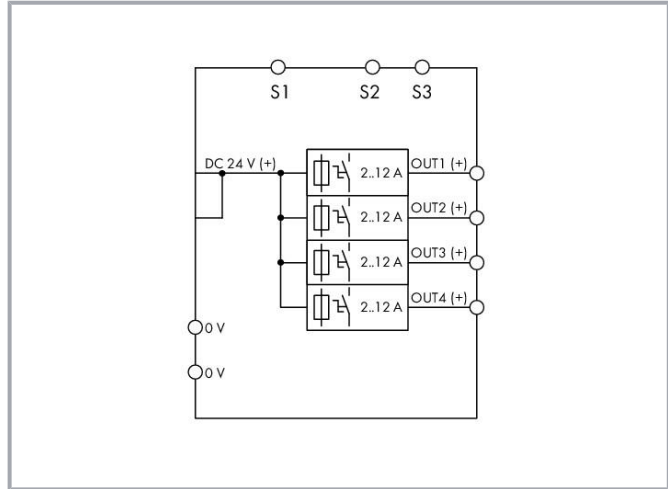


Data sheet | Item number: 787-1664/212-1000

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



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 μ 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_l	≤ 0.77 W (No load); ≤ 12.3 W (4 x 12 A)
Efficiency (typ.)	99 %
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	≤ 240 mV (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 μF 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.)
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	4 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.

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



500 ms
Switching on/off any number of channels via pulse sequence

Connection data

Connection type (1)	Input (+)
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	WAGO 831 Series
Solid conductor	0.5 ... 10 mm ² / 20 ... 8 AWG
Fine-stranded conductor	0.5 ... 10 mm ² / 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 ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch

Physical data

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

Mechanical data

Mounting type	DIN-35 rail
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Material data

Fire load	0.652 MJ
Weight	170 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	No derating

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Standards and specifications

Conformity marking	CE
Standards/Specifications	EN 60950 EN 61000-6-2 EN 61000-6-3 UL 508 UL 2367 DNV GL

Commercial data



PU (SPU)	1 Stück
Packaging type	box
Country of origin	DE
GTIN	4055143319973
Customs tariff number	85363010900

Approvals / Certificates

Ship Approvals

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

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc.	UL 508	E255817
	UL Underwriters Laboratories Inc.	UL 2367	E363438
















Optional accessories

Ferrule
Ferrule

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









	Item no.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-203
	Item no.: 216-206 Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated; blue	www.wago.com/216-206
	Item no.: 216-207 Ferrule; Sleeve for 4 mm ² / AWG 12; insulated; electro-tin plated; gray	www.wago.com/216-207
	Item no.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-202
	Item no.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	www.wago.com/216-204
	Item no.: 216-205 Ferrule; Sleeve for 2.08 mm ² / AWG 14; insulated; electro-tin plated; yellow	www.wago.com/216-205
	Item no.: 216-208 Ferrule; Sleeve for 6 mm ² / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow	www.wago.com/216-208
	Item no.: 216-201 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white	www.wago.com/216-201
	Item no.: 216-223 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-223
	Item no.: 216-241 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white	www.wago.com/216-241
	Item no.: 216-242 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	www.wago.com/216-242
	Item no.: 216-222 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-222
	Item no.: 216-221 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white	www.wago.com/216-221
	Item no.: 216-224 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	www.wago.com/216-224
	Item no.: 216-243 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	www.wago.com/216-243
	Item no.: 216-244 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	www.wago.com/216-244
	Item no.: 216-263 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	www.wago.com/216-263
	Item no.: 216-246	

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

	Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	www.wago.com/216-246
	Item no.: 216-266 Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	www.wago.com/216-266
	Item no.: 216-264 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	www.wago.com/216-264
	Item no.: 216-284 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	www.wago.com/216-284
	Item no.: 216-286 Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	www.wago.com/216-286
	Item no.: 216-287 Ferrule; Sleeve for 4 mm ² / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	www.wago.com/216-287
	Item no.: 216-262 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	www.wago.com/216-262
	Item no.: 216-288 Ferrule; Sleeve for 6 mm ² / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow	www.wago.com/216-288
	Item no.: 216-301 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow	www.wago.com/216-301
	Item no.: 216-321 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow	www.wago.com/216-321
	Item no.: 216-322 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; green	www.wago.com/216-322
	Item no.: 216-267 Ferrule; Sleeve for 4 mm ² / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	www.wago.com/216-267
	Item no.: 216-302 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; green	www.wago.com/216-302
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
	Item no.: 210-769 SCREWDRIVER; green	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

Marking accessories

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

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
	Item no.: 210-831 Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive; white	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
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
	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
	Item no.: 248-501 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	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
	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

Downloads

Documentation

Bid Text

787-1664/212-1000 X81 - Datei	2019. 7. 3.	xml 7.4 kB	Download
787-1664/212-1000 docx - Datei	2019. 7. 2.	docx 21.1 kB	Download

Instruction Leaflet

Elektronische Schutzschalter Elektronische Absicherung, DC 24 V / 48 A	pdf 688.0 kB	Download
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Additional Information

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Libraries

CoDeSys 3.x Library

Libraries for CODESYS V3.x	2021-06-15	ZIP	Download
WAGO libraries based on CODESYS V3.x control systems	2021. 6. 15.	60.8 MB	
<ul style="list-style-type: none"> ■ 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	1.3.0	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. 5. 14.	562.7 kB	
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	

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

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