Safe patching despite high density wiring:
WAGO matrix patchboards with CAGE CLAMP® connection

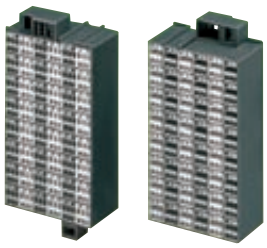
Patching Systems and Busbar Terminal Blocks

11 VOLUME 1

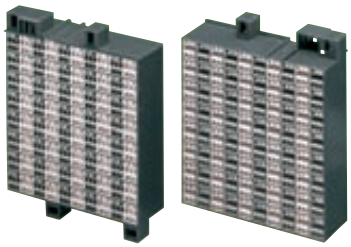
Patching Systems
– Product Summary –

Series 726 Matrix patchboards

Side 1 3 x 0.08 – 1.5 mm²/AWG 28 – 16
Side 2 3 x 0.08 – 1.5 mm²/AWG 28 – 16
32-, 48- and 80-pole – Pages 11.6 – 11.7



Side 1 3 x 0.08 – 1.5 mm²/AWG 28 – 16
Side 2 2 x 0.08 – 2.5 mm²/AWG 28 – 14
32-, 48- and 80-pole – Pages 11.6 – 11.7

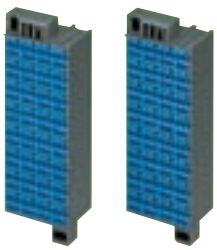


Series 726 Matrix patchboards

Slim line version
for 19" racks

2 x 0.08 – 1.5 mm²/AWG 28 – 16
2 x 0.08 – 1.5 mm²/AWG 28 – 16
32-pole – Page 11.8

Series 726 Ex i Matrix patchboards



Side 1 3 x 0.08 – 1.5 mm²/AWG 28 – 16
Side 2 3 x 0.08 – 1.5 mm²/AWG 28 – 16
32-, 48- and 80-pole – Pages 11.6 – 11.7

Side 1 3 x 0.08 – 1.5 mm²/AWG 28 – 16
Side 2 2 x 0.08 – 2.5 mm²/AWG 28 – 14
32-, 48- and 80-pole – Pages 11.6 – 11.7

Slim line version
for 19" racks

2 x 0.08 – 1.5 mm²/AWG 28 – 16
2 x 0.08 – 1.5 mm²/AWG 28 – 16
32-pole – Page 11.8

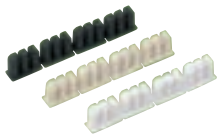
Series 726 Decade marker carrier

Page 11.9

Series 726 Additional modules

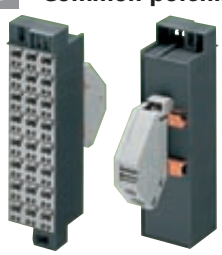
Page 11.9

Series 726 Insulation stop



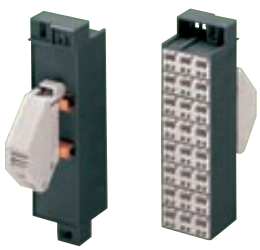
Page 11.9

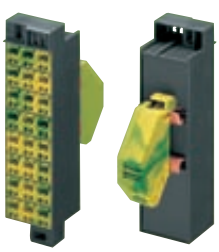
Series 726 Common potential matrix patchboards



24 x 0.08 – 2.5 mm²/AWG 28 – 14
1/2 x 0.2 – 16 mm²/AWG 24 – 6
Page 11.10

or





1/2 x 0.2 – 16 mm²/AWG 24 – 6
24 x 0.08 – 2.5 mm²/AWG 28 – 14
Page 11.11

Series 727 Terminal blocks for matrix patching and potential terminal blocks

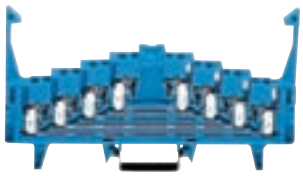
4-level terminal blocks

Pages 11.14 – 11.15

8-level terminal blocks

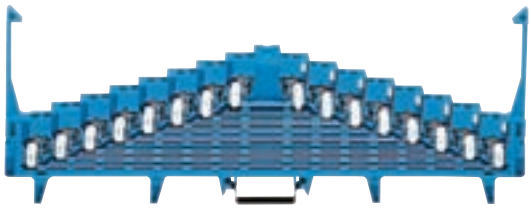
Pages 11.16 – 11.17

Series 727 Ex i Terminal blocks for matrix patching and potential terminal blocks



4-level terminal blocks

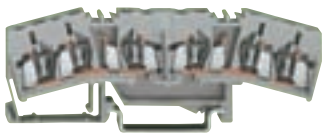
Pages 11.14 – 11.15



8-level terminal blocks

Pages 11.16 – 11.17

Series 280 3-conductor double potential terminal block / Terminal block for matrix patching



Page 11.19

Pin modules

Page 11.19

Wire harness support

Page 11.19

Series 812 Busbar terminal blocks

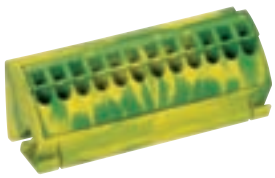
4 mm² / AWG 12
N/L
Page 11.21

16 mm² / AWG 6
N/L
Page 11.21

Insulated busbar carrier

Page 11.21

Series 812 Ground (earth) busbar terminal blocks



4 mm² / AWG 12
N/L
Page 11.21

16 mm² / AWG 6
N/L
Page 11.21

Ground (earth) busbar carrier

Page 11.21

Matrix Patchboards with CAGE CLAMP® connection . . .
Series 726

CAGE CLAMP® connection

Connection of wires with screwdriver blade size (2.5 x 0.4) mm Item No. 210-119

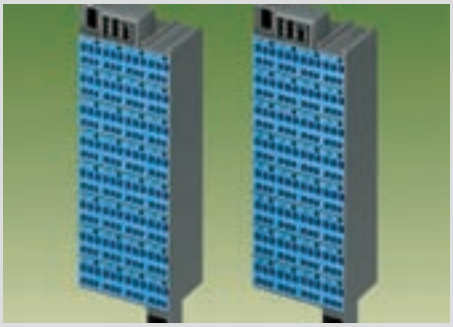
Marking of modules

Marking of modules (factory marked)
Side 1: 1, 2, 3, 4 . . .

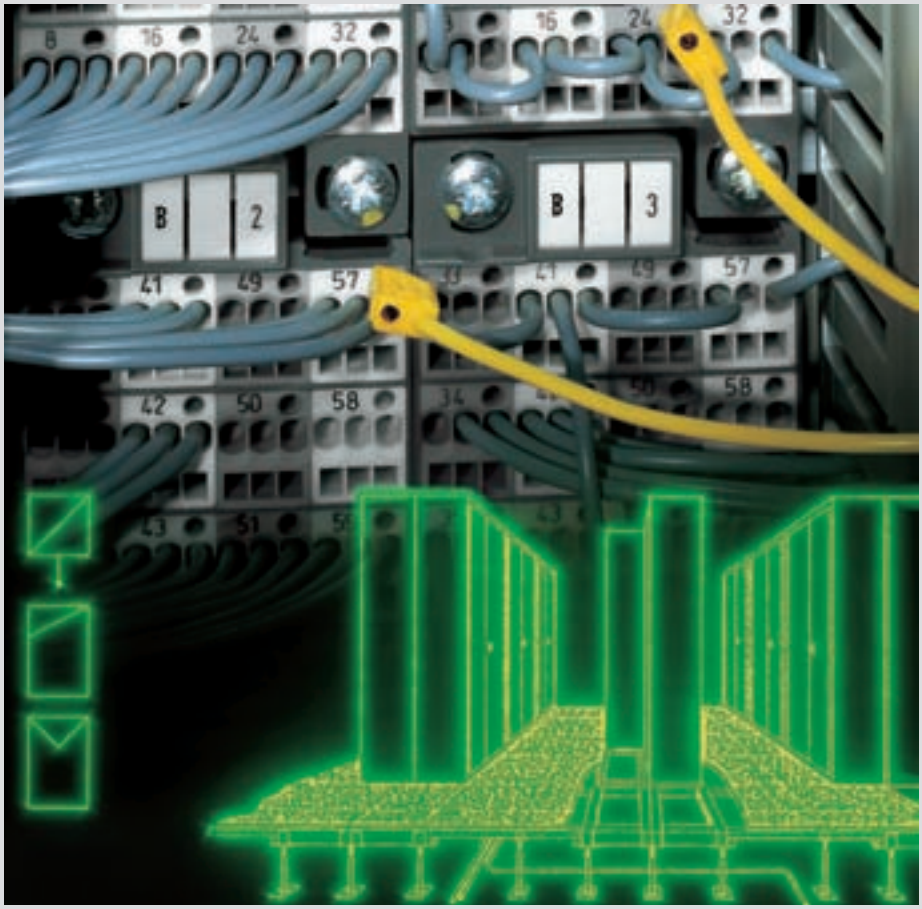
Testing

Testing with test plug 2.3 mm/0.091 in Ø
Item No. 210-137

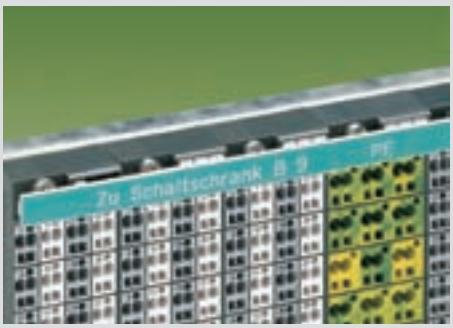
Ex i versions



Blue matrix patchboards are suitable for Ex i applications



Marking



WFB Continuous marking strips. Fits into the marker receptacle and the group marking carrier of the matrix patchboard

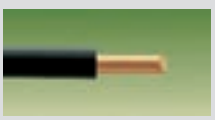
Marking

Individual group marking with WSB Quick marking system

Examples of installation

Matrix patchboards in a frame

Matrix patchboards in 19" rack



CAGE CLAMP® connects the following copper wires: *

solid

stranded

fine stranded, also with tinned single strands

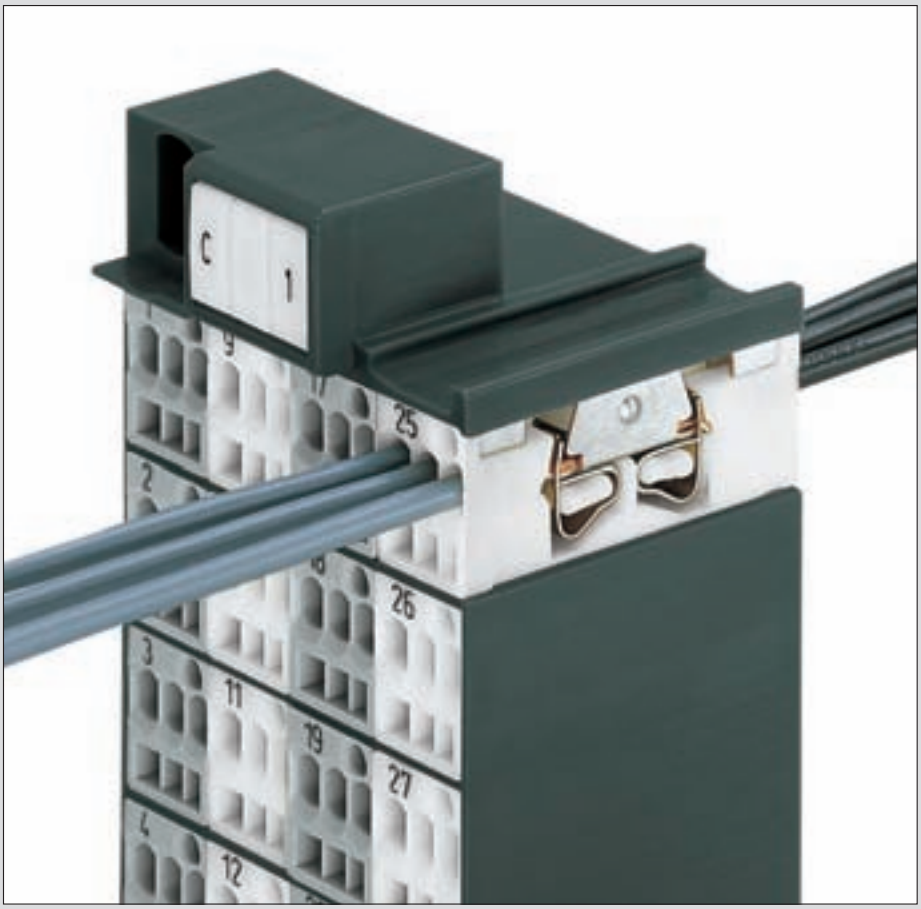
* For aluminum wire see notes in section 15!

Common potential matrix assembly

Example shown here with (white) supply terminal block

Space Saving

Slim line matrix patchboard (lower right) mounted upside down



Additional module

Snapping on an additional module with contact to mounting frame

Additional module

Assembly of a matrix patchboard with additional module snapped on.
Direct connection to the mounting frame via contact plate

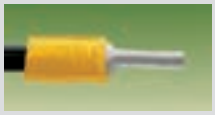
Ferrules ❶

	Conductor cross section (mm²/AWG) without ferrule	Conductor cross section (mm²/AWG) with ferrule	
		insulated	uninsulated
		Item No./Color	Item No.
Side 2	1.5/16	0.75/20 **216-202**/grey	1.0/18 **216-123**
Side 1	1.5/16	0.75/20 **216-202**/grey	1.0/18 **216-123**
Side 2	2.5/14	1.5/16 **216-204**/black	1.5/16 **216-104**
Side 1	1.5/16	0.75/20 **216-202**/grey	1.0/18 **216-123**

Connection of ferruled wires

fine-stranded wire – tip bonded

fine-stranded wire with crimped ferrule ❶



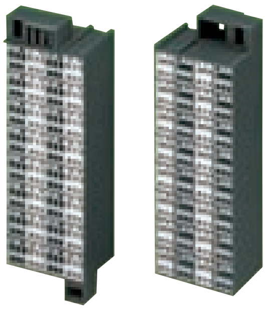
fine-stranded wire with crimped pin terminal

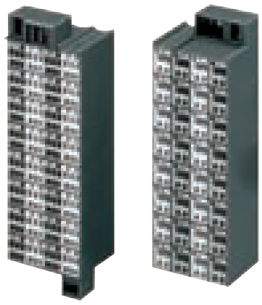
Matrix Patchboards

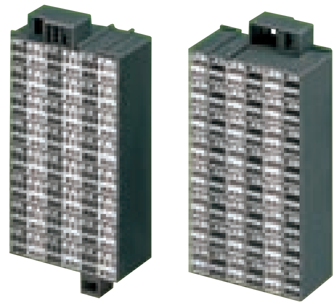
Side 1: 3 x 0.08 – 1.5 mm² | AWG 28 – 16
Side 2: 3 x 0.08 – 1.5 mm² | AWG 28 – 16
500 V/6 kV/3 | 300 V, 10 A
10 A | 300 V, 10 A
8 – 10 mm / 0.35 in
*

Side 1: 3 x 0.08 – 1.5 mm² | AWG 28 – 16
Side 2: 2 x 0.08 – 2.5 mm² | AWG 28 – 14
500 V/6 kV/3 | 300 V, 10 A
10 A | 300 V, 10 A
8 – 10 mm / 0.35 in
*

Side 1: 3 x 0.08 – 1.5 mm² | AWG 28 – 16
Side 2: 3 x 0.08 – 1.5 mm² | AWG 28 – 16
500 V/6 kV/3 | 300 V, 10 A
10 A | 300 V, 10 A
8 – 10 mm / 0.35 in
*







No. of poles		Item No.	Pack.-unit pcs
Matrix patchboards, 32 poles, frame dark grey, colors and numbering of modules on sides 1 and 2 arranged vertically			

Numbering	Colors of modules: grey	white	grey	white
(1 – 32)	1 – 8	9 – 16	17 – 24	25 – 32
(33 – 64)	33 – 40	41 – 48	49 – 56	57 – 64

No. of poles		Item No.	Pack.-unit pcs
32	(1 – 32)	**726-121**	20
32	(33 – 64)	**726-122**	20
Color of modules blue and numbering of modules on sides 1 and 2 arranged vertically			
32	(1 – 32)	**726-141** ❶	20
32	(33 – 64)	**726-142** ❶	20

❶ suitable for Ex i applications

No. of poles		Item No.	Pack.-unit pcs
Matrix patchboards, 32 poles, frame dark grey, colors and numbering of modules on sides 1 and 2 arranged vertically			

Numbering	Colors of modules: grey	white	grey	white
(1 – 32)	1 – 8	9 – 16	17 – 24	25 – 32
(33 – 64)	33 – 40	41 – 48	49 – 56	57 – 64

No. of poles		Item No.	Pack.-unit pcs
32	(1 – 32)	**726-221**	20
32	(33 – 64)	**726-222**	20
Color of modules blue and numbering of modules on sides 1 and 2 arranged vertically			
32	(1 – 32)	**726-241** ❶	20
32	(33 – 64)	**726-242** ❶	20

❶ suitable for Ex i applications

No. of poles		Item No.	Pack.-unit pcs
Matrix patchboards, 48 poles, frame dark grey, colors and numbering of modules on sides 1 and 2 arranged vertically			

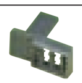
Numbering	Colors of modules: grey	white	grey	white
(1 – 48)	1 – 8	9 – 16	17 – 24	25 – 32
	33 – 40	41 – 48		

No. of poles		Item No.	Pack.-unit pcs
48	(1 – 48)	**726-421**	10
Color of modules blue and numbering of modules on sides 1 and 2 arranged vertically			
48	(1 – 48)	**726-441** ❶	10

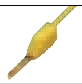
❶ suitable for Ex i applications

Accessories

(Insulation stop see page 11.9)

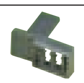


Group marking adapter for side 2
726-902 50

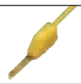


Test plug, 2.3 mm / 0.091 in Ø
yellow **210-137** 50 (5 x 10)
with cable 500 mm / 1'7.7"

Wire comm. chain, insulated, 6 A
31 connections, 0.5 mm², max. 50 V
grey **709-107** 1



Group marking adapter for side 2
726-902 50



Test plug, 2.3 mm / 0.091 in Ø
yellow **210-137** 50 (5 x 10)
with cable 500 mm / 1'7.7"

Wire comm. chain, insulated, 6 A
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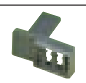
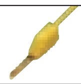


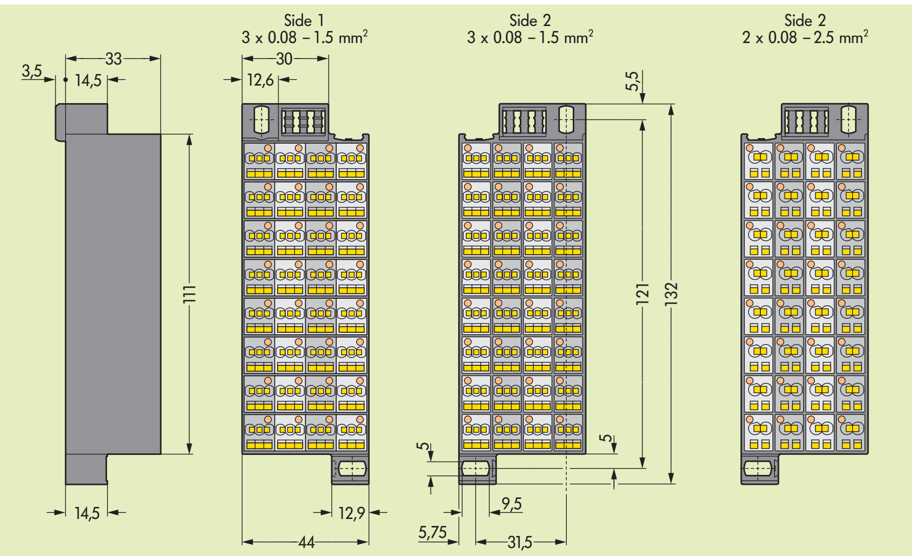
Group marking adapter for side 2
726-902 50



Test plug, 2.3 mm / 0.091 in Ø
yellow **210-137** 50 (5 x 10)
with cable 500 mm / 1'7.7"

Wire comm. chain, insulated, 6 A
31 connections, 0.5 mm², max. 50 V
grey **709-107** 1

Dimensions (in mm)



* For further approvals with corresponding ratings see section 15.

Side 1: 3 x 0.08 – 1.5 mm² | AWG 28 – 16
Side 2: 2 x 0.08 – 2.5 mm² | AWG 28 – 14
500 V/6 kV/3 | 300 V, 10 A
10 A | 300 V, 10 A
8 – 10 mm / 0.35 in
*

Side 1: 3 x 0.08 – 1.5 mm² | AWG 28 – 16
Side 2: 3 x 0.08 – 1.5 mm² | AWG 28 – 16
500 V/6 kV/3 | 300 V, 10 A
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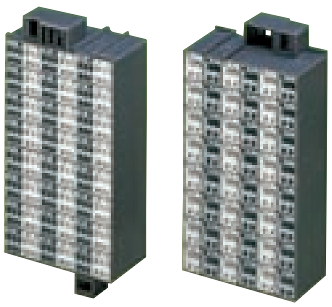
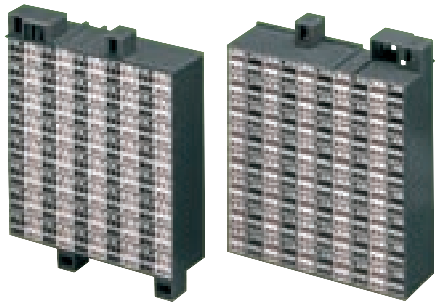
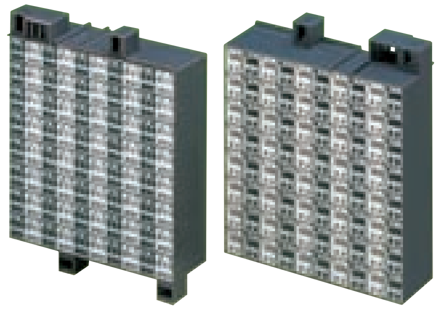






No. of poles	Item No.	Pack.-unit pcs
Matrix patchboards, 48 poles, frame dark grey, colors and numbering of modules on sides 1 and 2 arranged vertically		

Numbering	Colors of modules			
	grey	white	grey	white
(1 – 48)	1 – 8	9 – 16	17 – 24	25 – 32
	33 – 40	41 – 48		

No. of poles	Item No.	Pack.-unit pcs
48 (1 – 48)	**726-521**	10
Color of modules blue and numbering of modules on sides 1 and 2 arranged vertically		
48 (1 – 48)	**726-541** ❶	10

❶ suitable for Ex i applications

No. of poles	Item No.	Pack.-unit pcs
Matrix patchboards, 80 poles, frame dark grey, colors and numbering of modules on sides 1 and 2 arranged vertically		

Numbering	Colors of modules			
	grey	white	grey	white
(1 – 80)	1 – 8	9 – 16	17 – 24	25 – 32
	33 – 40	41 – 48	49 – 56	57 – 64
	65 – 72	73 – 80		

No. of poles	Item No.	Pack.-unit pcs
80 (1 – 80)	**726-721**	8
Color of modules blue and numbering of modules on sides 1 and 2 arranged vertically		
80 (1 – 80)	**726-741** ❶	8

❶ suitable for Ex i applications

No. of poles	Item No.	Pack.-unit pcs
Matrix patchboards, 80 poles, frame dark grey, colors and numbering of modules on sides 1 and 2 arranged vertically		

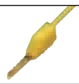
Numbering	Colors of modules			
	grey	white	grey	white
(1 – 80)	1 – 8	9 – 16	17 – 24	25 – 32
	33 – 40	41 – 48	49 – 56	57 – 64
	65 – 72	73 – 80		

No. of poles	Item No.	Pack.-unit pcs
80 (1 – 80)	**726-821**	8
Color of modules blue and numbering of modules on sides 1 and 2 arranged vertically		
80 (1 – 80)	**726-841** ❶	8

❶ suitable for Ex i applications

(for the group marking the WAGO WSB Quick marking system or WFB Continuous marking strips can be used, see section 14)

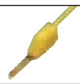
Group marking adapter for side 2
726-902 50



Test plug, 2.3 mm / 0.091 in Ø
yellow **210-137** 50 (5 x 10)
with cable 500 mm / 1'7.7"

Wire comm. chain, insulated, 6 A
31 connections, 0.5 mm², max. 50 V
grey **709-107** 1

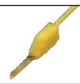
Group marking adapter for side 2
726-902 50



Test plug, 2.3 mm / 0.091 in Ø
yellow **210-137** 50 (5 x 10)
with cable 500 mm / 1'7.7"

Wire comm. chain, insulated, 6 A
31 connections, 0.5 mm², max. 50 V
grey **709-107** 1

Group marking adapter for side 2
726-902 50



Test plug, 2.3 mm / 0.091 in Ø
yellow **210-137** 50 (5 x 10)
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Wire comm. chain, insulated, 6 A
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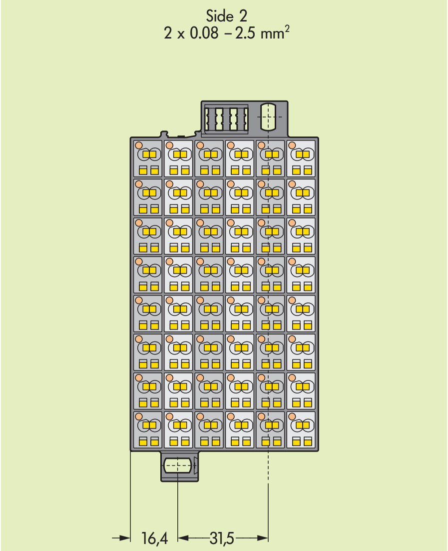
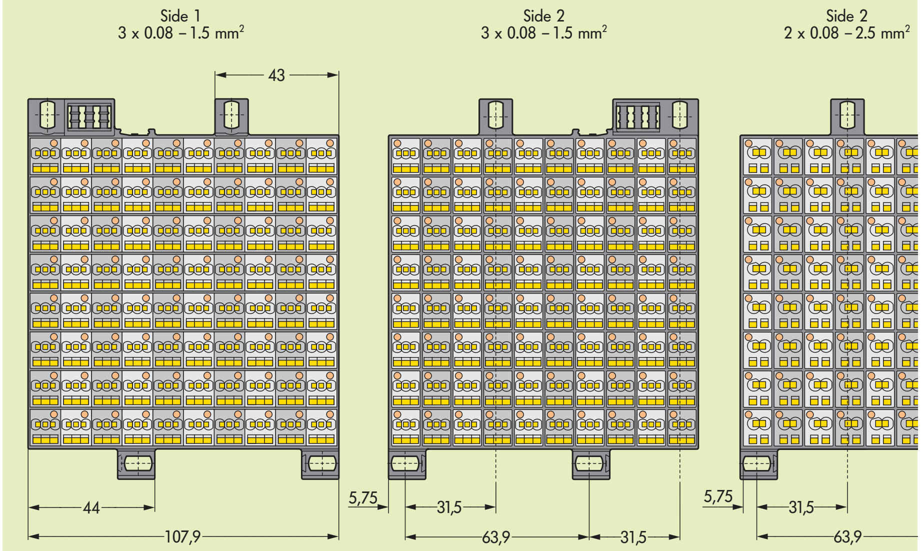




Matrix Patchboards
Slim Line Version for 19" Racks

Side 1: 2 x 0.08 – 1.5 mm² / AWG 28 – 16 Side 2: 2 x 0.08 – 1.5 mm² / AWG 28 – 16 500 V/6 kV/3 / 300 V, 10 A 10 A / 300 V, 10 A 8 – 10 mm / 0.35 in *	Side 1: 2 x 0.08 – 1.5 mm² / AWG 28 – 16 Side 2: 2 x 0.08 – 1.5 mm² / AWG 28 – 16 500 V/6 kV/3 / 300 V, 10 A 10 A / 300 V, 10 A 8 – 10 mm / 0.35 in *

No. of poles	Item No.	Pack.-unit pcs
Matrix patchboards, 32 poles, frame dark grey, colors and numbering of modules on sides 1 and 2 arranged vertically		
Numbering: (1 – 32) / (33 – 64) — Colors of modules: grey 1 – 8 / 33 – 40; white 9 – 16 / 41 – 48; grey 17 – 24 / 49 – 56; white 25 – 32 / 57 – 64		
32 (1 – 32)	**726-321**	24
32 (33 – 64)	**726-322**	24
Color of module blue and numbering of modules on sides 1 and 2 arranged vertically		
32 (1 – 32)	**726-341** ①	24
32 (33 – 64)	**726-342** ①	24
① suitable for Ex i applications		

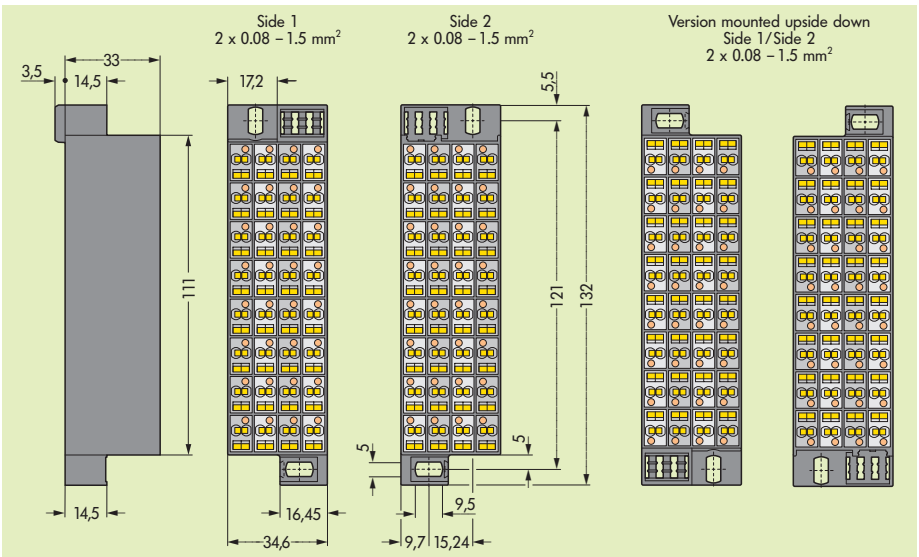
No. of poles	Item No.	Pack.-unit pcs
Matrix patchboards, 32 poles, mounted upside down, frame dark grey, colors and numbering of modules on sides 1 and 2 arranged vertically		
Numbering: (1 – 32) / (33 – 64) — Colors of modules: grey 1 – 8 / 33 – 40; white 9 – 16 / 41 – 48; grey 17 – 24 / 49 – 56; white 25 – 32 / 57 – 64		
32 (1 – 32)	**726-325**	24
32 (33 – 64)	**726-326**	24
Color of module blue and numbering of modules on sides 1 and 2 arranged vertically		
32 (1 – 32)	**726-345** ①	24
32 (33 – 64)	**726-346** ①	24
① suitable for Ex i applications		

Accessories

	**Group marking adapter for side 2**	**726-902** 50
	**Test plug,** 2.3 mm / 0.091 in Ø yellow with cable 500 mm / 1'7.7"	**210-137** 50 (5 x 10)
	**Wire comm. chain,** insulated, 6 A 31 connections, 0.5 mm², max. 50 V grey	**709-107** 1

	**Group marking adapter for side 2**	**726-902** 50
	**Test plug,** 2.3 mm / 0.091 in Ø yellow with cable 500 mm / 1'7.7"	**210-137** 50 (5 x 10)
	**Wire comm. chain,** insulated, 6 A 31 connections, 0.5 mm², max. 50 V grey	**709-107** 1

Dimensions (in mm)



* For further approvals with corresponding ratings see section 15.

Additional Modules, Decade Marker Carriers and Insulation Stops for Matrix Patching Series 726

1 x 0.08 – 4 mm² / AWG 28 – 12 1 x 0.08 – 2.5 mm² / AWG 28 – 14 500 V/4 kV/3 10 A / 300 V, 10 A 9 mm / 0.35 in *		**Insulation stop, suitable for patchboard side 1 matrix patching 3 x 1.5 mm²/AWG 16** 8 – 10 mm / 0.35 in

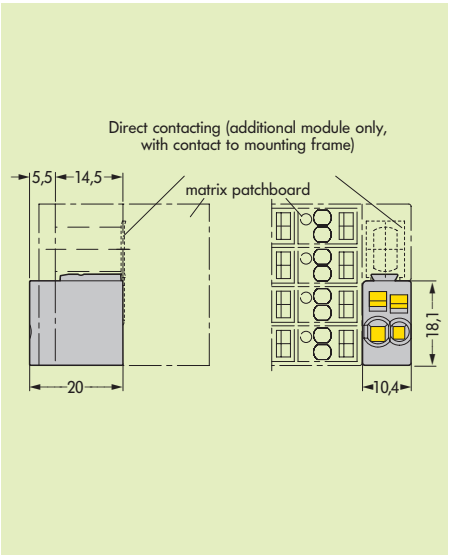
Color	Item No.	Pack.-unit pcs
Additional modules, for matrix patchboards, for snap-on fixing to the lower fixing element, with CAGE CLAMP®		
Additional module with contact to mounting frame		
white	**726-903**	25
Additional module, insulated		
grey	**726-904**	25

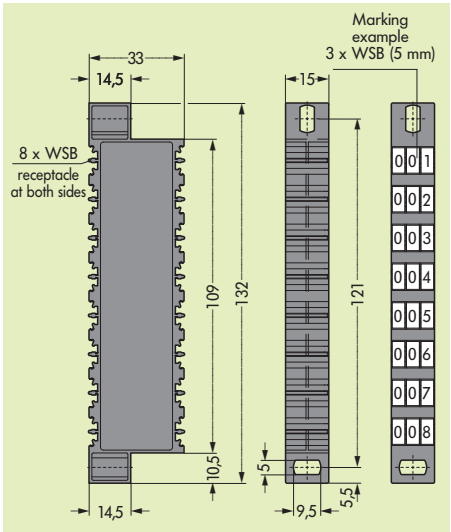
Color	Item No.	Pack.-unit pcs
Decade marker carrier, for matrix patchboards		
dark grey	**726-905**	10

	Item No.	Pack.-unit pcs
Insulation stop, 4 x 3 pcs / strip		
white	**726-901**	200 strips
0.08 – 0.2 mm²/AWG 28 – 24 "s" (0.08 – 0.14 mm²/AWG 28 – 26 "f-st")		
light grey	**726-906**	200 strips
0.25 mm²/AWG 22 "s" 0.14 – 0.25 mm²/AWG 26 – 22 "f-st"		
dark grey	**726-907**	200 strips
0.25 – 0.5 mm²/AWG 22 – 20 "s+f-st"		
Note: Suitable for patchboard side 1 of matrix patchboards 1.5 mm² / AWG 16 (patchboards with different front and back sides)		

Insert insulation stop into conductor entry holes of matrix patchboard.

Dimensions (in mm)

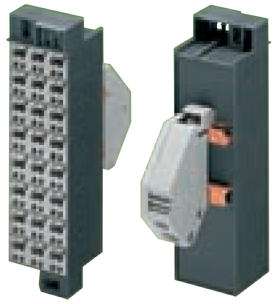
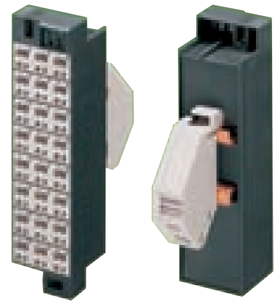
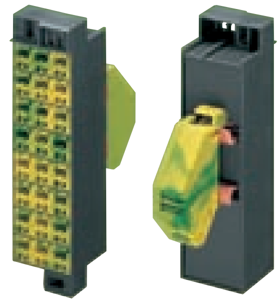




* For further approvals with corresponding ratings see section 15.

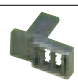
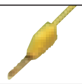
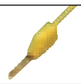
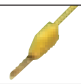
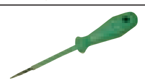
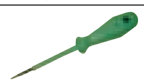
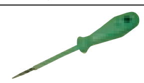
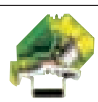
Common Potential Matrix Patchboards
Slime Line Version for 19" Racks

Supply side: 24 A 24 x 2 x 0.08 – 2.5 mm² | AWG 28 – 14 8 – 10 mm / 0.35 in | 300 V, 10 A Patchboard side: 76 A 1 x 0.2 – 16 mm² | AWG 24 – 6 or 2 x 0.2 – 16 mm² | AWG 24 – 6 16 – 17 mm / 0.65 in | *	Supply side: 24 A 24 x 2 x 0.08 – 2.5 mm² | AWG 28 – 14 8 – 10 mm / 0.35 in | 300 V, 10 A Patchboard side: 76 A 1 x 0.2 – 16 mm² | AWG 24 – 6 or 2 x 0.2 – 16 mm² | AWG 24 – 6 16 – 17 mm / 0.65 in | *	Supply side: 24 A 24 x 2 x 0.08 – 2.5 mm² | AWG 28 – 14 8 – 10 mm / 0.35 in | 300 V, 10 A Patchboard side: 76 A 1 x 0.2 – 16 mm² | AWG 24 – 6 or 2 x 0.2 – 16 mm² | AWG 24 – 6 16 – 17 mm / 0.65 in | *

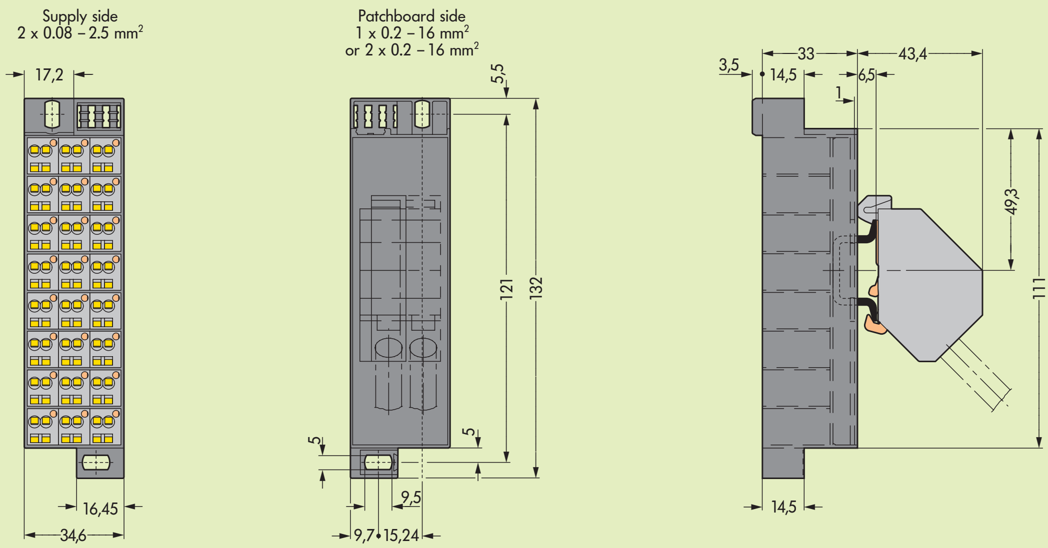




	Item No.	Pack.-unit pcs		Item No.	Pack.-unit pcs		Item No.	Pack.-unit pcs
Common potential matrix patchboards, frame dark grey,			**Common potential matrix patchboards,** frame dark grey,			**Comm. pot. matrix pbds. f. gnd. earth cond.,** frame dark grey,		
Supply side:			**Supply side:**			**Supply side:**		
24 x 2 connections, numbering of modules arranged			24 x 2 connections, numbering of modules arranged			24 x 2 connections, numbering of modules arranged		
vertically (1 – 24), color of module: grey,			vertically (1 – 24), color of module: white,			vertically (1 – 24), color of module: green-yellow,		
Patchboard side:			**Patchboard side:**			**Patchboard side:**		
with 1 supply terminal block incl. end plate			with 1 supply terminal block incl. end plate			with 1 supply terminal block incl. end plate		
wire size 0.2 mm² to 16 mm²/AWG 24-6			wire size 0.2 mm² to 16 mm²/AWG 24-6			wire size 0.2 mm² to 16 mm²/AWG 24-6		
grey	**726-601**	10	white	**726-611**	10	green-yellow	**726-621**	10
with 2 supply terminal blocks incl. end plate			with 2 supply terminal blocks incl. end plate			with 2 supply terminal blocks incl. end plate		
wire size 0.2 mm² to 16 mm²/AWG 24-6			wire size 0.2 mm² to 16 mm²/AWG 24-6			wire size 0.2 mm² to 16 mm²/AWG 24-6		
grey	**726-602**	10	white	**726-612**	10	green-yellow	**726-622**	10

Accessories (Marking accessories WSB quick marking system see section 14)

	**Group marking adapter**				**Group marking adapter**				**Group marking adapter**		
	for patchboard side				**for patchboard side**				**for patchboard side**		
		726-902	50			**726-902**	50			**726-902**	50
	**Test plug,** 2.3 mm / 0.091 in Ø				**Test plug,** 2.3 mm / 0.091 in Ø				**Test plug,** 2.3 mm / 0.091 in Ø		
	yellow	**210-137**	50 (5 x 10)		yellow	**210-137**	50 (5 x 10)		yellow	**210-137**	50 (5 x 10)
	with cable 500 mm / 1'7.7"				with cable 500 mm / 1'7.7"				with cable 500 mm / 1'7.7"		
	**Screwdrivers**				**Screwdrivers**				**Screwdrivers**		
	(2.5x0.4) mm	**210-119**	1		(2.5x0.4) mm	**210-119**	1		(2.5x0.4) mm	**210-119**	1
	(5.5x0.8) mm	**210-121**	1		(5.5x0.8) mm	**210-121**	1		(5.5x0.8) mm	**210-121**	1
	**Additional supply**				**Additional supply**				**Additional supply**		
	terminal block				**terminal block**				**terminal block**		
	grey	**283-611**	25		grey	**283-611**	25		green-yellow	**283-609**	25

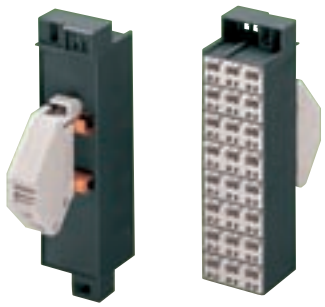
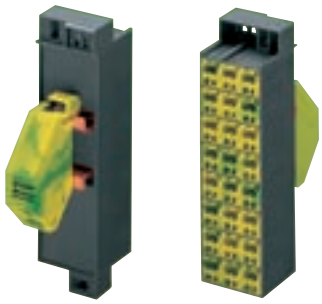
Dimensions (in mm)



* For further approvals with corresponding ratings see section 15.

Common Potential Matrix Patchboards
Slim Line Version, for 19" Racks, Supply Side/Patchboard Side

Supply side: 76 A 1 x 0.2 – 16 mm² or 2 x 0.2 – 16 mm² 16 – 17 mm / 0.65 in	AWG 24 – 6 AWG 24 – 6 300 V, 10 A	**Supply side: 76 A** 1 x 0.2 – 16 mm² or 2 x 0.2 – 16 mm² 16 – 17 mm / 0.65 in	AWG 24 – 6 AWG 24 – 6 300 V, 10 A	**Supply side: 76 A** 1 x 0.2 – 16 mm² or 2 x 0.2 – 16 mm² 16 – 17 mm / 0.65 in	AWG 24 – 6 AWG 24 – 6 300 V, 10 A
Patchboard side: 24 A 24 x 2 x 0.08 – 2.5 mm² 8 – 10 mm / 0.35 in	AWG 28 – 14 *	**Patchboard side: 24 A** 24 x 2 x 0.08 – 2.5 mm² 8 – 10 mm / 0.35 in	AWG 28 – 14 *	**Patchboard side: 24 A** 24 x 2 x 0.08 – 2.5 mm² 8 – 10 mm / 0.35 in	AWG 28 – 14 *

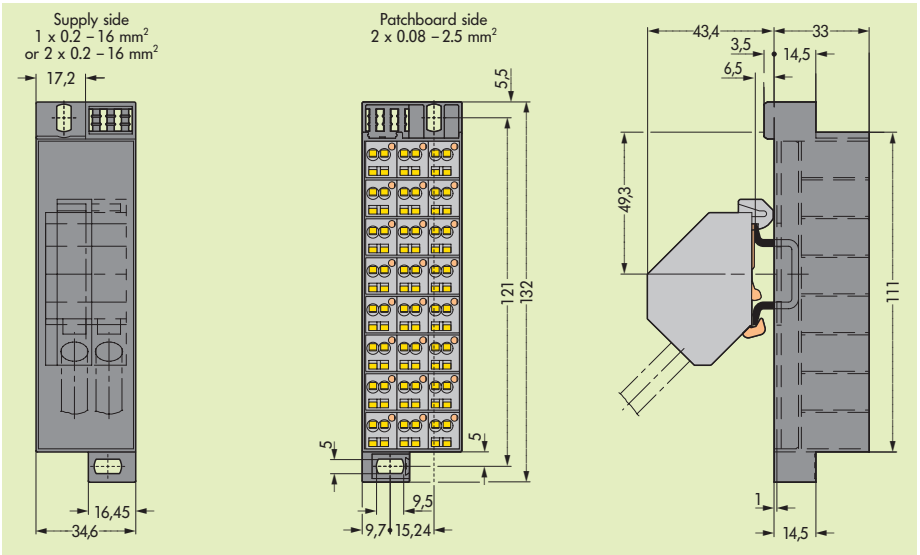




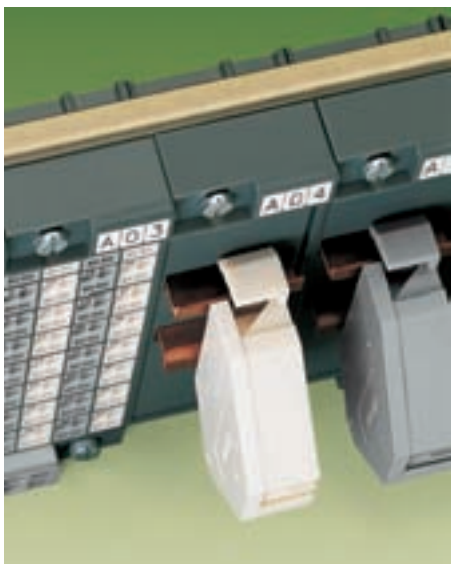
Item No.	Pack.-unit pcs	Item No.	Pack.-unit pcs	Item No.	Pack.-unit pcs
Common potential matrix patchboards, frame dark grey,		**Common potential matrix patchboards,** frame dark grey,		**Common potential matrix patchboards,** frame dark grey,	
Supply side:		**Supply side:**		**Supply side:**	
with 1 terminal block incl. end plate		with 1 terminal block incl. end plate		with 1 terminal block incl. end plate	
wire size 0.2 – 16 mm²/AWG 24-6		wire size 0.2 – 16 mm²/AWG 24-6		wire size 0.2 – 16 mm²/AWG 24-6	
grey **726-651**	10	white **726-661**	10	green-yellow **726-671**	10
with 2 terminal blocks incl. end plate		with 2 terminal blocks incl. end plate		with 2 terminal blocks incl. end plate	
wire size 0.2 – 16 mm²/AWG 24-6		wire size 0.2 – 16 mm²/AWG 24-6		wire size 0.2 – 16 mm²/AWG 24-6	
grey **726-652**	10	white **726-662**	10	green-yellow **726-672**	10
Patchboard side:		**Patchboard side:**		**Patchboard side:**	
24 x 2 connections, numbering of modules arranged		24 x 2 connections, numbering of modules arranged		24 x 2 connections, numbering of modules arranged	
vertically (1 – 24), color of module: grey		vertically (1 – 24), color of module: white		vertically (1 – 24), color of module: green-yellow	

Accessories (Marking accessories WSB quick marking system see section 14)

	**Group marking adapter for patchboard side** **726-902** 50		**Group marking adapter for patchboard side** **726-902** 50		**Group marking adapter for patchboard side** **726-902** 50
	**Test plug,** 2.3 mm / 0.091 in Ø yellow **210-137** 50 (5 x 10) with cable 500 mm / 1'7.7"		**Test plug,** 2.3 mm / 0.091 in Ø yellow **210-137** 50 (5 x 10) with cable 500 mm / 1'7.7"		**Test plug,** 2.3 mm / 0.091 in Ø yellow **210-137** 50 (5 x 10) with cable 500 mm / 1'7.7"
	**Screwdrivers** (2.5 x 0.4) mm **210-119** 1 (5.5 x 0.8) mm **210-121** 1		**Screwdrivers** (2.5 x 0.4) mm **210-119** 1 (5.5 x 0.8) mm **210-121** 1		**Screwdrivers** (2.5 x 0.4) mm **210-119** 1 (5.5 x 0.8) mm **210-121** 1
	**Additional supply terminal block** grey **283-611** 25		**Additional supply terminal block** white **283-610** 25		**Additional supply terminal block** green-yellow **283-609** 25

Dimensions (in mm)



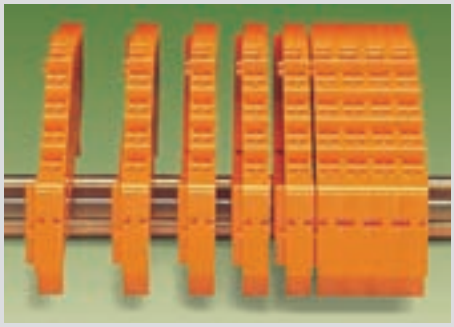


* For further approvals with corresponding ratings see section 15.

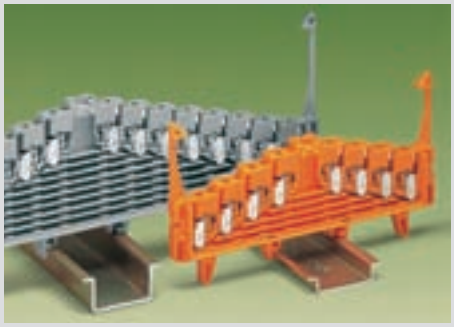
Terminal Blocks for Matrix Patching and Same Potential Terminal Blocks with CAGE CLAMP® connection, Series 727 . . .

Assembly

Snap individual 4- or 8-level terminal blocks onto the carrier rail . . .



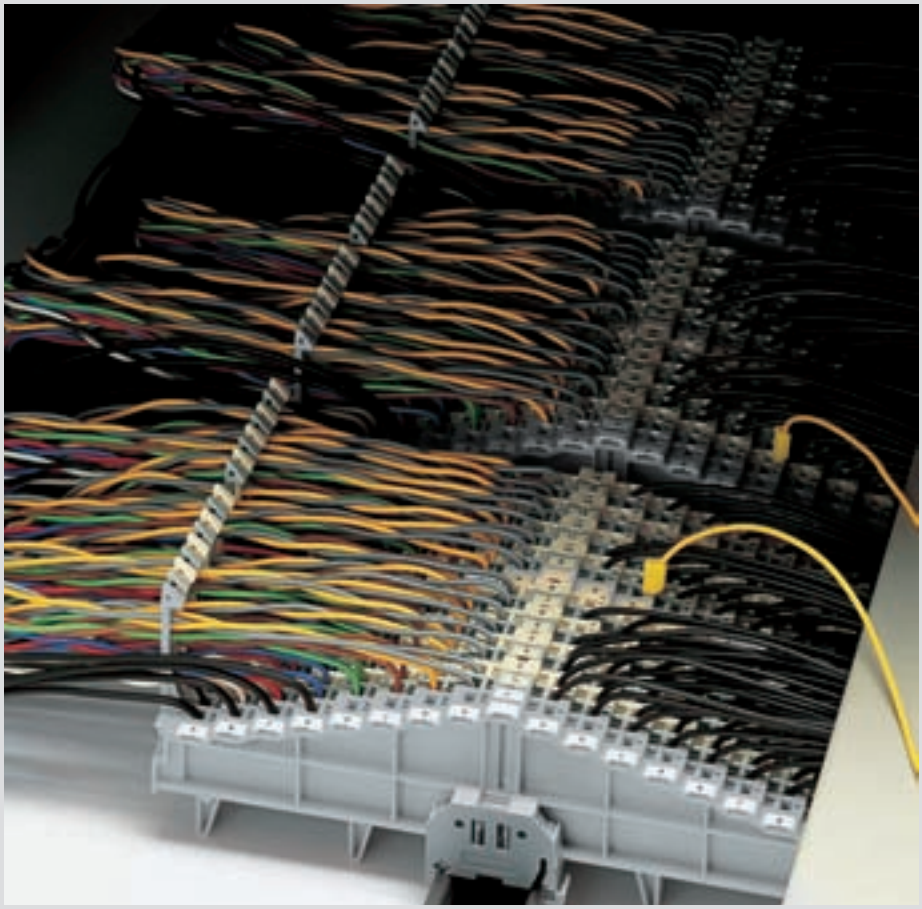
. . . and engage



Terminal blocks for DIN 35 x 7.5 mm or DIN 35 x 15 mm high are available

Assembly / Removal

Grip end plate at both sides and
– push down (assembly)
– pull up (removal)



Removal

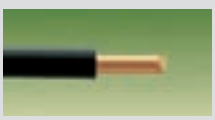
Open the assembly by laterally sliding a block using a screwdriver (2.5 x 0.4) mm . . .

Removal

. . . move terminal block laterally and remove from the rail with a levering action

Marking

Marking of clamping units by direct printing



CAGE CLAMP® connects the following copper wires: *

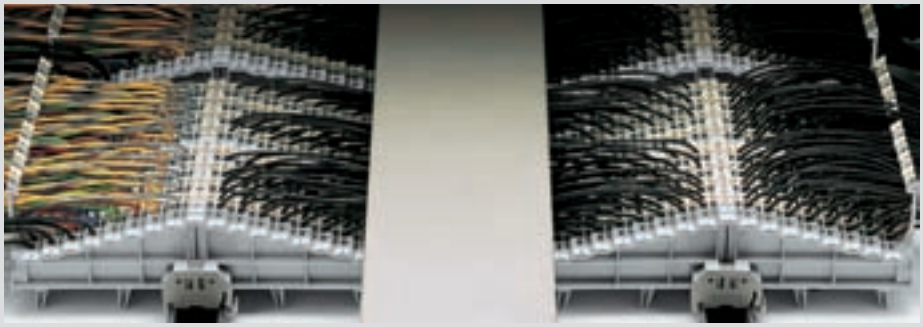
solid

stranded

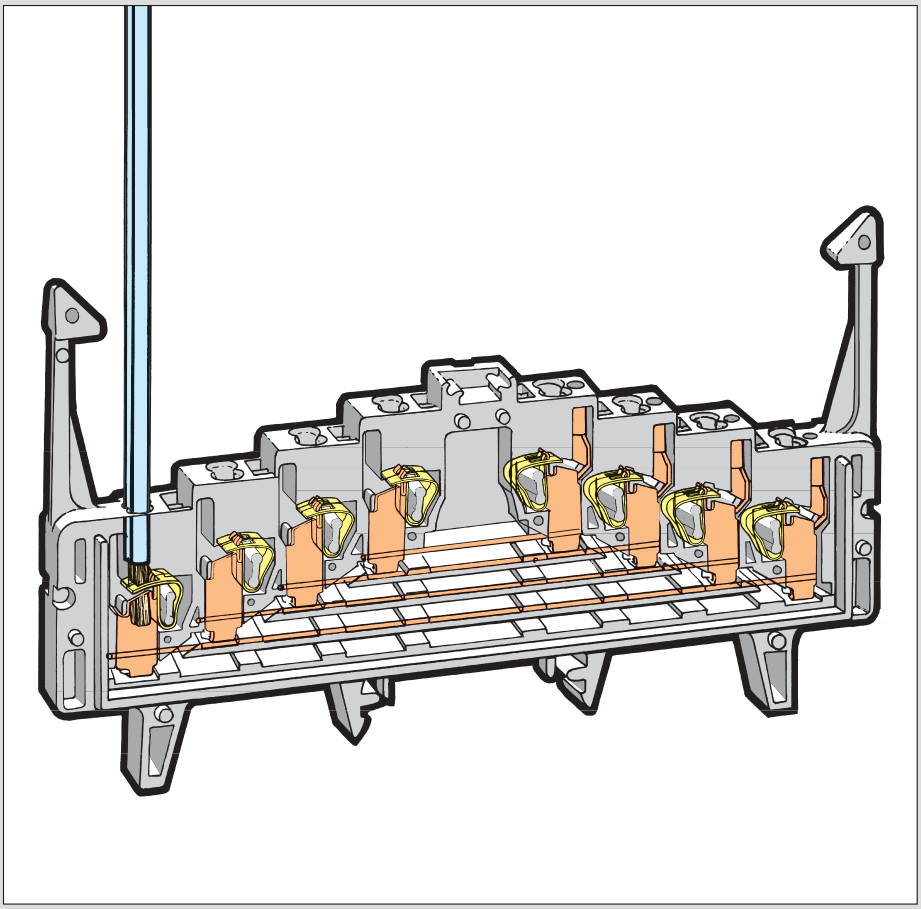
fine stranded, also with tinned single strands

* For aluminum wire see notes in section 15!

Matrix patching assembly



Example left: Main cables fed through locking clips on the field side
right: Control cables fed between locking clips
center: Wiring of the patching sides



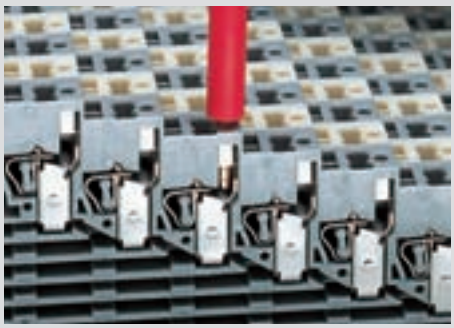
Wiring space

When using terminal blocks with locking clips the wiring space between the terminal strips can be covered with a wiring duct cover*.
(*for suitable suppliers – please contact factory)

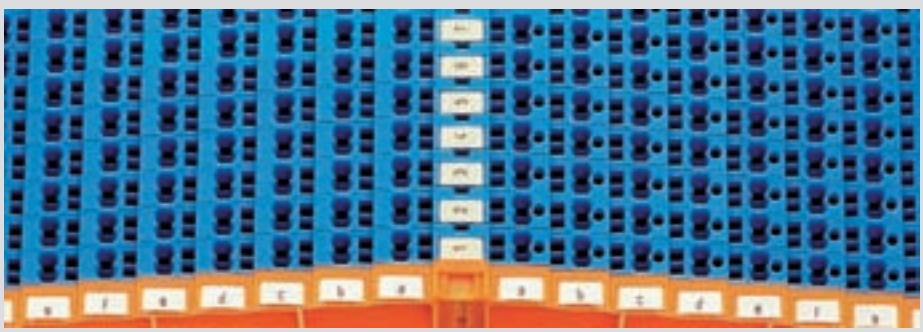
CAGE CLAMP® connection

Connection/removal of conductors using a screwdriver (2.5 x 0.4) mm

Testing



Special test contact for test plug 2.3 mm/0.091 in Ø



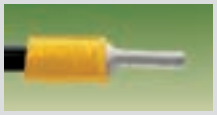
Marking of coordinates with the WMB Multi marking system or WSB Quick marking system

Ex i versions

Blue terminal blocks for matrix patching are suitable for Ex i applications

fine-stranded wire – tip bonded

fine-stranded wire with crimped ferrule ❶



fine-stranded wire with crimped pin terminal

❶ Max. cross section for uninsulated ferrules 1 mm²/AWG 18, for insulated ferrules 0.75 mm²/AWG 20.

4-Level Terminal Blocks for Matrix Patching 1.5 mm² / AWG 16, Series 727

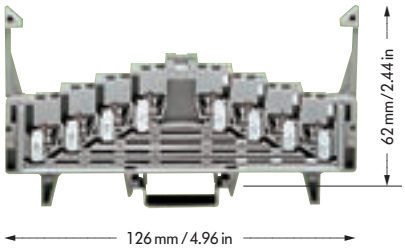
	2 x 0.08 – 1.5 mm² / 250 V/4 kV/3 ❶ / 12 A | 2 x AWG 28 – 16 / 300 V, 10 A / 300 V, 10 A	2 x 0.08 – 1.5 mm² / 250 V/4 kV/3 ❶ / 12 A | 2 x AWG 28 – 16 / 300 V, 10 A / 300 V, 10 A
	Terminal block width 7.62 mm / 0.3 in 8 – 10 mm / 0.35 in *	Terminal block width 7.62 mm / 0.3 in 8 – 10 mm / 0.35 in *

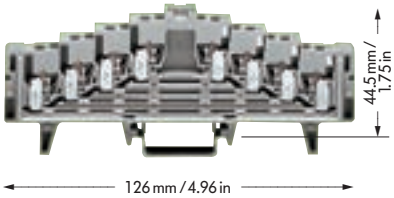
	Ex i** application
❶ 250 V 4 kV 3	60 V = peak value ∧ table 4, EN 50020

(see also section 15)

❷ 4 x pairs of contacts on each level

③ Suitable for Ex i applications

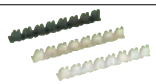




Description		Item No.	Item No.	Pack.-unit pcs		Item No.	Item No.	Pack.-unit pcs
4-level terminal block for matrix patching ❷,	**with**	for	for		**without**	for	for	
for DIN 35 rail	**locking clips**	DIN 35 x 7.5	DIN 35 x 15		**locking clips**	DIN 35 x 7.5	DIN 35 x 15	
acc. to EN 60715	grey	**727-219** ❹	**727-229** ❹	50	grey	**727-220** ❹	**727-230** ❹	50
	white	**727-221** ❹	**727-231** ❹	50	white	**727-222** ❹	**727-232** ❹	50
	blue	③ **727-223** ❹	**727-233** ❹	50	blue	③ **727-224** ❹	**727-234** ❹	50

Accessories

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

	**4-level end plate,** without printing	7.62 mm / 0.3 in thick			7.62 mm / 0.3 in thick			
		orange	**727-217**	25	orange	**727-217**		25
	**4-level end plate,** numeric printing	7.62 mm / 0.3 in thick 0-1-2-3--3-2-1-0			7.62 mm / 0.3 in thick 0-1-2-3--3-2-1-0			
		orange	**727-205**	25	orange	**727-205**		25
	**4-level end plate,** alphanumeric printing	7.62 mm / 0.3 in thick a-b-c-d--d-c-b-a			7.62 mm / 0.3 in thick a-b-c-d--d-c-b-a			
		orange	**727-206**	25	orange	**727-206**		25
	**4-level end plate,** numeric printing	7.62 mm / 0.3 in thick 3-2-1-0--0-1-2-3			7.62 mm / 0.3 in thick 3-2-1-0--0-1-2-3			
		orange	**727-207**	25	orange	**727-207**		25
	**4-level end plate,** alphanumeric printing	7.62 mm / 0.3 in thick d-c-b-a--a-b-c-d			7.62 mm / 0.3 in thick d-c-b-a--a-b-c-d			
		orange	**727-208**	25	orange	**727-208**		25
	**Wire harness support,** see also page 11.19	grey	**249-109**	50	grey	**249-109**		50
	**WSB Double marker carrier,** for I/O markings in the terminal block center	4 mm / 0.157 in wide	**209-128**	200 (2 x 100)	4 mm / 0.157 in wide	**209-128**		200 (2 x 100)
	**Screwless end stop**	6 mm / 0.236 in wide	**249-116**	100 (4 x 25)	6 mm / 0.236 in wide	**249-116**		100 (4 x 25)
		10 mm / 0.394 in wide	**249-117**	50 (2 x 25)	10 mm / 0.394 in wide	**249-117**		50 (2 x 25)
	**Test plug,** 2.3 mm / 0.091 in Ø with cable 500 mm / 1'7.7"	yellow	**210-137**	50 (5 x 10)	yellow	**210-137**		50 (5 x 10)
	**Reducing test plug,** from 4 mm / 0.157 in Ø socket to 2.3 mm / 0.091 in Ø plug	red	**210-297**	100 (4 x 25)	red	**210-297**		100 (4 x 25)
	**Wire commoning chain,** insulated, 6 A, 32 connections, 0.5 mm², max. 50 V	grey	**709-107**	1	grey	**709-107**		1
	**Insulation stop,** 8 pcs/strip							
	0.08–0.14 mm² "f-st"/0.08–0.2 mm² "s"	white	**727-197**	200 (8 x 25)	white	**727-197**		200 (8 x 25)
	0.14–0.25 mm² "f-st"/0.25 mm² "s"	light grey	**727-198**	200 (8 x 25)	light grey	**727-198**		200 (8 x 25)
	0.25–0.5 mm² "s + f-st"	dark grey	**727-199**	200 (8 x 25)	dark grey	**727-199**		200 (8 x 25)

❹ **Additional item no. for terminal blocks with marking**	0-1-2-3--3-2-1-0	...-.../**021-000**
	a-b-c-d--d-c-b-a	...-.../**022-000**
	3-2-1-0--0-1-2-3	...-.../**023-000**
	d-c-b-a--a-b-c-d	...-.../**024-000**

* For further approvals with corresponding ratings see section 15.

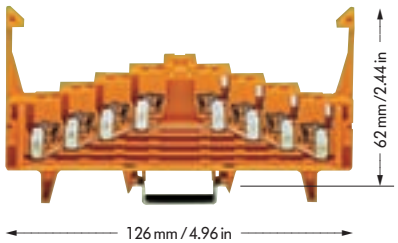
** if approved by the works expert

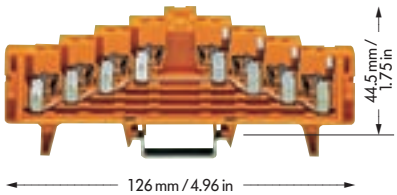
4-Level Same Potential Terminal Blocks 1.5 mm² / AWG 16, Series 727

	2 x 0.08 – 1.5 mm² / 250 V/4 kV/3 ❶ / 18 A	2 x AWG 28 – 16 / 300 V, 10 A / 300 V, 10 A	2 x 0.08 – 1.5 mm² / 250 V/4 kV/3 ❶ / 18 A	2 x AWG 28 – 16 / 300 V, 10 A / 300 V, 10 A
	Terminal block width 7.62 mm / 0.3 in 8 – 10 mm / 0.35 in		Terminal block width 7.62 mm / 0.3 in 8 – 10 mm / 0.35 in	
	*		*	

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

❷ All clamping units are connected to the same current bar

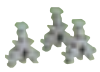
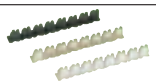




Description		Item No.	Item No.	Pack.-unit pcs		Item No.	Item No.	Pack.-unit pcs
4-level same potential terminal block ❷,	**with**	for	for		**without**	for	for	
for DIN 35 rail	**locking clips**	DIN 35 x 7.5	DIN 35 x 15		**locking clips**	DIN 35 x 7.5	DIN 35 x 15	
acc. to EN 60715	orange	**727-225** ❸	**727-235** ❸	50	orange	**727-226** ❸	**727-236** ❸	50
	light grey	**727-227** ❸	**727-237** ❸	50	light grey	**727-228** ❸	**727-238** ❸	50

Accessories

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

	**4-level end plate,** without printing	7.62 mm / 0.3 in thick			7.62 mm / 0.3 in thick			
		orange	**727-217**	25	orange	**727-217**		25
	**4-level end plate,** numeric printing	7.62 mm / 0.3 in thick 0-1-2-3--3-2-1-0			7.62 mm / 0.3 in thick 0-1-2-3--3-2-1-0			
		orange	**727-205**	25	orange	**727-205**		25
	**4-level end plate,** alphanumeric printing	7.62 mm / 0.3 in thick a-b-c-d--d-c-b-a			7.62 mm / 0.3 in thick a-b-c-d--d-c-b-a			
		orange	**727-206**	25	orange	**727-206**		25
	**4-level end plate,** numeric printing	7.62 mm / 0.3 in thick 3-2-1-0--0-1-2-3			7.62 mm / 0.3 in thick 3-2-1-0--0-1-2-3			
		orange	**727-207**	25	orange	**727-207**		25
	**4-level end plate,** alphanumeric printing	7.62 mm / 0.3 in thick d-c-b-a--a-b-c-d			7.62 mm / 0.3 in thick d-c-b-a--a-b-c-d			
		orange	**727-208**	25	orange	**727-208**		25
	**Wire harness support,** see also page 11.19	grey	**249-109**	50	grey	**249-109**		50
	**WSB Double marker carrier,** for I/O markings in the terminal block center	4 mm / 0.157 in wide	**209-128**	200 (2 x 100)	4 mm / 0.157 in wide	**209-128**		200 (2 x 100)
	**Screwless end stop**	6 mm / 0.236 in wide	**249-116**	100 (4 x 25)	6 mm / 0.236 in wide	**249-116**		100 (4 x 25)
		10 mm / 0.394 in wide	**249-117**	50 (2 x 25)	10 mm / 0.394 in wide	**249-117**		50 (2 x 25)
	**Test plug,** 2.3 mm / 0.091 in Ø with cable 500 mm / 1'7.7"	yellow	**210-137**	50 (5 x 10)	yellow	**210-137**		50 (5 x 10)
	**Reducing test plug,** from 4 mm / 0.157 in Ø socket to 2.3 mm / 0.091 in Ø plug	red	**210-297**	100 (4 x 25)	red	**210-297**		100 (4 x 25)
	**Wire commoning chain,** insulated, 6 A, 32 connections, 0.5 mm², max. 50 V	grey	**709-107**	1	grey	**709-107**		1
	**Insulation stop,** 8 pcs / strip							
	0.08–0.14 mm² "f-st" / 0.08–0.2 mm² "s"	white	**727-197**	200 (8 x 25)	white	**727-197**		200 (8 x 25)
	0.14–0.25 mm² "f-st" / 0.25 mm² "s"	light grey	**727-198**	200 (8 x 25)	light grey	**727-198**		200 (8 x 25)
	0.25–0.5 mm² "s + f-st"	dark grey	**727-199**	200 (8 x 25)	dark grey	**727-199**		200 (8 x 25)

❸ **Additional item no. for terminal blocks with marking**	0-1-2-3--3-2-1-0	...-.../**021-000**
	a-b-c-d--d-c-b-a	...-.../**022-000**
	3-2-1-0--0-1-2-3	...-.../**023-000**
	d-c-b-a--a-b-c-d	...-.../**024-000**

* For further approvals with corresponding ratings see section 15.

8-Level Terminal Blocks for Matrix Patching 1.5 mm² / AWG 16, Series 727

	2 x 0.08 – 1.5 mm² / 250 V/4 kV/3 ❶ / 12 A	2 x AWG 28 – 16 / 300 V, 10 A / 300 V, 10 A	2 x 0.08 – 1.5 mm² / 250 V/4 kV/3 ❶ / 12 A	2 x AWG 28 – 16 / 300 V, 10 A / 300 V, 10 A
	Terminal block width 7.62 mm / 0.3 in 8 – 10 mm / 0.35 in		Terminal block width 7.62 mm / 0.3 in 8 – 10 mm / 0.35 in	
	*		*	

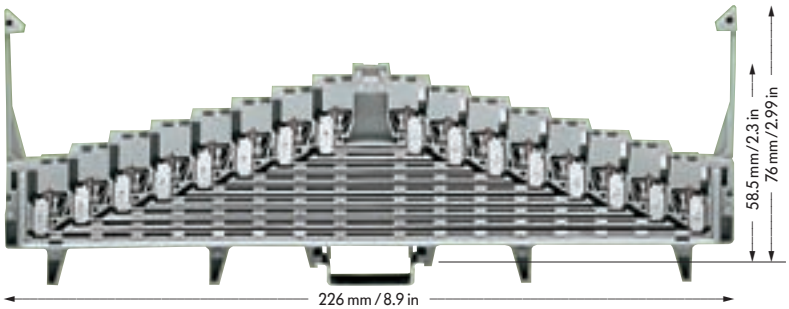
Note: Only combine terminal blocks and end plates that are colored **grey/white/light grey** or **orange/blue!**

	Ex i** application
❶ 250 V 4 kV 3	60 V = peak value /\ table 4, EN 50020

(see also section 15)

❷ 8 x pairs of contacts on each level

❸ Suitable for Ex i applications



Description		Item No.	Item No.	Pack.-unit pcs		Item No.	Item No.	Pack.-unit pcs
8-level terminal block for matrix patching ❷,	**with**	for	for		**without**	for	for	
for DIN 35 rail	**locking clips**	DIN 35 x 7.5	DIN 35 x 15		**locking clips**	DIN 35 x 7.5	DIN 35 x 15	
acc. to EN 60715	grey	**727-119** ❹	**727-129** ❹	25	grey	**727-120** ❹	**727-130** ❹	25
	white	**727-121** ❹	**727-131** ❹	25	white	**727-122** ❹	**727-132** ❹	25
	blue	❸ **727-123** ❹	**727-133** ❹	25	blue	❸ **727-124** ❹	**727-134** ❹	25

Accessories

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

	8-level end plate,		orange	grey	blue	white	light grey	
		7.62 mm / 0.3 in thick						
	without printing		**727-117**	**727-113**	**727-114**	**727-115**	**727-116**	25
		7.62 mm / 0.3 in thick						
	numeric printing	0-1-2-3-4-5-6-7--7-6-5-4-3-2-1-0						
			727-105	**727-155**	**727-159**	**727-163**	**727-167**	25
		7.62 mm / 0.3 in thick						
	alphanumeric printing	a-b-c-d-e-f-g-h--h-g-f-e-d-c-b-a						
			727-106	**727-156**	**727-160**	**727-164**	**727-168**	25
		7.62 mm / 0.3 in thick						
	numeric printing	7-6-5-4-3-2-1-0--0-1-2-3-4-5-6-7						
			727-107	**727-157**	**727-161**	**727-165**	**727-169**	25
		7.62 mm / 0.3 in thick						
	alphanumeric printing	h-g-f-e-d-c-b-a--a-b-c-d-e-f-g-h						
			727-108	**727-158**	**727-162**	**727-166**	**727-170**	25
	Wire harness support,							
	see also page 11.19	grey	**249-109**		50	grey	**249-109**	50
	WSB Double marker carrier,	4 mm / 0.157 in wide				4 mm / 0.157 in wide		
	for I/O markings		**209-128**		200 (2 x 100)		**209-128**	200 (2 x 100)
	in the terminal block center							
	WSB Quick marking system,		**209-933** to		5 cards		**209-933** bis	5 cards
	for I/O markings		**209-992**		5 cards		**209-992**	5 cards
	in the terminal block center	see section 8				see section 8		
	Screwless							
	end stop	6 mm / 0.236 in wide		**249-116**	100 (4 x 25)	6 mm / 0.236 in wide	**249-116**	100 (4 x 25)
		10 mm / 0.394 in wide		**249-117**	50 (2 x 25)	10 mm / 0.394 in wide	**249-117**	50 (2 x 25)
	Test plug, 2.3 mm / 0.091 in Ø							
	with cable 500 mm / 1'7.7"	yellow	**210-137**		50 (5 x 10)	yellow	**210-137**	50 (5 x 10)
	Reducing test plug,							
	from 4 mm / 0.157 in Ø socket	red	**210-297**		100 (4 x 25)	red	**210-297**	100 (4 x 25)
	to 2.3 mm / 0.091 in Ø plug							
	Wire commoning chain,							
	insulated, 6 A, 32 connections,	grey	**709-107**		1	grey	**709-107**	1
	0.5 mm², max. 50 V							
	Insulation stop,							
	see right page							

❹ Additional item no. for terminal blocks with marking		
	0-1-2-3-4-5-6-7--7-6-5-4-3-2-1-0	...-.../001-000
	a-b-c-d-e-f-g-h--h-g-f-e-d-c-b-a	...-.../002-000
	7-6-5-4-3-2-1-0--0-1-2-3-4-5-6-7	...-.../003-000
	h-g-f-e-d-c-b-a--a-b-c-d-e-f-g-h	...-.../004-000

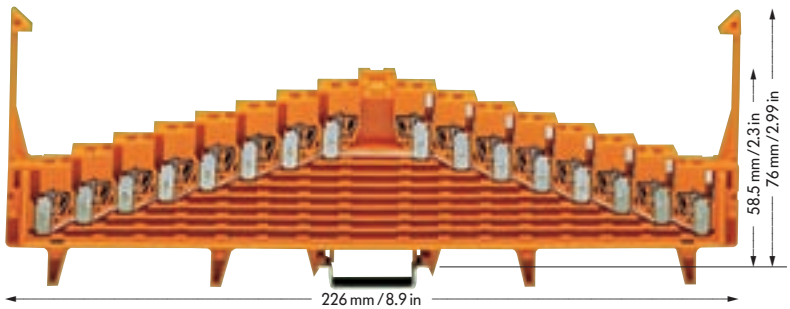
* For further approvals with corresponding ratings see section 15.

** if approved by the works expert

8-Level Same Potential Terminal Blocks 1.5 mm² / AWG 16, Series 727

	2 x 0.08 – 1.5 mm² / 250 V/4 kV/3 ❶ / 18 A	2 x AWG 28 – 16 / 300 V, 10 A / 300 V, 10 A	2 x 0.08 – 1.5 mm² / 250 V/4 kV/3 ❶ / 18 A	2 x AWG 28 – 16 / 300 V, 10 A / 300 V, 10 A
	Terminal block width 7.62 mm / 0.3 in 8 – 10 mm / 0.35 in		Terminal block width 7.62 mm / 0.3 in 8 – 10 mm / 0.35 in	
	*		*	

Note: Only combine terminal blocks and end plates that are colored **grey/white/light grey** or **orange/blue!**



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

❷ All clamping units are connected to the same current bar

Description		Item No.	Item No.	Pack.-unit pcs		Item No.	Item No.	Pack.-unit pcs
8-level same potential terminal block ❷,	**with**	for	for		**without**	for	for	
for DIN 35 rail	**locking clips**	DIN 35 x 7.5	DIN 35 x 15		**locking clips**	DIN 35 x 7.5	DIN 35 x 15	
acc. to EN 60715	orange	**727-125** ❸	**727-135** ❸	25	orange	**727-126** ❸	**727-136** ❸	25
	light grey	**727-127** ❸	**727-137** ❸	25	light grey	**727-128** ❸	**727-138** ❸	25

Accessories

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

	8-level end plate,		orange	grey	blue	white	light grey	
		7.62 mm / 0.3 in thick						
	without printing		**727-117**	**727-113**	**727-114**	**727-115**	**727-116**	25
		7.62 mm / 0.3 in thick						
	numeric printing	0-1-2-3-4-5-6-7--7-6-5-4-3-2-1-0						
			727-105	**727-155**	**727-159**	**727-163**	**727-167**	25
		7.62 mm / 0.3 in thick						
	alphanumeric printing	a-b-c-d-e-f-g-h--h-g-f-e-d-c-b-a						
			727-106	**727-156**	**727-160**	**727-164**	**727-168**	25
		7.62 mm / 0.3 in thick						
	numeric printing	7-6-5-4-3-2-1-0--0-1-2-3-4-5-6-7						
			727-107	**727-157**	**727-161**	**727-165**	**727-169**	25
		7.62 mm / 0.3 in thick						
	alphanumeric printing	h-g-f-e-d-c-b-a--a-b-c-d-e-f-g-h						
			727-108	**727-158**	**727-162**	**727-166**	**727-170**	25
	Wire harness support,							
	see also page 11.19	grey	**249-109**		50	grey	**249-109**	50
	WSB Double marker carrier,	4 mm / 0.157 in wide				4 mm / 0.157 in wide		
	for I/O markings		**209-128**		200 (2 x 100)		**209-128**	200 (2 x 100)
	in the terminal block center							
	Screwless							
	end stop	6 mm / 0.236 in wide		**249-116**	100 (4 x 25)	6 mm / 0.236 in wide	**249-116**	100 (4 x 25)
		10 mm / 0.394 in wide		**249-117**	50 (2 x 25)	10 mm / 0.394 in wide	**249-117**	50 (2 x 25)
	Test plug, 2.3 mm / 0.091 in Ø							
	with cable 500 mm / 1'7.7"	yellow	**210-137**		50 (5 x 10)	yellow	**210-137**	50 (5 x 10)
	Reducing test plug,							
	from 4 mm / 0.157 in Ø socket	red	**210-297**		100 (4 x 25)	red	**210-297**	100 (4 x 25)
	to 2.3 mm / 0.091 in Ø plug							
	Wire commoning chain,							
	insulated, 6 A, 32 connections, 0.5 mm², max. 50 V	grey	**709-107**		1	grey	**709-107**	1
	Insulation stop,							
	8 pcs/strip							
	0.08–0.14 mm² "f-st"/0.08–0.2 mm² "s"	white	**727-197**		200 (8 x 25)	white	**727-197**	200 (8 x 25)
	0.14–0.25 mm² "f-st"/0.25 mm² "s"	light grey	**727-198**		200 (8 x 25)	light grey	**727-198**	200 (8 x 25)
	0.25–0.5 mm² "s + f-st"	dark grey	**727-199**		200 (8 x 25)	dark grey	**727-199**	200 (8 x 25)

❸ **Additional item no. for terminal blocks with marking**	0-1-2-3-4-5-6-7--7-6-5-4-3-2-1-0	...-.../**001-000**
	a-b-c-d-e-f-g-h--h-g-f-e-d-c-b-a	...-.../**002-000**
	7-6-5-4-3-2-1-0--0-1-2-3-4-5-6-7	...-.../**003-000**
	h-g-f-e-d-c-b-a--a-b-c-d-e-f-g-h	...-.../**004-000**

* For further approvals with corresponding ratings see section 15.

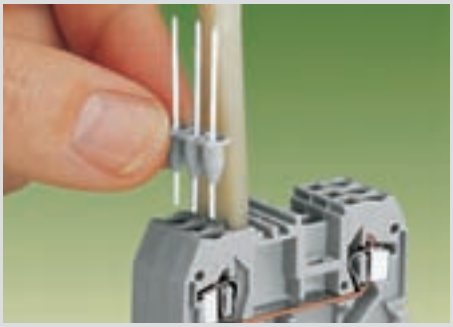
Rail-Mounted Terminal Blocks for Matrix Patching with CAGE CLAMP®
Description and Handling

**Terminal blocks for matrix patching.
Connection/removal of wires on the terminal blocks sides**

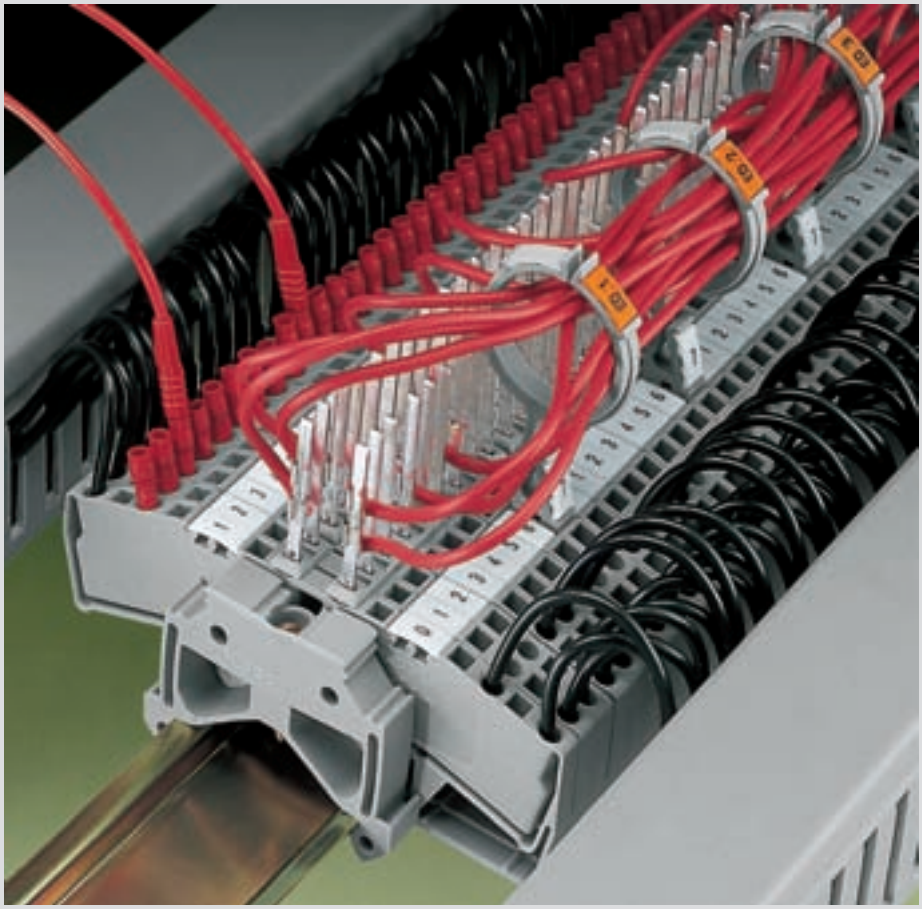
**Terminal blocks for matrix patching.
Connection/removal in the terminal block center**

**Used as disconnect terminal block.
Inserting disconnect jumpers**

Pin modules



Insertion of a pin module shown with terminal blocks series 280



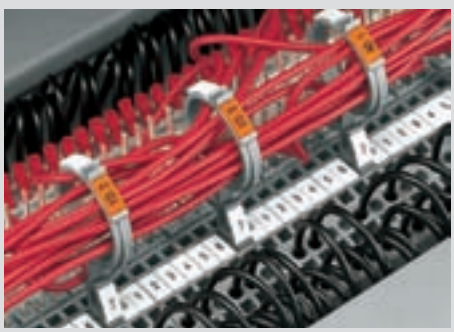
Comb type jumper bars

**Used as potential multiplication.
Insertion of a 10-way comb type jumper bar (only possible in the center)**

Wire harness support

Introduction of a wire harness support into the marker slot

Insertion of a cable into the wire harness support



**2 x group marking on top
1 x terminal block marking at the bottom**

CAGE CLAMP® connects the following copper wires:*

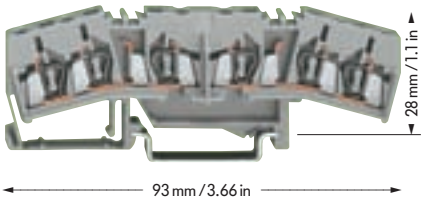
solid	fine-stranded wire – tip bonded	stranded	fine-stranded wire with crimped ferrule**	fine-stranded, also with tinned single strands	fine-stranded wire with crimped pin terminal

* For aluminum wire see notes in section 15!
** When using wires with ferrules, it is necessary to use a terminal block one size larger than the nominal cross section of the wire.

Rail-Mounted Terminal Blocks for Matrix Patching 2.5 mm² / AWG 12, Series 280
Wire Harness Support

	0.08 – 2.5 mm² **800 V/8 kV/3 ❶** **20 A** | **AWG 28 – 12** **300 V, 10 A** cULus **Terminal block width 5 mm / 0.197 in** **8 – 9 mm / 0.33 in** * cULus BV	**Wire harness support**

❶ 800 V = rated voltage
8 kV = rated surge voltage
3 = pollution degree
(see also section 10)
800 V/8 kV/3 against ground (earth) and adjacent terminal blocks.
500 V/6 kV/3 between both current rails.
(If used as disconnect terminal block or multiplier of potential)



Description		Item No.	Pack.-unit pcs
Terminal block for matrix patching, for DIN 35 rail	**3-conductor double potential terminal block**		
	grey	**280-675**	50
Attention! These 3-conductor double potential terminal blocks cannot be commonded with adjacent jumpers!			

	Item No.	Pack.-unit pcs
Wire harness support		
grey	**249-109**	50

Accessories

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

	**End and intermediate plate**	5 mm / 0.197 in thick	
		orange **280-333**	25
		grey **280-325**	25
	**Alternate comb type jumper bar,** insulated, $I_N = I_N$ of terminal block	2-way **280-492**	200 (8 x 25)
	**Disconnect jumper terminal block,** orange, $I_N = I_N$ of terminal block	with pull-tab	
		2-way **280-494**	200 (8 x 25)
	**Comb type jumper bar,** insulated, $I_N = I_N$ of terminal block	2-way **280-482**	200 (8 x 25)
		3-way **280-483**	200 (8 x 25)
		10-way **280-490**	50 (2 x 25)
	**Operating tool,** insulated, for comb jumpers	2-way **280-432**	1
		3-way **280-433**	1
		10-way **280-440**	1
	**2-pole pin modules,** for assembly on all front-entry rail-mounted term. blocks series 280	1 x 1 mm **280-477**	for Wire-Wrap
		0.8 x 1.6 mm **280-475**	for Termi-Point
		0.8 x 2.4 mm **280-473**	for Termi-Point
	3-pole pin modules, for assembly on all front-entry rail-mounted term. blocks series 280	1 x 1 mm **280-478**	for Wire-Wrap
		0.8 x 1.6 mm **280-476**	for Termi-Point
		0.8 x 2.4 mm **280-474**	for Termi-Point

Application notes

The maximum number of fine-stranded conductors which can be supported by the system depends on the wire size:

0.25 mm²/AWG 24	200 conductors
0.5 mm²/AWG 20	95 conductors
0.75 mm²/AWG 18	75 conductors
1 mm²/AWG 18	65 conductors
1.5 mm²/AWG 16	45 conductors
2.5 mm²/AWG 14	30 conductors

In process automation systems, the matrix patchboard is an essential element in measurement and control techniques. Particularly in this kind of application, use of the WAGO wire harness support can make wiring easier and more obvious.

WAGO 3-conductor front-entry double potential terminal blocks of the 280 series (with or without the addition of Wire-Wrap® or TERMI-POINT® pins) are particularly suitable in this application. They can be used for the linking of incoming field wires, from items such as measuring devices or servos etc., with the central process controller devices, such as control consoles, panelboards or PLCs, by means of matrix connections.

The WAGO wire harness suppoert elements are pushed into the terminal blocks (about every 8th one) to form an additional "cable-duct" above the wiring level of the terminal blocks. Two marker slots are provided in each, the top ones may be used for group marking, and the lower slot for marking the terminal block.

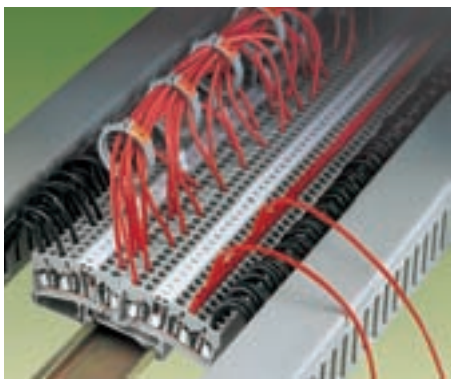
Application notes

In case of these 5 mm / 0.197 in wide double potential front-entry terminal blocks two 3-conductor through terminal blocks are built into one insulating housing on one level. Compared with "standard" through terminal blocks the terminal block width is only 2.5 mm / 0.098 in.

On each side of the terminal block are marker slots for WAGO WSB markers. By means of the available accessories these terminal blocks can also be used as 4-conductor disconnect terminal blocks or multipliers of potential.

During mounting / dismounting using DIN 35 rail please note that due to the protruding webs the terminal blocks can only be inserted or removed from the strip after having displaced the adjacent terminal blocks (see also opposite photo).

Detaching: seperate terminal strip, displace individual terminal block laterally and remove from the carrier rail



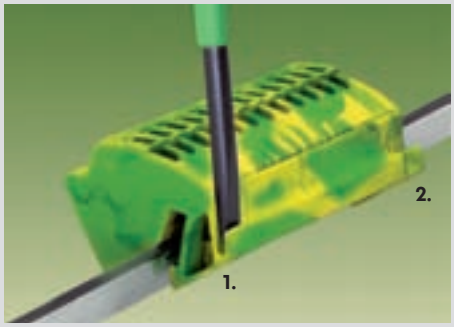
Terminal blocks for matrix patching with wire harness support

* For further approvals with corresponding ratings see section 15.

Busbar Terminal Blocks with CAGE CLAMP®
Description and Handling – Series 812

Using the series 812 busbar terminal blocks in switchgear cabinets and distribution boards allows simple and safe potential distribution on standard 10 x 3 mm busbars. Tool-less snapping of self-locking busbar terminal blocks onto the busbar enables quick and easy assembly as well as subsequent extension. The busbar terminal blocks are available in two different versions including conductor cross sections from AWG 16 to AWG 6 (1.5 mm² - 16 mm²).

Snapping the ground (earth) busbar terminal block onto the N-busbar



Unlock positions 1. and 2. to remove the ground (earth) busbar terminal block

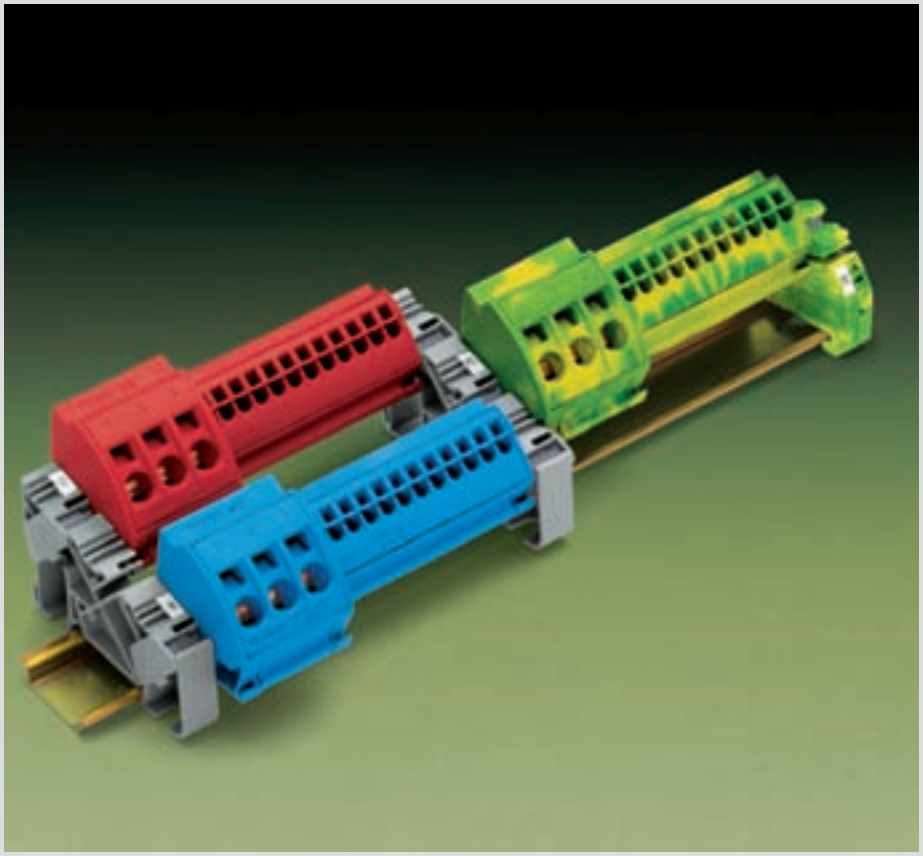
Connecting AWG 12 (4 mm²) wires

Due to the CAGE CLAMP®S connection, solid wires can be inserted directly into the AWG 12 (4 mm²) busbar terminal block, thus reducing wiring time significantly.

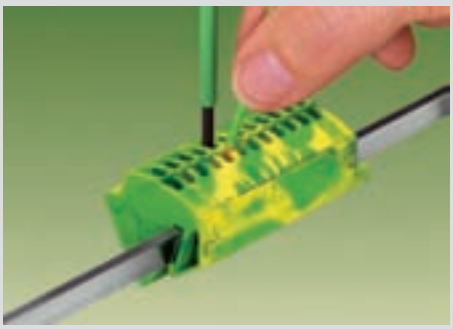
Connecting AWG 6 (16 mm²) wires

Open the clamping unit with a screwdriver when connecting solid, stranded and fine-stranded wires.

Combination of AWG 12 (4 mm²) and AWG 6 (16 mm²) busbar terminal blocks

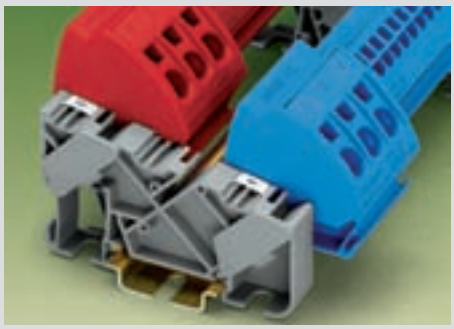


Removing AWG 12 (4 mm²) and AWG 6 (16 mm²) wires



Open the clamping unit using a screwdriver

Busbar carrier 812-140



Carrier with 3 receptacles for 10 x 3 mm busbars with locking device for easy mounting of the busbars. The carriers can be snapped onto the DIN 35 rail or fixed on a panel with screw mounting.

Ground (earth) busbar carrier 812-141

Carrier including a receptacle with locking device for 10 x 3 mm busbar. The contact between the busbar and the rail is made automatically by simply snapping the carrier onto the DIN 35 rail. One end of the busbar is mounted onto the ground (earth) busbar carrier, the other end is inserted into the middle position of the insulated busbar carrier.

CAGE CLAMP®
connects the following copper wires:*

solid	stranded	fine-stranded, also with tinned single strands	fine-stranded wire - tip bonded

* For aluminum wire see notes in section 15!

Busbar Terminal Blocks with CAGE CLAMP®
Series 812

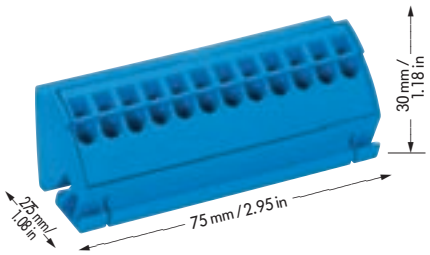
12 x 0.5 – 4 mm² | **AWG 20 – 12**
1000 V/ 6 kV/ 3 ❶ | **600 V**
96 A**

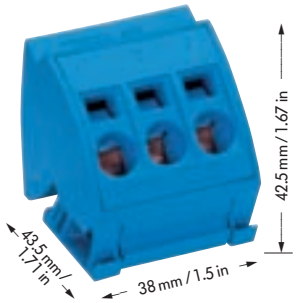
Terminal block width 75 mm / 2.953 in
10 mm / 0.39 in

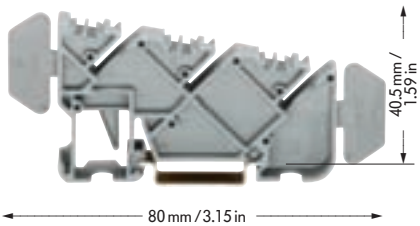
3 x 1.5 – 16 mm² | **AWG 16 – 6**
1000 V/ 6 kV/ 3*
96 A**

Terminal block width 38 mm / 1.496 in
12 mm / 0.47 in

*** Can only be used with insulated busbar carrier 812-140 and cover correctly mounted at the end of the busbar.**







	Item No.	Pack.-unit pcs
Busbar terminal blocks with CAGE CLAMP®S		
4 mm²/AWG 12		
light grey	**812-101**	10
dark grey	**812-102**	10
red	**812-103**	10
blue	**812-104**	10

	Item No.	Pack.-unit pcs
Busbar terminal blocks with CAGE CLAMP®		
16 mm²/AWG 6		
light grey	**812-111**	12
dark grey	**812-112**	12
red	**812-113**	12
blue	**812-114**	12

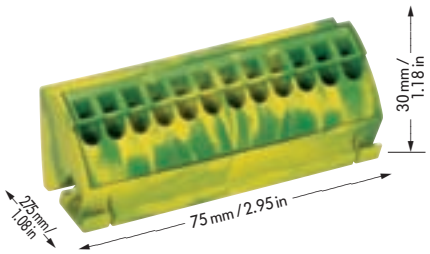
	Item No.	Pack.-unit pcs
Insulated busbar carrier		
	812-140	25
Each busbar receptacle is equipped with one marking position for WMB or WSB markers.		

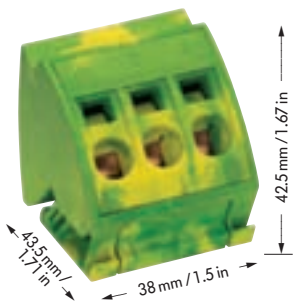
12 x 0.5 – 4 mm² | **AWG 20 – 12**

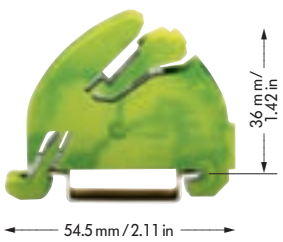
Terminal block width 75 mm / 2.953 in
10 mm / 0.39 in

3 x 1.5 – 16 mm² | **AWG 16 – 6**

Terminal block width 38 mm / 1.496 in
12 mm / 0.47 in







	Item No.	Pack.-unit pcs
Ground (earth) busbar terminal block		
with CAGE CLAMP®S 4 mm²/AWG 12		
green-yellow	**812-100**	10

	Item No.	Pack.-unit pcs
Ground (earth) busbar terminal block		
with CAGE CLAMP® 16 mm²/AWG 6		
green-yellow	**812-110**	12

	Item No.	Pack.-unit pcs
Ground (earth) busbar carrier		
with contact to DIN 35 rail		
green-yellow	**812-141**	25
suitable for WMB or WSB marking system		

Accessories

N-busbar, copper, tinned,

10 x 3 mm /0.394 x 0.118 in,
I_N 140 A, 1000 mm/3'3" long
210-133 1

N-busbar, copper, tinned,

10 x 3 mm /0.394 x 0.118 in,
I_N 140 A, 1000 mm/3'3" long
210-133 1

Finger guard cover for busbar terminal blocks

16 mm²,
serves as touchproof protection
for unused clamping units
yellow **284-400** 100 (4 x 25)

**** Current carrying capacity:**
With a maximum total current of 96 A, the clamping units of the busbar terminal block can be loaded with the rated current of the conductor cross sections approved. This only applies when 10 x 3 mm busbars are used. Other applications on request.

Note:

The busbar system is **touch-proof** provided that there is no space left between the insulated busbar carriers and the busbar terminal blocks. Furthermore, the covers at the ends of the busbar and the finger guard covers of the unused clamping units of the AWG 6 (16 mm²) terminal block must be correctly mounted.