## High-Current, Rail-Mounted Terminal Blocks 35 mm<sup>2</sup> 285 Series

## Conductor termination - Step 1



Insert operating tool and turn counterclockwise. Then push in orange locking tab for handsfree wiring.

## Conductor termination - Step 2



Insert stripped conductor into the clamping unit until it hits backstop; hold conductor in position.

## Conductor termination - Step 3



Unlock the locking tab with a short conterclockwise turn of the operating tool ①, when unlocked allow operating tool to rotate clockwise 2 to securely terminate the conductor.

## Power tap



The power tap is inserted into the jumper contact slot. It can be fitted with a strain relief plate.





Rail-mounted, high-current terminal blocks 35 mm $^2$ /AWG 2 and 50 mm $^2$ /AWG 1



**POWER CAGE CLAMP** clamps the following copper conductors:\*



stranded



fine-stranded, also with tinned single strands

## - Description and Handling -

## Commoning



Commoning adjacent terminal blocks using centrally positioned adjacent jumpers.



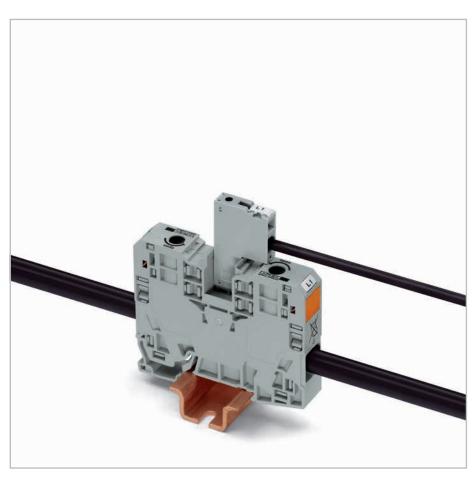
Slide the marking strip laterally to remove the jumper.

## Commoning with step-down jumpers

POWER
CAGE CLAMP®



Commoning from 35 mm²/AWG 2
POWER CAGE CLAMP terminal blocks to 10/16 mm²
(AWG 8/10) TOPJOB® S terminal blocks (2010 and 2016 Series)



Step-down jumpers may 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.

Step-down jumpers are simply pushed down for full insertion, similar to adjacent jumpers. Commoning may be made in either direction using the special thin end plate to cover the open side. Further terminal blocks of the smaller cross section may be commoned using standard adjacent jumpers.

In this case, pay attention that: The total current flowing does not exceed the rating of the step-down jumper.



Side-entry wiring means that even larger conductors, which offer limited flexibility, can be easily connected.

## Marking



In addition to the WMB marking system, custom marking strips can also be used.

## Marking



Adapter for marking strips or 2 x WMB



fine-stranded, with ferrule (gastight crimped)



## High-Current, Through and Ground Conductor Terminal Blocks 35 mm<sup>2</sup> 285 Series



6 ... 35 mm<sup>2</sup> 1000 V/8 kV/3 1 I<sub>N</sub> 125 A

AWG 10 ... 2 600 V, 115 A 🗫 600 V, 115 A®

0.2 ... 6 mm<sup>2</sup> AWG 24 ... 10 800 V/8 kV/3 2 600 V, 30 A 🖘  $I_N 32 A$ 600 V, 32 A®

Terminal block width 16 mm / 0.63 in. 25 mm / 0.98 in. 3

Module width 8 mm / 0.315 in. 12 ... 13 mm / 0.49 in. 3





1000 V = rated voltage 8 kV = rated surge voltage 3 = pollution degree (see Section 14)

2 800 V = rated voltage 8 kV = rated surge voltage 3 = pollution degree (see Section 14)

- 3 Strip length, see packaging or instructions.
- 4 See application notes for: Step-down jumper, page 167

	Item	No.	Pack. Unit		Ite	m No.	Pack. Unit
2-conductor	through termin	nal block, to be		Power tap,			
sively on DIN	•	,		for 35 mm² hig	ah-current terr	ninal blocks	
gray	285-	135	15	gray		5-427	5
blue	285-		15	© 5 · /			
2-conductor	ground termin	<b>al block,</b> to be	used exclu-				
sively on DIN	35 x 15 rail; 2.	3 mm thick					
green-yell	ow <b>285</b> -	137	15				
Item-Spe	cific Access	ories		Item-Spec	ific Acces	sories	
Adjacent jur	<b>nper,</b> insulated,			Strain relief p	olate, gray		
100	I <sub>N</sub> 85 A				1-pole	769-410	100 (4x25
17	gray	285-435	50 (2×25)	1			
	<b>umper,</b> insulate	d,		Test plug,			
4	I <sub>N</sub> 90 A				with 500 n	nm cable,	
81	gray	285-430	50 (2×25)		2 mm Ø		
70					red	210-136	50
Protective w	arning marker			WMB Multi m			
		tage symbol, blo				ith 10 markers per	
-	yellow	285-420	100 (4x25)	THE PERSON NAMED IN		l widths 5 17.5	
	1			MANAR AA II:	plain	793-501	5
Finger guard				WMB Multi n			
	tor entries	over protects un	used conduc-			ith 10 markers per 5 5.2 mm	cara,
	yellow	285-421	100 (4x25)		plain	793-5501	5
Test plug ad	lapter, 11.6 mm		100 (4,25)		pidiri	7 73-3301	
resi piog da	•	mm² terminal b	locks for				
1	4 mm Ø test		10010, 101				
-	gray	283-404	25				
Operatina to		lly insulated sh					
A	-	x 0.8) mm blade					
1	71	210-721	1				
Three-phase	set,						
STATE OF THE PARTY	with 35mm²	high-current tern	ninal blocks				
Land Market		285-139	1				
Power tap,	<sub>N</sub> 24 A, with 50	0 mm cable, for	terminal				
1		m² (283/783 S					
	35 mm <sup>2</sup> (28	5/785 Series)					
T	gray	283-407	25				
Marking stri	i <b>p,</b> plain,						
	11 mm wide	,					
0	50 m roll						
	white	2009-110	1				
Copper carr	rier rail, acc. to	•					
	35 x 15 mm						
	2 m/6′6″ loi	•					
	unslotted	210-198	10				



Always push power tap (283-407) down into the terminal block until fully inserted!

## High-Current, Through and Ground Conductor Terminal Blocks 50 (70 "f-st") mm<sup>2</sup> 285 Series



10 ... 50 (70 "f-st") mm<sup>2</sup> 1000 V/8 kV/3 1

I<sub>N</sub> 150 A

AWG 8 ... 1/0 600 V, 150 A 🗫 600 V, 150 A@

1000 V/8 kV/3 1 I<sub>N</sub> 41 A

AWG 24 ... 10 600 V, 30 A 94 600 V, 41 A@

Terminal block width 20 mm / 0.787 in.

30 mm / 1.18 in. 2

Module width 16 mm / 0.63 in. 12 ... 13 mm / 0.49 in. 2





1000 V = rated voltage 8 kV = rated surge voltage 3 = pollution degree

(see Section 14)

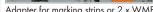
- 2 Strip length, see packaging or instructions.
- 3 Jumper can only be removed or inserted when the clamp is in closed position.

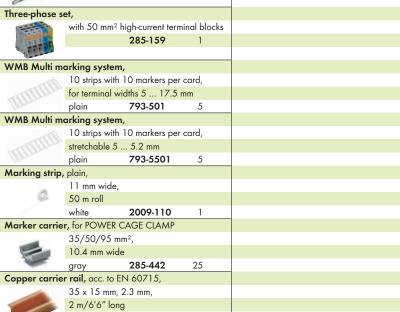
Pack. Pack. Item No. Item No. Unit Unit 2-conductor through terminal block, to be used exclusively on DIN 35 x 15 rail for 50 mm<sup>2</sup> high-current terminal blocks gray 285-150 gray 285-154 🔵 blue 2-conductor ground terminal block, to be used exclusively on DIN 35 x 15 rail; 2.3 mm thick, copper green-yellow 285-157 **Item-Specific Accessories Item-Specific Accessories** Adjacent jumper, insulated, Protective warning marker,  $I_N$  150 A for 1 jumper, with high-voltage symbol, black, I<sub>N</sub> 130 A for 2 ... 4 jumpers for 5 terminal blocks 285-450 100 (4x25) yellow 282-415 50 (2x25) gray WMB Multi marking system, Protective warning marker, with high-voltage symbol, black 10 strips with 10 markers per card, yellow 285-440 50 (2x25) for terminal widths 5 ... 17.5 mm plain 793-501 WMB Multi marking system, Finger guard, touchproof cover protects unused conduc-10 strips with 10 markers per card, tor entries and jumper slots stretchable 5 ... 5.2 mm yellow 285-441 100 (4x25) 793-5501 plain Allen wrench with partially insulated shaft 285-172

Description and handling see page 170



Adapter for marking strips or 2 x WMB







unslotted

210-198

## High-Current, Rail-Mounted Terminal Blocks 50 mm<sup>2</sup> ... 185 mm<sup>2</sup> 285 Series

## 170 Conductor termination – Step 1



Rotate Allen wrench counterclockwise to the stop ①. Then, push in orange locking tab for hands-free wiring.

## Conductor termination - Step 2



Insert stripped conductor until it hits backstop; hold this in

## Conductor termination - Step 3



Unlock the locking tab with a short counter-clockwise turn 2) of the Allen wrench to securely terminate the conduc-

## Safety notes



For an optimum clamping force:

1. Bend conductor

- 2. Cut conductor to length (Conductor end must be straight!)
- 3. Strip conductor

Always observe the printed strip length!

## **Grounding foot**



Ground conductor terminal blocks (limited to max. 120 mm²/250 MCM acc. to EN 60947-7-2) must be snapped onto a 2.3 mm thick copper carrier rail.

## Safety notes



Protective warning marker may indicate: Caution! Power is still on even after switching off the main



Caution! Health hazard! Keep your fingers out of the conductor entry hole!

## **Touchproof protection**



Yellow, detachable covers provide touchproof safety by shielding jumper contact slots and/or unused conductor



Rail-mounted, high-current terminal blocks 35 mm²/ AWG 2, 50 mm²/AWG 1, 95 mm²/AWG 4/0 and 185 mm²/350 kcmil



fine-stranded, also with tinned single strands



POWER CAGE CLAMP clamps the following copper conductors:



stranded

POWER CAGE CLAMP®

## - Description and Handling -

## Commoning



Commoning with adjacent jumper: Inserting the jumper above the conductor entry hole – prior to conductor termination. The nominal cross section remains unchanged.



Removing jumper via operating tool.



## **Testing**



Testing with touch-proof test sockets 4 mm Ø. (not offered by WAGO – e.g., mfd by Multi-Contact Deutschland GmbH)

## Power tap

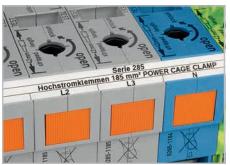


Reliably and easily tap directly onto the power supply.
Insert the unwired tap before opening the pressure spring.

## Marking



WMB markers or self-adhesive, printable marking strips can be accommodated on 35, 50 and 95 mm<sup>2</sup> high-current terminal blocks.



Besides WMB markers, marking strips can also be directly accommodated on the 185 mm<sup>2</sup> (350 MCM) terminal block.



fine-stranded, with ferrule (gastight crimped)



# High-Current Through/Ground Conductor and Ex Terminal Blocks POWER CAGE CLAMP®

172 285 Series 25 ... 95 mm<sup>2</sup>

1000 V/8 kV/3 2

AWG 4 ... 4/0 600 V, 200 A SA 600 V, 210 A®

0.2 ... 10 mm<sup>2</sup> AWG 24 ... 8 1000 V/8 kV/3 2 600 V, 50 A S I<sub>N</sub> 57 A

I<sub>N</sub> 232 A Terminal block width 25 mm / 0.984 in. 35 mm / 1.38 in. **3** 

Module width 20 mm / 0.787 in. 12 ... 13 mm / 0.49 in. 3





Max. connector size: 16 mm²

2 1000 V = rated voltage 8 kV = rated surge voltage 3 = pollution degree (see Section 14)

3 Strip length, see packaging or instructions.

4 Suitable for Ex e II applications 25 ... 95 mm²/AWG 4 ... 4/0 880 V, 211 A 1 jumper 211 A 2 ... 4 jumpers 175 A 35 ... 70 mm²/AWG 2 ... 2/0 for ground conductor terminal blocks (see Section 14)

	Item No.	Pack. Unit		Item I	No.	Pack. Unit
2-conductor thro	ough terminal block,		Power tap, f	or 95 mm² high-c	urrent terminal	blocks
to be used exclusi	vely on DIN 35 x 15 rail					
gray	285-195	5	gray	285-4	07	5
blue	285-194	5	_ ,			
light gray 🖾	285-995 4	5				
2-conductor gro	<b>und terminal block,</b> to b	ne used exclu-				
•	x 15 rail; 2.3 mm thick, co					
green-yellow	285-197	5				
green-yellow		<b>4</b> 5				
Item-Specific	: Accessories		Item-Spec	cific Accesso	ories	
Adjacent jumper	r, insulated.		Protective w	arning marker,		
	232 A for 1 jumper,			•	ige symbol, bla	ck.
	130 A for 2 4 jumper	'S		for 5 terminal		. ,
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	ray <b>285-495</b>	25	To be and	vellow	284-415	50 (2x25
Protective warni	/		WMB Multin	marking system		00 (2/120
	vith high-voltage symbol, k	olack			, 10 markers pe	card
	ellow <b>285-170</b>	50 (2x25)			dths 5 17.5	
Y	ellow 203-170	30 (2,23)	Million	plain	793-501	5
Finger guard,			WMR Multin	marking system		<u> </u>
	ouchproof cover protects	unused conduc	WWW WOM		<b>,</b> 10 markers pei	card
4000	or entries and jumper slots			stretchable 5.		curu,
200	rellow 285-169	25		plain	793-5501	5
	th partially insulated sh			pidili	773-3301	<u> </u>
Allen Wienen Wi	in parially insoluted si	idii				
	285-172	1				
Three-phase set,						
100000000000000000000000000000000000000	vith 95mm² high-current te	rminal blocks				
The second secon	285-199	1				
222.20	203-177					
Steel carrier rail	, acc. to EN 60715,					
	5 x 15 mm, 2.3 mm,					
	? m/6'6" long					
	nslotted 210-118	10				
	ail, acc. to EN 60715,	10				
	5 x 15 mm, 2.3 mm,					
	2 m/6'6" long					
	nslotted 210-198	10				
WMB Multi mar		10				
	O strips with 10 markers p	per card				
	or terminal widths 5 17					
	lain 793-501	5 D				
	for POWER CAGE CLAM	F				
3	5/50/95 mm²,					
	O 4 · I					



Adapter for marking strips or 2 x WMB

285-442

10.4 mm wide

gray

## High-Current Through and Ground Conductor Terminal Blocks 185 mm<sup>2</sup>

## 285 Series

 50 ... 185 mm²
 AWG 1/0 ... 350 kcmil

 1000 V AC/DC/1500 VDC/12 kV/3
 50 ... 120 mm²
 AWG 1/0 ... 250 kcmil

 In 353 A
 Terminal block width 32 mm / 1.26 in.
 Terminal block width 32 mm / 1.26 in.

 Image: April 1 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

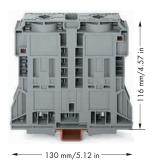
 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

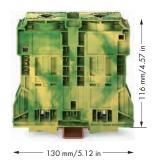
 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²
 AWG 1/0 ... 250 kcmil

 Image: April 2 mm²





 AC/DC up to 1000 V = rated voltage DC up to 1500 V

12 kV = rated surge voltage 3 = pollution degree

(see Section 14)

2 Strip length, see packaging or instructions.

	Item	No.	Pack. Unit		Item	No.	Pack. Unit		
2-conductor	through termi	nal block,		2-conductor ground terminal block, to be used exclu					
to be used exclusively on DIN 35 x 15 rail				sively on DIN 3	sively on DIN 35 x 15 rail; 2.3 mm thick, copper				
gray	285-	1185	5	green-yellov	285	1187	5		
blue	285-	1184	5						
Item-Specific Accessories				Item-Specific Accessories					
Steel carrier	r rail, acc. to EN	160715,		Copper carrier rail, acc. to EN 60715,					
-	35 x 15 mm	, 2.3 mm,		35 x 15 mm, 2.3 mm,					
	2 m/6'6" lo	2 m/6'6" long			2 m/6'6" long				
1	unslotted	210-118	10		unslotted	210-198	10		
Copper carr	,		10		unslotted	210-198	10		
Copper carr	unslotted	EN 60715,	10		unslotted	210-198	10		
Copper carr	unslotted rier rail, acc. to	EN 60715, n, 2.3 mm,	10		unslotted	210-198	10		

### **Accessories**

Appropriate marking systems: WMB/Marking strips/WMB Inline (see Section 13)

Adjacent jump	er, insulated,			WMB Inline,	olain,			
	I <sub>N</sub> 309 A for			,,	_	5 5.2 mm,		
		1. 1.		13	1,500 WMB markers, 5 mm, on roll			
1	gray	285-1171	25		white	2009-115	1	
Protective war		r,		Marking strip	, plain,			
	with high-vol	tage symbol, blad	ck		11 mm wid	de,		
-	yellow	285-1177	50 (2x25)	0	50 m roll			
					white	2009-110	1	
Finger guard,				WMB Multi m	arking syst	em,		
400	touchproof o	cover protects unu	sed conduc-		10 strips w	vith 10 markers per	card,	
7	tor entries and jumper slots			THE PARTY OF THE P	for terminal widths 5 17.5 mm			
A.	yellow	285-1178	25	Illian.	plain	793-501	5	
Allen wrench	with partially	y insulated shaf	t	WMB Multi marking system,				
						vith 10 markers per	card,	
		285-172	1			5 5.2 mm		
				Ille.	plain	793-5501	5	
Three-phase s	-							
	with 35mm <sup>2</sup>	high-current term	inal blocks					
33333		285-1169	1					
	•							
Screwless end		al.						
	for DIN 35 r							
	14 mm wide		10					
No. 107	gray	249-197	10					



Besides WMB markers, marking strips can also be directly accommodated on the  $185\ \text{mm}^2$  ( $350\ \text{MCM}$ ) terminal block.



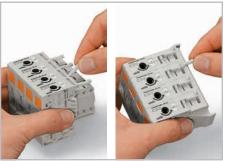
## High-Current Connectors 35 mm<sup>2</sup>, 834 Series - Description and Handling -





Position the mounting adapter and secure it using locking

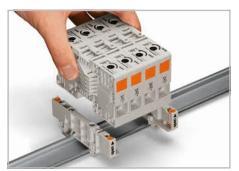
Screw down locking device 2 to the stop.



Coding male and female connectors: Coding pins removed from the female connector can be used to code the male connector.



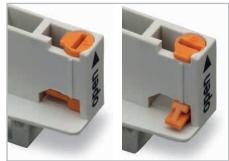
Secure the male connector to the mounting adapters. Tilt the male connector to plug the female connector.



Mounting a male and female connector assembly: Fit the assembly between the mounting adapters.



Fixing the assembly:
Turn the latch on the mounting adapters from the **open** to the **closed** position using an operating tool.



Latch in **open** position (left) Latch in **closed** position (right)



Removing the assembly: Turn the mounting adapter latches to the **open** position. Lift the assembly between the mounting adapters and remove it.



Removing the assembly: Insert two operating tools into the separator slots between male and female connectors and unlatch the assembly.





Insert operating tool and turn counterclockwise. Then push in orange locking tab for handsfree wiring.



Insert stripped conductor until it hits backstop; hold this in position.



Unlock the locking tab with a short conterclockwise turn of the operating tool ①, when unlocked allow operating tool to rotate clockwise 2 to securely terminate the conductor.

# Male and Female Connectors 35 mm<sup>2</sup>, 100% Protected Against Mismating 834 Series

Pin spacing 17.5 mm / 0.689 in., light gray 6 ... 35 mm<sup>2</sup> AWG 8 ... 2 1000 V/8 kV/3 600 V, 50 AN I<sub>N</sub> 125 A

25 mm / 0.98 in.

Pin spacing 17.5 mm / 0.689 in., light gray 6 ... 35 mm<sup>2</sup> AWG 8 ... 2 1000 V/8 kV/3 600 V, 50 AN

I<sub>N</sub> 125 A

25 mm / 0.98 in.

Mounting adapter





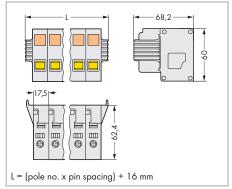


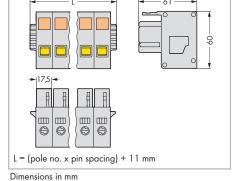
Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit		Item No.	Pack. Unit
Male connector	r,		Female conne	ctor,		Mounting adapte	r,	
100% protected	d against mismating,		100% protected against mismating,			for DIN 35 rail		
light gray			with coding fing	gers, light gray				
O 2	834-1202	10	O 2	834-1102	10	light gray	834-137	10
<b>3</b>	834-1203	5	<b>3</b>	834-1103	5			
<b>4</b>	834-1204	5	<b>4</b>	834-1104	5			
<u> </u>	834-1205	5	<u> </u>	834-1105	5			
O 6	834-1206	5	<b>6</b>	834-1106	5			
O 7	834-1207	4	07	834-1107	4			
<b>8</b>	834-1208	4	8	834-1108	4			

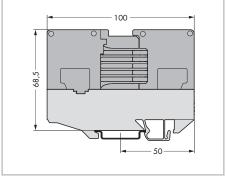
834 Series Accessories

Appropriate marking system: WMB (see Section 13)

ol with partially insulated shaft,		
type 3, (5.5 x 0.8) mm blade		
<b>210-721</b> 1		
	type 3, (5.5 x 0.8) mm blade 210-721 1	type 3, (5.5 x 0.8) mm blade 210-721 1







Dimensions in mm



Certification organizations can be found in the overview on page 622.