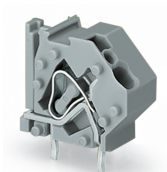


## Data Sheet | Item Number: 745-823

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

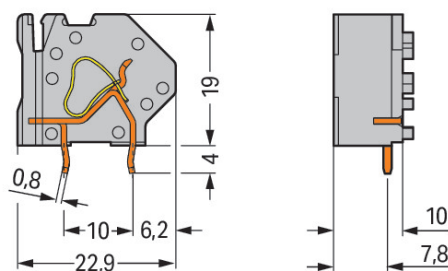
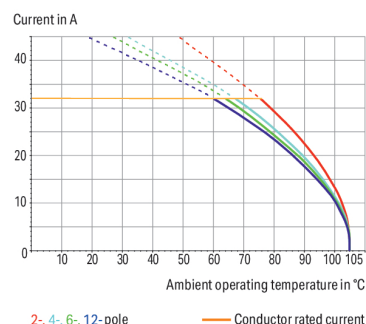
<https://www.wago.com/745-823>



Color: ■ light gray

Similar to illustration

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



Dimensions in mm

PCB terminal block, 745 Series, 45 °conductor entry to board

Our PCB terminal block (item number 745-823) makes connections quick and easy. You can count on proven safety with these PCB terminal blocks, perfect for a wide range of applications when designing your devices. Conductors can only be connected to this PCB terminal block if their strip length is between 8 and 9 mm. This product features one conductor terminal and utilizes CAGE CLAMP®. Our highly-rated and maintenance-free CAGE CLAMP® connection makes it easy to connect all types of conductors without having to prepare the conductor. For example, you don't need to crimp ferrules. Dimensions: (11.5 x 23 x 22.9) mm (width x height x depth). Depending on the type of conductor, this PCB terminal block is ideal for conductor cross sections ranging from 0.08 mm<sup>2</sup> to 4 mm<sup>2</sup>.

The contact surface is coated with tin. An operating tool is used to operate this PCB terminal block. The PCB terminal block is designed for THT soldering. The conductor is designed to be inserted into the board at a 45° angle..



| Notes     |                                                                                                                                                                                                               |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Variants: | Versions for Ex e II and Ex i<br>Other colors<br>Other versions (or variants) can be requested from WAGO Sales or configured at <a href="https://configurator.wago.com/">https://configurator.wago.com/</a> . |

| Electrical data                 |       |                |        |  |               |                   |
|---------------------------------|-------|----------------|--------|--|---------------|-------------------|
| Ratings per                     |       | IEC/EN 60664-1 |        |  | Approvals per |                   |
|                                 |       | UL 1059        |        |  |               |                   |
| Overvoltage category            | III   | III            | II     |  | Use group     | B C D             |
| Pollution degree                | 3     | 2              | 2      |  | Rated voltage | 300 V 150 V 300 V |
| Nominal voltage                 | 630 V | 1000 V         | 1000 V |  | Rated current | 20 A 20 A 10 A    |
| Rated impulse withstand voltage | 8 kV  | 8 kV           | 8 kV   |  |               |                   |
| Rated current                   | 32 A  | 32 A           | 32 A   |  |               |                   |

| Approvals per |       | CSA   |       |  |
|---------------|-------|-------|-------|--|
| Use group     | B     | C     | D     |  |
| Rated voltage | 300 V | 150 V | 300 V |  |
| Rated current | 20 A  | 20 A  | 10 A  |  |

| Connection data            |   |  |
|----------------------------|---|--|
| Clamping units             | 1 |  |
| Total number of potentials | 1 |  |
| Number of connection types | 1 |  |
| Number of levels           | 1 |  |
| Number of jumper slots     | 1 |  |

| Connection 1                                      |                                   |
|---------------------------------------------------|-----------------------------------|
| Connection technology                             | CAGE CLAMP®                       |
| Actuation type                                    | Operating tool                    |
| Solid conductor                                   | 0.08 ... 4 mm² / 28 ... 12 AWG    |
| Fine-stranded conductor                           | 0.08 ... 4 mm² / 28 ... 12 AWG    |
| Fine-stranded conductor; with insulated ferrule   | 0.25 ... 2.5 mm²                  |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 2.5 mm²                  |
| Strip length                                      | 8 ... 9 mm / 0.31 ... 0.35 inches |
| Conductor connection direction to PCB             | 45 °                              |
| Pole number                                       | 1                                 |

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



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

| Material data                      |  |                                                                          |
|------------------------------------|--|--------------------------------------------------------------------------|
| Note (material data)               |  | <a href="#">Information on material specifications can be found here</a> |
| Color                              |  | light gray                                                               |
| Material group                     |  | I                                                                        |
| Insulation material (main housing) |  | Polyamide (PA66)                                                         |
| Flammability class per UL94        |  | V0                                                                       |
| Clamping spring material           |  | Chrome-nickel spring steel (CrNi)                                        |
| Contact material                   |  | Electrolytic copper (E <sub>Cu</sub> )                                   |
| Contact Plating                    |  | Tin                                                                      |
| Fire load                          |  | 0.062 MJ                                                                 |
| Weight                             |  | 3 g                                                                      |

| Environmental requirements |  |                 |
|----------------------------|--|-----------------|
| Limit temperature range    |  | -60 ... +105 °C |

| Commercial data       |  |                                |
|-----------------------|--|--------------------------------|
| Product Group         |  | 4 (Printed Circuit Connectors) |
| PU (SPU)              |  | 200 (50) pcs                   |
| Packaging type        |  | Box                            |
| Country of origin     |  | PL                             |
| GTIN                  |  | 4044918300391                  |
| Customs tariff number |  | 85369010000                    |

| Product Classification |  |                      |
|------------------------|--|----------------------|
| UNSPSC                 |  | 39121409             |
| eCl@ss 10.0            |  | 27-44-04-01          |
| eCl@ss 9.0             |  | 27-44-04-01          |
| ETIM 9.0               |  | EC002643             |
| ETIM 10.0              |  | EC002643             |
| ECCN                   |  | NO US CLASSIFICATION |

| Environmental Product Compliance |  |                         |
|----------------------------------|--|-------------------------|
| RoHS Compliance Status           |  | Compliant, No Exemption |

| Approvals / Certificates        |               |                                         |
|---------------------------------|---------------|-----------------------------------------|
| General approvals               |               | General approvals                       |
|                                 |               | UR<br>Underwriters Laboratories<br>Inc. |
|                                 |               | UL 1059                                 |
|                                 |               | E45172                                  |
| Approval                        | Standard      | Certificate Name                        |
| CCA<br>DEKRA Certification B.V. | EN 60947      | NTR NL-7095                             |
| CCA<br>DEKRA Certification B.V. | EN 60947      | 71-112275                               |
| CSA<br>DEKRA Certification B.V. | C22.2 No. 158 | 1604421                                 |



Declarations of conformity and manufacturer's declarations

| Approval                                                | Standard | Certificate Name |
|---------------------------------------------------------|----------|------------------|
| EU-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG | -        | -                |
| UK-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG | -        | -                |

Downloads

Environmental Product Compliance

| Compliance Search                           |
|---------------------------------------------|
| Environmental Product<br>Compliance 745-823 |



Documentation

| Additional Information |
|------------------------|
| Technical Section      |
| 03.04.2019             |
| pdf<br>2027.26 KB      |



CAD/CAE-Data

| CAD data             |
|----------------------|
| 2D/3D Models 745-823 |



| CAE data                     |
|------------------------------|
| EPLAN Data Portal<br>745-823 |
| ZUKEN Portal 745-823         |



| PCB Design                                             |
|--------------------------------------------------------|
| Symbol and Footprint<br>via SamacSys 745-823           |
| Symbol and Footprint<br>via Ultra Librarian<br>745-823 |





1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate



**Item No.: 745-100**  
End plate; 1.5 mm thick; snap-fit type; gray



**Item No.: 745-140**  
End plate; with flange; gray



**Item No.: 745-145**  
End plate; with flange; gray

1.2 Optional Accessories

1.2.1 Ferrule

1.2.1.1 Ferrule



**Item No.: 216-241**  
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white



**Item No.: 216-141**  
Ferrule; Sleeve for 0.5 mm² / 20 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



**Item No.: 216-242**  
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



**Item No.: 216-262**  
Ferrule; Sleeve for 0.75 mm² / 18 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



**Item No.: 216-142**  
Ferrule; Sleeve for 0.75 mm² / 18 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



**Item No.: 216-243**  
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



**Item No.: 216-263**  
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



**Item No.: 216-143**  
Ferrule; Sleeve for 1 mm² / AWG 18; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



**Item No.: 216-244**  
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black



**Item No.: 216-264**  
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black



**Item No.: 216-284**  
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black



**Item No.: 216-144**  
Ferrule; Sleeve for 1.5 mm² / AWG 16; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored



**Item No.: 216-246**  
Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue



**Item No.: 216-266**  
Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue



**Item No.: 216-286**  
Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue



**Item No.: 216-106**  
Ferrule; Sleeve for 2.5 mm² / AWG 14; un-insulated; electro-tin plated; silver-colored

1.2.2 Jumper

1.2.2.1 Jumper



**Item No.: 745-280**  
Jumper; 10-way; unplated; silver-colored



**Item No.: 745-283**  
Jumper; 3-way; unplated; silver-colored



**Item No.: 745-284**  
Jumper; 4-way; unplated; silver-colored



**Item No.: 745-285**  
Jumper; 5-way; unplated; silver-colored



**Item No.: 745-281**  
Jumper; silver-colored



1.2.3 Marking

1.2.3.1 Marker

|                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>Item No.: 2009-145/000-006</b><br>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue                  | <br><b>Item No.: 2009-145/000-007</b><br>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray             | <br><b>Item No.: 2009-145/000-023</b><br>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green         | <br><b>Item No.: 2009-145/000-012</b><br>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange           |
| <br><b>Item No.: 2009-145/000-005</b><br>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red                   | <br><b>Item No.: 2009-145/000-024</b><br>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet           | <br><b>Item No.: 2009-145</b><br>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white                 | <br><b>Item No.: 2009-145/000-002</b><br>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow           |
| <br><b>Item No.: 248-501/000-006</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue                                                   | <br><b>Item No.: 248-501/000-007</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray                                              | <br><b>Item No.: 248-501/000-023</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green                                          | <br><b>Item No.: 248-501/000-017</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green                                       |
| <br><b>Item No.: 248-501/000-012</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange                                                 | <br><b>Item No.: 248-501/000-005</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red                                               | <br><b>Item No.: 248-501/000-024</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet                                         | <br><b>Item No.: 248-501</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white                                                     |
| <br><b>Item No.: 248-501/000-002</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow                                                | <br><b>Item No.: 793-5501/000-006</b><br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue    | <br><b>Item No.: 793-5501/000-007</b><br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray | <br><b>Item No.: 793-5501/000-023</b><br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green   |
| <br><b>Item No.: 793-5501/000-017</b><br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green | <br><b>Item No.: 793-5501/000-012</b><br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange | <br><b>Item No.: 793-5501/000-005</b><br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red | <br><b>Item No.: 793-5501/000-024</b><br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet |
| <br><b>Item No.: 793-5501</b><br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white               | <br><b>Item No.: 793-5501/000-002</b><br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow | <br><b>Item No.: 793-501/000-006</b><br>WMB marking card; as card; not stretchable; plain; snap-on type; blue                                              | <br><b>Item No.: 793-501/000-007</b><br>WMB marking card; as card; not stretchable; plain; snap-on type; gray                                                 |
| <br><b>Item No.: 793-501/000-023</b><br>WMB marking card; as card; not stretchable; plain; snap-on type; green                                                     | <br><b>Item No.: 793-501/000-017</b><br>WMB marking card; as card; not stretchable; plain; snap-on type; light green                                          | <br><b>Item No.: 793-501/000-012</b><br>WMB marking card; as card; not stretchable; plain; snap-on type; orange                                            | <br><b>Item No.: 793-501/000-005</b><br>WMB marking card; as card; not stretchable; plain; snap-on type; red                                                  |
| <br><b>Item No.: 793-501/000-024</b><br>WMB marking card; as card; not stretchable; plain; snap-on type; violet                                                    | <br><b>Item No.: 793-501</b><br>WMB marking card; as card; not stretchable; plain; snap-on type; white                                                        | <br><b>Item No.: 793-501/000-002</b><br>WMB marking card; as card; not stretchable; plain; snap-on type; yellow                                            | <br><b>Item No.: 2009-115/000-006</b><br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue                |
| <br><b>Item No.: 2009-115/000-007</b><br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray                     | <br><b>Item No.: 2009-115/000-023</b><br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green               | <br><b>Item No.: 2009-115/000-017</b><br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green      | <br><b>Item No.: 2009-115/000-012</b><br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange              |
| <br><b>Item No.: 2009-115/000-024</b><br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet                   | <br><b>Item No.: 2009-115</b><br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white                       | <br><b>Item No.: 2009-115/000-002</b><br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow           |                                                                                                                                                                                                                                                    |

## 1.2.4 Test and measurement

### 1.2.4.1 Testing accessories



#### Item No.: 210-136

Test plug; 2 mm Ø; with 500 mm cable; red

## 1.2.5 Tool

### 1.2.5.1 Operating tool



#### Item No.: 210-658

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured



#### Item No.: 210-720

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

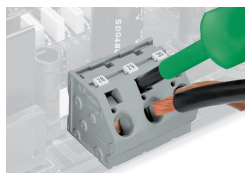


#### Item No.: 210-657

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

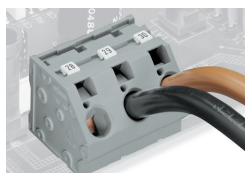
## Installation Notes

### Conductor termination



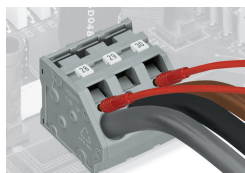
Inserting/removing a conductor via 5.5 mm screwdriver – 745 Series, 16 mm².

## Marking



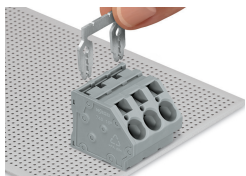
Marking via Mini-WSB and WMB markers or factory direct marking – 745 Series.

## Testing

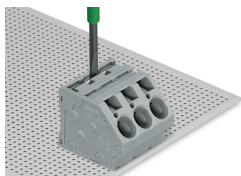


Testing with test plug – 745 Series.

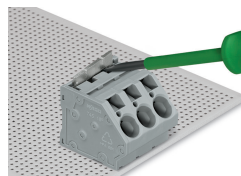
Commoning



Inserting a comb-style jumper bar.



To insert a comb-style jumper bar, push it down using a screwdriver until it hits the backstop – 745 Series.



To remove the jumper bar, lift it up using a screwdriver – 745 Series.