

Data sheet | Item number: 787-1662/004-1000

Electronic circuit breaker; 2-channel; 24 VDC input voltage; 3.8 A; active current limitation; NEC Class 2; communication capability

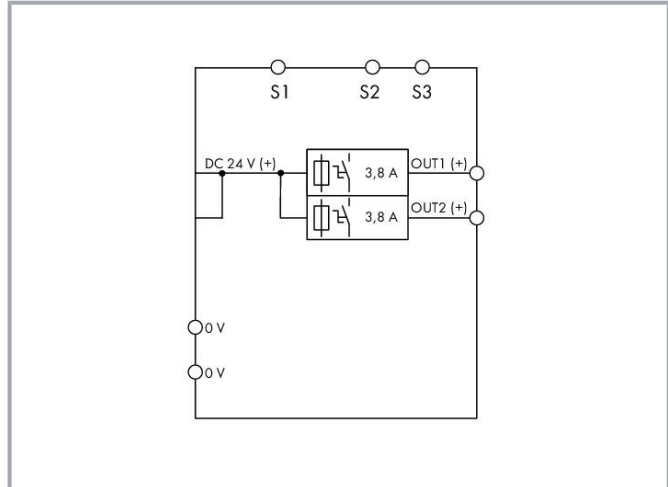


[www.wago.com/787-1662/004-1000](http://www.wago.com/787-1662/004-1000)



**i** Picture differs from the item.

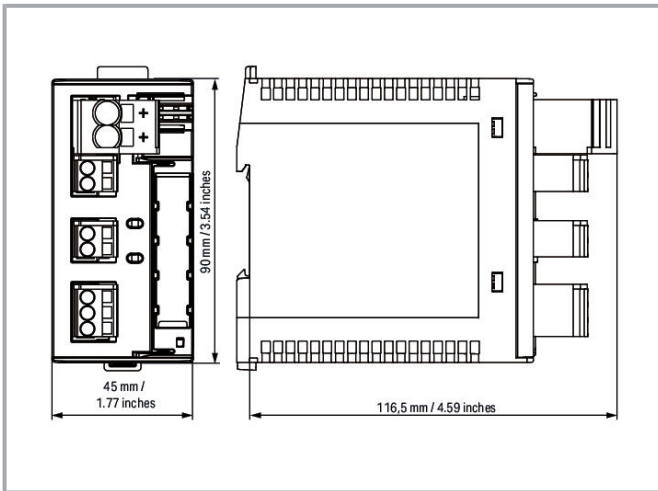
Similar to illustration



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

WAGO GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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## Item description

### Features:

- Space-saving ECB with two channels
- Nominal current is fixed at 3.8 A for each channel
- Each output complies with NEC Class 2
- Active current limitation
- Switch-on capacity > 65000  $\mu$ F per channel
- One illuminated, three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
- Time-delayed switching of channels
- Tripped message (group signal)
- Status message for each channel via pulse sequence
- Remote input resets tripped channels or switches on/off any number of channels via pulse sequence

## Data

### Technical data

#### Input

Nominal input voltage $U_{i\text{nom}}$	DC 24 V
Input voltage range	DC 20 ... 28.8 V

#### Output

Total number of channels (module)	2
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Subject to changes. Please also observe the further product documentation!



Nominal output voltage $U_{o\ nom}$	2 x DC 24 V
Output voltage range	DC 20 ... 28.8 V ( $U_e$ – voltage drop)
Voltage drop	$\leq 125$ mV (3.8 A) (Input (+))
Nominal output current $I_{o\ nom}$	2 x 3.8 A (fixed setting; NEC Class 2 at 20 ... 24 VDC); 2 x 3.2 A (NEC Class 2 (at 28 VDC))
Default setting	DC 3.5 A; switched on
Trip time	16 ms ... 4.7 s (Load-dependent)
Switch-on capacity	> 65000 $\mu$ F per channel
Switch-on behavior	Time-delayed channel switching (load-dependent, min. 50 ms / max. 5 s)
Active current limitation	yes
Current limitation	3.8 A (3.2 A at $U_o > 25$ VDC); LPS per NEC Class 2

### Signaling and Communication

Signaling	2 x LED (green/red/orange) 1 x Remote control input (S1)
Operation status indicator	Green LED (channel OK) Red LED (tripped channel)
Remote input	Reactivation of all tripped channels via 15 ... 30 VDC pulse for min. 500 ms Switching on/off any number of channels via pulse sequence

### Efficiency/power losses

Power loss $P_l$	$\leq 0.65$ W; $\leq 1.6$ W (2 x 3.8 A)
Efficiency (typ.)	99 %

### Circuit protection

Internal fuse	No
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### Safety and protection

Protection class	III
Protection type	IP20; per EN 60529
Reverse voltage protection	No
Pollution degree	2
Transient suppression (primary)	Suppressor diode (33 V)
Parallel operation of single channels	Not permitted

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



Series operation	No
MTBF	> 500,000 h (per IEC 61709)

### Connection data

Connection type 1	Input (+)
Connection technology	Push-in CAGE CLAMP®
WAGO connector	WAGO 831 Series
Solid conductor	0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Fine-stranded conductor	0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Strip length	13 ... 15 mm / 0.51 ... 0.59 inches
Connection type 2	Input (-); Output; Signaling
Connection technology 2	CAGE CLAMP®
WAGO connector 2	WAGO 721 Series
Solid conductor 2	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inches

### Physical data

Width	45 mm / 1.772 inches
Height	90 mm / 3.543 inches
Depth from upper-edge of DIN-rail	115.5 mm / 4.547 inches

### Mechanical Data

Mounting type	DIN-35 rail
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### Material Data

Fire load	0.573 MJ
Weight	200 g

### Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	No derating

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

## Standards and specifications

Conformity marking	CE
Standards/specifications	EN 61000-6-2 EN 61000-6-3 UL 508 UL 2367

## Commercial data


eCl@ss 10.0	27-37-18-02
eCl@ss 9.0	27-37-18-02
ETIM 8.0	EC001440
ETIM 7.0	EC001440
PU (SPU)	1 pcs
Packaging type	box
Country of origin	DE
GTIN	4055143896320
Customs tariff number	85363010900

## Environmental Product Compliance


RoHS Compliance Status	Compliant, No Exemption
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## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C-DE.AM02.B.00115_19

### Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

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## Optional accessories

### Tool

#### Operating tool



**Item no.: 210-721**

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

[www.wago.com/210-721](http://www.wago.com/210-721)



**Item no.: 210-769**

SCREWDRIVER; green

[www.wago.com/210-769](http://www.wago.com/210-769)



**Item no.: 210-720**

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

[www.wago.com/210-720](http://www.wago.com/210-720)

### Ferrule

#### Ferrule



**Item no.: 216-203**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red

[www.wago.com/216-203](http://www.wago.com/216-203)



**Item no.: 216-206**

Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; insulated; electro-tin plated; blue

[www.wago.com/216-206](http://www.wago.com/216-206)



**Item no.: 216-207**

Ferrule; Sleeve for 4 mm<sup>2</sup> / AWG 12; insulated; electro-tin plated; gray

[www.wago.com/216-207](http://www.wago.com/216-207)



**Item no.: 216-202**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray

[www.wago.com/216-202](http://www.wago.com/216-202)



**Item no.: 216-204**

Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black

[www.wago.com/216-204](http://www.wago.com/216-204)



**Item no.: 216-205**

Ferrule; Sleeve for 2.08 mm<sup>2</sup> / AWG 14; insulated; electro-tin plated; yellow

[www.wago.com/216-205](http://www.wago.com/216-205)



**Item no.: 216-208**

Ferrule; Sleeve for 6 mm<sup>2</sup> / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow

[www.wago.com/216-208](http://www.wago.com/216-208)



**Item no.: 216-201**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white

[www.wago.com/216-201](http://www.wago.com/216-201)



**Item no.: 216-223**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red

[www.wago.com/216-223](http://www.wago.com/216-223)



**Item no.: 216-241**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white

[www.wago.com/216-241](http://www.wago.com/216-241)



**Item no.: 216-242**

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WAGO GmbH & Co. KG

Hansastr. 27
















32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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	Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	<a href="http://www.wago.com/216-242">www.wago.com/216-242</a>
	<b>Item no.: 216-222</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-222">www.wago.com/216-222</a>
	<b>Item no.: 216-221</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-221">www.wago.com/216-221</a>
	<b>Item no.: 216-224</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-224">www.wago.com/216-224</a>
	<b>Item no.: 216-243</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	<a href="http://www.wago.com/216-243">www.wago.com/216-243</a>
	<b>Item no.: 216-244</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-244">www.wago.com/216-244</a>
	<b>Item no.: 216-263</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	<a href="http://www.wago.com/216-263">www.wago.com/216-263</a>
	<b>Item no.: 216-246</b> 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	<a href="http://www.wago.com/216-246">www.wago.com/216-246</a>
	<b>Item no.: 216-266</b> 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	<a href="http://www.wago.com/216-266">www.wago.com/216-266</a>
	<b>Item no.: 216-264</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-264">www.wago.com/216-264</a>
	<b>Item no.: 216-284</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-284">www.wago.com/216-284</a>
	<b>Item no.: 216-286</b> 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	<a href="http://www.wago.com/216-286">www.wago.com/216-286</a>
	<b>Item no.: 216-287</b> 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	<a href="http://www.wago.com/216-287">www.wago.com/216-287</a>
	<b>Item no.: 216-262</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	<a href="http://www.wago.com/216-262">www.wago.com/216-262</a>
	<b>Item no.: 216-288</b> Ferrule; Sleeve for 6 mm <sup>2</sup> / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow	<a href="http://www.wago.com/216-288">www.wago.com/216-288</a>
	<b>Item no.: 216-301</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-301">www.wago.com/216-301</a>
	<b>Item no.: 216-321</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-321">www.wago.com/216-321</a>

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	<b>Item no.: 216-322</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise	<a href="http://www.wago.com/216-322">www.wago.com/216-322</a>
	<b>Item no.: 216-267</b> 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	<a href="http://www.wago.com/216-267">www.wago.com/216-267</a>
	<b>Item no.: 216-302</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise	<a href="http://www.wago.com/216-302">www.wago.com/216-302</a>
<b>Marking accessories</b>		
Marking strip		
	<b>Item no.: 2009-110</b> Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/2009-110">www.wago.com/2009-110</a>
	<b>Item no.: 210-831</b> Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive; white	<a href="http://www.wago.com/210-831">www.wago.com/210-831</a>
	<b>Item no.: 210-832</b> Marking strips; on reel; 3 mm wide; plain; Self-adhesive; white	<a href="http://www.wago.com/210-832">www.wago.com/210-832</a>
Marker		
	<b>Item no.: 2009-145</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	<a href="http://www.wago.com/2009-145">www.wago.com/2009-145</a>
	<b>Item no.: 2009-115</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	<a href="http://www.wago.com/2009-115">www.wago.com/2009-115</a>
	<b>Item no.: 248-501</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/248-501">www.wago.com/248-501</a>
	<b>Item no.: 793-501</b> WMB marking card; as card; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/793-501">www.wago.com/793-501</a>
	<b>Item no.: 793-5501</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white	<a href="http://www.wago.com/793-5501">www.wago.com/793-5501</a>

## Downloads

### Documentation

#### Bid Text

787-1662/004-1000	2019 Jul 3	xml	Download
X81 - Datei		7.6 kB	

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 Hansastr. 27  
 32423 Minden  
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### Instruction Leaflet

Elektronische Schutzschalter Elektronische Absicherung, DC 24 V / 2x3,8 A		pdf 624.3 kB	Download
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### Additional Information

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 Aug 18	pdf 2.2 MB	Download
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### Application Notes

#### Application note SIEMENS

Elektronische Schutzschalter Serie 787 ab FW2.24 (a500371) S7 Bausteine für die Serie 787 (Epsitron, elektronische Schutzschalter und 3 Phasen Netzgeräte).	1.0.0 2017 Feb 14	zip 13.4 MB	Download
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### Libraries

#### CoDeSys 3.x Library

Libraries for CODESYS V3.x	2023-04-26	ZIP	Download
WAGO libraries based on CODESYS V3.x control systems	2023 Apr 26	89.6 MB	

- WagoAppASi
- WagoAppCanLayer2
- WagoAppCom
- WagoAppDALI
- WagoAppDCDriveController
- WagoAppDigitalImpulseInterface
- WagoAppEnOcean
- WagoAppFuse
- WagoAppHART
- WagoAppIOLink
- WagoAppM\_Bus
- WagoAppMP\_Bus
- WagoAppPowerMeasurement
- WagoAppRTC

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- WagoAppSMI
- WagoAppSolenoid
- WagoAppStepper
- WagoAppVibrationMonitoring

CODESYS Control Win V3 x64 is used as a test instance in version 3.5.18.20.

### Library

Anbindung Stromversorgungen Serie 787	1.0.0	zip	Download
Die Bibliothek "WagoLib787_02.lib" stellt Funktionsbausteine und Visualisierungen zur Verfügung, mit deren Hilfe die Informationen der WAGO Stromversorgungsmodule der Serie 787 angezeigt werden können.	2017 Aug 28	348.4 kB	
Anbindung Stromversorgungen Serie 787	1.3.0	zip	Download
Die Bibliothek "WagoLib787_01.lib" stellt Funktionsbausteine und Visualisierungen zur Verfügung, mit deren Hilfe die Informationen der WAGO Stromversorgungsmodule der Serie 787 angezeigt werden können.	2014 May 14	562.7 kB	

### CAD/CAE-Data

#### CAE data

EPLAN Data Portal 787-1662/004-1000	URL	Download
WSCAD Universe 787-1662/004-1000	URL	Download
EPLAN Data Portal 787-1662/004-1000	URL	Download
WSCAD Universe 787-1662/004-1000	URL	Download

### Environmental Product Compliance

#### Compliance Search

Environmental Product Compliance 787-1662/004-1000	URL	Download
Electronic circuit breaker; 2-channel; 24 VDC input voltage; 3.8 A; active current limitation; NEC Class 2; communication capability		

### Installation Notes

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