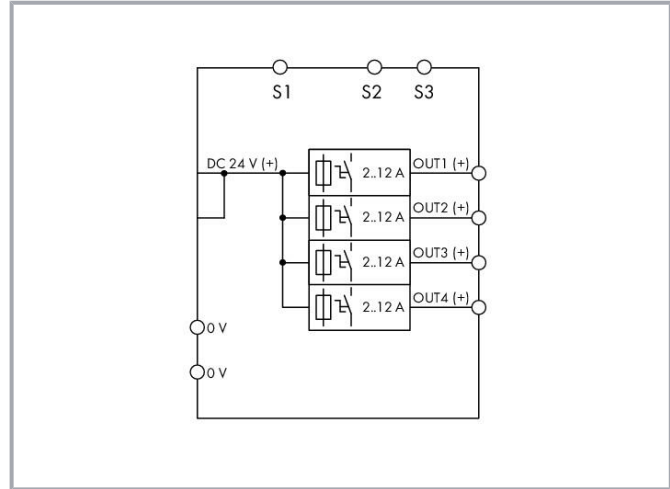


Data sheet | Item number: 787-1664/212-1000

Electronic circuit breaker; 4-channel; 24 VDC input voltage; adjustable 2 ...  
12 A; active current limitation; communication capability

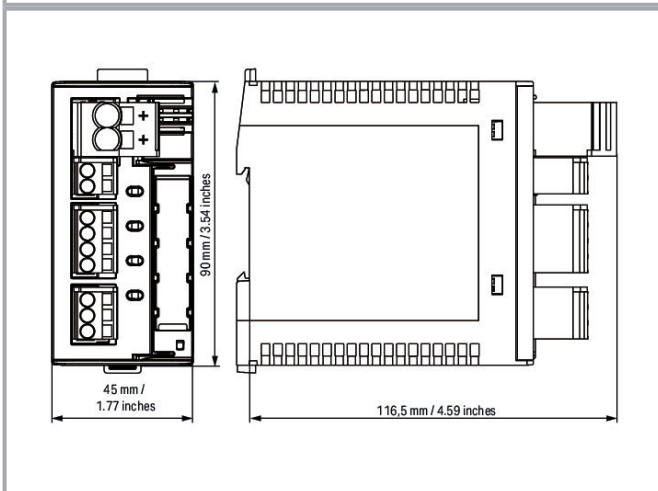


[www.wago.com/787-1664/212-1000](http://www.wago.com/787-1664/212-1000)



**i** Picture differs from the item.

Similar to illustration



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

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## Item description

### Features:

- Space-saving ECB with four channels
- Nominal current: 2 ... 12 A (adjustable for each channel via sealable selector switch)
- Active current limitation
- Switch-on capacity > 50000  $\mu$ 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 18 ... 30 V

#### Output

Total number of channels (module)	4
Nominal output voltage $U_{o\text{ nom}}$	4 x DC 24 V
Output voltage range	DC 18 ... 30 V ( $U_e$ – voltage drop)
Voltage drop	$\leq$ 240 mV (12 A) (Input (+))
Nominal output current $I_{o\text{ nom}}$	4 x 2 / 4 / 6 / 8 / 10 / 12 A (adjustable for each channel via selector switch)
Default setting	DC 12 A; switched on
Trip time	16 ms ... 5 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	$1.7 \times I_{o\text{ nom}}$ (typ.)

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



## Signaling and Communication

Signaling	4 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 $P_l$	$\leq 0.77 \text{ W}; \leq 12.3 \text{ W (4 x 12 A)}$
Efficiency (typ.)	99 %

## Circuit protection

Internal fuse	T 15 A per channel
---------------	--------------------

## 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
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

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



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
---------------	-------------

**Material Data**

Fire load	0.651 MJ
Weight	170 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

**Standards and specifications**

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

**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

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




Country of origin	DE
GTIN	4055143319973
Customs tariff number	85363010900

### Environmental Product Compliance


RoHS Compliance Status	Compliant, No Exemption
------------------------	-------------------------

### 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
	UL Underwriters Laboratories Inc.	UL 508	E255817
	UR Underwriters Laboratories Inc.	UL 2367	E363438

#### Declarations of conformity and manufacturer's declarations

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

#### Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA0000281

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## Optional accessories

### Marking accessories

#### Marking strip



**Item no.: 2009-110**

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

[www.wago.com/2009-110](http://www.wago.com/2009-110)



**Item no.: 210-831**

Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive; white

[www.wago.com/210-831](http://www.wago.com/210-831)



**Item no.: 210-832**

Marking strips; on reel; 3 mm wide; plain; Self-adhesive; white

[www.wago.com/210-832](http://www.wago.com/210-832)

#### Marker



**Item no.: 2009-145**

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

[www.wago.com/2009-145](http://www.wago.com/2009-145)



**Item no.: 2009-115**

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

[www.wago.com/2009-115](http://www.wago.com/2009-115)



**Item no.: 248-501**

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

[www.wago.com/248-501](http://www.wago.com/248-501)



**Item no.: 793-501**

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

[www.wago.com/793-501](http://www.wago.com/793-501)



**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

[www.wago.com/793-5501](http://www.wago.com/793-5501)

### 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)

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
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	<b>Item no.: 216-205</b> Ferrule; Sleeve for 2.08 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-205">www.wago.com/216-205</a>
	<b>Item no.: 216-208</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/216-208">www.wago.com/216-208</a>
	<b>Item no.: 216-201</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-201">www.wago.com/216-201</a>
	<b>Item no.: 216-223</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-223">www.wago.com/216-223</a>
	<b>Item no.: 216-241</b> 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	<a href="http://www.wago.com/216-241">www.wago.com/216-241</a>
	<b>Item no.: 216-242</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/216-242">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	<a href="http://www.wago.com/216-286">www.wago.com/216-286</a>




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crimped; acc. to DIN 46228, Part 4/09.90; blue

	<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>
	<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>

**Tool**

Operating tool

	<b>Item no.: 210-721</b> Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-721">www.wago.com/210-721</a>
	<b>Item no.: 210-769</b> SCREWDRIVER; green	<a href="http://www.wago.com/210-769">www.wago.com/210-769</a>
	<b>Item no.: 210-720</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-720">www.wago.com/210-720</a>

**Downloads**

**Documentation**

**Bid Text**

787-1664/212-1000	2019 Jul 3	xml	Download
X81 - Datei		7.4 kB	

787-1664/212-1000

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### Instruction Leaflet

Elektronische Schutzschalter Elektronische Absicherung, DC 24 V / 48 A		pdf 688.0 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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## 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
- WagoAppSMI
- WagoAppSolenoid
- WagoAppStepper
- WagoAppVibrationMonitoring

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

### Library

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Anbindung Stromversorgungen Serie 787	1.0.0 2017 Aug 28	zip 348.4 kB	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.			

Anbindung Stromversorgungen Serie 787	1.3.0 2014 May 14	zip 562.7 kB	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.			

## CAD/CAE-Data

### CAE data

EPLAN Data Portal 787-1664/212-1000	URL	Download
WSCAD Universe 787-1664/212-1000	URL	Download
ZUKEN Portal 787-1664/212-1000	URL	Download
WSCAD Universe 787-1664/212-1000	URL	Download
EPLAN Data Portal 787-1664/212-1000	URL	Download

### CAD data

2D/3D Models 787-1664/212-1000	URL	Download
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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 787-1664/212-1000	URL	Download
Electronic circuit breaker; 4-channel; 24 VDC input voltage; adjustable 2 ... 12 A; active current limitation; communication capability		

## Installation Notes

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