

**Data sheet | Item number: 787-1668**

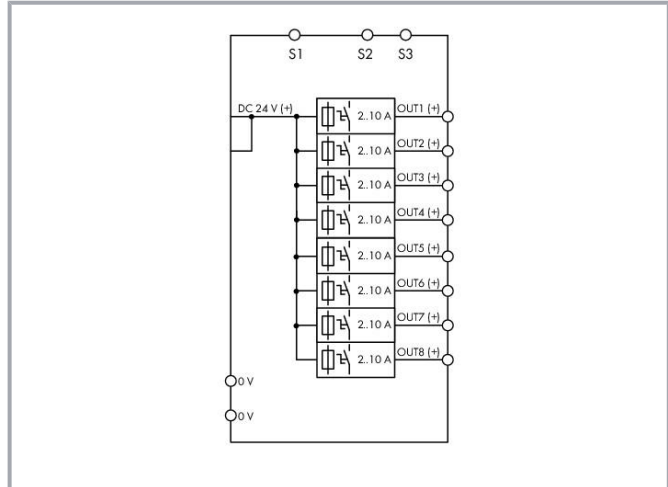
Electronic circuit breaker; 8-channel; 24 VDC input voltage; adjustable 2 ...  
10 A; communication capability; 10,00 mm<sup>2</sup>



[www.wago.com/787-1668](http://www.wago.com/787-1668)



Similar to illustration



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

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## Item description

### Features:

- Space-saving ECB with eight channels
- Nominal current: 2 ... 10 A (adjustable for each channel via sealable selector switch)
- 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

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



## Data

## Technical data

Nominal input voltage $U_{i\text{nom}}$	DC 24 V
Input voltage range	DC 18 ... 30 V
Power loss $P_I$	$\leq 1.3$ W (No load); $\leq 20$ W (8 x 10 A)
Efficiency (typ.)	99 %
Total number of channels (module)	8
Nominal output voltage $U_{o\text{nom}}$	8 x DC 24 V
Output voltage range	DC 18 ... 30 V ( $U_e$ - voltage drop)
Voltage drop	$\leq 200$ mV (Input (+))
Nominal output current $I_{o\text{nom}}$	8 x 2 / 3 / 4 / 6 / 8 / 10 A (adjustable for each channel via selector switch)
Default setting	DC 10 A; switched on
Trip time	16 ms ... 100 s (Load-dependent)
Switch-on capacity	$> 50000$ $\mu$ F per channel
Switch-on behavior	Time-delayed channel switching (load-dependent, min. 50 ms / max. 5 s)
Active current limitation	no
Isolation voltage (connectors – housing)	DC 0.5 kV
Protection class	III
Protection type	IP20 (per EN 60529)
Reverse voltage protection	No
Resistance to reverse feed	$\leq$ DC 35 V
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)
Internal fuse	T 15 A per channel
Signaling	8 x LED (green/red/orange) 1 x Remote control input (S1) 2 x Active signal output (S2; S3)
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

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



## 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 inch
Connection type 2	Input (-); Output; Signaling
Connection technology 2	CAGE CLAMP®
WAGO Connector 2	WAGO 2606 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 inch

## Physical data

Width	42 mm / 1.654 inch
Height	127 mm / 5 inch
Depth from upper edge of DIN-rail	142.5 mm / 5.61 inch

## Mechanical data

Mounting type	DIN-35 rail
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## Material data

Fire load	0.769 MJ
Weight	440 g

## Environmental requirements

Surrounding air temperature (operation)	-25 ... 70 °C
Surrounding air temperature (storage)	-25 ... 85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	≥ 50 °C (see instruction manual)

## Standards and specifications

Conformity marking	CE
Standards/Specifications	EN 60950

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EN 61000-6-2  
 EN 61000-6-3  
 UL 508  
 UL 2367  
 DNV GL

## Commercial data



Product Group	6 (Interface Electronics)
PU (SPU)	1 Stück
Packaging type	box
Country of origin	DE
GTIN	4050821502593
Customs tariff number	85363010900

## Approvals / Certificates

### Ship Approvals


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

### UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>UL</b> Underwriters Laboratories Inc.	UL 508	E255817
	<b>UL</b> Underwriters Laboratories Inc.	UL 2367	E363438

## Optional accessories

### 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>

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**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**  
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

[www.wago.com/216-242](http://www.wago.com/216-242)



**Item no.: 216-222**  
Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray

[www.wago.com/216-222](http://www.wago.com/216-222)



**Item no.: 216-221**  
Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white

[www.wago.com/216-221](http://www.wago.com/216-221)



**Item no.: 216-224**  
Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black

[www.wago.com/216-224](http://www.wago.com/216-224)


















**Item no.: 216-243**  
Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped;

[www.wago.com/216-243](http://www.wago.com/216-243)

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acc. to DIN 46228, Part 4/09.90; red

	<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>
	<b>Item no.: 216-322</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green	<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; green	<a href="http://www.wago.com/216-302">www.wago.com/216-302</a>

**Marking accessories**

Marking strip

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

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	<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>
<b>Marker</b>		
	<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

#### Manual

Electronic Circuit Breaker 24 VDC / 8 x 2...10 A	V 1.1.0	pdf 1.4 MB	Download
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#### Bid Text

787-1668 X81 - Datei	2019. 7. 3.	xml 7.3 kB	Download
787-1668 docx - Datei	2019. 7. 3.	docx 20.9 kB	Download

#### Instruction Leaflet

Elektronische Schutzschalter	pdf	Download
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Elektronische Absicherung, DC 24 V / 8x10 A

419.6 kB

**Additional Information**

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB	Download
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**Libraries**

**CoDeSys 3.x Library**

Libraries for CODESYS V3.x	2021-06-15 2021. 6. 15.	ZIP 60.8 MB	Download
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WAGO libraries based on CODESYS V3.x control systems

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

"CODESYS Control Win V3" is used as a test instance in version 3.5.16.40.

**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. 8. 28.	348.4 kB	

Anbindung Stromversorgungen Serie 787	1.3.0 2014. 5. 14.	zip 562.7 kB	Download
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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.

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## CAD/CAE-Data

### CAD data

2D/3D Models 787-1668	<a href="#">URL</a>	<a href="#">Download</a>
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### CAE data

EPLAN Data Portal 787-1668	<a href="#">URL</a>	<a href="#">Download</a>
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WSCAD Universe 787-1668	<a href="#">URL</a>	<a href="#">Download</a>
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ZUKEN Portal 787-1668	<a href="#">URL</a>	<a href="#">Download</a>
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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 787-1668	<a href="#">URL</a>	<a href="#">Download</a>
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Electronic circuit breaker; 8-channel; 24 VDC input voltage; adjustable 2 ... 10 A; communication capability; 10,00 mm<sup>2</sup>

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## Installation Notes

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