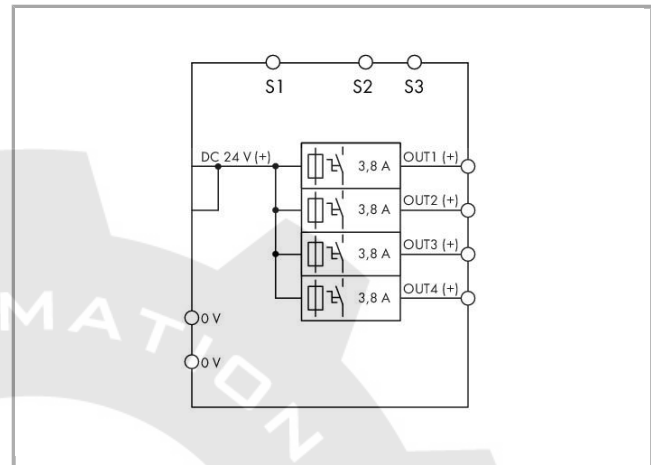


Data sheet | Item number: 787-1664/004-1000

electronic circuit breaker; 4-channel; 24 VDC input voltage; 3.8 A; active current limitation; NEC Class 2; communication capability



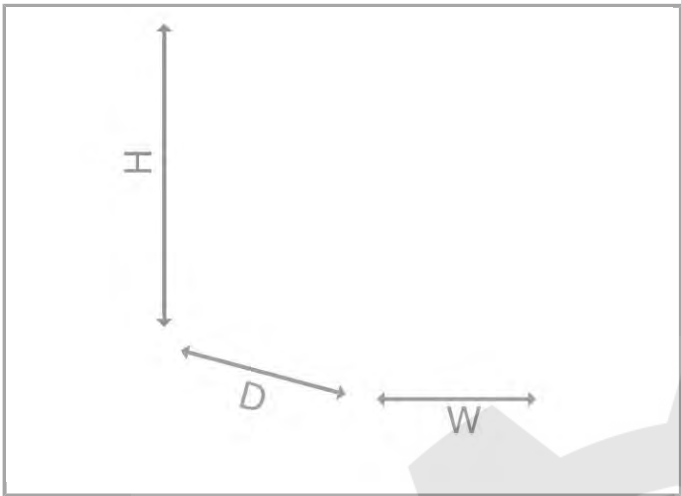
787-1664/004-1000



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Item description

Features:

- Space-saving ECB with four 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 µF 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)	4
Nominal output voltage $U_{o\text{ nom}}$	4 x DC 24 V
Output voltage range	DC 20 ... 28.8 V (U_i – voltage drop)
Voltage drop	$\leq 150\text{ mV}$ (Input (+)) 4 x 3.8 A (fixed setting; NEC Class 2 at 20 ... 24 VDC); 4 x 3.2 A (NEC

Nominal output current $I_{o\ nom}$	Class 2 at 28 VDC)
Factory preset	DC 3.8 A; switched on
Trip time	16 ms ... 4.7 s (Load-dependent)
Switch-on capacity	> 65000 μ 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	4 x LED (green/red/orange) 1 x remote input (S1) 2 x active signal output (S2, S3)
Operation status indicator	LED green (channel OK) LED red (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_v	≤ 0.82 W (no load); ≤ 3.1 W (4 x 3.8 A)
Efficiency	99 %

Fuse protection:

Internal fuse	No
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Safety and protection:

Insulation voltage (connectors-housing)	DC 0.5 kV
Protection class	III
Protection class	IP20 (per EN 60529)
Reverse voltage protection	No
Feedback voltage	$\leq$ DC 28.8 V
Transient protection, primary	Suppressor diode, 33 V
Parallel operation of single channels	Not permitted
Series connection	No
MTBF	> 500,000 h (per IEC 61709)

Connection data

Connection type (1)	Input (+)
Connection technology	Push-in CAGE CLAMP®



WAGO terminal	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 terminal 2	WAGO 721 Series
Solid conductor (2)	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length (2)	8 ... 9 mm / 0.31 ... 0.35 inch

Geometrical Data

Width	45 mm / 1.772 inch
Height	90 mm / 3.543 inch
Length from upper-edge of DIN-35 rail	115.5 mm / 4.547 inch

Mechanical data

Type of mounting	DIN-35 rail (EN 60715)
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Material Data

Weight	170 g
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Environmental Requirements

Surrounding air (operating) temperature	-25 ... 70 °C
Surrounding air (storage) temperature	-25 ... 85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	No derating
Pollution degree	2

Standards and specifications

Conformity marking	1
Standards/specifications	UL 508; UL 2367; GL*; EN 60950; EN 61000-6-2; EN 61000-6-3 (*pending)

Commercial data

Country of origin	DE
GTIN	4055143318891
Customs Tariff No.	85363010900

Compatible products

ferrule

	Item no.: 216-201 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated	216-201
	Item no.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated	216-202
	Item no.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated	216-203
	Item no.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated	216-204
	Item no.: 216-205 Ferrule; Sleeve for 2.08 mm ² / AWG 14; insulated; electro-tin plated	216-205
	Item no.: 216-206 Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated	216-206
	Item no.: 216-207 Ferrule; Sleeve for 4 mm ² / AWG 12; insulated; electro-tin plated	216-207
	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	216-208
	Item no.: 216-221 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated	216-221
	Item no.: 216-222 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated	216-222
	Item no.: 216-223 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated	216-223
	Item no.: 216-224 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated	216-224
	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	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	216-242
	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	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	216-244
	Item no.: 216-246	

	Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90	216-246
	Item no.: 216-262 Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90	216-262
	Item no.: 216-263 Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90	216-263
	Item no.: 216-264 Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90	216-264
	Item no.: 216-266 Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90	216-266
	Item no.: 216-267 Ferrule; Sleeve for 4 mm² / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90	216-267
	Item no.: 216-284 Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90	216-284
	Item no.: 216-286 Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90	216-286
	Item no.: 216-287 Ferrule; Sleeve for 4 mm² / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90	216-287
	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	216-288
	Item no.: 216-301 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated	216-301
	Item no.: 216-302 Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated	216-302
	Item no.: 216-321 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated	216-321
	Item no.: 216-322 Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated	216-322
tools		
	Item no.: 210-720 Operating tool with partially insulated shaft; Type 2, blade (3.5 x 0.5) mm	210-720
	Item no.: 210-721 Operating tool with partially insulated shaft; Type 3, blade (5.5 x 0.8) mm	210-721
	Item no.: 210-769 SCREWDRIVER	210-769
Marking accessories		
	Item no.: 2009-110 Marking strips; on reel; not stretchable; plain; snap-on type	2009-110

	Item no.: 2009-115 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type		2009-115
	Item no.: 2009-115/000-002 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-002	2009-115
	Item no.: 2009-115/000-006 WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-006	2009-115
	Item no.: 2009-115/000-007 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-007	2009-115
	Item no.: 2009-115/000-012 WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-012	2009-115
	Item no.: 2009-115/000-017 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-017	2009-115
	Item no.: 2009-115/000-023 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-023	2009-115
	Item no.: 2009-115/000-024 WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-024	2009-115
	Item no.: 2009-135 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type		2009-135
	Item no.: 2009-145 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type		2009-145
	Item no.: 2009-145/000-002 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-002	2009-145
	Item no.: 2009-145/000-005 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-005	2009-145
	Item no.: 2009-145/000-006 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-006	2009-145
	Item no.: 2009-145/000-007 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-007	2009-145
	Item no.: 2009-145/000-012 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-012	2009-145

	Item no.: 2009-145/000-023 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145
	7000-023	
	Item no.: 2009-145/000-024 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145
	7000-024	
	Item no.: 210-831 Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive	210-831
	Item no.: 210-832 Marking strips; on reel; 3 mm wide; plain; Self-adhesive	210-832
	Item no.: 248-501 Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card	248-501
	Item no.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
	7000-002	
	Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
	7000-005	
	Item no.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
	7000-006	
	Item no.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
	7000-007	
	Item no.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
	7000-012	
	Item no.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
	7000-017	
	Item no.: 248-501/000-023 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
	7000-023	
	Item no.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type	793-501
	Item no.: 793-501/000-002 WMB marking card; as card; not stretchable; plain; snap-on type	793-501
	7000-002	
	Item no.: 793-501/000-005 WMB marking card; as card; not stretchable; plain; snap-on type	793-501
	7000-005	
	Item no.: 793-501/000-006 WMB marking card; as card; not stretchable; plain; snap-on type	793-501
	7000-006	

	Item no.: 793-501/000-007 WMB marking card; as card; not stretchable; plain; snap-on type	/000-007	793-501
	Item no.: 793-501/000-012 WMB marking card; as card; not stretchable; plain; snap-on type	/000-012	793-501
	Item no.: 793-501/000-017 WMB marking card; as card; not stretchable; plain; snap-on type	/000-017	793-501
	Item no.: 793-501/000-023 WMB marking card; as card; not stretchable; plain; snap-on type	/000-023	793-501
	Item no.: 793-501/000-024 WMB marking card; as card; not stretchable; plain; snap-on type	/000-024	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		793-5501
	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	/000-002	793-5501
	Item no.: 793-5501/000-005 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	/000-005	793-5501
	Item no.: 793-5501/000-006 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	/000-006	793-5501
	Item no.: 793-5501/000-007 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	/000-007	793-5501
	Item no.: 793-5501/000-012 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	/000-012	793-5501
	Item no.: 793-5501/000-014 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	/000-014	793-5501
	Item no.: 793-5501/000-017 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	/000-017	793-5501
	Item no.: 793-5501/000-023 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	/000-023	793-5501



Item no.: 793-5501/000-024
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

793-5501

/000-024

Downloads

Documentation

Bid Text

787-1664/004-1000	Jan 14, 2016	doc	Download
Stromversorgung EPSITRON		36.9 kB	

Instruction Leaflet

EPSITRON Electronic Circuit Breakers	pdf	Download
Electronic Circuit Breaker, 24 VDC / 4x 3.8 A	624.3 kB	

Additional Information

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

Libraries

CoDeSys 3.x Library

Libraries for CODESYS V3.x	Feb 26, 2019	ZIP	Download
WAGO libraries based on CODESYS V3.x control systems		17.4 MB	

- - WagoAppASi
- - WagoAppCanLayer2
- - WagoAppCom
- - WagoAppDALI
- - WagoAppDCDriveController
- - WagoAppDigitalImpulseInterface
- - WagoAppFuse
- - WagoAppIOLink
- - WagoAppPowerMeasurement
- - WagoAppSolenoid
- - WagoAppStepper
- - WagoAppVibrationMonitoring

"CODESYS Control Win V3" is used as a test instance in version 3.5.11.10.

Library

Connection of 787 Series power supplies	V1.0.0	zip	Download
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The WagoLib787_02.lib library makes function blocks and visualization objects available which can be used to display information from the WAGO 787 Series power supply modules.

Aug 28, 2017 348.4 kB

Connection of 787 Series power supplies

V1.3.0 zip Download

May 14, 2014 562.7 kB

The WagoLib787_01.lib library makes function blocks and visualization objects available which can be used to display information from the WAGO 787 Series power supply modules.



Subject to changes.