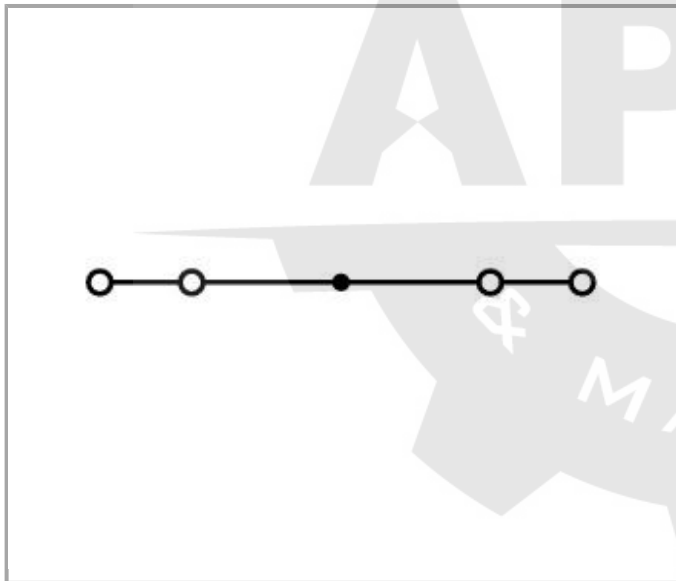
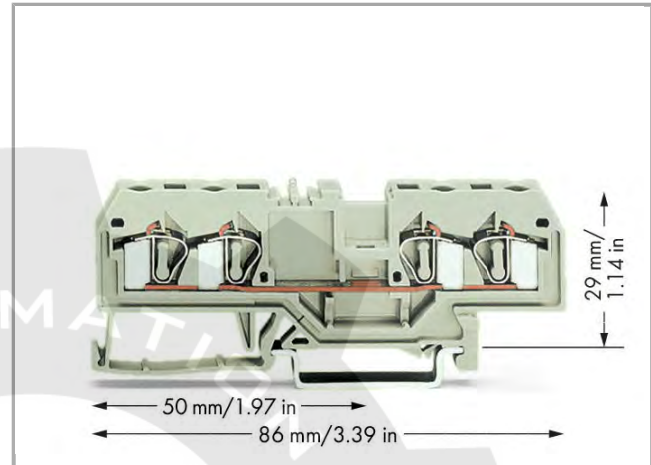
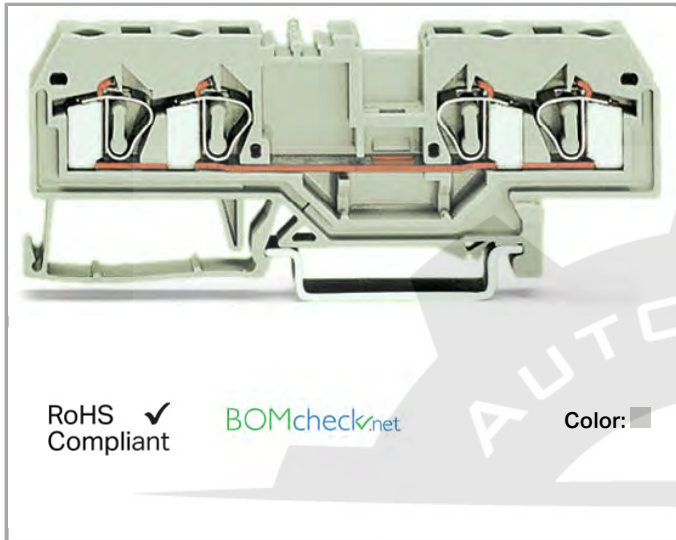


## Data sheet | Item number: 281-994

4-conductor through terminal block; 4 mm<sup>2</sup>; suitable for Ex e II applications;  
center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®



281-994



### Item description

#### Note:

##### Terminating Aluminum Conductors

WAGO spring clamp terminal blocks are suitable for solid aluminum conductors up to 4 mm<sup>2</sup>/12 AWG if WAGO "Alu-Plus" Contact Paste is used for termination.

##### "Alu-Plus" Contact Paste Advantages:

- Automatically destroys the oxide film during clamping.
- Prevents fresh oxidation at the clamping point.



- Prevents electrolytic corrosion between aluminum and copper conductors (in the same terminal block).
- Provides long-term protection against corrosion.

Using terminal blocks with CAGE CLAMP® Spring Pressure Connection Technology, **aluminum conductors must first be cleaned with a blade** and then immediately be inserted into the clamping units filled with "Alu-Plus" Contact Paste.

It is also possible to apply WAGO "Alu-Plus" **additionally** on the whole surface of the aluminum conductor before termination.

Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors:

2.5 mm<sup>2</sup> (14 AWG) = 16 A

4 mm<sup>2</sup> (12 AWG) = 22 A

## Data

### Electrical data

|                            |       |
|----------------------------|-------|
| Rated voltage EN (Ex e II) | 550 V |
|----------------------------|-------|

### Ratings per IEC/EN 60664-1

|               |      |
|---------------|------|
| Rated current | 30 A |
|---------------|------|

### Connection data

|                                   |                                            |
|-----------------------------------|--------------------------------------------|
| Connection technology             | CAGE CLAMP®                                |
| Actuation type                    | Operating tool                             |
| Connectable conductor materials   | Copper<br>Aluminum                         |
| 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 |
| Strip length                      | 9 ... 10 mm / 0.35 ... 0.39 inch           |
| Total number of connection points | 4                                          |
| Total number of potentials        | 1                                          |
| Number of levels                  | 1                                          |
| Type of wiring                    | Front-entry wiring                         |

### Geometrical Data

|                                       |                    |
|---------------------------------------|--------------------|
| Width                                 | 6 mm / 0.236 inch  |
| Height from upper-edge of DIN-35 rail | 29 mm / 1.142 inch |
| Depth                                 | 86 mm / 3.386 inch |

### Mechanical data

|                  |             |
|------------------|-------------|
| Design           | horizontal  |
| Type of mounting | DIN-35 rail |

|               |                |
|---------------|----------------|
| Marking level | Center marking |
|---------------|----------------|

## Material Data

|                     |                      |
|---------------------|----------------------|
| Color               | light gray           |
| Insulating material | Polyamide 66 (PA 66) |
| Fire load           | 0.211 MJ             |
| Weight              | 12.848 g             |

## Commercial data

|                    |               |
|--------------------|---------------|
| Country of origin  | DE            |
| GTIN               | 4044918486675 |
| Customs Tariff No. | 85369010000   |

## Approvals / Certificates

### Ex-Approvals

| Logo                                                                              | Approval                                            | Additional Approval Text | Certificate name                                 |
|-----------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------|--------------------------------------------------|
|  | ATEx<br>Physikalisch Technische Bundesanstalt (PTB) | -                        | PTB 00<br>ATEX<br>3110 U (II<br>2 G EEx e<br>II) |

### Country specific Approvals

| Logo                                                                               | Approval                              | Additional Approval Text | Certificate name   |
|------------------------------------------------------------------------------------|---------------------------------------|--------------------------|--------------------|
|  | CCA<br>DEKRA Certification B.V.       | IEC 60947                | NTR NL-<br>7454/A1 |
|  | CCA<br>DEKRA Certification B.V.       | EN 60947                 | NTR NL-<br>7454/A1 |
|  | CSA<br>DEKRA Certification B.V.       | C22.2 No. 158            | 1505034            |
|                                                                                    | CSA<br>DEKRA Certification B.V.       | UL 1059                  | 1505034            |
|  | KEMA/KEUR<br>DEKRA Certification B.V. | EN 60947                 | 71-<br>107288      |

## Ship Approvals

| Logo                                                                             | Approval                                                | Additional Approval Text | Certificate name         |
|----------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------|--------------------------|
|  | <b>ABS</b><br>American Bureau of Shipping               | -                        | 14-<br>HG1293677-<br>PDA |
|  | <b>BV</b><br>Bureau Veritas S.A.                        | EN 60947                 | 07436/E0 BV              |
|  | <b>DNV GL</b><br>Det Norske Veritas, Germanischer Lloyd | -                        | TAE00001V2               |
|  | <b>LR</b><br>Lloyds Register                            | EN 60947                 | 91/20112<br>(E9)         |

## UL-Approvals

| Logo                                                                               | Approval                                    | Additional Approval Text | Certificate name    |
|------------------------------------------------------------------------------------|---------------------------------------------|--------------------------|---------------------|
|  | <b>UL</b><br>Underwriters Laboratories Inc. | UL 1059                  | 20170731-<br>E45172 |

## Compatible products

## Carrier rail

|                                                                                    |                                                                                                                                      |         |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------|
|  | <b>Item no.: 210-112</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm | 210-112 |
|  | <b>Item no.: 210-113</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715                  | 210-113 |

|                                                                                    |                                                                                                                                      |         |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------|
|    | <b>Item no.: 210-114</b><br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715                   | 210-114 |
|    | <b>Item no.: 210-115</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm | 210-115 |
|    | <b>Item no.: 210-118</b><br>Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715                 | 210-118 |
|    | <b>Item no.: 210-196</b><br>Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715               | 210-196 |
|    | <b>Item no.: 210-197</b><br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715                     | 210-197 |
|    | <b>Item no.: 210-198</b><br>Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715                | 210-198 |
|    | <b>Item no.: 210-504</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715        | 210-504 |
|    | <b>Item no.: 210-505</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715      | 210-505 |
|   | <b>Item no.: 210-506</b><br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715       | 210-506 |
|  | <b>Item no.: 210-508</b><br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715         | 210-508 |
| <b>End plate</b>                                                                   |                                                                                                                                      |         |
|  | <b>Item no.: 209-191</b><br>Separator for Ex e/Ex i applications; 3 mm thick; 120 mm wide                                            | 209-191 |
|  | <b>Item no.: 209-192</b><br>Separator for Ex e/Ex i applications; 3 mm thick; 125.5 mm wide                                          | 209-192 |
|  | <b>Item no.: 281-345</b><br>End and intermediate plate; 2.5 mm thick                                                                 | 281-345 |
|  | <b>Item no.: 281-347</b><br>Separator plate; 2 mm thick; oversized                                                                   | 281-347 |
| <b>Protective Warning Marker</b>                                                   |                                                                                                                                      |         |
|  | <b>Item no.: 281-415</b><br>Protective warning marker; with high-voltage symbol, black; for 5 terminal blocks                        | 281-415 |
| <b>tools</b>                                                                       |                                                                                                                                      |         |
|  | <b>Item no.: 210-657</b><br>Operating tool with partially insulated shaft; Blade (3.5 x 0.5) mm; short                               | 210-657 |
|  | <b>Item no.: 210-658</b><br>Operating tool with partially insulated shaft; Blade (3.5 x 0.5) mm; short; angled                       | 210-658 |
|  | <b>Item no.: 210-720</b><br>Operating tool with partially insulated shaft; Type 2, blade (3.5 x 0.5) mm                              | 210-720 |
| <b>General accessories</b>                                                         |                                                                                                                                      |         |



**Item no.: 249-105**  
Group marker carrier

249-105

## ferrule



**Item no.: 216-106**  
Ferrule; Sleeve for 2.5 mm² / AWG 14; uninsulated; electro-tin plated

216-106



**Item no.: 216-201**  
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated

216-201



**Item no.: 216-202**  
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated

216-202



**Item no.: 216-203**  
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated

216-203



**Item no.: 216-204**  
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated

216-204



**Item no.: 216-205**  
Ferrule; Sleeve for 2.08 mm² / AWG 14; insulated; electro-tin plated

216-205



**Item no.: 216-206**  
Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated

216-206



**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

216-241



**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

216-242



**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

216-243



**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

216-244



**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

216-246

**Item no.: 216-301**  
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated

216-301



**Item no.: 216-302**  
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated

216-302

## assembling



**Item no.: 209-106**  
Mounting carrier; for isolated mounting on DIN 35 rails

209-106



**Item no.: 709-153**  
Cover; Type 1; suitable for cover carrier, type 1; 1 m long

709-153

## Jumper



**Item no.: 210-103**  
Wire commoning chain; insulated; 50 connections

210-103

|                                                                                    |                                                                                                                                   |         |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------|
|    | <b>Item no.: 249-123</b><br>Push-in type wire jumper; insulated; wire length 180 mm; Conductor cross section 0.75 mm <sup>2</sup> | 249-123 |
|    | <b>Item no.: 249-125</b><br>Push-in type wire jumper; insulated; wire length 60 mm; Conductor cross section 0.75 mm <sup>2</sup>  | 249-125 |
|    | <b>Item no.: 249-126</b><br>Push-in type wire jumper; insulated; wire length 110 mm; Conductor cross section 0.75 mm <sup>2</sup> | 249-126 |
|    | <b>Item no.: 249-127</b><br>Push-in type wire jumper; insulated; wire length 250 mm; Conductor cross section 0.75 mm <sup>2</sup> | 249-127 |
|    | <b>Item no.: 281-402</b><br>Adjacent jumper; insulated; IN = IN terminal block                                                    | 281-402 |
|    | <b>Item no.: 281-409</b><br>Alternate jumper; insulated; IN = IN terminal block                                                   | 281-409 |
|    | <b>Item no.: 281-422</b><br>Adjacent jumper; insulated; IN = IN terminal block                                                    | 281-422 |
|    | <b>Item no.: 281-482</b><br>Comb-style jumper bar; insulated; 2-way; IN = IN terminal block                                       | 281-482 |
|    | <b>Item no.: 281-483</b><br>Comb-style jumper bar; insulated; 3-way; IN = IN terminal block                                       | 281-483 |
|   | <b>Item no.: 281-485</b><br>Comb-style jumper bar; insulated; 5-way; IN = IN terminal block                                       | 281-485 |
|  | <b>Item no.: 281-490</b><br>Comb-style jumper bar; insulated; 10-way; IN = IN terminal block                                      | 281-490 |
|  | <b>Item no.: 281-492</b><br>Alternate comb-style jumper bar; insulated; 2-way; IN = IN terminal block                             | 281-492 |
|  | <b>Item no.: 709-110</b><br>Wire commoning chain; insulated; 4 connections; 3 x 110 mm                                            | 709-110 |
|  | <b>Item no.: 709-111</b><br>Wire commoning chain; insulated; 3 connections; 2 x 120 mm                                            | 709-111 |
|  | <b>Item no.: 709-112</b><br>Wire commoning chain; insulated; 3 connections; 2 x 170 mm                                            | 709-112 |
|  | <b>Item no.: 781-452</b><br>Staggered jumper; insulated; from 1 to 2; Spacing: 6 mm                                               | 781-452 |
|  | <b>Item no.: 781-453</b><br>Staggered jumper; insulated; from 1 to 3; Spacing: 6 mm                                               | 781-453 |
|  | <b>Item no.: 781-454</b><br>Staggered jumper; insulated; from 1 to 4; Spacing: 6 mm                                               | 781-454 |
|  | <b>Item no.: 781-455</b><br>Staggered jumper; insulated; from 1 to 5; Spacing: 6 mm                                               | 781-455 |
|  | <b>Item no.: 781-456</b><br>Staggered jumper; insulated; from 1 to 6; Spacing: 6 mm                                               | 781-456 |



## 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         | 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.: 209-140</b><br>Group marker carrier                                                                         | 209-140              |
|   | <b>Item no.: 209-141</b><br>Group marker carrier                                                                         | 209-141              |
|   | <b>Item no.: 209-142</b><br>Group marker carrier                                                                         | 209-142              |
|   | <b>Item no.: 209-185</b><br>Adaptor                                                                                      | 209-185              |
|   | <b>Item no.: 793-501</b><br>WMB marking card; as card; not stretchable; plain; snap-on type                              | 793-501              |
|   | <b>Item no.: 793-501/000-002</b><br>WMB marking card; as card; not stretchable; plain; snap-on type                      | 793-501<br>/000-002  |
|   | <b>Item no.: 793-501/000-005</b><br>WMB marking card; as card; not stretchable; plain; snap-on type                      | 793-501<br>/000-005  |
|   | <b>Item no.: 793-501/000-006</b><br>WMB marking card; as card; not stretchable; plain; snap-on type                      | 793-501<br>/000-006  |





**Item no.: 793-501/000-007**  
WMB marking card; as card; not stretchable; plain; snap-on type

793-501  
/000-007



**Item no.: 793-501/000-012**  
WMB marking card; as card; not stretchable; plain; snap-on type

793-501  
/000-012



**Item no.: 793-501/000-017**  
WMB marking card; as card; not stretchable; plain; snap-on type

793-501  
/000-017



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

793-501  
/000-023



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

793-501  
/000-024



**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

793-5501  
/000-002



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

793-5501  
/000-005



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

793-5501  
/000-006



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

793-5501  
/000-007



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

793-5501  
/000-012



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

793-5501  
/000-017



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

793-5501  
/000-023



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

793-5501  
/000-024

#### Insulation stop

**Item no.: 281-470**  
Insulation stop; 0.08 - 0.2 mm<sup>2</sup> "s" (0.14 mm<sup>2</sup> "f-st"); 5 pieces/strip

281-470



Item no.: 281-471

Insulation stop; 0.25 - 0.5 mm<sup>2</sup>; 5 pieces/strip

281-471

Item no.: 281-472

Insulation stop; 0.75 - 1.5 mm<sup>2</sup>; 5 pieces/strip

281-472

## Downloads

## Documentation

## Bid Text

281-994

Reihenklemmen

Apr 4, 2012

doc  
24.6 kB

Download

## Additional Information

pdf  
2.1 MB

Download

## CAD/CAE - Smart Data

## CAD data

3D Download 281-994

URL

Download

Subject to changes.