
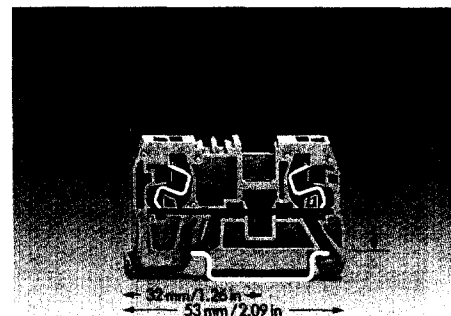
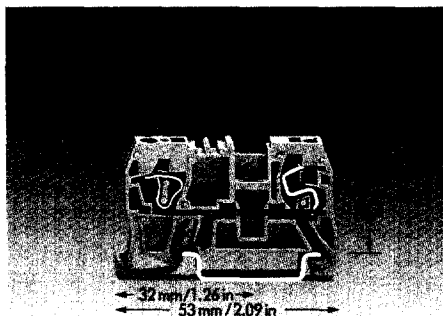


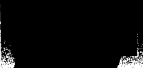



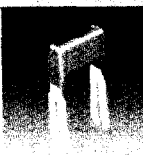







# 1 Rail-Mounted Terminal Blocks with FIT CLAMP/CAGE CLAMP® Connection, Series 290

14 Front-entry

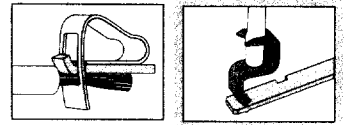
|  |  |
|--|--|
| <p>0.34 – 1.5 mm<sup>2</sup> "f-st" ①   AWG 22 – 16 "str." ①<br/>         0.31 – 1.0 mm<sup>2</sup> "s" ①   AWG 22 – 18 "sol." ①<br/>         0.08 – 2.5 mm<sup>2</sup> ②   AWG 28 – 12 ②<br/>         500 V/6 kV/3 ③   300 V, 10 A ④<br/>         13.5 A ①/24 A ②<br/>         Terminal block width 5 mm / 0.197 in<br/>  8 – 9 mm / 0.33 in ②</p> | <p>0.34 – 1.5 mm<sup>2</sup> "f-st" ①   AWG 22 – 16 "str." ①<br/>         0.31 – 1.0 mm<sup>2</sup> "s" ①   AWG 22 – 18 "sol." ①<br/>         500 V/6 kV/3 ③   300 V, 10 A ④<br/>         13.5 A ①<br/>         Terminal block width 5 mm / 0.197 in</p> |
|--|--|


- ① FIT CLAMP connection only with standard EN harmonized PVC or PE insulation for factory wiring
- ② CAGE CLAMP® connection for external wiring
- ③ 500 V = rated voltage  
6 kV = rated surge voltage  
3 = pollution degree  
(see also section 10)
- ④ See application notes on pages 1.197 – 1.199
- ⑤ Suitable for EEx i applications

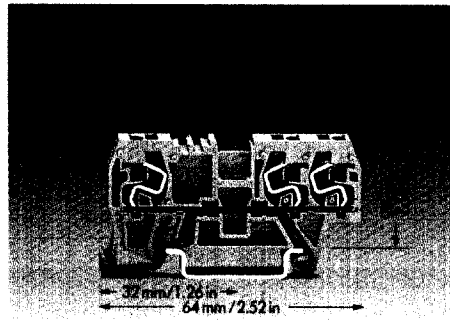
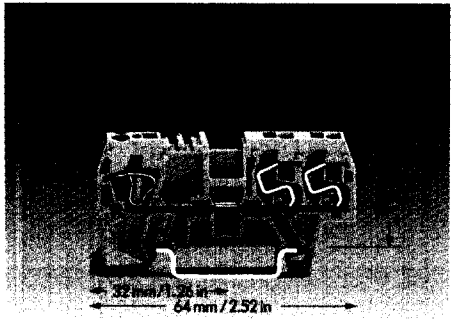


| Description   | Item-No.   | Pack.-unit pcs             | Item-No.   | Pack.-unit pcs   |                     |                |             |
|---|--|----------------------------|--|--|---------------------|----------------|-------------|
| <b>CAGE CLAMP® / FIT CLAMP connection</b><br>Through and ground (earth) terminal blocks, for DIN 35 rail  | <b>1 CAGE CLAMP® / 1 FIT CLAMP Through terminal blocks</b>         |                            | <b>1 FIT CLAMP / 1 FIT CLAMP Through terminal blocks</b> |  |                     |                |             |
|   | grey   | <b>290-901</b>             | 100  | grey   | <b>290-961</b>      | 100            |             |
|   | blue   | <b>290-904</b> ①           | 100  | blue   | <b>290-964</b> ①    | 100            |             |
|   | <b>Ground (earth) terminal block</b>                               |                            | <b>Ground (earth) terminal block</b>                     |  |                     |                |             |
|   | green-yellow   | <b>290-907</b>             | 100  | green-yellow   | <b>290-967</b>      | 100            |             |
| <b>Accessories</b> (see also section 8)   | Appropriate marking system   | <b>WMB/WSB/WFB</b>         | Appropriate marking system                               | <b>WMB/WSB/WFB</b>   |                     |                |             |
|  <b>End and intermediate plate</b>   | 1.1 mm / 0.043 in thick  |                            | 1.1 mm / 0.043 in thick                                  |  |                     |                |             |
|   | grey   | <b>290-305</b>             | 100 (4 x 25)   | grey   | <b>290-305</b>      | 100 (4 x 25)   |             |
|   | orange   | <b>290-306</b>             | 100 (4 x 25)   | orange   | <b>290-306</b>      | 100 (4 x 25)   |             |
|  <b>Insulation stop</b> ④, 5 pcs/strip   | white  | 0.08 – 0.2 mm <sup>2</sup> | <b>280-470</b>   | 200 strips   |                     |                |             |
|   | light grey   | 0.25 – 0.5 mm <sup>2</sup> | <b>280-471</b>   | 200 strips   |                     |                |             |
|   | dark grey  | 0.75 – 1 mm <sup>2</sup>   | <b>280-472</b>   | 200 strips   |                     |                |             |
|  <b>Adjacent jumper, insulated</b>   | I <sub>N</sub> 24 A  |                            |  |  | I <sub>N</sub> 24 A |                |             |
|   | grey   | <b>280-402</b>             | 200 (8 x 25)   | grey   | <b>280-402</b>      | 200 (8 x 25)   |             |
|   | yellow-green   | <b>280-422</b>             | 200 (8 x 25)   | yellow-green   | <b>280-422</b>      | 200 (8 x 25)   |             |
|  <b>Alternate jumper, insulated</b>  | I <sub>N</sub> 24 A  |                            |  | I <sub>N</sub> 24 A  |                     |                |             |
|   | grey   | <b>280-409</b>             | 100 (4 x 25)   | grey   | <b>280-409</b>      | 100 (4 x 25)   |             |
|  <b>Staggered jumper</b> ④, from 1 to 2 insulated, from 1 to 3 width 5 mm / 0.197 in from 1 to 4 from 1 to 5 : from 1 to 8 | I <sub>N</sub> 24 A  | <b>780-452</b>             | 100 (4 x 25)   | I <sub>N</sub> 24 A  | <b>780-452</b>      | 100 (4 x 25)   |             |
|   |  | <b>780-453</b>             | 100 (4 x 25)   |  | <b>780-453</b>      | 100 (4 x 25)   |             |
|   |  | <b>780-454</b>             | 100 (4 x 25)   |  | <b>780-454</b>      | 100 (4 x 25)   |             |
|   |  | <b>780-455</b>             | 50 (2 x 25)  |  | <b>780-455</b>      | 50 (2 x 25)    |             |
|   |  | :                          |  |  | :                   |                |             |
|   |  | <b>780-458</b>             | 50 (2 x 25)  |  | <b>780-458</b>      | 50 (2 x 25)    |             |
|  <b>Push-in type wire jumper</b> ④, insulated, 9 A - conductor cross section 0.75 mm <sup>2</sup> /AWG 18                  | L = 60 mm  | <b>249-125</b>             | 10   | L = 60 mm  | <b>249-125</b>      | 10             |             |
|   | L = 110 mm   | <b>249-126</b>             | 10   | L = 110 mm   | <b>249-126</b>      | 10             |             |
|   | L = 250 mm   | <b>249-127</b>             | 10   | L = 250 mm   | <b>249-127</b>      | 10             |             |
|  <b>Comb type jumper bar</b> ④, insulated, I <sub>N</sub> = I <sub>N</sub> of terminal block                               | 2-way  | <b>280-482</b>             | 200 (8 x 25)   |  |                     |                |             |
|   | 3-way  | <b>280-483</b>             | 200 (8 x 25)   |  |                     |                |             |
|  <b>Operating tool, insulated</b>  | 2-way  | <b>280-432</b>             | 1  |  |                     |                |             |
|   | 3-way  | <b>280-433</b>             | 1  |  |                     |                |             |
|  <b>Protective warning marker, for 5 terminal blocks, fits into screwdriver slots</b>                                      | yellow   | <b>280-415</b>             | 100 (4 x 25)   |  |                     |                |             |
| All test plug adapters and test plugs for testing using jumper contact position in current bar  | Item-Nos and application notes see pages 1.194 – 1.196, Series 280 |                            |  | Item-Nos and application notes see pages 1.195 – 1.196, Series 280 |                     |                |             |
|  <b>Test plug, w. cable 500 mm/1'77"</b>   | 2 mm / 0.079 in Ø  | red                        | <b>210-136</b>   | 50 (5 x 10)  | red                 | <b>210-136</b> | 50 (5 x 10) |
|   | 2.3 mm / 0.091 in Ø  | yellow                     | <b>210-137</b>   | 50 (5 x 10)  | yellow              | <b>210-137</b> | 50 (5 x 10) |
|  <b>WMB multi marking system, 10 strips with 10 markers each, white with black printing</b>                                | see also section 8   |                            |  | see also section 8   |                     |                |             |
|  <b>Screwdriver, (3.5 x 0.5) mm</b>  | <b>210-120</b>   | 1                          |  | <b>210-120</b>   | 1                   |                |             |

\* For further approvals with corresponding ratings see pages 10.3 ff.



|   |   |  |   |
|---|---|--|---|
| <b>0.34 – 1.5 mm<sup>2</sup> "f-st" ①</b><br><b>0.31 – 1.0 mm<sup>2</sup> "s"</b><br><b>0.08 – 2.5 mm<sup>2</sup></b><br><b>500 V/6 kV/3 ②</b><br><b>13.5 A ①/24 A ②</b><br><b>Terminal block width 5 mm / 0.197 in</b><br> <b>8 – 9 mm / 0.33 in ②</b> | <b>AWG 22–16 "str." ①</b><br><b>AWG 22–18 "sol." ①</b><br><b>AWG 28–12 ②</b><br><b>300 V, 10 A* ②</b> | <b>0.34 – 1.5 mm<sup>2</sup> "f-st" ①</b><br><b>0.31 – 1.0 mm<sup>2</sup> "s"</b><br><b>500 V/6 kV/3 ②</b><br><b>13.5 A ①</b><br><b>Terminal block width 5 mm / 0.197 in</b> | <b>AWG 22–16 "str." ①</b><br><b>AWG 22–18 "sol." ①</b><br><b>300 V, 10 A* ②</b> |
|---|---|--|---|



**Application criteria**  
**For the WAGO FIT CLAMP connection**  
**Serie 290**

For **PVC** insulated conductors (e.g. H05V) and **TPE** insulated conductors (e.g. H05Z)

| Nominal cross section | Types of conductors and reduced rated currents |        | Overall diameter of the conductor insulation up to |
|-----------------------|--|--------|--|
|                       | s  | f-st   |  |
| 0.31                  | 4.0 A  | –      | 2.0  |
| 0.34                  | –  | 2.0 A  | 2.0  |
| 0.5                   | 6.0 A  | 4.0 A  | 2.3  |
| 0.75                  | 9.0 A  | 6.0 A  | 2.5  |
| 1.0                   | 13.5 A   | 9.0 A  | 2.6  |
| 1.5                   | –  | 13.5 A | 3.0  |

| Item-No.   | Pack.-unit pcs | Item-No.   | Pack.-unit pcs |
|--|----------------|--|----------------|
| <b>1 CAGE CLAMP® / 2 FIT CLAMP</b>                                 |                | <b>1 FIT CLAMP / 2 FIT CLAMP</b>                                   |                |
| <b>Through terminal blocks</b>                                     |                | <b>Through terminal blocks</b>                                     |                |
| grey <b>290-681</b>  | 100            | grey <b>290-661</b>  | 100            |
| blue <b>290-684 ①</b>  | 100            | blue <b>290-664 ①</b>  | 100            |
| <b>Ground (earth) terminal block</b>                               |                | <b>Ground (earth) terminal block</b>                               |                |
| green-yellow <b>290-687</b>  | 100            | green-yellow <b>290-667</b>  | 100            |
| Appropriate marking system <b>WMB/WSB/WFB</b>                      |                | Appropriate marking system <b>WMB/WSB/WFB</b>                      |                |
| 1.1 mm / 0.043 in thick  |                | 1.1 mm / 0.043 in thick  |                |
| grey <b>290-301</b>  | 100 (4 x 25)   | grey <b>290-301</b>  | 100 (4 x 25)   |
| orange <b>290-302</b>  | 100 (4 x 25)   | orange <b>290-302</b>  | 100 (4 x 25)   |
| 0.08 – 0.2 mm <sup>2</sup> <b>280-470</b>                          | 200 strips     |  |                |
| 0.25 – 0.5 mm <sup>2</sup> <b>280-471</b>                          | 200 strips     |  |                |
| 0.75 – 1 mm <sup>2</sup> <b>280-472</b>                            | 200 strips     |  |                |
| I <sub>N</sub> 24 A  |                | I <sub>N</sub> 24 A  |                |
| grey <b>280-402</b>  | 200 (8 x 25)   | grey <b>280-402</b>  | 200 (8 x 25)   |
| yellow-green <b>280-422</b>  | 200 (8 x 25)   | yellow-green <b>280-422</b>  | 200 (8 x 25)   |
| I <sub>N</sub> 24 A  |                | I <sub>N</sub> 24 A  |                |
| grey <b>280-409</b>  | 100 (4 x 25)   | grey <b>280-409</b>  | 100 (4 x 25)   |
| I <sub>N</sub> 24 A  |                | I <sub>N</sub> 24 A  |                |
| <b>780-452</b>   | 100 (4 x 25)   | <b>780-452</b>   | 100 (4 x 25)   |
| <b>780-453</b>   | 100 (4 x 25)   | <b>780-453</b>   | 100 (4 x 25)   |
| <b>780-454</b>   | 100 (4 x 25)   | <b>780-454</b>   | 100 (4 x 25)   |
| <b>780-455</b>   | 50 (2 x 25)    | <b>780-455</b>   | 50 (2 x 25)    |
| :  |                | :  |                |
| <b>780-458</b>   | 50 (2 x 25)    | <b>780-458</b>   | 50 (2 x 25)    |
| L = 60 mm <b>249-125</b>   | 10             | L = 60 mm <b>249-125</b>   | 10             |
| L = 110 mm <b>249-126</b>  | 10             | L = 110 mm <b>249-126</b>  | 10             |
| L = 250 mm <b>249-127</b>  | 10             | L = 250 mm <b>249-127</b>  | 10             |
| 2-way <b>280-482</b>   | 200 (8 x 25)   |  |                |
| 3-way <b>280-483</b>   | 200 (8 x 25)   |  |                |
| 1-way <b>280-432</b>   | 1              |  |                |
| 1-way <b>280-433</b>   | 1              |  |                |
| elbow <b>280-415</b>   | 100 (4 x 25)   |  |                |
| Item-Nos and application notes see pages 1.194 – 1.196, Series 280 |                | Item-Nos and application notes see pages 1.195 – 1.196, Series 280 |                |
| red <b>210-136</b>   | 50 (5 x 10)    | red <b>210-136</b>   | 50 (5 x 10)    |
| yellow <b>210-137</b>  | 50 (5 x 10)    | yellow <b>210-137</b>  | 50 (5 x 10)    |
| see also section 8   |                | see also section 8   |                |
| <b>210-120</b>   | 1              | <b>210-120</b>   | 1              |

| AWG | sol.  | str.  | in / mm    |
|-----|-------|-------|------------|
| 22  | 4.0 A | 2.0 A | 0.67/1.7 ① |
| 20  | 6.0 A | 4.0 A | 0.75/1.9 ① |
| 18  | 9.0 A | 6.0 A | 0.87/2.2 ① |
| 16  | –     | 9.0 A | 0.98/2.5 ① |

① max. overall diameter of conductor insulation  
 0.017 in / 43 mm

Conductor: **PVC** insulation  
 Δ DIN/VDE 0281/HD 21.1 S3  
**TPE** insulation  
 Δ DIN/VDE 0282/HD 22.1 S3  
 Shore hardness A (standard value):  
 70 – 90  
 Temperature range for the conductor connection:  
 10 – 40 °C

**To re-connect use only the same type of conductors with the same cross section within the rated cross section range in accordance with test specification DIN EN 60 998-2-3.**

A special range of rail-mounted terminal blocks combines FIT CLAMP and CAGE CLAMP® connections. The CAGE CLAMP® connection is made for external wiring, the FIT CLAMP connection is made for factory wiring. As conductors do not have to be stripped, considerable time can be saved.

The terminal block profile is similar to that of the 280 series WAGO rail-mounted terminal blocks with CAGE CLAMP® connection up to 2.5 mm / AWG 12. Accessories for the 280 series, including the jumpers, can also be used for the 290 series FIT CLAMP.

The FIT CLAMP connection is designed to be factory-wired. In order to achieve a terminal block width of only 5 mm, there is a small reduction of the rated current of the respective wire cross section (see table).

**Ground (earth) conductor terminal blocks**

