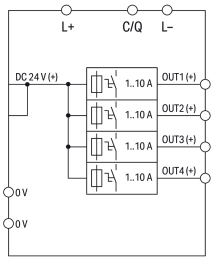
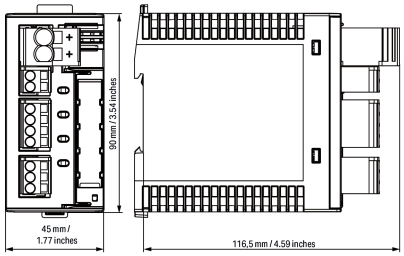
Data Sheet | Item Number: 787-1664/000-080

Electronic circuit breaker; 4-channel; 24 VDC input voltage; adjustable 1 … 10 A; IO-Link

https://www.wago.com/787-1664/000-080







Features:

- Space-saving ECB with four channels
- Nominal current: 1 … 10 A (adjustable for each channel via sealable selector switch or IO-Link interface)
- Switch-on capacity > 50000 µF per channel
- One illuminated, three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
- Time-delayed switching of channels
- Status message and current measurement of each individual channel via IO-Link interface
- Switch on/off each channel separately via IO-Link interface

Technical data

Input

Nominal input voltage $U_{i\,nom}$	24 VDC
Input voltage range	18 … 30 VDC

Output

Total number of channels (module)	4
Nominal output voltage $U_{o\,nom}$	4 x 24 VDC
Output voltage range	18 … 30 VDC (U_e - voltage drop)
Voltage drop	≤ 200 mV (10 A) (Input (+))
Nominal output current $I_{o\,nom}$	4 x 1 / 2 / 3 / 4 / 6 / 8 / 10 A (adjustable for each channel via IO-Link interface; 1, 2, 4, 6, 10 A adjustable for each channel via selector switch)
Default Setting	DC 10 A; switched off
Trip time	16 ms … 100 s (load-dependent)
Switch-on capacity	

Output

Switch-on behavior	Time-delayed channel switching (load-dependent, min. 50 ms / max. 5 s)
Active current limitation	No
Current limitation	No

Signaling and Communication

Signaling	4 x LED (green/red/orange) 1 x IO-Link interface
Operation status indicator	Green LED (channel OK) Red LED (tripped channel)
Remote input	Switching on/off any number of channels via IO-Link interface

Efficiency/Power Losses

Power loss P_l	≤ 0.84 W; ≤ 10 W (4 x 10 A)
Efficiency (typ.)	99 %

Circuit Protection

Internal fuse	T 15 A per channel

Safety and protection

Isolation voltage (connectors – housing)	0.5 kVDC
Protection class	III
Protection type	IP20; per EN 60529
Reverse voltage protection	No
Resistance to reverse feed	≤ 35 VDC
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 1

Connection type	Input (+)
Connection technology	Push-in CAGE CLAMP®
WAGO connector	WAGO 831 Series
Solid conductor	0.5 … 10 mm² / 20 … 8 AWG
Fine-stranded conductor	0.5 … 10 mm² / 20 … 8 AWG
Strip length	13 … 15 mm / 0.51 … 0.59 inches

Connection 2

Connection type	Input (-); output; signaling
Connection technology	CAGE CLAMP®
WAGO connector	WAGO 721 Series
Solid conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Strip length	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

Continued on next page

Material data

Fire load	0.586 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	≥ 50 °C (see instruction manual)

Standards and Specifications

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

Commercial data

PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
Customs tariff number	85362010900

Product Classification

UNSPSC	39121601
eCl@ss 10.0	27-37-18-02
eCl@ss 9.0	27-37-18-02
ETIM 9.0	EC001440
ETIM 10.0	EC001440
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

RoHS Compliance Status	Compliant,No Exemption

Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081
UL Underwriters Laboratories Inc.	UL 508	E255817
UR Underwriters Laboratories Inc.	UL 2367	E363438

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Continued on next page

Approvals for marine applications

Approval	Standard	Certificate Name
DNV DNV GL SE	-	TAA0000281

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 787-1664/000-080			

Documentation

Manual

Product Manual Electronic Circuit Breaker	V 1.1.1 10.10.2019	pdf 5173.86 KB	

Additional Information

Electronic Circuit Breaker	23.04.2020 19.05.2020	pdf 1996.49 KB	

Bid Text

787-1664/000-080	03.07.2019	xml 6.86 KB	
787-1664/000-080	03.07.2019	docx 20.25 KB	

Application Notes

Application Note e!COCKPIT

e!COCKPIT Application Note WagoAppFuse (a2019001)	2021-11-08 06.12.2021	pdf 548.17 KB	

Application note SIEMENS

Application note Electronic fuse 787-166x/0000-0080 with I/O-Link Interface (a2019004)	2019-06-06 06.06.2019	zip 7180.98 KB	
Application note Electronic fuse 787-166x/0000-0080 with I/O-Link Interface (a2019005)	2019-06-06 06.06.2019	zip 10697.94 KB	

Continued on next page

CAD/CAE-Data

CAD data	CAE data
2D/3D Models 787-1664/000-080	EPLAN Data Portal 787-1664/000-080
	ZUKEN Portal 787-1664/000-080

Libraries

Device Description File

Device description files 787-1664/000-080	1.1 19.03.2018	zip 162.19 KB	
Device description files 787-1664/000-080	1.4.1 10.09.2019	zip 162.38 KB	

1 Compatible Products

1.1 Optional Accessories

1.1.1 Marking

1.1.1.1 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



Item No.: 248-501
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

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

Item No.: 793-501
WMB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 2009-115
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

1.1.1.2 Marking strip



Item No.: 2009-110
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white



Item No.: 210-831
Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive; white



Item No.: 210-832
Marking strips; on reel; 3 mm wide; plain; Self-adhesive; white

1.1.2 Tool

1.1.2.1 Operating tool



Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



Item No.: 210-721
Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured



Item No.: 210-769
SCREWDRIVER; green