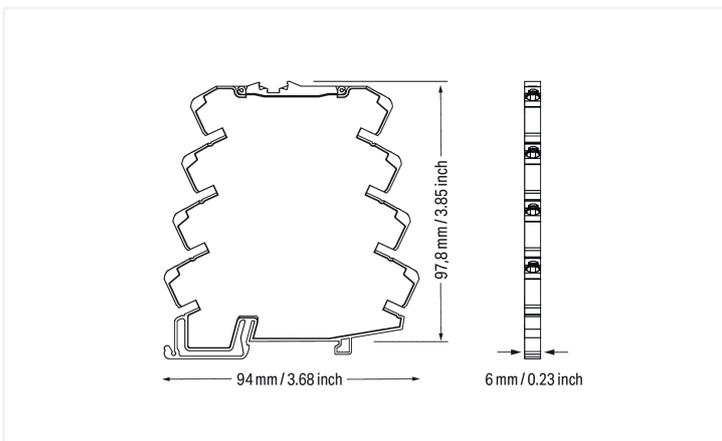
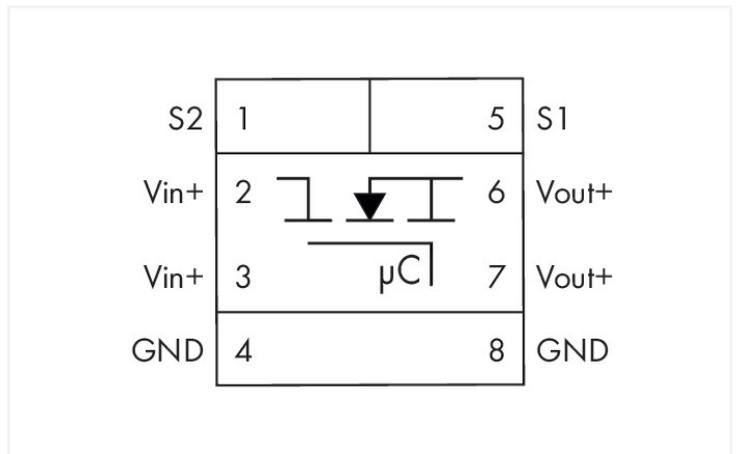
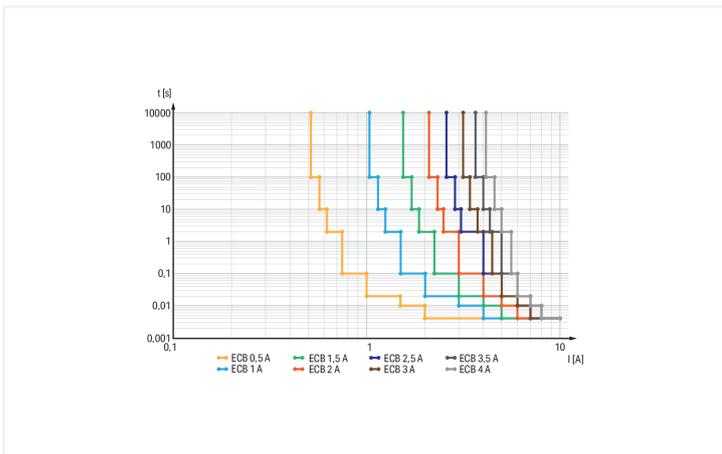
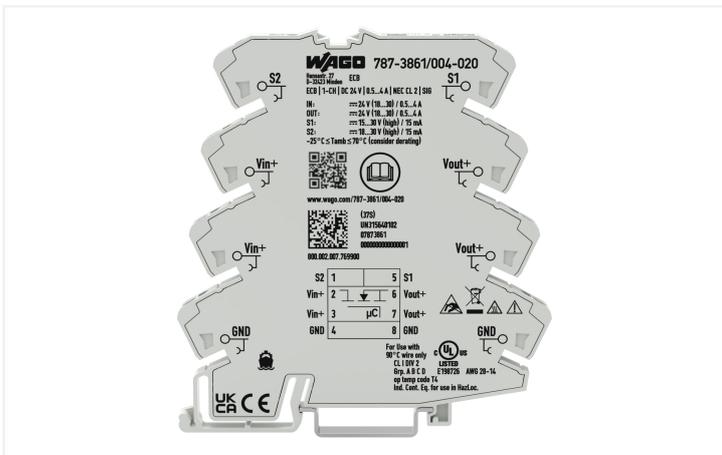
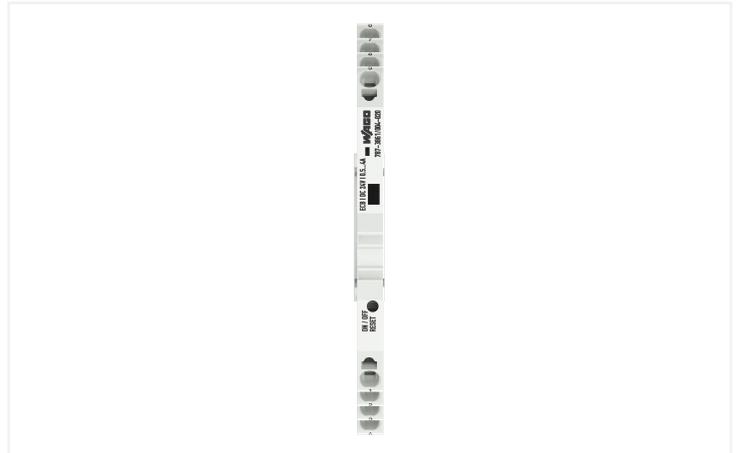


Data Sheet | Item Number: 787-3861/004-020

Electronic circuit breaker; 1-channel; 24 VDC input voltage; adjustable 0.5 ... 4 A; Signal contact



<https://www.wago.com/787-3861/004-020>



Features:

- Space-saving ECB with one channel
- Reliably and safely trips in the event of an overload and short circuit on the secondary side
- Switch-on capacity > 50,000 μF
- Enables the use of an economical, standard power supply
- Minimizes wiring via two voltage outputs and maximizes commoning options on both input and output sides (e.g., commoning of the output voltage on 857 and 2857 Series devices)
- Status signal – adjustable as single or group message
- Reset, switch on/off via remote input or local switch
- Prevents power supply overload due to total inrush current thanks to time-delayed switching on during interconnected operation

Notes

Note	The device is designed for use in SELV circuits. Depending on the output current, please use the approved minimum conductor cross-sections.
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Technical data**Input**

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

Output

Total number of channels (module)	1
Nominal output voltage $U_{o, \text{nom}}$	1 x 24 VDC
Output voltage range	18 ... 30 VDC (U_{θ} – voltage drop)
Voltage drop	$\leq 40 \text{ mV}$ (0.5 A); $\leq 80 \text{ mV}$ (1 A); $\leq 120 \text{ mV}$ (1.5 A); $\leq 160 \text{ mV}$ (2 A); $\leq 200 \text{ mV}$ (2.5 A); $\leq 240 \text{ mV}$ (3 A); $\leq 280 \text{ mV}$ (3.5 A); $\leq 320 \text{ mV}$ (4 A)
Nominal output current $I_{o, \text{nom}}$	1 x 0.5 / 1 / 1.5 / 2 / 2.5 / 3 / 3.5 / 4 A (adjustable)
Default Setting	DC 0.5 A; switched off
Trip time	10 ms ... 90 s (load-dependent)
Switch-on capacity	
Switch-on behavior	Time-delayed channel switching (load-dependent, min. 0 ms / max. 500 ms)
Current limitation	No
Switch-on threshold	DC 20.3 V

Signaling and Communication

Signaling	1 x Status LED (green/yellow/red) 1 x Signal output (18 ... 30 VDC, max. 0.015 A), default setting: tripped
Operation status indicator	Green LED (channel OK) Red LED (channel switched off)
Remote input	1 x Control input (15 ... 30 VDC (active high); 0 ... 5 VDC (active low); max. 0.015 A)

Efficiency/Power Losses

Power loss P_1	$\leq 0.4 \text{ W}$ (no load)
Efficiency (typ.)	98 %

Circuit Protection

Internal fuse	T 8 A
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Safety and protection

Isolation voltage (connectors – housing)	1.5 kVDC	MTBF	807,840 h
Protection class	III		
Protection type	IP20; per EN 60529		
Reverse voltage protection	No		
Transient suppression (primary)	Suppressor diode (33 V)		
Parallel operation of single channels	Not permitted		
Series operation	No		

Insulation coordination (UL)

Overvoltage category	II
Pollution degree	2

Insulation coordination

Overvoltage category	II
Pollution degree	2

Connection Data

Number of jumper slots	8
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Connection 1

Connection technology	Push-in CAGE CLAMP®
WAGO connector	WAGO 857 Series
Solid conductor	0.08 ... 2.5 mm ² / 26 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches
Note (conductor cross-section)	Depending on the output current, use the conductor cross-sections tested and approved by UL: 26 ... 14 AWG (0.5 A); 24 ... 14 AWG (1 A / 1.5 A); 22 ... 14 AWG (2 A / 2.5 A); 20 ... 14 AWG (3 A / 3.5 A / 4 A)

Physical data

Width	6 mm / 0.236 inches
Height	94 mm / 3.701 inches
Depth from upper-edge of DIN-rail	97.8 mm / 3.85 inches

Mechanical data

Mounting type	DIN-35 rail
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Material data

Fire load	0.634 MJ
Weight	55.7 g

Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	10 ... 95 % (no condensation permissible)
Derating	No derating
Operating altitude	≤ 2000 m (a.s.l.)

Standards and Specifications

Conformity marking	CE; UKCA
Standards/specifications	EN 61000-6-2 EN 61000-6-3 UL 61010-2-201 DNV UL 2367

Commercial data

PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	IN
Customs tariff number	85362010900

Product Classification

UNSPSC	39121634
ETIM 9.0	EC001440
ETIM 10.0	EC001440
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

CAS-No.	11120-22-2 1303-86-2 1317-36-8 7439-92-1
REACH Candidate List Substance	Diboron trioxide Lead Lead monoxide Lead silicate
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	182a37ec-835c-4398-8a34-26201cdd647d
SCIP notification number (Belgium)	7be3cd1c-81db-4697-a0e7-4510af4b0fd3
SCIP notification number (Bulgaria)	ace2344b-cece-40e9-838e-5420ff7f06d3
SCIP notification number (Czech Republic)	eb7d500a-09ae-4c68-b0e6-cf5de11bb5a3
SCIP notification number (Denmark)	2fe76880-4391-4e7f-b43f-312ea576f7ac
SCIP notification number (Finland)	5412f2c7-19e9-475b-820c-724a74597644
SCIP notification number (France)	1b5214de-93ad-4cba-819d-9eeab6e2f665
SCIP notification number (Germany)	eaba3ebe-87e7-4c03-b934-cf6d6de9d5ad
SCIP notification number (Hungary)	b81f3d60-9a87-43f6-9087-58886bf6fc11
SCIP notification number (Italy)	80f1784f-8ca8-4cda-914f-12cbdee804ee
SCIP notification number (Netherlands)	d630cf8b-2fe9-47a8-80dd-96dd379b2c2d
SCIP notification number (Poland)	efb9155f-9a6d-451d-9a46-a31631f587ae
SCIP notification number (Romania)	a2c30a36-126b-4e67-a159-9409a10010f4
SCIP notification number (Sweden)	585b6e14-60b3-4a80-b3b2-05e4b69c9b39

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	UL E175199 Vol.3 Sec.5
UR Underwriters Laboratories Inc.	-	E175199

Declarations of conformity and manufacturer's declarations

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

Approvals for marine applications



Approval	Standard	Certificate Name
DNV DNV Germany GmbH	DNV-CG-0339, Aug. 2021	TAA00001D1

Approvals for hazardous areas



Approval	Standard	Certificate Name
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 787-3861/004-020

Documentation

Manual			
Product Manual Electronic circuit breaker	V 1.0.0 25.03.2024	pdf 7578.83 KB	

Instruction Leaflet			
Electronic Circuit Breaker	V 1.1.1 11.09.2023	pdf 2491.12 KB	

CAD/CAE-Data

CAD data	
2D/3D Models 787-3861/004-020	

1 Compatible Products

1.1 Optional Accessories

1.1.1 Jumper

1.1.1.1 Jumper



[Item No.: 859-410/000-006](#)
Jumper; for jumper slot; 10-way; insulated; blue



[Item No.: 859-410](#)
Jumper; for jumper slot; 10-way; insulated; light gray



[Item No.: 859-410/000-005](#)
Jumper; for jumper slot; 10-way; insulated; red



[Item No.: 859-410/000-029](#)
Jumper; for jumper slot; 10-way; insulated; yellow



[Item No.: 859-402/000-006](#)
Jumper; for jumper slot; 2-way; insulated; blue



[Item No.: 859-402](#)
Jumper; for jumper slot; 2-way; insulated; light gray

[Item No.: 859-402/000-029](#)
Jumper; for jumper slot; 2-way; insulated; yellow



[Item No.: 859-403/000-006](#)
Jumper; for jumper slot; 3-way; insulated; blue

[Item No.: 859-403](#)
Jumper; for jumper slot; 3-way; insulated; light gray



[Item No.: 859-403/000-005](#)
Jumper; for jumper slot; 3-way; insulated; red



[Item No.: 859-403/000-029](#)
Jumper; for jumper slot; 3-way; insulated; yellow



[Item No.: 859-404/000-006](#)
Jumper; for jumper slot; 4-way; insulated; blue



[Item No.: 859-404](#)
Jumper; for jumper slot; 4-way; insulated; light gray



[Item No.: 859-404/000-005](#)
Jumper; for jumper slot; 4-way; insulated; red



[Item No.: 859-404/000-029](#)
Jumper; for jumper slot; 4-way; insulated; yellow



[Item No.: 859-405/000-006](#)
Jumper; for jumper slot; 5-way; insulated; blue



1.1.1.1 Jumper



Item No.: 859-405
Jumper; for jumper slot; 5-way; insulated; light gray

Item No.: 859-405/000-005
Jumper; for jumper slot; 5-way; insulated; red

Item No.: 859-405/000-029
Jumper; for jumper slot; 5-way; insulated; yellow

Item No.: 859-406/000-006
Jumper; for jumper slot; 6-way; insulated; blue



Item No.: 859-406
Jumper; for jumper slot; 6-way; insulated; light gray

Item No.: 859-406/000-005
Jumper; for jumper slot; 6-way; insulated; red

Item No.: 859-406/000-029
Jumper; for jumper slot; 6-way; insulated; yellow

Item No.: 859-407/000-006
Jumper; for jumper slot; 7-way; insulated; blue



Item No.: 859-407
Jumper; for jumper slot; 7-way; insulated; light gray

Item No.: 859-407/000-005
Jumper; for jumper slot; 7-way; insulated; red

Item No.: 859-407/000-029
Jumper; for jumper slot; 7-way; insulated; yellow

Item No.: 859-408/000-006
Jumper; for jumper slot; 8-way; insulated; blue



Item No.: 859-408
Jumper; for jumper slot; 8-way; insulated; light gray

Item No.: 859-408/000-005
Jumper; for jumper slot; 8-way; insulated; red

Item No.: 859-408/000-029
Jumper; for jumper slot; 8-way; insulated; yellow

Item No.: 859-409/000-006
Jumper; for jumper slot; 9-way; insulated; blue



Item No.: 859-409
Jumper; for jumper slot; 9-way; insulated; light gray

Item No.: 859-409/000-005
Jumper; for jumper slot; 9-way; insulated; red

Item No.: 859-409/000-029
Jumper; for jumper slot; 9-way; insulated; yellow

1.1.2 Marking

1.1.2.1 Marker



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.: 793-502
WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white

Item No.: 793-566
WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white

Item No.: 793-503
WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-504
WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white

Item No.: 793-505
WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white

Item No.: 793-506
WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; 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

1.1.2.2 Marking strip



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

1.1.3 Potential distribution

1.1.3.1 Potential Distribution Module



Item No.: 787-3861/000-1000

Potential distribution module; 1 potential; with 8 clamping points 0V; Conductor cross-section up to 2.5 mm²



Item No.: 787-3861/000-2000

Potential distribution module; 1 potential; with 8 clamping points 24V; Conductor cross-section up to 2.5 mm²



Item No.: 787-3861/000-3000

Potential distribution module; 2 potentials; with 4 clamping points each (0V / 24V); Conductor cross-section up to 2.5 mm²

1.1.4 Tool

1.1.4.1 Operating tool



Item No.: 210-720

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured