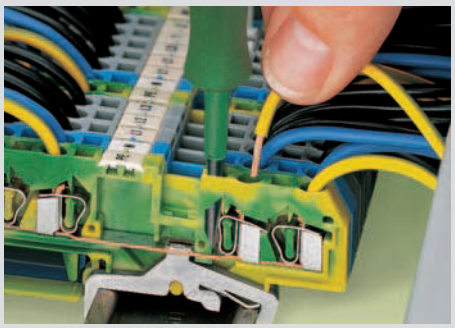
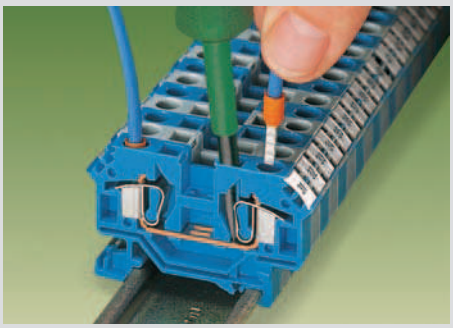
CAGE CLAMP® connection

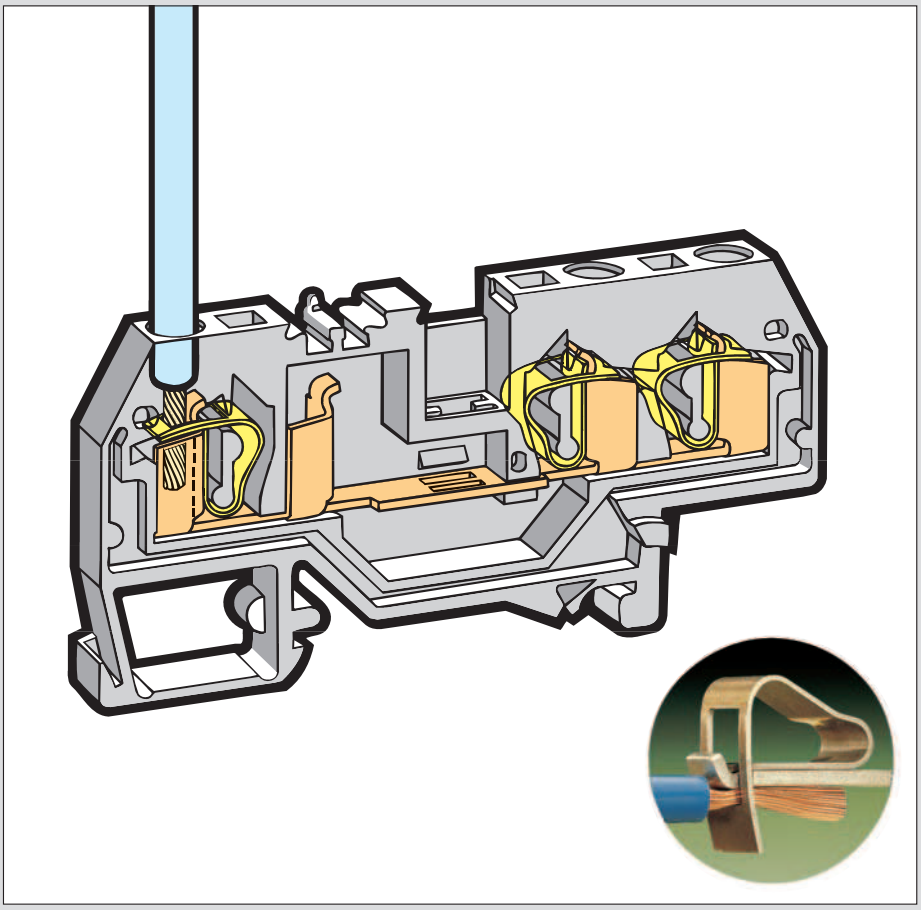


Connection of conductors



Connection of conductors

❶ When using conductors with ferrules, it is necessary to use a terminal block one size larger than the nominal cross section of the conductor

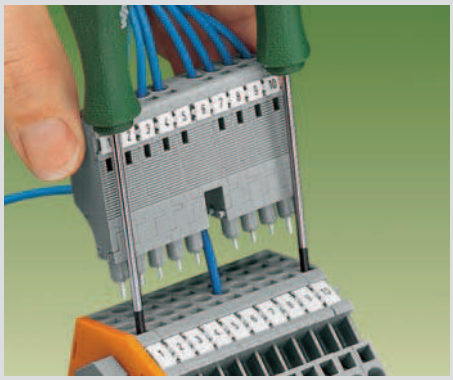


Testing



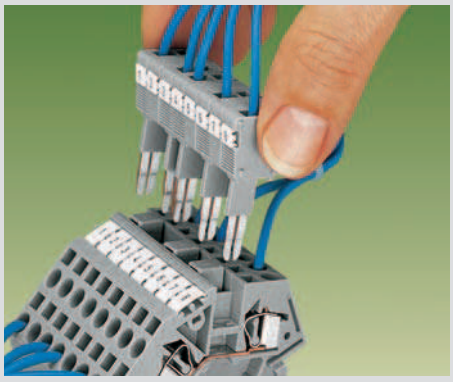
Testing with test plug.
Test plug with CAGE CLAMP®

Testing



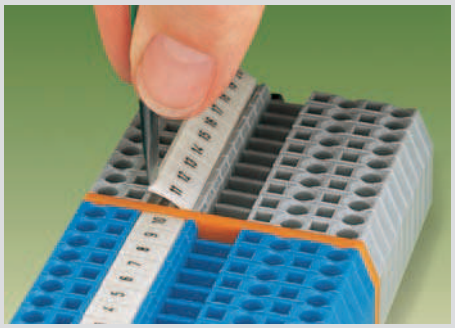
Test plug modules with CAGE CLAMP®. Testing using the conductor wire opening, see page 2.38

Testing



Test plug modules with CAGE CLAMP®. Testing using jumper contact position in current bar, see page 2.39

Marking

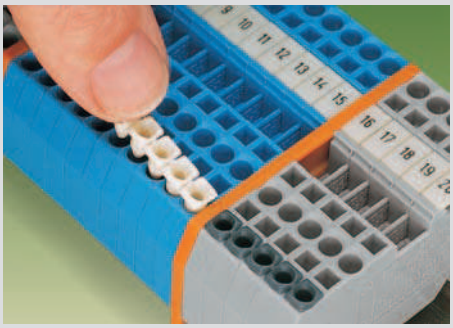


Marking with WMB multi-marking system or WSB quick marking system.
For other systems see section 14



fine-stranded wire – tip bonded

Insulation stop

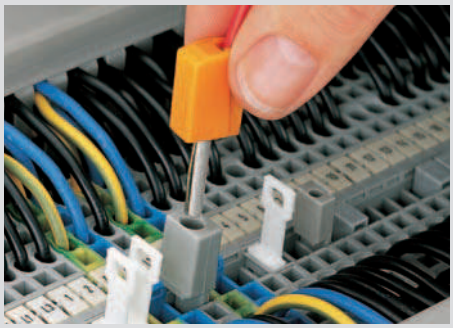


Insertion of insulation stop.
Application notes see page 2.43



fine-stranded wire with crimped ferrule ❶

Testing



Testing with banana plug 4 mm / 0.157 in Ø, using test plug adapter 209-170



fine-stranded wire with crimped pin terminal

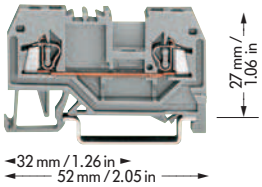
Through/Ground (Earth) Conductor/Shield (Screen) and Ex Terminal Blocks 1.5 mm² / AWG 16, Series 279

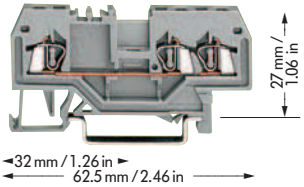
0.08 – 1.5 mm²	AWG 28 – 16
800 V/8 kV/3 ❶	600 V, 10 A
18 A	600 V, 10 A

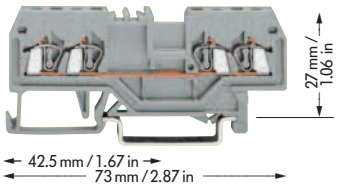
Terminal block width 4 mm / 0.157 in

8 – 9 mm / 0.33 in

* GL BV LR NV







	Item No.	Pack. unit pcs
2-conductor through terminal blocks		
grey	**279-901**	100
blue	**279-904**	100
orange	**279-902**	100
red	**279-903**	100
black	**279-905**	100
yellow	**279-906**	100
light grey Ex	**279-992**	100
2-conductor ground (earth) terminal blocks		
green-yellow	**279-907**	100
green-yellow Ex	**279-907/999-950**	100
Other terminal blocks with the same shape		
diode	**279-915/...-...**	page 7.56

	Item No.	Pack. unit pcs
3-conductor through terminal blocks		
grey	**279-681**	100
blue	**279-684**	100
orange	**279-682**	100
red	**279-683**	100
black	**279-685**	100
yellow	**279-686**	100
light grey Ex	**279-993**	100
3-conductor ground (earth) terminal blocks		
green-yellow	**279-687**	100
green-yellow Ex	**279-687/999-950**	100
Other terminal blocks with the same shape		
diode	**279-673/...-...**	page 7.56
LED	**279-674/...-...**	page 7.60

	Item No.	Pack. unit pcs
4-conductor through terminal blocks		
grey	**279-831**	100
blue	**279-834**	100
orange	**279-832**	100
red	**279-833**	**100**
black	**279-835**	100
yellow	**279-836**	100
light grey Ex	**279-994**	100
4-conductor ground (earth) terminal blocks		
green-yellow	**279-837**	100
green-yellow Ex	**279-837/999-950**	100
4-conductor shield (screen) terminal block		
white	**279-838**	100
Other terminal blocks with the same shape		
double potential	**279-826**	page 2.9
diode	**279-815/...-...**	page 7.56
LED	**279-809/...-...**	page 7.60

Accessories Series 279

Appropriate marking system **WMB/WSB/WFB** (see section 14)

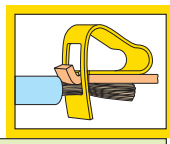
		Item No.	Pack. unit pcs
End and intermediate plate, 2 mm / 0.079 in thick	orange	**279-328**	100 (4 x 25)
	grey	**279-325**	100 (4 x 25)
	light grey	**279-330**	100 (4 x 25)
Separator, oversized, 2 mm / 0.079 in thick	orange	**279-329**	100 (4 x 25)
	grey	**279-326**	100 (4 x 25)
	light grey	**279-331**	100 (4 x 25)
Insulation stop ❸, 5 pcs / strip	white	**279-470**	200 strips
	dark grey	**279-471**	200 strips
Adjacent jumper, insulated, I_N 15 A	grey	**279-402**	200 (8 x 25)
	yell.-green	**279-422**	200 (8 x 25)
Alternate jumper, insulated, I_N 15 A	grey	**279-409**	100 (4 x 25)
Push-in type wire jumper ❸, insulated, I_N 9 A	L = 60 mm	**249-125**	10
	L = 110 mm	**249-126**	10
	L = 250 mm	**249-127**	10
Protective warning marker, comp type jumper bar, test plug adapter, etc. (see right page)			

		Item No.	Pack. unit pcs
End and intermediate plate, 2 mm / 0.079 in thick	orange	**279-339**	100 (4 x 25)
	grey	**279-308**	100 (4 x 25)
	light grey	**279-341**	100 (4 x 25)
Separator, oversized, 2 mm / 0.079 in thick	orange	**279-340**	100 (4 x 25)
	grey	**279-309**	100 (4 x 25)
	light grey	**279-342**	100 (4 x 25)
Insulation stop ❸, 5 pcs / strip	white	**279-470**	200 strips
	dark grey	**279-471**	200 strips
Adjacent jumper, insulated, I_N 15 A	grey	**279-402**	200 (8 x 25)
	yell.-green	**279-422**	200 (8 x 25)
Alternate jumper, insulated, I_N 15 A	grey	**279-409**	100 (4 x 25)
Push-in type wire jumper ❸, insulated, I_N 9 A	L = 60 mm	**249-125**	10
	L = 110 mm	**249-126**	10
	L = 250 mm	**249-127**	10
Protective warning marker, comp type jumper bar, test plug adapter, etc. (see right page)			

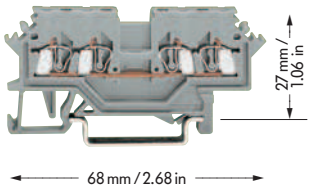
		Item No.	Pack. unit pcs
End and intermediate plate, 2 mm / 0.079 in thick	orange	**279-346**	100 (4 x 25)
	grey	**279-344**	100 (4 x 25)
	light grey	**279-348**	100 (4 x 25)
Separator, oversized, 2 mm / 0.079 in thick	orange	**279-347**	100 (4 x 25)
	grey	**279-345**	100 (4 x 25)
	light grey	**279-349**	100 (4 x 25)
Insulation stop ❸, 5 pcs / strip	white	**279-470**	200 strips
	dark grey	**279-471**	200 strips
Adjacent jumper, insulated, I_N 15 A	grey	**279-402**	200 (8 x 25)
	yell.-green	**279-422**	200 (8 x 25)
Alternate jumper, insulated, I_N 15 A	grey	**279-409**	100 (4 x 25)
Push-in type wire jumper ❸, insulated, I_N 9 A	L = 60 mm	**249-125**	10
	L = 110 mm	**249-126**	10
	L = 250 mm	**249-127**	10
Protective warning marker, comp type jumper bar, test plug adapter, etc. (see right page)			

* For further approvals with corresponding ratings see section 15.

Double Potential Terminal Blocks 1.5 mm² / AWG 16, Series 279



0.08 – 1.5 mm² | **AWG 28 – 16**
800 V/8 kV/3 ❶ | **600 V, 10 A**
18 A | **600 V, 10 A**
Terminal block width 4 mm / 0.157 in
8 – 9 mm / 0.33 in
* CCA GL



	Item No.	Pack. unit pcs
4-conductor through terminal blocks		
grey	**279-621**	100
blue	**279-604** ❷	100
light grey Ex	**279-990**	100
Other terminal blocks with the same shape		
double potential	**279-626**	
diode	**279-623/...-...**	page 7.56
LED	**279-624/...-...**	page 7.60

End and intermediate plate, 2 mm / 0.079 in thick



orange	**279-317**	100 (4 x 25)
grey	**279-316**	100 (4 x 25)
light grey	**279-318**	100 (4 x 25)

Separator, oversized, 2 mm / 0.079 in thick



orange	**279-327**	100 (4 x 25)
grey	**279-337**	100 (4 x 25)
light grey	**279-338**	100 (4 x 25)

Insulation stop ❸, 5 pcs / strip



white	**279-470**	200 strips
dark grey	**279-471**	200 strips

Adjacent jumper, insulated, I_N 15 A



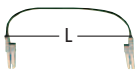
grey	**279-402**	200 (8 x 25)
yell.-green	**279-422**	200 (8 x 25)

Alternate jumper, insulated, I_N 15 A



grey	**279-409**	100 (4 x 25)

Push-in type wire jumper ❸, insulated, I_N 9 A



L = 60 mm	**249-125**	10
L = 110 mm	**249-126**	10
L = 250 mm	**249-127**	10

Protective warning marker, for 5 terminal blocks, fits into screwdriver slot



yellow	**279-415**	100 (4 x 25)

Test plug adapter, suitable f. term. bl. 1.5 mm² – 4 mm², 5 mm / 0.197 in wide



280-404 100 (4 x 25)
or. test plug 210-137 (2.3 mm Ø)

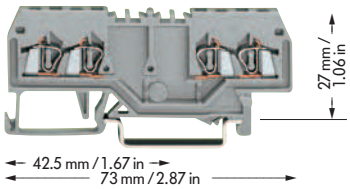
Test plug adapter, suitable f. term. bl. 1.5 mm² – 10 mm², 8 mm / 0.315 in wide



209-170 50 (2 x 25)
for test plug 4 mm / 0.157 in Ø

Comp type jumper bar **(see right column)**

0.08 – 1.5 mm² | **AWG 28 – 16**
800 V/8 kV/3 ❶ | **600 V, 10 A**
18 A | **600 V, 10 A**
Terminal block width 4 mm / 0.157 in
8 – 9 mm / 0.33 in
* CCA BV LR NV



	Item No.	Pack. unit pcs
Double potential terminal blocks, with double marker receptacle in the center of the terminal block		
grey	**279-826**	100
light grey Ex	**279-995**	100

Attention! These double potential terminal blocks cannot be commoned with adjacent jumpers!

End and intermediate plate, 2 mm / 0.079 in thick



orange	**279-346**	100 (4 x 25)
grey	**279-344**	100 (4 x 25)
light grey	**279-348**	100 (4 x 25)

Separator, oversized, 2 mm / 0.079 in thick



orange	**279-347**	100 (4 x 25)
grey	**279-345**	100 (4 x 25)
light grey	**279-349**	100 (4 x 25)

Insulation stop ❸, 5 pcs / strip



white	**279-470**	200 strips
dark grey	**279-471**	200 strips

Comb type jumper bar ❸, insulated, $I_N = I_N$ of terminal block



2-way	**279-482**	200 (8 x 25)
3-way	**279-483**	200 (8 x 25)

Alternate comb type jumper bar, insulated, $I_N = I_N$ of terminal block



2-way	**279-492**	200 (8 x 25)

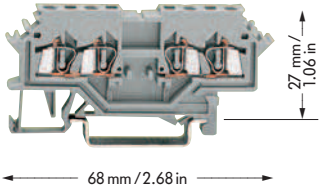
Operating tool, insulated



2-way	**279-432**	1
3-way	**279-433**	1

Double potential terminal blocks, with marker receptacle on the side of the terminal block

0.08 – 1.5 mm² | **AWG 28 – 16**
800 V/8 kV/3 ❶ | **600 V, 10 A**
18 A | **600 V, 10 A**
Terminal block width 4 mm / 0.157 in
8 – 9 mm / 0.33 in
* CCA GL BV LR NV



	Item No.	Pack. unit pcs
grey	**279-626**	100
light grey Ex	**279-989**	100

Attention! These double potential terminal blocks cannot be commoned with adjacent jumpers!

End and intermediate plate, 2 mm / 0.079 in thick



orange	**279-317**	100 (4 x 25)
grey	**279-316**	100 (4 x 25)
light grey	**279-318**	100 (4 x 25)

Separator, oversized, 2 mm / 0.079 in thick



orange	**279-327**	100 (4 x 25)
grey	**279-337**	100 (4 x 25)
light grey	**279-338**	100 (4 x 25)

Insulation stop ❸, 5 pcs / strip



white	**279-470**	200 strips
dark grey	**279-471**	200 strips

Comb type jumper bar ❸, insulated, $I_N = I_N$ of terminal block



2-way	**279-482**	200 (8 x 25)
3-way	**279-483**	200 (8 x 25)

Alternate comb type jumper bar, insulated, $I_N = I_N$ of terminal block



2-way	**279-492**	200 (8 x 25)

Operating tool, insulated



2-way	**279-432**	1
3-way	**279-433**	1

Double potential terminal blocks are space savers. Two independent through terminal blocks are placed in one insulated housing on one level. The width of the housing is only 4 mm / 0.157 in. Compared to standard through terminal blocks, the width is only 2 mm / 0.079 in for a total height of only 27 mm / 1.063 in from the upper edge of the carrier rail. Input and output contacts of one circuit are placed on the same side of the terminal block. Both circuits can be individually marked according to input and output.

❶ 800 V = rated voltage
8 kV = rated surge voltage
3 = pollution degree
(see also section 15)

❷ Suitable for Ex i applications

Ex Suitable for Ex e II applications
0.2 – 1.5 mm² AWG 24 – 16
550 V, 15 A
(see also section 13)
Ex e / Ex i separator see page 2.13

❸ See application notes on pages 2.43 – 2.45

Through/Ground (Earth) Conductor/Shield (Screen) and Ex Terminal Blocks 2.5 mm² / AWG 12, Series 280

0.08 – 2.5 mm²	AWG 28 – 12
800 V/8 kV/3 ❶	600 V, 20 A UL
24 A	600 V, 25 A CSA

Terminal block width 5 mm / 0.197 in
8 – 9 mm / 0.33 in

* UL CSA KEUR CCA KEMA KEUR N D GL BV LR NV Ex

0.08 – 2.5 mm²	AWG 28 – 12
800 V/8 kV/3 ❶	600 V, 20 A UL
24 A	600 V, 25 A CSA

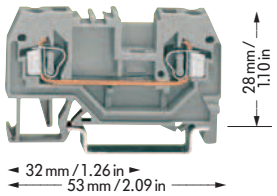
Terminal block width 5 mm / 0.197 in
8 – 9 mm / 0.33 in

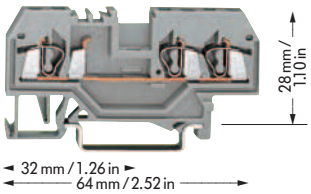
* UL CSA KEUR CCA KEMA KEUR D GL BV LR NV Ex

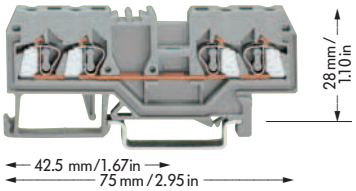
0.08 – 2.5 mm²	AWG 28 – 12
800 V/8 kV/3 ❶	600 V, 20 A UL
20 A	600 V, 25 A CSA

Terminal block width 5 mm / 0.197 in
8 – 9 mm / 0.33 in

* UL CSA KEUR CCA KEMA GL BV LR NV Ex







	Item No.	Pack. unit pcs
2-conductor through terminal blocks		
grey	**280-901**	100
blue	**280-904**	100
orange	**280-902**	100
red	**280-903**	100
black	**280-905**	100
yellow	**280-906**	100
light grey Ex	**280-992**	100
2-conductor ground (earth) terminal blocks		
green-yellow	**280-907**	100
green-yellow Ex	**280-907/999-950**	100
Other terminal blocks with the same shape		
disconnect	**280-912**	page 7.10
carrier term. block	**280-916**	page 7.35
diode	**280-915/...-...**	page 7.57
spacer	**280-902/056-000**	

	Item No.	Pack. unit pcs
3-conductor through terminal blocks		
grey	**280-681**	100
blue	**280-684**	100
orange	**280-650**	100
red	**280-653**	100
black	**280-671**	100
yellow	**280-672**	100
light grey Ex	**280-993**	100
3-conductor ground (earth) terminal blocks		
green-yellow	**280-687**	100
green-yellow Ex	**280-687/999-950**	100
Other terminal blocks with the same shape		
disconnect	**280-683**	page 7.10
carrier term. block	**280-610**	page 7.35
diode	**280-673/...-...**	page 7.57
spacer	**280-650/056-000**	

	Item-No.	Pack.-unit pcs
4-conductor through terminal blocks		
grey	**280-833**	100
blue	**280-834**	100
orange	**280-835**	100
red	**280-830**	**100**
black	**280-831**	100
yellow	**280-832**	100
light grey Ex	**280-994**	100
4-conductor ground (earth) terminal blocks		
green-yellow	**280-837**	100
green-yellow Ex	**280-837/999-950**	100
4-conductor shield (screen) terminal block		
white	**280-838**	100
Other terminal blocks with the same shape		
double potential	**280-826**	page 2.11
disconnect	**280-836**	page 7.10
disc., test a. meas.	**280-829**	page 7.10
carrier term. block	**280-816**	page 7.35
diode	**280-815/...-...**	page 7.57
LED	**280-809/...-...**	page 7.60
spacer	**280-835/056-000**	

Accessories Series 280

Appropriate marking system **WMB/WSB/WFB** (see section 14)

End and intermediate plate, 2.5 mm/0.098 in thick



orange	**280-309**	100 (4 x 25)
grey	**280-308**	100 (4 x 25)
light grey	**280-356**	100 (4 x 25)

End and intermediate plate, 2.5 mm/0.098 in thick



orange	**280-326**	100 (4 x 25)
grey	**280-324**	100 (4 x 25)
light grey	**280-358**	100 (4 x 25)

End and intermediate plate, 2.5 mm/0.098 in thick



orange	**280-315**	100 (4 x 25)
grey	**280-314**	100 (4 x 25)
light grey	**280-352**	100 (4 x 25)

Separator, oversized, 2 mm / 0.079 in thick



orange	**280-311**	100 (4 x 25)
grey	**280-310**	100 (4 x 25)
light grey	**280-357**	100 (4 x 25)

Separator, oversized, 2 mm / 0.079 in thick



orange	**280-346**	100 (4 x 25)
grey	**280-344**	100 (4 x 25)
light grey	**280-359**	100 (4 x 25)

Separator, oversized, 2 mm / 0.079 in thick



orange	**280-335**	100 (4 x 25)
grey	**280-334**	100 (4 x 25)
light grey	**280-353**	100 (4 x 25)

Insulation stop ❸, 5 pcs / strip



white	**280-470**	200 strips
light grey	**280-471**	200 strips
dark grey	**280-472**	200 strips

Insulation stop ❸, 5 pcs / strip



white	**280-470**	200 strips
light grey	**280-471**	200 strips
dark grey	**280-472**	200 strips

Insulation stop ❸, 5 pcs / strip



white	**280-470**	200 strips
light grey	**280-471**	200 strips
dark grey	**280-472**	200 strips

Adjacent jumper, insulated, I_N 24 A, Ex 23 A



grey	**280-402**	200 (8 x 25)
yell.-green	**280-422**	200 (8 x 25)

Adjacent jumper, insulated, I_N 24 A, Ex 22 A



grey	**280-402**	200 (8 x 25)
yell.-green	**280-422**	200 (8 x 25)

Adjacent jumper, insulated, I_N 24 A, Ex 20 A



grey	**280-402**	200 (8 x 25)
yell.-green	**280-422**	200 (8 x 25)

Staggered jumper ❸, insulated, I_N 24 A, Ex 23 A



width 5 mm / 0.197 in		
from 1 to 2	**780-452**	100 (4 x 25)
from 1 to 3	**780-453**	100 (4 x 25)
from 1 to 4	**780-454**	100 (4 x 25)
from 1 to 5	**780-455**	50 (2 x 25)
:	:	
from 1 to 8	**780-458**	50 (2 x 25)

Staggered jumper ❸, insulated, I_N 24 A, Ex 22 A



width 5 mm / 0.197 in		
from 1 to 2	**780-452**	100 (4 x 25)
from 1 to 3	**780-453**	100 (4 x 25)
from 1 to 4	**780-454**	100 (4 x 25)
from 1 to 5	**780-455**	50 (2 x 25)
:	:	
from 1 to 8	**780-458**	50 (2 x 25)

Staggered jumper ❸, insulated, I_N 24 A, Ex 20 A



width 5 mm / 0.197 in		
from 1 to 2	**780-452**	100 (4 x 25)
from 1 to 3	**780-453**	100 (4 x 25)
from 1 to 4	**780-454**	100 (4 x 25)
from 1 to 5	**780-455**	50 (2 x 25)
:	:	
from 1 to 8	**780-458**	50 (2 x 25)

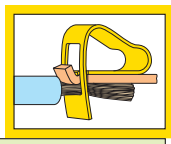
Protective warning marker, comp type jumper bar, test plug adapter, etc. (see page 2.13)

Protective warning marker, comp type jumper bar, test plug adapter, etc. (see page 2.13)

Protective warning marker, comp type jumper bar, test plug adapter, etc. (see page 2.13)

* For further approvals with corresponding ratings see section 15.

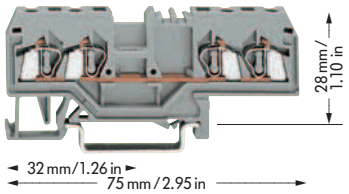
Double Potential Terminal Blocks 2.5 mm² / AWG 12, Series 280



0.08 – 2.5 mm² | AWG 28 – 12
800 V/8 kV/3 ❶ | 600 V, 20 A
20 A | 600 V, 25 A

Terminal block width 5 mm / 0.197 in
8 – 9 mm / 0.33 in

* GL BV LR NV



	Item No.	Pack. unit pcs
4-conductor through terminal blocks		
grey	**280-633**	100
blue	**280-634** ❷	100
orange	**280-603**	100
light grey Ex	**280-999**	100
4-conductor ground (earth) terminal blocks		
green-yellow	**280-677**	100
green-yellow Ex	**280-677/999-950**	100
4-conductor shield (screen) terminal block		
white	**280-678**	100
Other terminal blocks with the same shape		
double potential	**280-626**	page 2.11
disconnect	**280-685**	page 7.11
disc., test a. meas.	**280-649**	page 7.11
carrier term. block	**280-686**	page 7.35
diode	**280-655/...-...**	page 7.57
LED	**280-658/...-...**	page 7.61

End and intermediate plate, 2.5 mm/0.098 in thick



orange	**280-315**	100 (4 x 25)
grey	**280-314**	100 (4 x 25)
light grey	**280-352**	100 (4 x 25)

Separator, oversized, 2 mm / 0.079 in thick



orange	**280-335**	100 (4 x 25)
grey	**280-334**	100 (4 x 25)
light grey	**280-353**	100 (4 x 25)

Insulation stop ❸, 5 pcs / strip



white	**280-470**	200 strips
light grey	**280-471**	200 strips
dark grey	**280-472**	200 strips

Adjacent jumper, insulated, I_N 24 A, Ex 20 A



grey	**280-402**	200 (8 x 25)
yell.-green	**280-422**	200 (8 x 25)

Staggered jumper ❸, insulated, I_N 24 A, Ex 20 A



width 5 mm / 0.197 in

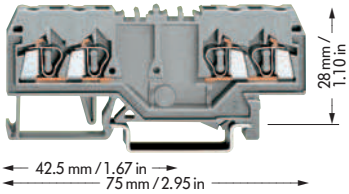
from 1 to 2	**780-452**	100 (4 x 25)
from 1 to 3	**780-453**	100 (4 x 25)
from 1 to 4	**780-454**	100 (4 x 25)
from 1 to 5	**780-455**	50 (2 x 25)
:	:	
from 1 to 8	**780-458**	50 (2 x 25)

Protective warning marker, comp type jumper bar, test plug adapter, etc. (see page 2.13)

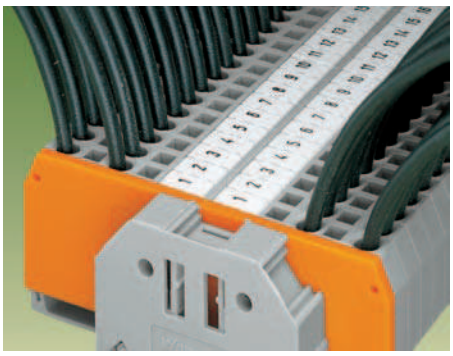
0.08 – 2.5 mm² | AWG 28 – 12
800 V/8 kV/3 ❶ | 600 V, 15 A
24 A | 600 V, 15 A

Terminal block width 5 mm / 0.197 in
8 – 9 mm / 0.33 in

* GL BV LR NV



	Item No.	Pack. unit pcs
Double potential terminal blocks, with double marker receptacle in the center of the terminal block		
grey	**280-826**	100
light grey Ex	**280-995**	100
Attention! These double potential terminal blocks cannot be commoned with adjacent jumpers!		



Terminal block marking directly on the terminal block either with WSB or WMB markers.

End and intermediate plate, 2.5 mm/0.098 in thick



orange	**280-315**	100 (4 x 25)
grey	**280-314**	100 (4 x 25)
light grey	**280-352**	100 (4 x 25)

Separator, oversized, 2 mm / 0.079 in thick



orange	**280-335**	100 (4 x 25)
grey	**280-334**	100 (4 x 25)
light grey	**280-353**	100 (4 x 25)

Insulation stop ❸, 5 pcs / strip



white	**280-470**	200 strips
light grey	**280-471**	200 strips
dark grey	**280-472**	200 strips

Comb type jumper bar ❸, insulated,



$I_N = I_N$ of terminal block

2-way	**280-482**	200 (8 x 25)
3-way	**280-483**	200 (8 x 25)

Alternate comb type jumper bar, insulated,



$I_N = I_N$ of terminal block

2-way	**280-492**	200 (8 x 25)

Operating tool, insulated

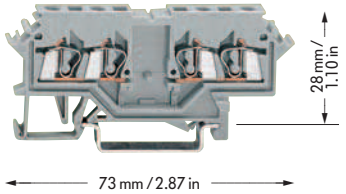


2-way	**280-432**	1
3-way	**280-433**	1

0.08 – 2.5 mm² | AWG 28 – 12
800 V/8 kV/3 ❶ | 600 V, 15 A
24 A | 600 V, 20 A

Terminal block width 5 mm / 0.197 in
8 – 9 mm / 0.33 in

* GL BV LR NV



	Item No.	Pack. unit pcs
Double potential terminal blocks, with marker receptacle on the side of the terminal block		
grey	**280-626**	100
light grey Ex	**280-989**	100
Attention! These double potential terminal blocks cannot be commoned with adjacent jumpers!		

❶ 800 V = rated voltage
8 kV = rated surge voltage
3 = pollution degree
(see also section 15)

❷ Suitable for Ex i applications

Ex Suitable for Ex e II applications
0.2 – 2.5 mm² AWG 24 – 12
550 V, 20 A
(see also section 13)
When using staggered jumpers the max. rated voltage will be reduced to 275 V.
Ex e / Ex i separator see page 2.13

❸ See application notes on pages 2.38 – 2.45

End and intermediate plate, 2.5 mm/0.098 in thick



orange	**280-317**	100 (4 x 25)
grey	**280-316**	100 (4 x 25)
light grey	**280-364**	100 (4 x 25)

Separator, oversized, 2 mm / 0.079 in thick



orange	**280-327**	100 (4 x 25)
grey	**280-337**	100 (4 x 25)
light grey	**280-365**	100 (4 x 25)

Insulation stop ❸, 5 pcs / strip



white	**280-470**	200 strips
light grey	**280-471**	200 strips
dark grey	**280-472**	200 strips

Comb type jumper bar ❸, insulated,



$I_N = I_N$ of terminal block

2-way	**280-482**	200 (8 x 25)
3-way	**280-483**	200 (8 x 25)

Alternate comb type jumper bar, insulated,



$I_N = I_N$ of terminal block

2-way	**280-492**	200 (8 x 25)

Operating tool, insulated



2-way	**280-432**	1
3-way	**280-433**	1