

# Data sheet | Item number: 745-821

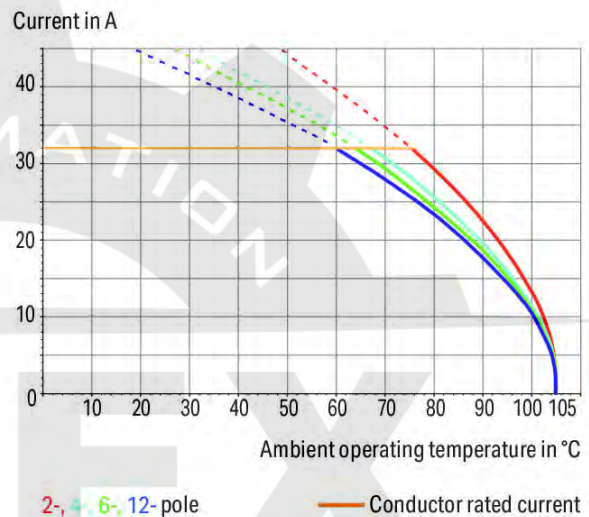
Stackable PCB terminal block; 4 mm<sup>2</sup>; Pin spacing 10 mm; 1-pole; CAGE  
CLAMP®; commoning option



745-821



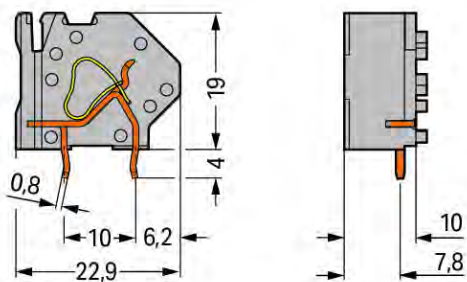
**Current-Carrying Capacity Curve**  
Pin spacing: 5 mm / Conductor cross-section: 4 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1



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 |
| Rated current UL (Use Group D) | 10 A  |

#### 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°                                        |
| No. of poles                                                | 1                                          |
| 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                                          |

### 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                       | gray                                   |
| 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                   | 0.062 MJ                               |
| Weight                      | 3.005 g                                |

## Environmental Requirements

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

## Commercial data

|                    |                     |
|--------------------|---------------------|
| Product Group      | 4 (Printed Circuit) |
| Country of origin  | PL                  |
| GTIN               | 4044918300377       |
| Customs Tariff No. | 85369010000         |

## Approvals / Certificates

### 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          |

### UL-Approvals

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

## Compatible products

### Jumper

|                                                                                    |                                                    |         |
|------------------------------------------------------------------------------------|----------------------------------------------------|---------|
|  | Item no.: 745-280<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              |
| <b>Marking accessories</b>                                                          |                                                                                                                               |                      |
|    | <b>Item no.: 2009-115</b><br>WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type              | 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      | 2009-115<br>/000-002 |
|    | <b>Item no.: 2009-115/000-006</b><br>WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type       | 2009-115<br>/000-006 |
|   | <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      | 2009-115<br>/000-007 |
|  | <b>Item no.: 2009-115/000-012</b><br>WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type       | 2009-115<br>/000-012 |
|  | <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      | 2009-115<br>/000-017 |
|  | <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      | 2009-115<br>/000-023 |
|  | <b>Item no.: 2009-115/000-024</b><br>WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type       | 2009-115<br>/000-024 |
|   | <b>Item no.: 2009-145</b><br>Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type         | 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 | 2009-145<br>/000-002 |
|   | <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 | 2009-145<br>/000-005 |

|                                                                                    |                                                                                                                               |                      |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------|
|    | <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 | 2009-145<br>/000-006 |
|    | <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 | 2009-145<br>/000-007 |
|    | <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 | 2009-145<br>/000-012 |
|    | <b>Item no.: 2009-145/000-023</b><br>Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type  | 2009-145<br>/000-023 |
|    | <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 | 2009-145<br>/000-024 |
|    | <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              |
|    | <b>Item no.: 248-501/000-002</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type                      | 248-501<br>/000-002  |
|  | <b>Item no.: 248-501/000-005</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type                      | 248-501<br>/000-005  |
|  | <b>Item no.: 248-501/000-006</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type                      | 248-501<br>/000-006  |
|  | <b>Item no.: 248-501/000-007</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type                      | 248-501<br>/000-007  |
|  | <b>Item no.: 248-501/000-012</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type                      | 248-501<br>/000-012  |
|  | <b>Item no.: 248-501/000-017</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type                      | 248-501<br>/000-017  |
|  | <b>Item no.: 248-501/000-023</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type                      | 248-501<br>/000-023  |
|  | <b>Item no.: 248-501/000-024</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type                      | 248-501<br>/000-024  |
|  | <b>Item no.: 793-501</b><br>WMB marking card; as card; not stretchable; plain; snap-on type                                   | 793-501              |

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

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

/000-002

793-501

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

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

/000-005

793-501

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

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

/000-006

793-501

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

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

/000-007

793-501

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

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

/000-012

793-501

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

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

/000-017

793-501

**Item no.: 793-501/000-023**

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

/000-023

793-501

**Item no.: 793-501/000-024**

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

/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

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

/000-002

793-5501

**Item no.: 793-5501/000-005**

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-005

793-5501

**Item no.: 793-5501/000-006**

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-006

793-5501

**Item no.: 793-5501/000-007**

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-007

793-5501

**Item no.: 793-5501/000-012**

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-012

793-5501

**Item no.: 793-5501/000-017**

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-017

793-5501

**Item no.: 793-5501/000-023**

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-023

793-5501

**Item no.: 793-5501/000-024**

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-024

793-5501

**tools****Item no.: 210-657**

Operating tool with partially insulated shaft; Blade (3.5 x 0.5) mm; short

210-657

**Item no.: 210-658**

Operating tool with partially insulated shaft; Blade (3.5 x 0.5) mm; short; angled

210-658

**Item no.: 210-720**

Operating tool with partially insulated shaft; Type 2, blade (3.5 x 0.5) mm

210-720

**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

**Item no.: 216-131**Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

216-131

**Item no.: 216-132**Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

216-132

**Item no.: 216-141**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

**Item no.: 216-142**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

**Item no.: 216-143**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

**Item no.: 216-144**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

**Item no.: 216-151**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 mm² / AWG 24; uninsulated; electro-tin plated                                                                       | 216-152 |
|    | <b>Item no.: 216-221</b><br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated                                                                          | 216-221 |
|    | <b>Item no.: 216-222</b><br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated                                                                         | 216-222 |
|    | <b>Item no.: 216-223</b><br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated                                                                            | 216-223 |
|    | <b>Item no.: 216-224</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated                                                                          | 216-224 |
|    | <b>Item no.: 216-241</b><br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90  | 216-241 |
|    | <b>Item no.: 216-242</b><br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90 | 216-242 |
|    | <b>Item no.: 216-243</b><br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90    | 216-243 |
|    | <b>Item no.: 216-244</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90  | 216-244 |
|    | <b>Item no.: 216-246</b><br>Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90  | 216-246 |
|  | <b>Item no.: 216-262</b><br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90 | 216-262 |
|  | <b>Item no.: 216-263</b><br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90    | 216-263 |
|  | <b>Item no.: 216-264</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90  | 216-264 |
|  | <b>Item no.: 216-266</b><br>Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90  | 216-266 |
|  | <b>Item no.: 216-284</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90  | 216-284 |
|  | <b>Item no.: 216-286</b><br>Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90  | 216-286 |
|                                                                                    | <b>Item no.: 216-321</b><br>Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated                                                                         | 216-321 |
|  | <b>Item no.: 216-322</b><br>Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated                                                                         | 216-322 |
| End plate                                                                          |                                                                                                                                                                          |         |

**Item no.: 745-100**

End plate; 1.5 mm thick; snap-fit type

745-100

**Item no.: 745-140**

End plate; with flange

745-140

**Item no.: 745-145**

End plate; with flange

745-145

**check****Item no.: 210-136**

Test plug; 2 mm Ø; with 500 mm cable

210-136

**Item no.: 210-137**

Test plug; 2.3 mm Ø; with 500 mm cable

210-137

**Downloads****CAD/CAE - Smart Data****CAD data**

3D Download 745-821

URL

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**PCB libraries**

DesignSpark Library for WAGO PCB Terminal Blocks

Compatible with DesignSpark PCB Version 4.x or higher

2.1

Oct 6, 2014

zip

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TARGET Library for WAGO PCB Terminal Blocks

Compatible with TARGET PCB Design Software Version 17.x

1.1.0

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EAGLE Library for WAGO PCB Terminal Blocks

Compatible with EAGLE PCB Design Software Version 6.x or higher

2.1

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Subject to changes.