

## Data Sheet | Item Number: 2002-1401

4-conductor through terminal block; 2.5 mm<sup>2</sup>; suitable for Ex e II applications; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®; 2,50 mm<sup>2</sup>; gray

<https://www.wago.com/2002-1401>

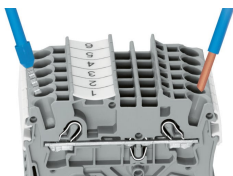


### Installation Notes

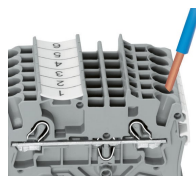
#### Conductor termination



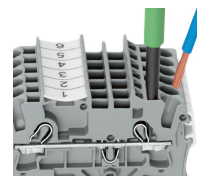
All conductor types at a glance



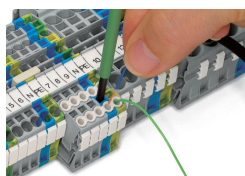
Push-in termination of solid and ferruled conductors



Inserting a conductor via push-in termination:  
Solid conductors with cross-sections from either one size above, or up to two sizes below, the rated cross-section can be simply pushed in – no tools needed.

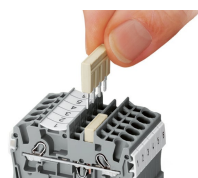


Inserting a conductor via operating tool:  
Connecting fine-stranded conductors without ferrules, or small cross-sectional conductors that cannot be pushed in, is performed similarly to the original CAGE CLAMP® – just use an operating tool.  
Advantage:  
To open the clamp, the operating tool is inserted vertically. The conductor entry is less than 15 degrees for easier wiring.

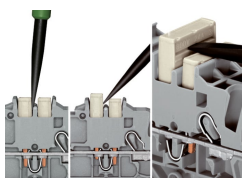


Conductor termination – insulation stop

#### Commoning

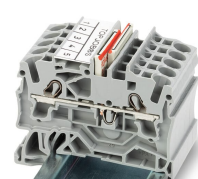


Insert push-in type jumper bar and push down until it hits backstop.

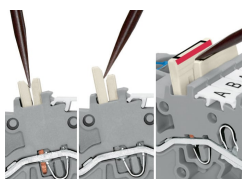


Removing a push-in type jumper bar:  
Insert the operating tool between the jumper and partition wall of the dual jumper slots, then lift up the jumper.  
Place the operating tool in the center of jumpers for up to five contacts (see above), or alternately on both sides for jumpers with more than five contacts.

#### Commoning



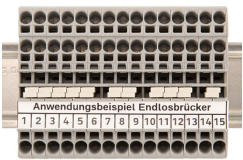
Orient the staggered jumpers' red stripes on the inside.  
Insert the staggered jumper and push down until it hits the backstop.



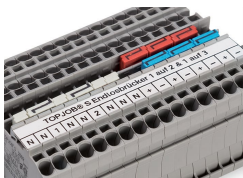
Removing a staggered jumper:  
Insert the operating tool between the staggered jumpers, then lift up the jumper.



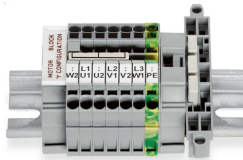
Commoning



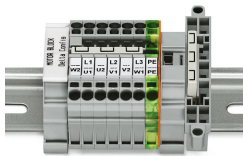
Continuous jumpers (2002 Series) readily connect an endless number of terminal blocks to each other via single jumper slot. Use the second jumper slot for additional commoning or testing.



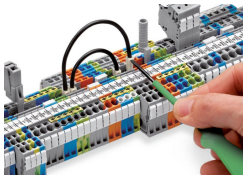
The 1-to-3 adjacent jumper for continuous commoning enables every other terminal block to be commoned. For example, positive and negative potentials can be accommodated alongside each other.



This star point jumper has been specially developed to create a "star point" and is used on motor terminal boards equipped with Rail-Mount Terminal Blocks TOPJOB® S.

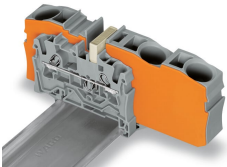


This delta jumper has been specially developed to create a delta configuration and is used on motor terminal boards equipped with rail-mount terminal blocks TOPJOB® S.

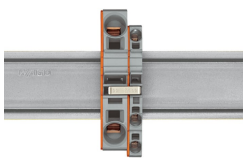


Push down the wire jumper until fully inserted. Lift the jumper with an operating tool for rewiring.

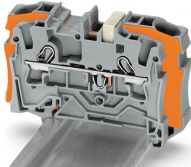
Commoning



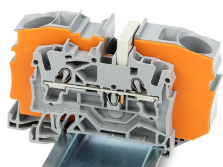
Step-down jumpers common terminal blocks of different sizes, without losing a conductor clamping point. This can be beneficial on long conductor runs where voltage drop can be a problem. A large conductor can be easily connected to smaller conductors at the distribution point. Commoning may be made in either direction using the special thin end plate to cover the open side. Additional through terminal blocks having a smaller cross-section may be commoned using push-in type jumper bars.



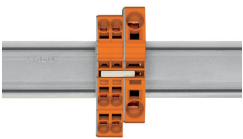
Using step-down jumpers, an end plate must be inserted between the terminal blocks to be commoned.



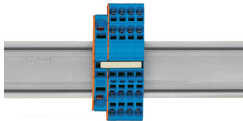
Step-down jumper (2006-499) commons 6/4 mm² (10/12 AWG) terminal blocks (2006/2004 Series) with 4/2.5/1.5 mm² (AWG 12/14/16) terminal blocks (2004/2002/2001 Series).



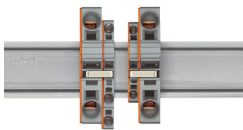
Step-down jumper (2016-499) commons 16/10 mm² (16/8 AWG) terminal blocks (2016/2010 Series) with 10/6/4/2.5 mm² (8/10/12/14 AWG) terminal blocks (2010/2006/2004/2002 Series).



Stepping down via push-in type jumper bar: Commoning via open terminal side with end plate allows jumpering over two cross-section sizes for 16 mm² (6 AWG) and 10 mm² (8 AWG) and one cross-section size for 6/4/2.5 mm² (10/12/14 AWG). An example: from 16 mm² (6 AWG) to 6 mm² (10 AWG) (see illustration above) or from 10 mm² (8 AWG) to 4 mm² (12 AWG).



Stepping down via push-in type jumper bar: Commoning via closed terminal side with end plate allows jumpering over two cross-section sizes, e.g., from 16 mm² (6 AWG) to 6 mm² (10 AWG) or from 6 mm² (10 AWG) to 2.5 mm² (14 AWG) (see illustration above).



Note: The total current of the outgoing circuits must not exceed the nominal current of the step-down jumper/push-in type jumper bar.

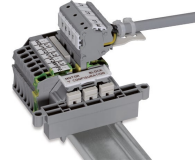
## Testing



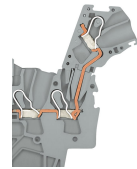
The modular TOPJOB® S connectors also connect conductors of the same size as the terminal blocks being used.



TOPJOB® S Connectors with a 2 mm Ø test socket for testing voltage via 2-pole voltage tester



Rail-mount terminal block assembly for electric motor wiring



L-type test plug module – cross-sectional view of contacts

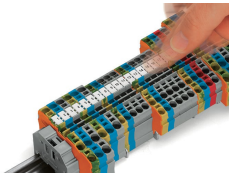


Test plug adapter (2009-174, CAT I) for 4 mm Ø plugs – compatible with 2000 to 2016 Series

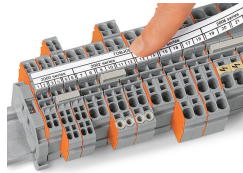


Testing tap (2009-182) for tool-free connection of test cables up to 2.5 mm² (12 AWG) – compatible with 2000 to 2016 Series

## Marking



Snapping WMB Inline markers into marker slots.

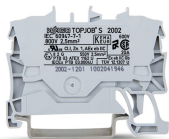


TOPJOB® S 2009-193 Group Marker Carrier (equipped with a marking strip) for all 2001 to 2016 Series TOPJOB® S Rail-Mount Terminal Blocks  
Do not use on an end plate!

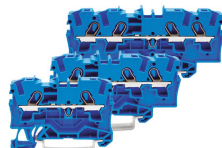


Using marker carriers for marking strips (2002-161) in jumper slots.

## Ex application



Through terminal blocks with a blue insulated housing are suitable for Ex i applications.



All through and ground conductor terminal blocks are suitable for Ex e II applications.



Separator plate for Ex e/Ex i applications  
An end plate must be applied to the terminal block located directly behind an Ex e/Ex i separator plate.



### Ex e II/Ex i terminal strip

#### Note:

The movable feet of terminal blocks and separator plates must face the same direction.



A separator plate is located between the Ex e II and Ex i terminal strip.

End plate

Ex e II terminal blocks

Separator plate for Ex e/Ex i applications

End plate

Ex i terminal blocks

According to EN 50020, a minimum distance of 50 mm must be kept between live parts of Ex e and Ex i circuits. The use of Ex e/Ex i separators is a space-saving solution when Ex e and Ex i terminal blocks are mounted on a common DIN-rail.

