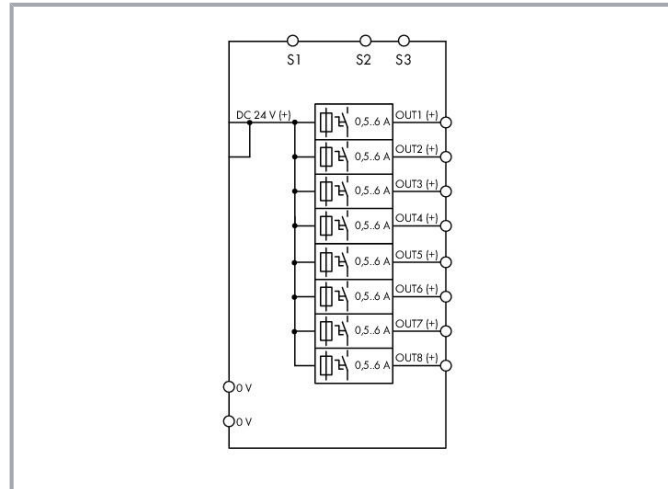


Data sheet | Item number: 787-1668/006-1000

Electronic circuit breaker; 8-channel; 24 VDC input voltage; adjustable 0.5 ... 6 A; active current limitation; communication capability



www.wago.com/787-1668/006-1000



Item description

Features:

- Space-saving ECB with eight channels
- Nominal current: 0.5 ... 6 A (adjustable for each channel via sealable selector switch)

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

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- Active current limitation
- Switch-on capacity > 65000 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

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) | 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 | ≤ 155 mV (6 A) (Input (+)) |
| Nominal output current $I_{o\text{nom}}$ | 8 x 0.5 / 1 / 2 / 3 / 4 / 6 A (adjustable for each channel via selector switch) |
| Default setting | DC 6 A; switched on |
| Trip time | 16 ms ... 5 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 | $1.7 \times I_{o\text{nom}}$ (typ.) |

Signaling and Communication

| | |
|----------------------------|-----------------------------------------------------------------------|
| Signaling | 8 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. |

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

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

Efficiency/power losses

| | |
|-------------------|-----------------------------------------------------|
| Power loss P_l | $\leq 1.15 \text{ W}; \leq 8.6 \text{ W (8 x 6 A)}$ |
| 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 ² / 20 ... 8 AWG |
| Fine-stranded conductor | 0.5 ... 10 mm ² / 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 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 inches |

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



Physical data

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

Mechanical Data

| | |
|---------------|-------------|
| Mounting type | DIN-35 rail |
|---------------|-------------|

Material Data

| | |
|--------|-------|
| Weight | 440 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 |
| Country of origin | DE |
| GTIN | 4050821848332 |
| Customs tariff number | 85363010900 |

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

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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 | - | - |
|  | UK-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 |

Optional accessories




Marking accessories

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






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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 |

Ferrule

Ferrule








| | | |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
|  | 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; | www.wago.com/216-208 |

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

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

| | | |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
|  | 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 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 |

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

| | | |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
|  | <p>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; gray</p> | www.wago.com/216-262 |
|  | <p>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; yellow</p> | www.wago.com/216-288 |
|  | <p>Item no.: 216-301 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow</p> | www.wago.com/216-301 |
|  | <p>Item no.: 216-321 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow</p> | www.wago.com/216-321 |
|  | <p>Item no.: 216-322 Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise</p> | www.wago.com/216-322 |
|  | <p>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; gray</p> | www.wago.com/216-267 |
|  | <p>Item no.: 216-302 Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise</p> | www.wago.com/216-302 |

Mounting adapter

DIN-rail adapter



| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <p>Item no.: 787-897/000-010 Carrier rail adapter made of zinc die-cast; horizontal mounting of 787-16xx (TS35)</p> | www.wago.com/787-897/000-010 |
|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|

Tool

Operating tool



| | |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| <p>Item no.: 210-721 Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured</p> | www.wago.com/210-721 |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|



| | |
|-------------------------------------------------------------------------|----------------------------------------------------------------|
| <p>Item no.: 210-769 SCREWDRIVER; green</p> | www.wago.com/210-769 |
|-------------------------------------------------------------------------|----------------------------------------------------------------|



| | |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| <p>Item no.: 210-720 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured</p> | www.wago.com/210-720 |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|

Downloads

Documentation

Manual

| | | | |
|----------------------------------------------|---------|-----|----------|
| Product Manual br/Electronic Circuit Breaker | V 1.1.0 | pdf | Download |
|----------------------------------------------|---------|-----|----------|

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



24 VDC / 8 x 2...10 A

1.4 MB

Bid Text

| | | | |
|-----------------------------------|------------|-----------------|----------|
| 787-1668/006-1000 X81 - Datei | 2019 Jul 3 | xml 7.4 kB | Download |
| 787-1668/006-1000 docx - Datei | 2019 Jul 2 | docx 21.4 kB | Download |

Instruction Leaflet

| | | | |
|----------------------------------------------------------------------------|--|-----------------|----------|
| Elektronische Schutzschalter Elektronische Absicherung, DC 24 V / 8x6 A | | pdf 688.0 kB | Download |
|----------------------------------------------------------------------------|--|-----------------|----------|

Additional Information

| | | | |
|-------------------------------------------------------------------------------------|------------------------|---------------|----------|
| Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging | V 1.1.0 2022 Aug 18 | pdf 2.2 MB | Download |
|-------------------------------------------------------------------------------------|------------------------|---------------|----------|

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

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



- WagoAppSolenoid
- WagoAppStepper
- WagoAppVibrationMonitoring

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

Library

| | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------|-----------------|
| <p>Anbindung Stromversorgungen Serie 787</p> <p>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.</p> | <p>1.0.0</p> <p>2017 Aug 28</p> | <p>zip</p> <p>348.4 kB</p> | <p>Download</p> |
| <p>Anbindung Stromversorgungen Serie 787</p> <p>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.</p> | <p>1.3.0</p> <p>2014 May 14</p> | <p>zip</p> <p>562.7 kB</p> | <p>Download</p> |

CAD/CAE-Data

CAD data

| | | |
|--------------------------------|-----|----------|
| 2D/3D Models 787-1668/006-1000 | URL | Download |
|--------------------------------|-----|----------|

CAE data

| | | |
|-------------------------------------|-----|----------|
| EPLAN Data Portal 787-1668/006-1000 | URL | Download |
| WSCAD Universe 787-1668/006-1000 | URL | Download |
| ZUKEN Portal 787-1668/006-1000 | URL | Download |
| EPLAN Data Portal 787-1668/006-1000 | URL | Download |
| WSCAD Universe 787-1668/006-1000 | URL | Download |

Environmental Product Compliance

Compliance Search

| | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|
| <p>Environmental Product Compliance 787-1668/006-1000</p> <p>Electronic circuit breaker; 8-channel; 24 VDC input voltage; adjustable 0.5 ... 6 A; active current limitation; communication capability</p> | URL | Download |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|

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



Installation Notes

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

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