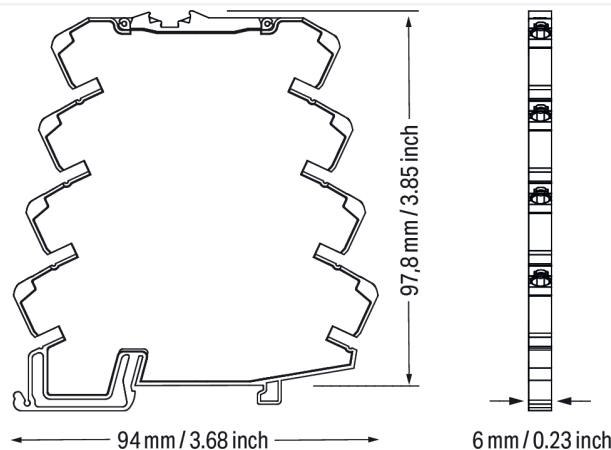
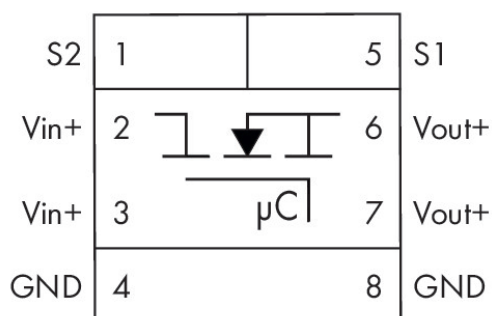
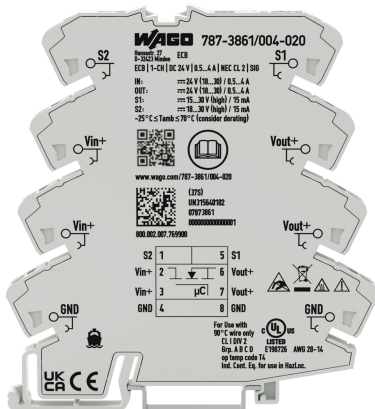
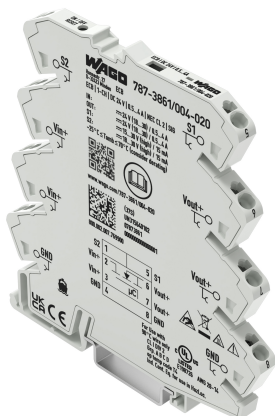
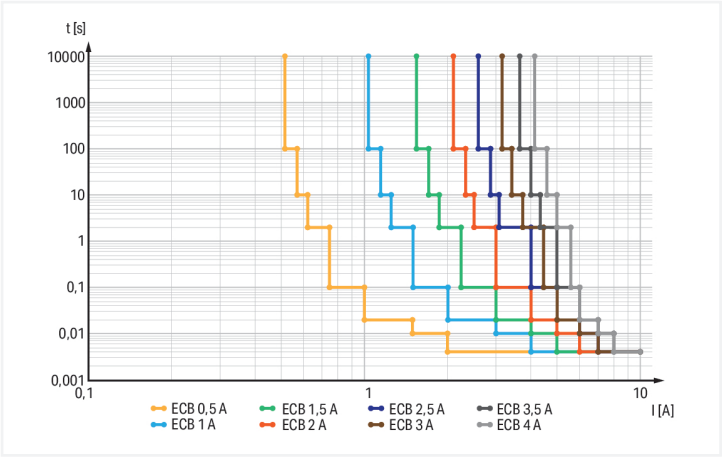


Data Sheet | Item Number: 787-3861/004-020

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.



Technical data

Input		Output	
Nominal input voltage $U_{i\,nom}$	24 VDC	Total number of channels (module)	1
Input voltage range	18 ... 30 VDC	Nominal output voltage $U_{o\,nom}$	1 x 24 VDC
		Output voltage range	18 ... 30 VDC (U_e – 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 $I_{o\,nom}$	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

Signaling and communication	
Signaling	1 x Status LED (green/yellow/red) 1 x Signal output (18 ... 30 VDC, max. 0.015 A), Default setting: triggered
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_I	$\leq 0.4\text{ W}$ (no load)
Efficiency (typ.)	98 %

Circuit protection	
Internal fuse	T 8 A

Safety and protection

		Insulation coordination (UL)	
Isolation voltage (connectors – housing)	1.5 kVDC	Overvoltage category	II
Protection class	III	Pollution degree	2
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		
MTBF	807,840 h		

Insulation coordination	
Overvoltage category	II
Pollution degree	2



Connection data		
Number of jumper slots	8	
Connection 1		
Connection technology	Push-in CAGE CLAMP®	
WAGO connector	WAGO 857 Series	
Solid conductor	0.08 ... 2.5 mm² / 26 ... 14 AWG	
Fine-stranded conductor	0.34 ... 2.5 mm² / 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	

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	85363010000	



Product classification	
UNSPSC	39121634
ETIM 9.0	EC001440
ETIM 8.0	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		Declarations of conformity and manufacturer's declarations
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
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 Elec- tronic circuit breaker V 1.0.0 25.03.2024 pdf 7578.83 KB



Instruction Leaflet
Electronic Circuit Brea- ker 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; insula- ted; blue
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Item No.: 859-410 Jumper; for jumper slot; 10-way; insula- ted; light gray
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Item No.: 859-410/000-005 Jumper; for jumper slot; 10-way; insula- ted; red



Item No.: 859-410/000-029 Jumper; for jumper slot; 10-way; insula- ted; yellow
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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
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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
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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