

Color: light gray

Double-deck terminal block, 870 Series, CAGE CLAMP®

Our double-deck terminal block (item number 870-961) ensures effortless electrical installations. The double-deck terminal block also serves as a through terminal block. Strip lengths must be between 6 mm and 7 mm when connecting conductors to this double-deck terminal block. This product features conductor terminals and utilizes CAGE CLAMP®. Our CAGE CLAMP® connection provides a reliable and maintenance-free way to connect all types of conductors. You do not need to prepare the conductor in any way, such as crimping ferrules. Depending on the type of conductor, this double-deck terminal block is suitable for conductor cross sections ranging from 0.08 mm² to 2.5 mm². It has two levels. Two potentials can connect using the four clamping points. The light gray housing is made of polyamide (PA66) for insulation. These through rail-mount terminal blocks are mounted using DIN-35 rails..

Notes

Safety Information

Max. insulation diameter: 4.4 mm

Electrical data

Ratings per		IEC/EN 60947-7-1		
Overvoltage category	III	III	II	
Pollution degree	3	2	2	
Nominal voltage	-	-	-	
Rated surge voltage	-	-	-	
Rated current	-	-	-	

Ex information

Rated voltage EN (Ex e II) 420 V

Power Loss

Power loss, per pole (potential)	0.4309 W
Rated current I _N for specified power loss	18 A
Resistance value for specified, current-dependent power loss	0.00133 Ω

Connection data

Clamping units	4
Total number of potentials	2
Number of levels	2

Connection 1

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 4 mm ² / 28 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Strip length	6 ... 7 mm / 0.24 ... 0.28 inches
Wiring direction	Front-entry wiring

Physical data

Width	5 mm / 0.197 inches
Height	70 mm / 2.756 inches
Depth from upper-edge of DIN-rail	40 mm / 1.575 inches

Mechanical data

Potential marking	L/L
Design	horizontal type
Mounting type	DIN-35 rail
Marking level	Side marking

Material data

Note (material data)	Information on material specifications can be found here
Color	light gray
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	VO
Fire load	0.168 MJ
Weight	9.9 g

Environmental requirements

Processing temperature	-35 ... +85 °C
Continuous operating temperature	-60 ... +105 °C

Commercial data

Product Group	16 (Rail Mounted Terminal Blocks with CCC)
eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 9.0	EC000897
ETIM 8.0	EC000897
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918852401
Customs tariff number	85369010000

Environmental Product Compliance

RoHS Compliance Status

Compliant, No Exemption

Approvals / Certificates

General approvals

Declarations of conformity and manufacturer's declarations



Approval	Standard	Certificate Name
cURus UL International Germany GmbH	UL 1059	E45172

Approval	Standard	Certificate Name
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ATEX-Attestation of Conformity	-	-
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WAGO GmbH & Co. KG

Approvals for hazardous areas



Approval	Standard	Certificate Name
AEx UL International Germany GmbH c/o Physikalisch Technische Bundesanstalt	UL 60079	E185892 (AEx eb II C resp. Ex eb II C)
ATEX Physikalisch Technische Bundesanstalt (PTB)	EN 60079	PTB 03 ATEX 1188 U (II 2 G Ex eb IIC Gb bzw. I M 2 Ex eb I Mb)
CCC CNEX	GB/T 3836.3	2020312313000179 (Ex eb IIC Gb, Ex eb I Mb)
IECEx Physikalisch Technische Bundesanstalt	IEC 60079	IECEx PTB 04.0018 U (Ex eb IIC Gb resp. Ex eb I Mb)
INMETRO TÜV Rheinland do Brasil Ltda.	IEC 60079	TÜV 12.1312 U

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product
Compliance 870-961

Documentation

Additional Information

Technical Section

pdf
2246.92 KB

Bid Text

870-961

19.02.2019

xml
3.59 KB

870-961

31.05.2017

doc
24.50 KB

CAD/CAE-Data

CAD data

2D/3D Models 870-961



CAE data

EPLAN Data Portal
870-961WSCAD Universe
870-961

ZUKEN Portal 870-961



1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

[Item No.: 870-518](#)End and intermediate plate; 2 mm thick;
gray[Item No.: 870-519](#)End and intermediate plate; 2 mm thick;
orange

1.2 Optional Accessories

1.2.1 DIN-rail

1.2.1.1 Mounting accessories

[Item No.: 210-196](#)Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm
thick; 2 m long; unslotted; similar to EN
60715; silver-colored[Item No.: 210-508](#)Steel carrier rail; 35 x 15 mm; 1.5 mm
thick; 2 m long; slotted; galvanized; simi-
lar to EN 60715; silver-colored[Item No.: 210-197](#)Steel carrier rail; 35 x 15 mm; 1.5 mm
thick; 2 m long; slotted; similar to EN
60715; silver-colored[Item No.: 210-506](#)Steel carrier rail; 35 x 15 mm; 1.5 mm
thick; 2 m long; unslotted; galvanized; si-
milar to EN 60715; silver-colored[Item No.: 210-114](#)Steel carrier rail; 35 x 15 mm; 1.5 mm
thick; 2 m long; unslotted; similar to EN
60715; silver-colored[Item No.: 210-118](#)Steel carrier rail; 35 x 15 mm; 2.3 mm
thick; 2 m long; unslotted; according to
EN 60715; silver-colored[Item No.: 210-115](#)Steel carrier rail; 35 x 7.5 mm; 1 mm thick;
2 m long; slotted; according to EN 60715;
"Hole width 18 mm; silver-colored[Item No.: 210-112](#)Steel carrier rail; 35 x 7.5 mm; 1 mm thick;
2 m long; slotted; according to EN 60715;
"Hole width 25 mm; silver-colored[Item No.: 210-504](#)Steel carrier rail; 35 x 7.5 mm; 1 mm thick;
2 m long; slotted; galvanized; according to
EN 60715; silver-colored[Item No.: 210-113](#)Steel carrier rail; 35 x 7.5 mm; 1 mm thick;
2 m long; unslotted; according to EN
60715; silver-colored[Item No.: 210-505](#)Steel carrier rail; 35 x 7.5 mm; 1 mm thick;
2 m long; unslotted; galvanized; according
to EN 60715; silver-colored

1.2.2 End plate

1.2.2.1 End plate

**Item No.: 209-192**

Separator for Ex e/Ex i applications; 3 mm thick; 125.5 mm wide; orange

1.2.3 Ferrule

1.2.3.1 Ferrule

**Item No.: 216-321**Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow**Item No.: 216-131**Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored**Item No.: 216-322**Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise**Item No.: 216-132**Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated**Item No.: 216-221**Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white**Item No.: 216-121**Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored**Item No.: 216-222**Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray**Item No.: 216-122**Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored**Item No.: 216-223**Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red**Item No.: 216-123**Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; silver-colored**Item No.: 216-224**Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black**Item No.: 216-124**Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated

1.2.4 Installation

1.2.4.1 Mounting accessories

**Item No.: 209-106**

Mounting carrier; for isolated mounting on DIN 35 rails; gray

Item No.: 249-117

Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

Item No.: 249-116

Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

1.2.5 Insulation stop

1.2.5.1 Insulation stop

**Item No.: 280-470**Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 5 pieces/strip; white**Item No.: 280-471**Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray**Item No.: 280-472**Insulation stop; 0.75 - 1 mm²; 5 pieces/strip; black

1.2.6 Jumper

1.2.6.1 Jumper

[Item No.: 870-405/011-000](#)[Item No.: 870-407/011-000](#)[Item No.: 870-409/011-000](#)[Item No.: 870-406/020-000](#)

Delta jumper; insulated; light gray

[Item No.: 870-410](#)

Jumper; 10-way; insulated; light gray

[Item No.: 870-402](#)

Jumper; 2-way; insulated; light gray

[Item No.: 870-403](#)

Jumper; 3-way; insulated; light gray

[Item No.: 870-404](#)

Jumper; 4-way; insulated; light gray

[Item No.: 870-405](#)

Jumper; 5-way; insulated; light gray

[Item No.: 870-406](#)

Jumper; 6-way; insulated; light gray

[Item No.: 870-407](#)

Jumper; 7-way; insulated; light gray

[Item No.: 870-408](#)

Jumper; 8-way; insulated; light gray

[Item No.: 870-409](#)

Jumper; 9-way; insulated; light gray

[Item No.: 870-440](#)

Jumper; from 1 to 10; insulated; light gray

[Item No.: 870-433](#)

Jumper; from 1 to 3; insulated; light gray

[Item No.: 870-434](#)

Jumper; from 1 to 4; insulated; light gray

[Item No.: 870-435](#)

Jumper; from 1 to 5; insulated; light gray

[Item No.: 870-436](#)

Jumper; from 1 to 6; insulated; light gray

[Item No.: 870-437](#)

Jumper; from 1 to 7; insulated; light gray

[Item No.: 870-438](#)

Jumper; from 1 to 8; insulated; light gray

[Item No.: 870-439](#)

Jumper; from 1 to 9; insulated; light gray

1.2.7 Marking

1.2.7.1 Group marker carrier

[Item No.: 870-182](#)

Adaptor; gray

[Item No.: 870-183](#)

Adaptor; gray

[Item No.: 870-184](#)

Adaptor; gray

1.2.7.2 Marker

[Item No.: 2009-145/000-006](#)

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue

[Item No.: 2009-145/000-007](#)

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray

[Item No.: 2009-145/000-023](#)

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

[Item No.: 2009-145/000-012](#)

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

[Item No.: 2009-145/000-005](#)

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red

[Item No.: 2009-145/000-024](#)

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet

[Item No.: 2009-145](#)

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

[Item No.: 2009-145/000-002](#)

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

[Item No.: 248-501/000-006](#)

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue

[Item No.: 248-501/000-007](#)

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray

[Item No.: 248-501/000-023](#)

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

[Item No.: 248-501/000-017](#)

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green

[Item No.: 248-501/000-012](#)

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange

[Item No.: 248-501/000-005](#)

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red

[Item No.: 248-501/000-024](#)

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet

[Item No.: 248-501](#)

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

1.2.7.2 Marker

Item No.: 248-501/000-002

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

Item No.: 793-5501/000-006

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue

Item No.: 793-5501/000-007

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray

Item No.: 793-5501/000-023

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green

Item No.: 793-5501/000-017

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green

Item No.: 793-5501/000-012

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange

Item No.: 793-5501/000-005

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red

Item No.: 793-5501/000-024

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet

Item No.: 793-5501

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white

Item No.: 793-5501/000-002

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

Item No.: 793-501/000-006

WMB marking card; as card; not stretchable; plain; snap-on type; blue

Item No.: 793-501/000-007

WMB marking card; as card; not stretchable; plain; snap-on type; gray

Item No.: 793-501/000-023

WMB marking card; as card; not stretchable; plain; snap-on type; green

Item No.: 793-501/000-017

WMB marking card; as card; not stretchable; plain; snap-on type; light green

Item No.: 793-501/000-012

WMB marking card; as card; not stretchable; plain; snap-on type; orange

Item No.: 793-501/000-005

WMB marking card; as card; not stretchable; plain; snap-on type; red

Item No.: 793-501/000-024

WMB marking card; as card; not stretchable; plain; snap-on type; violet

Item No.: 793-501

WMB marking card; as card; not stretchable; plain; snap-on type; white

Item No.: 793-501/000-002

WMB marking card; as card; not stretchable; plain; snap-on type; yellow

Item No.: 2009-115/000-006

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue

Item No.: 2009-115/000-007

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray

Item No.: 2009-115/000-023

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

Item No.: 2009-115/000-017

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green

Item No.: 2009-115/000-012

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

Item No.: 2009-115/000-024

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet

Item No.: 2009-115

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

Item No.: 2009-115/000-002

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

1.2.7.3 Marking strip

Item No.: 709-196

Marking strips; for laser printer; translucent

Item No.: 709-177

Marking strips; on reel; 7.5 mm wide; not stretchable; plain; snap-on type; translucent

Item No.: 709-178

Marking strips; on reel; 7.5 mm wide; not stretchable; plain; snap-on type; white

1.2.8 Protective warning marker

1.2.8.1 Cover

Item No.: 280-405

Protective warning marker; for 5 terminal blocks; with high-voltage symbol; black; yellow

1.2.9 Test and measurement

1.2.9.1 Testing accessories

Item No.: 870-427

Spacer module; modular; bridging common terminal blocks; gray

Item No.: 870-426

Tap-off module; modular; suitable for 870 Series terminal blocks with jumper slots in the current bar; gray

Item No.: 870-425

Tap-off module; with anti-rotation protection; modular; suitable for 870 Series terminal blocks with jumper slots in the current bar; gray

1.2.10 Tool

1.2.10.1 Operating tool

Item No.: 210-658

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured

Item No.: 210-720

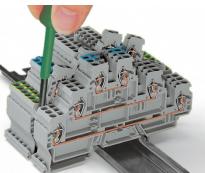
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Item No.: 210-657

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

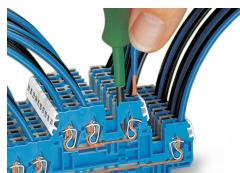
Installation Notes

Installation



Removing a terminal block from the assembly.

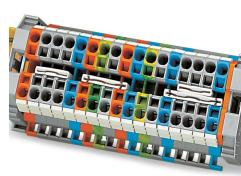
Conductor termination

**CAGE CLAMP® connection**

Inserting a conductor via operating tool (0.08 ... 4 mm² "f-st").

With ferruled conductors, it is necessary to use a terminal block one size smaller than the conductor's nominal cross-section.

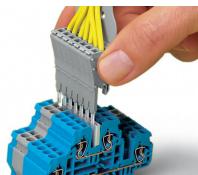
Commoning



Push jumper bars down firmly until fully inserted. When using multipole bars, push alternately on the right and then left side until installed.
Push-in type jumper bars 1 – 3 – 5 – 7 or 1 – 4 – 7 upon request

Commoning with push-in type jumper bars:
Two parallel jumper slots are accommodated in one terminal block.

Testing



Testing with phase testing device, also possible with single-pole voltage tester.

Testing is also possible using a pre-wired tap-off module assembly in the very same way as test plugs.

Cover



Protective warning markers (280-405), with a black high-voltage symbol



Use 50% less rail space with double-deck terminal blocks.

Marking



WMB markers in Mini-WSB marker slots
Translucent marking strip
Mini-WSB markers



Translucent marking strip (709-196) –
jumpers below may be visible.



In addition to the plastic marker strips, group marker carriers are now available for the WMB and WSB marking systems. They can be mounted in parallel to a push-in type jumper bar via the open jumper contact slot. It is also very useful if the marker slots on the side of the terminal block are hidden. The carriers are available in the following widths: 5 mm (0.197 inch), 10 mm (0.394 inch) and 15 mm (0.591 inch).

Notice:

Group marker carriers are not suitable for ground conductor terminal blocks and double potential terminal blocks as they have no jumper contact slots.