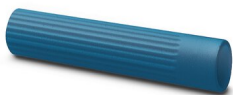


Insulating sleeve

Insulating sleeve - MPS-IH BU - 0201689

<https://www.phoenixcontact.com/pc/products/0201689>

Insulating sleeve, color: blue



Plug - PP-H 2,5/1-M

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<https://www.phoenixcontact.com/pc/products/3210091>



Insulating sleeve

Insulating sleeve - MPS-IH YE - 0201692

<https://www.phoenixcontact.com/pc/products/0201692>

Insulating sleeve, color: yellow



Insulating sleeve

Insulating sleeve - MPS-IH GN - 0201702

<https://www.phoenixcontact.com/pc/products/0201702>

Insulating sleeve, color: green



Plug - PP-H 2,5/1-M

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<https://www.phoenixcontact.com/pc/products/3210091>



Insulating sleeve

Insulating sleeve - MPS-IH GY - 0201728

<https://www.phoenixcontact.com/pc/products/0201728>

Insulating sleeve, color: gray



Insulating sleeve

Insulating sleeve - MPS-IH BK - 0201731

<https://www.phoenixcontact.com/pc/products/0201731>

Insulating sleeve, color: black



Plug - PP-H 2,5/1-M

3210091

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Insulating sleeve

Insulating sleeve - ISH 2,5/0,2 - 3002843

<https://www.phoenixcontact.com/pc/products/3002843>



Insulating sleeve, color: white

Insulating sleeve

Insulating sleeve - ISH 2,5/0,5 - 3002856

<https://www.phoenixcontact.com/pc/products/3002856>



Insulating sleeve, color: gray

Plug - PP-H 2,5/1-M

3210091

<https://www.phoenixcontact.com/pc/products/3210091>



Insulating sleeve

Insulating sleeve - ISH 2,5/1,0 - 3002869

<https://www.phoenixcontact.com/pc/products/3002869>



Insulating sleeve, color: black

Cable housing

Cable housing - PH 2,5/ 2 - 3209691

<https://www.phoenixcontact.com/pc/products/3209691>



Cable housing, pitch: 10.4 mm, length: 19.9 mm, width: 10.4 mm, height: 36.8 mm, number of positions: 2, color: gray

Plug - PP-H 2,5/1-M

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Cable housing

Cable housing - PH 2,5/ 3 - 3209701

<https://www.phoenixcontact.com/pc/products/3209701>



Cable housing, pitch: 15.6 mm, length: 19.9 mm, width: 15.6 mm, height: 36.8 mm, number of positions: 3, color: gray

Cable housing

Cable housing - PH 2,5/ 4 - 3209714

<https://www.phoenixcontact.com/pc/products/3209714>



Cable housing, pitch: 20.8 mm, length: 19.9 mm, width: 20.8 mm, height: 36.8 mm, number of positions: 4, color: gray

Plug - PP-H 2,5/1-M

3210091

<https://www.phoenixcontact.com/pc/products/3210091>



Cable housing

Cable housing - PH 2,5/ 5 - 3209727

<https://www.phoenixcontact.com/pc/products/3209727>



Cable housing, pitch: 26 mm, length: 19.9 mm, width: 26 mm, height: 36.8 mm, number of positions: 5, color: gray

Cable housing

Cable housing - PH 2,5/ 6 - 3209730

<https://www.phoenixcontact.com/pc/products/3209730>



Cable housing, pitch: 31.2 mm, length: 19.9 mm, width: 31.2 mm, height: 36.8 mm, number of positions: 6, color: gray

Plug - PP-H 2,5/1-M

3210091

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Cable housing

Cable housing - PH 2,5/ 7 - 3209743

<https://www.phoenixcontact.com/pc/products/3209743>



Cable housing, pitch: 36.4 mm, length: 19.9 mm, width: 36.4 mm, height: 36.8 mm, number of positions: 7, color: gray

Cable housing

Cable housing - PH 2,5/ 8 - 3209756

<https://www.phoenixcontact.com/pc/products/3209756>



Cable housing, pitch: 41.6 mm, length: 19.9 mm, width: 41.6 mm, height: 36.8 mm, number of positions: 8, color: gray

Plug - PP-H 2,5/1-M

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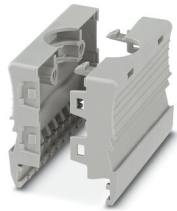
<https://www.phoenixcontact.com/pc/products/3210091>



Cable housing

Cable housing - PH 2,5/ 9 - 3209507

<https://www.phoenixcontact.com/pc/products/3209507>



Cable housing, pitch: 46.8 mm, length: 19.9 mm, width: 46.8 mm, height: 36.8 mm, number of positions: 9, color: gray

Cable housing

Cable housing - PH 2,5/10 - 3209769

<https://www.phoenixcontact.com/pc/products/3209769>



Cable housing, pitch: 52 mm, length: 19.9 mm, width: 52 mm, height: 36.8 mm, number of positions: 10, color: gray

Plug - PP-H 2,5/1-M

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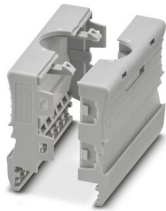
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Cable housing

Cable housing - PH 2,5/11 - 3209772

<https://www.phoenixcontact.com/pc/products/3209772>

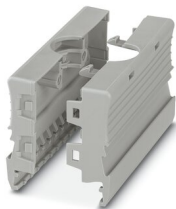


Cable housing, pitch: 57.2 mm, length: 19.9 mm, width: 57.2 mm, height: 36.8 mm, number of positions: 11, color: gray

Cable housing

Cable housing - PH 2,5/12 - 3209785

<https://www.phoenixcontact.com/pc/products/3209785>



Cable housing, pitch: 62.4 mm, length: 19.9 mm, width: 62.4 mm, height: 36.8 mm, number of positions: 12, color: gray

Plug - PP-H 2,5/1-M

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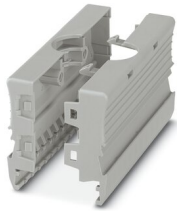
<https://www.phoenixcontact.com/pc/products/3210091>



Cable housing

Cable housing - PH 2,5/13 - 3209798

<https://www.phoenixcontact.com/pc/products/3209798>

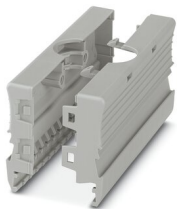


Cable housing, pitch: 67.6 mm, length: 19.9 mm, width: 67.6 mm, height: 36.8 mm, number of positions: 13, color: gray

Cable housing

Cable housing - PH 2,5/14 - 3209808

<https://www.phoenixcontact.com/pc/products/3209808>



Cable housing, pitch: 72.8 mm, length: 19.9 mm, width: 72.8 mm, height: 36.8 mm, number of positions: 14, color: gray

Plug - PP-H 2,5/1-M

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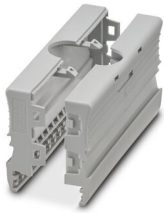
<https://www.phoenixcontact.com/pc/products/3210091>



Cable housing

Cable housing - PH 2,5/15 - 3209811

<https://www.phoenixcontact.com/pc/products/3209811>



Cable housing, pitch: 78 mm, length: 19.9 mm, width: 78 mm, height: 36.8 mm, number of positions: 15, color: gray

Marker for terminal blocks

Marker for terminal blocks - UC-TMF 5 - 0818153

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

Plug - PP-H 2,5/1-M

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Marker for terminal blocks

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

<https://www.phoenixcontact.com/pc/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

Marker for terminal blocks

Marker for terminal blocks - UCT-TMF 5 - 0828744

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

Plug - PP-H 2,5/1-M

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Marker for terminal blocks

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

<https://www.phoenixcontact.com/pc/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

Test plugs

Test plugs - MPS-MT - 0201744

<https://www.phoenixcontact.com/pc/products/0201744>



Test plugs, with solder connection up to 1 mm² conductor cross section, color: gray

Plug - PP-H 2,5/1-M

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Shield connection clamp

Shield connection clamp - PSH 3- 6 - 3040591

<https://www.phoenixcontact.com/pc/products/3040591>



Shield connection clamp, color: black

Shield connection clamp

Shield connection clamp - PSH 5-10 - 3040601

<https://www.phoenixcontact.com/pc/products/3040601>



Shield connection clamp, color: black

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