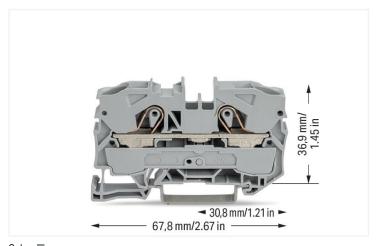
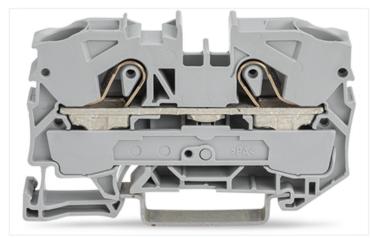
2-conductor through terminal block; 10 mm²; suitable for Ex e II applications; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®; 10,00 mm²; gray



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Color: 🔳 gray



Similar to illustration

Electrical data			
Ratings per	IEC	/EN 60947-	7-1
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	800 V	-	-
Rated surge voltage	8 kV	-	-
Rated current	57 A	-	-
Current at conductor cross-section (max.) mm <sup>2</sup>	76 A	-	-

Approvals per		UL 1059	
Use group	В	С	D
Rated voltage	600 V	600 V	-
Rated current	65 A	65 A	-

Approvals per	CSA 22.2 No 158		
Use group	В	С	D
Rated voltage	600 V	600 V	-
Rated current	65 A	65 A	-

Ex information	
Reference hazardous areas	See application instructions in section "Knowledge and Downloads – Documentation – Additio- nal Information: Technical Section; Tech- nical Explications"
Ratings per	ATEX: PTB 05 ATEX 1070 U / IECEx: PTB 06.0003U (Ex eb IIC Gb)
Rated voltage EN (Ex e II)	550 V
Rated current (Ex e II)	51 A

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Connection data				
Clamping units	2		Connection 1	
Total number of potentials	1		Connection technology	Push-in CAGE CLAMP®
Number of levels	1		Actuation type	Operating tool
Number of jumper slots	2		Connectable conductor materials	Copper
			Nominal cross-section	10 mm²
			Solid conductor	0.5 16 mm² / 20 6 AWG
			Solid conductor; push-in termination	4 16 mm² / 14 6 AWG
			Fine-stranded conductor	0.5 16 mm² / 20 6 AWG
	Fine-stranded conductor; with insulated ferrule	0.5 10 mm² / 20 8 AWG		
		Fine-stranded conductor; with ferrule; push-in termination	4 10 mm² / 12 8 AWG	
	Note (conductor cross-section)	Depending on the conductor characteristic, a conductor with a smaller cross-section can also be inserted via push-in termination.  AWG specifications were converted according to IEC.		
			Strip length	17 19 mm / 0.67 0.75 inches
			Wiring direction	Front-entry wiring

Physical data	
Width	10 mm / 0.394 inches
Height	67.8 mm / 2.669 inches
Depth from upper-edge of DIN-rail	36.9 mm / 1.453 inches
Depth	43.5 mm / 1.713 inches

Mechanical data	
Mounting type	DIN-35 rail
Marking level	Center/side marking

Material data	
Note (material data)	Information on material specifications can be found here
Color	gray
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.32 MJ
Weight	17.1 g



ronme		

-35 ... +85 °C Processing temperature Continuous operating temperature -60 ... +105 °C **Environmental Testing (Environmental Conditions)** 

Test specification Railway applications -Rolling stock -Electronic equipment

DIN EN 50155 (VDE 0115-200):2022-06

Test procedure DIN EN 61373 (VDE 0115-0106):2011-04 Railway applications -

Rolling stock equipment -Shock and vibration tests

Spectrum/Installation location Service life test, Category 1, Class A/B

Function test with noise-like vibration Test passed according to Section 8 of the standard

 $f_1 = 5 \text{ Hz to } f_2 = 150 \text{ Hz}$ Frequency  $f_1' = 5 \text{ Hz to } f_2' = 150 \text{ Hz}$ 

Acceleration 0.101g (highest test level used for all

axes) 0.572g (highest test level used for all axes) 5g (highest test level used for all axes)

10 min. Test duration per axis 5 h

Test directions X, Y and Z axes X, Y and Z axes X, Y and Z axes

Monitoring for contact faults/interrupti-Passed

Voltage drop measurement before and after each axis

Passed

Simulated service life test through increased levels of noise-like vibration

Test passed according to Section 9 of

Extended test scope: Monitoring for contact faults/interruptions

the standard Passed

Extended test scope: Voltage drop measurement before and after each axis

Passed Passed

Shock test

Passed Test passed according to Section 10 of

the standard Half sine Shock form Shock duration 30 ms

Number of shocks per axis 3 pos. und 3 neg. Vibration and shock stress for rolling stock equipment

Passed

Commercial data **Product Group** 22 (TOPJOBS) 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) 25 pcs Packaging type Box Country of origin 4017332076005 **GTIN** Customs tariff number 85369010000



#### **Environmental Product Compliance**

RoHS Compliance Status Compliant, No Exemption

#### Approvals / Certificates

#### General approvals







Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947	NTR NL 7876
CSA DEKRA Certification B.V.	C22.2 No. 158	70111238
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-119201
UL UL International Germany GmbH	UL 1059	E45172

### Declarations of conformity and manufacturer's declarations



Approval	Standard	Certificate Name
ATEX-Attestation of Conformity WAGO GmbH & Co. KG	-	-
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
Railway WAGO GmbH & Co. KG	-	Railway Ready
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

#### Approvals for marine applications







Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	-	20-HG1941090-PDA
BV Bureau Veritas S.A.	EN 60947	38586/B0 BV
DNV GL Det Norske Veritas, Ger- manischer Llovd	-	TAE00001V2

#### Approvals for hazardous areas







	Approval	Standard	Certificate Name
	AEx UL International Germany GmbH c/o Physikalisch Technische Bundesanstalt	UL 60079	E185892 (Ex e II)
	ATEX Physikalisch Technische Bundesanstalt (PTB)	EN 60079	PTB 05 ATEX 1070 U (II 2 G Ex eb II C bzw. I M 2 Ex eb I Mb)
	CCC CNEX	GB/T 3836.3	2020312313000161 (Ex eb IIC Gb, Ex eb I Mb)
	EAC Brjansker Zertifizierungs- stelle	TP TC 012/2011	RU C-DE.AM02. B.00127/19 (Ex e IIC Gb U)
	IECEx Physikalisch Technische Bundesanstalt (PTB)	IEC 60079	IECEx PTB 06.0003 U (Ex eb IIC Gb and Ex ebl Mb)
	INMETRO TÜV Rheinland do Brasil Ltda.	IEC 60079	TÜV 12.1311 U

#### Downloads

#### **Environmental Product Compliance**

#### Compliance Search

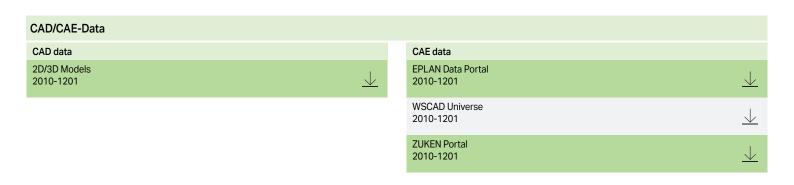
**Environmental Product** Compliance 2010-1201



https://www.wago.com/2010-1201









#### 1.2 Optional Accessories

#### 1.2.1 Cover

#### 1.2.1.1 Cover



#### Item No.: 2010-100

Finger guard; touchproof cover protects unused conductor entries; yellow

#### 1.2.2 DIN-rail

Item No.: 210-196

60715; silver-colored

### 1.2.2.1 Mounting accessories



Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm

thick; 2 m long; unslotted; similar to EN







### Item No.: 210-198

Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored



Steel carrier rail; 35 x 15 mm; 1.5 mm

thick; 2 m long; slotted; similar to EN

Item No.: 210-197

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

https://www.wago.com/2010-1201



#### 1.2.2.1 Mounting accessories



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.: 210-113

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored

#### 1.2.3 Ferrule

#### 1.2.3.1 Ferrule

Item No.: 216-284



Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; in-

sulated; electro-tin plated; electrolytic

copper; gastight crimped; acc. to DIN

Item No.: 216-289
Ferrule; Sleeve for 10 mm² / AWG 8; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue

#### Item No.: 216-287

Ferrule; Sleeve for 4 mm<sup>2</sup> / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



46228, Part 4/09.90; black

Item No.: 216-288
Ferrule; Sleeve for 6 mm² / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow

#### 1.2.4 Installation

#### 1.2.4.1 Cover



Item No.: 709-156

Cover; Type 3; suitable for cover carrier, type 3; 1 m long; transparent

#### 1.2.4.2 Cover carrier



Item No.: 709-169

Cover carrier; Type 3; incl. fixing/retaining screws and knurled nut; suitable for 279 to 282 and 880 Series rail-mounted terminal blocks; suitable for 264 Series miniature rail-mounted terminal blocks; suitable for 270 Series sensor and actuator terminal blocks; gray

#### 1.2.5 Jumper

#### 1.2.5.1 Jumper



Item No.: 2010-402

Jumper; 2-way; insulated; light gray



Item No.: 2010-403

Jumper; 3-way; insulated; light gray



Item No.: 2010-404

Jumper; 4-way; insulated; light gray



Item No.: 2010-405

Jumper; 5-way; insulated; light gray

Star point jumper; 3-way; insulated; light

Y

<u>Item No.: 2010-433</u> Jumper; from 1 to 3; insulated; light gray LY

Item No.: 2010-434
Jumper; from 1 to 4; insulated; light gray

II.

Item No.: 2010-435
Jumper; from 1 to 5; insulated; light gray

Item No.: 2010-405/011-000

gray

https://www.wago.com/2010-1201



#### 1.2.5.1 Jumper



#### Item No.: 2016-499

Step-down jumper; from 2016/2010 to 2010/2006/2004/2002 series; from 2216/2210 to 2210/2206/2204/2202 series; insulated; light gray

### Item No.: 285-430

Step-down jumper; from 285 (35mm²) to 2016/2010 series; insulated; gray

#### 1.2.6 Marking

#### 1.2.6.1 Group marker carrier



Item No.: 2009-191 Group marker carrier; gray



#### Item No.: 2009-192

Group marker carrier; gray



#### Item No.: 2009-193

Group marker carrier; gray

#### 1.2.6.2 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

Mini-WSB Inline; for Smart Printer; 1700

pieces on roll; stretchable 5 - 5.2 mm;

#### 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

# plain; snap-on type; violet

Item No.: 2009-145/000-024

Mini-WSB marking card; as card; not

### 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

stretchable; plain; snap-on type; gray

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

Item No.: 248-501/000-023

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



#### 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

https://www.wago.com/2010-1201



#### 1.2.6.2 Marker









#### 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





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#### 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

#### 1.2.6.3 Marker carrier



Item No.: 2009-198 Adaptor; gray

#### 1.2.6.4 Marking strip



#### Item No.: 2009-110

Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

#### 1.2.7 Protective warning marker

#### 1.2.7.1 Cover



#### Item No.: 2010-115

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

#### 1.2.8 Screwless end stop

#### 1.2.8.1 Mounting accessories





#### Item No.: 249-117

Screwless end stop; 10 mm wide; for DINrail 35 x 15 and 35 x 7.5; gray

#### Item No.: 249-116

Screwless end stop; 6 mm wide; for DINrail 35 x 15 and 35 x 7.5; gray



#### 1.2.9 Test and measurement

#### 1.2.9.1 Testing accessories



#### Item No.: 2010-511

Modular TOPJOB®S connector; modular; for jumper contact slot; 1-pole; 4,00 mm<sup>2</sup>;



#### Item No.: 2010-549

Spacer module; modular; e.g., for bridging commoned terminal blocks; gray



Test plug adapter; for 4 mm  $\emptyset$  test plugs; for testing TOPJOB®S rail-mounted terminal blocks; gray

#### Item No.: 2009-182

Testing tap; for max. 2.5 mm<sup>2</sup>; tool-free connection for individual test wires 0.08 -2.5 mm; gray

#### 1.2.10 Tool

#### 1.2.10.1 Operating tool



#### Item No.: 210-721

Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured

#### **Installation Notes**

#### Conductor termination

All conductor types at a glance





Push-in termination of solid and ferruled

conductors



#### Inserting a conductor via push-in termination:

Solid conductors with cross-sections from either one size above, or up to two sizes below, the rated cross-section can be simply pushed in - no tools needed.



### Inserting a conductor via operating tool:

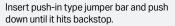
Connecting fine-stranded conductors without ferrules, or small cross-sectional conductors that cannot be pushed in, is performed similarly to the original CAGE CLAMP® – just use an operating tool.

### Advantage:

To open the clamp, the operating tool is inserted vertically. The conductor entry is less than 15 degrees for easier wiring.

#### Commoning







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

pers with more than five contacts.

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# W/AGO

#### Commoning



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

#### Commoning



Step-down jumpers common terminal blocks of different sizes, without losing a conductor clamping point. This can be beneficial on long conductor runs where voltage drop can be a problem. A large conductor can be easily connected to smaller conductors at the distribution point.

Commoning may be made in either direction using the special thin end plate to cover the open side. Additional through terminal blocks having a smaller cross-section may be commoned using push-in type jumper bars.



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



Step-down jumper (Item No. 2006-499) commons 6/4 mm² (10/12 AWG) terminal blocks (2006/2004 Series) with 4/2.5/1.5 mm² (AWG 12/14/16) terminal blocks (2004/2002/2001 Series).



**Step-down jumper (Item No. 2016-499)** commons 16/10 mm² (16/8 AWG) terminal blocks (2016/2010 Series) with 10/6/4/2.5 mm² (8/10/12/14 AWG) terminal blocks (2010/2006/2004/2002 Series).



# Stepping down via push-in type jumper

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



# Stepping down via push-in type jumper

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



#### Note:

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

#### **Testing**



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



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



Rail-mount terminal block assembly for electric motor wiring



Test plug adapter (Item No. 2009-174, CAT I) for 4 mm Ø plugs – compatible with 2000 to 2016 Series

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#### Testing



Testing tap (Item No. 2009-182) for toolfree connection of test cables up to 2.5 mm² (12 AWG) – compatible with 2000 to 2016 Series

#### Marking



Snapping WMB Inline markers into marker slots.



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



#### Ex application







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



# Separator plate for Ex e/Ex i applications

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



# Ex e II/Ex i terminal strip Note:

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



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

End plate

Ex e II terminal blocks

Separator plate for Ex e/Ex i applications

End plate

Ex i terminal blocks

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

Subject to changes. Please also observe the further product documentation!

Current addresses can be found at::  $\underline{www.wago.com}$ 

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