

# Data sheet | Item number: 745-828

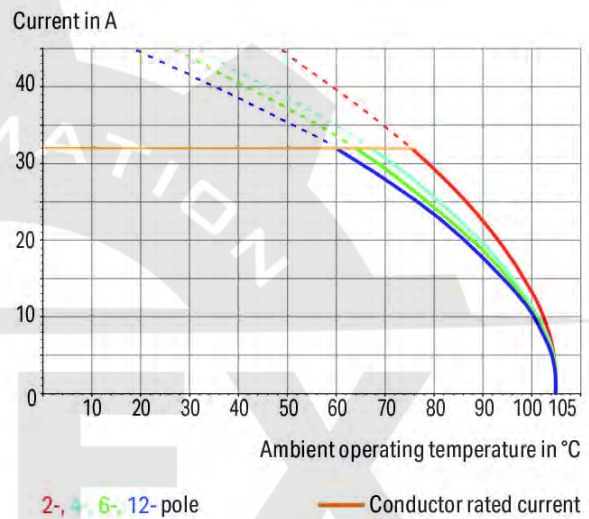
Stackable PCB terminal block; 4 mm<sup>2</sup>; Pin spacing 10 mm; 1-pole; CAGE CLAMP®; commoning option; 4,00 mm<sup>2</sup>; light green



745-828



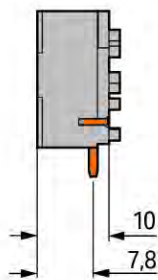
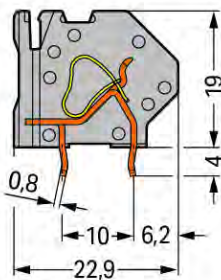
**Current-Carrying Capacity Curve**  
Pin spacing: 5 mm / Conductor cross-section: 4 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1



RoHS  
Compliant

BOMcheck.net

Color:



## Item description

- Modular PCB terminal blocks with screwdriver-actuated CAGE CLAMP® for custom PCB terminal strip assemblies
- Versions with Ex approval
- Common and distribute potentials via comb-style jumper bars
- Double solder pins for high mechanical stability
- Integrated testing tap
- Marker slot for Mini-WSB markers

## Data

### Electrical data

#### Ratings per IEC/EN 60664-1

|                                 |        |
|---------------------------------|--------|
| Rated voltage (III / 3)         | 630 V  |
| Rated impulse voltage (III / 3) | 8 kV   |
| Rated voltage (III / 2)         | 1000 V |
| Rated impulse voltage (III / 2) | 8 kV   |
| Rated voltage (II / 2)          | 1000 V |
| Rated impulse voltage (II / 2)  | 8 kV   |
| Rated current                   | 32 A   |

#### Approvals per UL 1059

|                                |       |
|--------------------------------|-------|
| Rated voltage UL (Use Group B) | 300 V |
| Rated current UL (Use Group B) | 20 A  |
| Rated voltage UL (Use Group C) | 150 V |
| Rated current UL (Use Group C) | 20 A  |
| Rated voltage UL (Use Group D) | 300 V |

#### Approvals per CSA

|                                 |       |
|---------------------------------|-------|
| Rated voltage CSA (Use Group B) | 300 V |
| Rated current CSA (Use Group B) | 20 A  |
| Rated voltage CSA (Use Group C) | 150 V |
| Rated current CSA (Use Group C) | 20 A  |
| Rated voltage CSA (Use Group D) | 300 V |
| Rated current CSA (Use Group D) | 10 A  |

## Connection data

|                       |                |
|-----------------------|----------------|
| Connection technology | CAGE CLAMP®    |
| Actuation type        | Operating tool |

|                                                             |      |                        |           |
|-------------------------------------------------------------|------|------------------------|-----------|
| Solid conductor                                             | 0.08 | 4 mm <sup>2</sup> / 28 | 12 AWG    |
| Fine-stranded conductor                                     | 0.08 | 4 mm <sup>2</sup> / 28 | 12 AWG    |
| Fine-stranded conductor with ferrule with plastic collar    | 0.25 | 2.5 mm <sup>2</sup>    |           |
| Fine-stranded conductor with ferrule without plastic collar | 0.25 | 2.5 mm <sup>2</sup>    |           |
| Strip length                                                | 8    | 9 mm / 0.31            | 0.35 inch |
| Conductor entry angle to the PCB                            | 45°  |                        |           |
| Total number of connection points                           | 1    |                        |           |
| Total number of potentials                                  | 1    |                        |           |
| Number of connection types                                  | 1    |                        |           |
| Number of levels                                            | 1    |                        |           |
| Number of jumper slots                                      | 1    |                        |           |
| No. of poles                                                | 1    |                        |           |

### Geometrical Data

|                                   |                                |
|-----------------------------------|--------------------------------|
| Pin spacing                       | 10 mm / 0.394 inch             |
| Width                             | 11.5 mm / 0.453 inch           |
| Height                            | 23 mm / 0.906 inch             |
| Height from the surface           | 19 mm / 0.748 inch             |
| Depth                             | 22.9 mm / 0.902 inch           |
| Solder pin length                 | 4 mm                           |
| Solder pin dimensions             | 0.8 x 1.2 mm                   |
| Drilled hole diameter (tolerance) | 1.5 <sup>(- ... +0.1)</sup> mm |

### PCB contact

|                                     |                                    |
|-------------------------------------|------------------------------------|
| PCB contact                         | THT                                |
| Solder pin arrangement              | within the terminal block, in line |
| Number of solder pins per potential | 2                                  |

### Material Data

|                             |                                        |
|-----------------------------|----------------------------------------|
| Color                       | light green                            |
| Material group              | I                                      |
| Insulating material         | Polyamide 66 (PA 66)                   |
| Flammability class per UL94 | V0                                     |
| Clamping spring material    | Chrome nickel spring steel (CrNi)      |
| Contact material            | Electrolytic copper (E <sub>Cu</sub> ) |
| Contact plating             | tin-plated                             |
| Fire load                   | 0.061 MJ                               |
| Weight                      | 2.953 g                                |

## Environmental Requirements

|                         |             |
|-------------------------|-------------|
| Limit temperature range | -60 +105 °C |
|-------------------------|-------------|

## Commercial data

|                    |                     |
|--------------------|---------------------|
| Product Group      | 4 (Printed Circuit) |
| Country of origin  | PL                  |
| GTIN               | 4044918937269       |
| Customs Tariff No. | 85369010000         |

## Approvals / Certificates

### Radio-Approvals

| Logo                                                                               | Approval                        | Additional Approval Text | Certificate name |
|------------------------------------------------------------------------------------|---------------------------------|--------------------------|------------------|
|    | CCA<br>DEKRA Certification B.V. | EN 60947                 | NTR NL-7095      |
|  | CCA<br>DEKRA Certification B.V. | EN 60947                 | 2160584.15       |

### Country specific Approvals

| Logo                                                                               | Approval                        | Additional Approval Text | Certificate name |
|------------------------------------------------------------------------------------|---------------------------------|--------------------------|------------------|
|  | CCA<br>DEKRA Certification B.V. | EN 60947                 | NTR NL-7095      |
|  | CCA<br>DEKRA Certification B.V. | EN 60947                 | 2160584.15       |
|  | CSA<br>DEKRA Certification B.V. | C22.2 No. 158            | 1604421          |

### Other Approvals

| Logo                                                                               | Approval                             | Additional Approval Text | Certificate name |
|------------------------------------------------------------------------------------|--------------------------------------|--------------------------|------------------|
|  | UR<br>Underwriters Laboratories Inc. | UL 1059                  | E45172 sec6      |

## UL-Approvals

| Logo                                                                             | Approval                                    | Additional Approval Text | Certificate name |
|----------------------------------------------------------------------------------|---------------------------------------------|--------------------------|------------------|
|  | <b>UR</b><br>Underwriters Laboratories Inc. | UL 1059                  | E45172<br>sec6   |

## Compatible products

## tools

|                                                                                    |                                                                                                                  |         |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|---------|
|    | <b>Item no.: 210-657</b><br>Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short         | 210-657 |
|   | <b>Item no.: 210-658</b><br>Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short | 210-658 |
|  | <b>Item no.: 210-720</b><br>Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft                | 210-720 |

## Jumper

|                                                                                    |                                                                |         |
|------------------------------------------------------------------------------------|----------------------------------------------------------------|---------|
|  | <b>Item no.: 745-280</b><br>Comb-style jumper bar; 10-way      | 745-280 |
|  | <b>Item no.: 745-281</b><br>Comb-style jumper bar; from 1 to 3 | 745-281 |
|  | <b>Item no.: 745-282</b><br>Comb-style jumper bar; 2-way       | 745-282 |
|  | <b>Item no.: 745-283</b><br>Comb-style jumper bar; 3-way       | 745-283 |
|  | <b>Item no.: 745-284</b><br>Comb-style jumper bar; 4-way       | 745-284 |
|  | <b>Item no.: 745-285</b><br>Comb-style jumper bar; 5-way       | 745-285 |

## Marking accessories

|                                                                                    |                                                                                                                                  |                      |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------|
|  | <b>Item no.: 2009-115</b><br>WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; white          | 2009-115             |
|  | <b>Item no.: 2009-115/000-002</b><br>WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; yellow | 2009-115<br>/000-002 |

|                                                                                    |                                                                                                                                       |          |          |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------|----------|
|    | <b>Item no.: 2009-115/000-006</b><br>WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; blue        | /000-006 | 2009-115 |
|    | <b>Item no.: 2009-115/000-007</b><br>WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; gray        | /000-007 | 2009-115 |
|    | <b>Item no.: 2009-115/000-012</b><br>WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; orange      | /000-012 | 2009-115 |
|    | <b>Item no.: 2009-115/000-017</b><br>WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; light green | /000-017 | 2009-115 |
|    | <b>Item no.: 2009-115/000-023</b><br>WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; green       | /000-023 | 2009-115 |
|    | <b>Item no.: 2009-115/000-024</b><br>WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; violet      | /000-024 | 2009-115 |
|    | <b>Item no.: 2009-145</b><br>Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; white          |          | 2009-145 |
|   | <b>Item no.: 2009-145/000-002</b><br>Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; yellow | /000-002 | 2009-145 |
|  | <b>Item no.: 2009-145/000-005</b><br>Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; red    | /000-005 | 2009-145 |
|  | <b>Item no.: 2009-145/000-006</b><br>Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; blue   | /000-006 | 2009-145 |
|  | <b>Item no.: 2009-145/000-007</b><br>Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; gray   | /000-007 | 2009-145 |
|  | <b>Item no.: 2009-145/000-012</b><br>Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; orange | /000-012 | 2009-145 |
|  | <b>Item no.: 2009-145/000-023</b><br>Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; green  | /000-023 | 2009-145 |
|  | <b>Item no.: 2009-145/000-024</b><br>Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; violet | /000-024 | 2009-145 |
|  | <b>Item no.: 248-501</b><br>Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card          |          | 248-501  |

**Item no.: 248-501/000-002**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

/000-002

248-501

**Item no.: 248-501/000-005**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

/000-005

248-501

**Item no.: 248-501/000-006**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

/000-006

248-501

**Item no.: 248-501/000-007**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

/000-007

248-501

**Item no.: 248-501/000-012**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

/000-012

248-501

**Item no.: 248-501/000-017**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

/000-017

248-501

**Item no.: 248-501/000-023**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

/000-023

248-501

**Item no.: 248-501/000-024**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

/000-024

248-501

**Item no.: 793-501**

WMB marking card; as card; not stretchable; plain; snap-on type; white

793-501

**Item no.: 793-501/000-002**

WMB marking card; as card; not stretchable; plain; snap-on type; white

/000-002

793-501

**Item no.: 793-501/000-005**

WMB marking card; as card; not stretchable; plain; snap-on type; white

/000-005

793-501

**Item no.: 793-501/000-006**

WMB marking card; as card; not stretchable; plain; snap-on type; white

/000-006

793-501

**Item no.: 793-501/000-007**

WMB marking card; as card; not stretchable; plain; snap-on type; white

/000-007

793-501

**Item no.: 793-501/000-012**

WMB marking card; as card; not stretchable; plain; snap-on type; white

/000-012

793-501

**Item no.: 793-501/000-017**

WMB marking card; as card; not stretchable; plain; snap-on type; white

/000-017

793-501





**Item no.: 793-501/000-023**  
WMB marking card; as card; not stretchable; plain; snap-on type; white

/000-023

793-501



**Item no.: 793-501/000-024**  
WMB marking card; as card; not stretchable; plain; snap-on type; white

/000-024

793-501



**Item no.: 793-5501**  
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white

793-5501



**Item no.: 793-5501/000-002**  
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

/000-002

793-5501



**Item no.: 793-5501/000-005**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; red

/000-005

793-5501



**Item no.: 793-5501/000-006**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; blue

/000-006

793-5501



**Item no.: 793-5501/000-007**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; gray

/000-007

793-5501



**Item no.: 793-5501/000-012**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; orange

/000-012

793-5501



**Item no.: 793-5501/000-017**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; light green

/000-017

793-5501



**Item no.: 793-5501/000-023**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; green

/000-023

793-5501



**Item no.: 793-5501/000-024**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; violet

/000-024

793-5501

## ferrule



**Item no.: 216-106**  
Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; uninsulated; electro-tin plated

216-106



**Item no.: 216-121**  
Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated

216-121



**Item no.: 216-122**  
Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated

216-122



**Item no.: 216-123**  
Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated

216-123



**Item no.: 216-124**  
Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; uninsulated; electro-tin plated

216-124



|                                                                                   |                                                                                                                                                                                            |         |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|    | <b>Item no.: 216-131</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated                                                                             | 216-131 |
|    | <b>Item no.: 216-132</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated                                                                             | 216-132 |
|    | <b>Item no.: 216-141</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92      | 216-141 |
|    | <b>Item no.: 216-142</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92     | 216-142 |
|    | <b>Item no.: 216-143</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92        | 216-143 |
|    | <b>Item no.: 216-144</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92      | 216-144 |
|    | <b>Item no.: 216-151</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated                                                                             | 216-151 |
|    | <b>Item no.: 216-152</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated                                                                             | 216-152 |
|   | <b>Item no.: 216-221</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white                                                                         | 216-221 |
|  | <b>Item no.: 216-222</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray                                                                         | 216-222 |
|  | <b>Item no.: 216-223</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red                                                                             | 216-223 |
|  | <b>Item no.: 216-224</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black                                                                         | 216-224 |
|  | <b>Item no.: 216-241</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white | 216-241 |
|  | <b>Item no.: 216-242</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray | 216-242 |
|  | <b>Item no.: 216-243</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red     | 216-243 |
|  | <b>Item no.: 216-244</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black | 216-244 |
|  | <b>Item no.: 216-246</b><br>Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue  | 216-246 |
|  | <b>Item no.: 216-262</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray | 216-262 |
|                                                                                   | <b>Item no.: 216-263</b>                                                                                                                                                                   |         |

|                                                                                    |                                                                                                                                                                                            |         |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|     | Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red                                 | 216-263 |
|     | <b>Item no.: 216-264</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black | 216-264 |
|     | <b>Item no.: 216-266</b><br>Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue  | 216-266 |
|     | <b>Item no.: 216-284</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black | 216-284 |
|     | <b>Item no.: 216-286</b><br>Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue  | 216-286 |
|                                                                                    | <b>Item no.: 216-321</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow                                                                       | 216-321 |
|     | <b>Item no.: 216-322</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green                                                                        | 216-322 |
| <b>End plate</b>                                                                   |                                                                                                                                                                                            |         |
|    | <b>Item no.: 745-100</b><br>End plate; 1.5 mm thick; snap-fit type; gray                                                                                                                   | 745-100 |
|  | <b>Item no.: 745-140</b><br>End plate; with flange; gray                                                                                                                                   | 745-140 |
|  | <b>Item no.: 745-145</b><br>End plate; with flange; gray                                                                                                                                   | 745-145 |
| <b>check</b>                                                                       |                                                                                                                                                                                            |         |
|  | <b>Item no.: 210-136</b><br>Test plug; 2 mm Ø; with 500 mm cable; red                                                                                                                      | 210-136 |
|  | <b>Item no.: 210-137</b><br>Test plug; 2.3 mm Ø; with 500 mm cable; yellow                                                                                                                 | 210-137 |

## Downloads

## Documentation

## Additional Information

Technical explanations

Apr 3, 2019

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3.6 MB

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## CAD/CAE - Smart Data

## CAD data

3D Download 745-828

URL

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## EPLAN



Subject to changes.