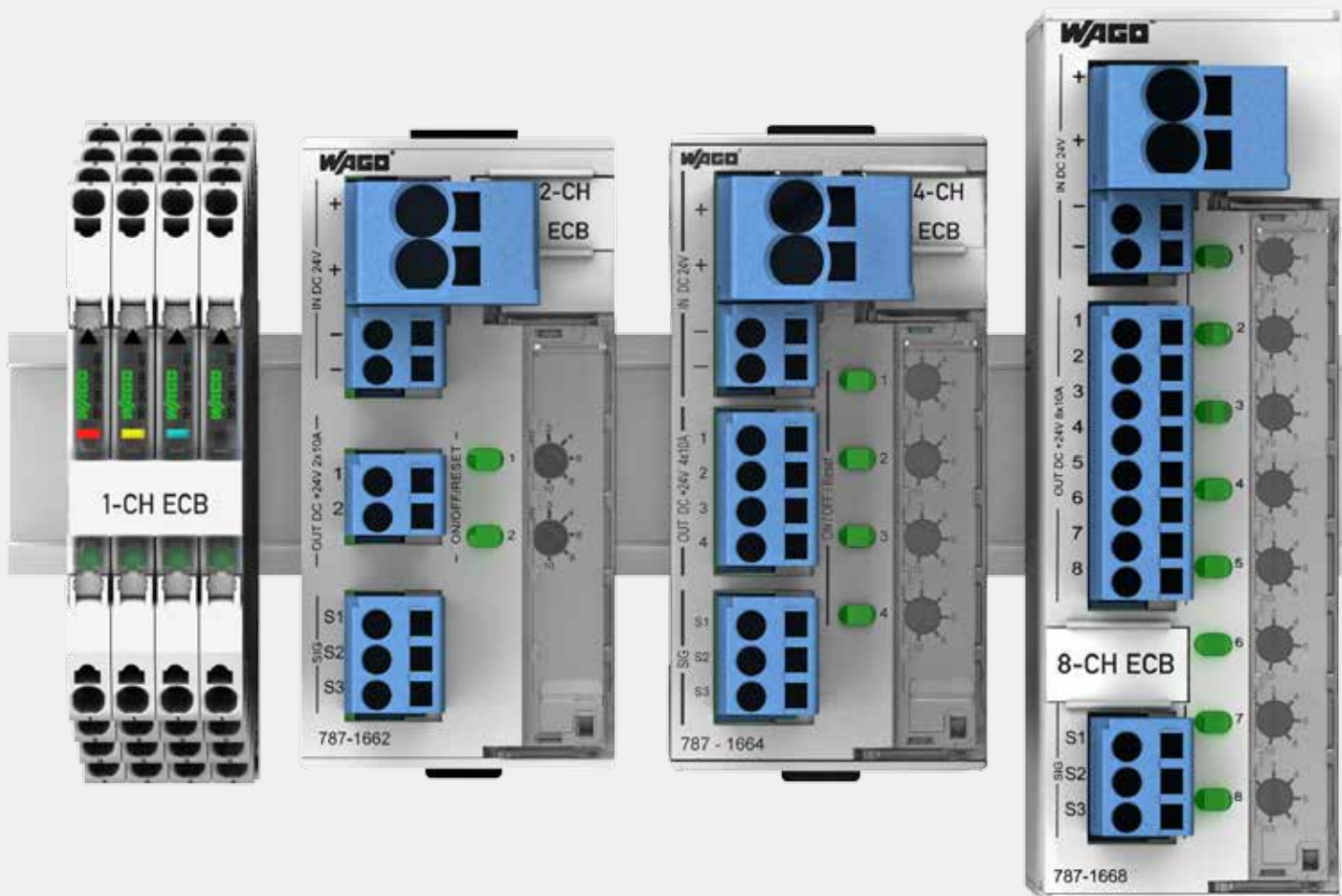


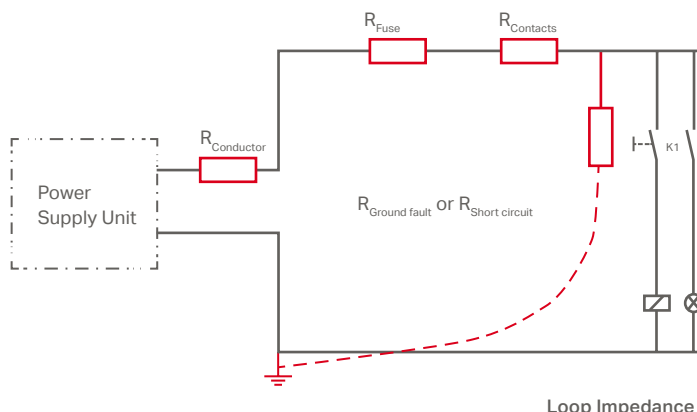
# EPSITRON® – Electronic Circuit Breakers

## Compact and Precise ECBs for DC Circuits



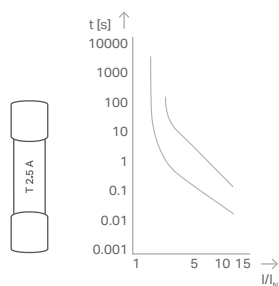
# WHY SECONDARY-SIDE FUSE PROTECTION?

On the secondary side, switched-mode power supplies provide DC voltage to control circuit loads (e.g., controllers, operating panels, displays and auxiliary relays). These control circuits also call for wiring protection and if the load has no protective unit of its own, device protection as well. Furthermore, Machinery Directive EN 60204 requires the detection of hazardous ground faults in control circuits and switching off within five seconds.



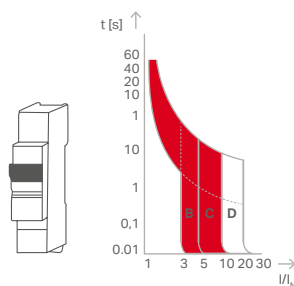
The overcurrent protection in primary switched-mode power supplies reacts very quickly to overcurrents on the output side. Selective protection of individual current paths in the secondary circuit via fuses or conventional circuit breakers is often ineffective, if the power supply cannot deliver a brief overcurrent.

# WHAT TYPES OF FUSE PROTECTION ARE THERE?



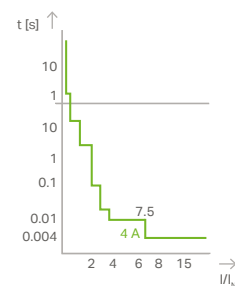
## Thermal

- Example: as found in NH and DP fuses
- High overcurrents required for fast tripping
- In the example:
  - 10-fold overcurrent (related to the fuse nominal current):
    - Tripping within range 30 ms (best case) or 200 ms (worst case)
  - Only 2-fold overcurrent:
    - Tripping within range 2 s (best case) or > 100 s (worst case)



## Thermal and Magnetic

- Found in circuit breakers or motor protection switches
- High overcurrents required for fast tripping
- In the example:
  - 3 ... 5-fold overcurrent for B-characteristic and AC operation, additional safety factor 1.2 or 1.5
  - Thus, in the worst case a tripping current of 7.5 times the nominal current is necessary.



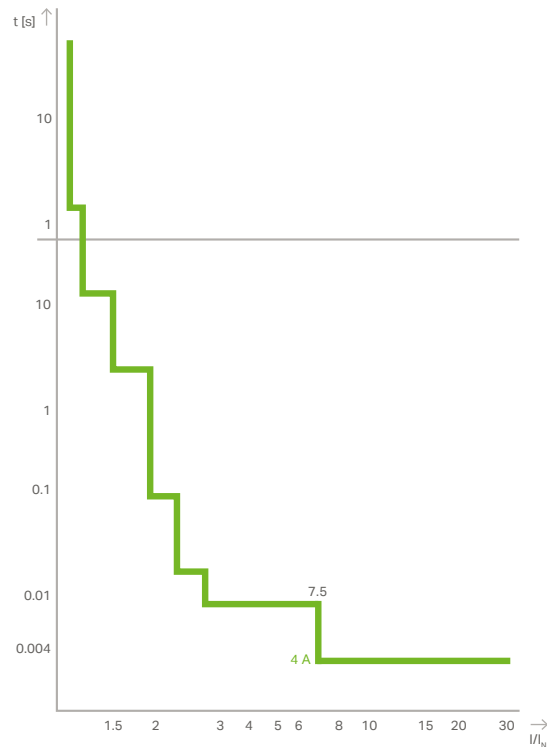
## Electronic

- Ensure precision settings
- Reaction within a short time – even at low overcurrents
- Protection of long cable runs and small cross sections possible

NH fuse = Low-voltage, high-power fuse  
DP fuse = Device protection fuse

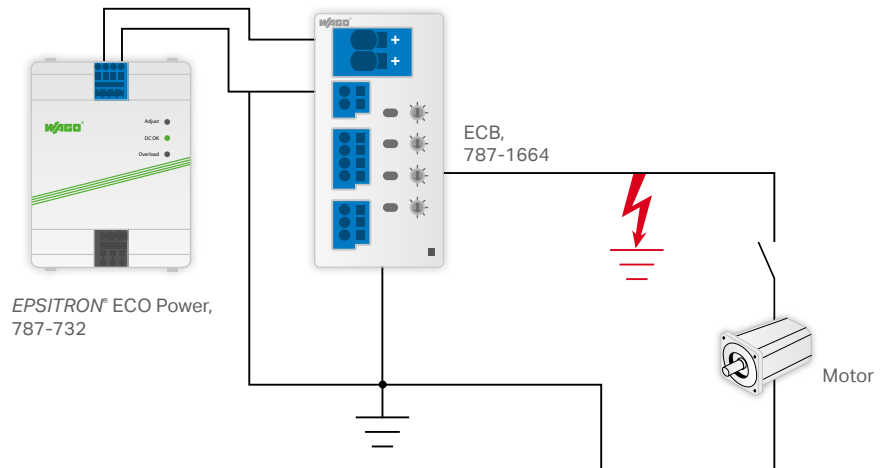
# HOW DOES AN ECB FUNCTION?

The ECB verifies that the output current is greater than the nominal current. As soon as the output current exceeds the nominal current, the output is electronically switched off by a semiconductor switch. The trip time depends on the magnitude of the overcurrent. The measurement of the output current, processing and calculation of the tripping time, as well as actuation of the semiconductor switch are performed by a microprocessor that monitors one or more output channels. The corresponding tripping times can be taken from the graph on the right.



## ECB ADVANTAGES

- Switch off secondary-side overcurrents and short circuits – even with long cable runs and small conductor cross-sections – precisely, fast and repeatedly
- Selectivity, especially with ECBs having active current limitation
- Remote operation via digital input and output
- Readout functions (communication) through serial data transfer via digital input and output
- Beneficial installation size and width, for example, 8 output channels in just 42 mm (save more than 70% of installation space compared to miniature circuit breakers)
- Nominal current assignable for each channel
- Satisfy EN 60204-1 requirements for dependably switching off ground faults after five seconds (see right)



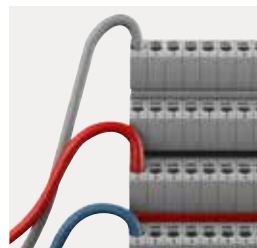
# EPSITRON® – ELECTRONIC CIRCUIT BREAKERS

## Single-Channel ECBs



### Push-In CAGE CLAMP® Connection

- Terminate solid and ferruled conductors via Push-In CAGE CLAMP® Connections – no operating tool needed



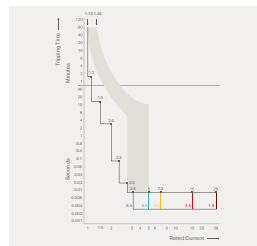
### Easy Wiring

- Input potential up to 40 A via double connection
- Signal output can be commoned for up to 30 devices
- Total reset by commoning the signal inputs



### Intuitive Status Indication

- Integrated, multi-color LEDs indicate the operating status of each channel
- Push/slide switch for switching on/off, as well as acknowledgement



### Trip Characteristics

- Reliable, rapid and precise disconnection in case of overcurrent or short circuit
- High switch-on capacities > 50,000  $\mu\text{F}$



### Industry's Most Compact

- "True" 6.0 mm width maximizes panel space



### Marking

- Device identification via WMB Markers or TOPJOB® S Marking Strips
- With devices color coded according to nominal current



### Versatile Configuration Options

- Optional nominal current setting 1 ... 8 A, in 1 A increments
- 7 different configuration options for the digital measurement output

## 2-, 4- and 8-Channel ECBs



### Pluggable CAGE CLAMP® Connection Technology

- Fast, vibration-proof, maintenance-free
- For solid, fine-stranded and ferruled conductors
- 100% protected against mismatching
- With marking



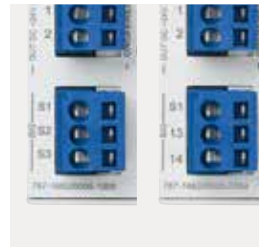
### Rotary Switch

- Nominal current can be individually adjusted for each channel
- The setting is visible, even when no voltage is applied
- Transparent cover can be sealed and marked with TOPJOB® S Marking Strips



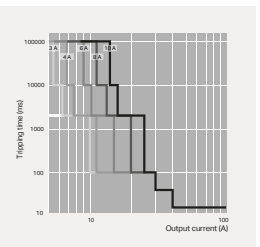
### Intuitive Status Indication

- Each output channel has backlit buttons for switching on/off, as well as acknowledgement
- Integrated, multi-color LEDs indicate the operating status of each channel



### Communication 1.0

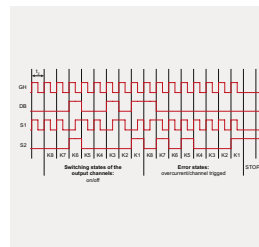
- Remote digital input S1 resets all tripped channels.
- Digital output S3 transmits a simple group message indicating whether one of the channels was triggered by an overcurrent.
- Optional isolated signal contact 13/14 as group signal



### Trip Characteristics

- Reliable and precise disconnection in case of overcurrent or short circuit
- Optional, active short circuit current limitation\* to 1.7 times the nominal current prevents a voltage drop in other current paths

\*Only for 787-166x/xxxx-1xxx



### Communication 2.0

- Remote digital input (S1) switches certain channels on and off via pulse sequence.
- Digital output S2 transmits the current status (on/off/tripped/over-current) of each individual channel
- Optional transmission of input voltage and output/nominal current value for each channel

# EPSITRON® – ELECTRONIC CIRCUIT BREAKERS

## Product Overview – ECBs



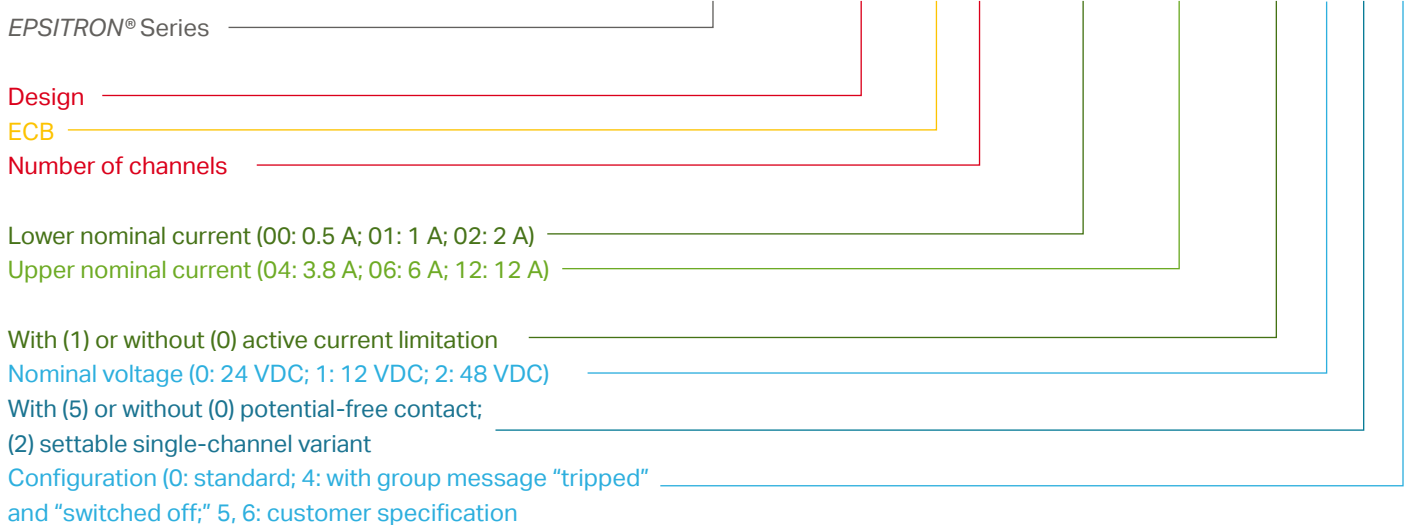
Nominal Voltage [V] DC	Number of Channels	Adjustable Nominal Current [A]	Active Current Limitation	Isolated Signal Contact	Specialty Configuration	Item Number
24	1	1				787-2861/0100-0000
		2				787-2861/0200-0000
		4				787-2861/0400-0000
		6				787-2861/0600-0000
		8				787-2861/0800-0000
		1 ... 8				787-2861/0108-0020
		24	2	2 ... 10		
2 ... 10					■	787-1662/0000-0004
2 ... 10				■	■	787-1662/0000-0054
3.8 LPS	■					787-1662/0004-1000
0.5 ... 6	■					787-1662/0006-1000
1 ... 6						787-1662/0106-0000
2 ... 12	■					787-1662/0212-1000
24	4	2 ... 10				787-1664
		2 ... 10			■	787-1664/0000-0004
		2 ... 10		■	■	787-1664/0000-0054
		3.8 LPS	■			787-1664/0004-1000
		0.5 ... 6	■			787-1664/0006-1000
		1 ... 6				787-1664/0106-0000
		2 ... 12	■			787-1664/0212-1000
		0.5 ... 6	■		■	787-1664/0006-1054
24	8	2 ... 10				787-1668
		2 ... 10			■	787-1668/0000-0004
		2 ... 10		■	■	787-1668/0000-0054
		0.5 ... 6	■			787-1668/0006-1000
		1 ... 6				787-1668/0106-0000
		0.5 ... 6	■		■	787-1668/0006-1054
12	2	2 ... 10				787-1662/0000-0100
	4	2 ... 10				787-1664/0000-0100
48	2	2 ... 10				787-1662/0000-0200
		2 ... 10		■		787-1662/0000-0250
	4	2 ... 10				787-1664/0000-0200
		2 ... 10		■		787-1664/0000-0250
	8	2 ... 10				787-1668/0000-0200
		2 ... 10			■	787-1668/0000-0250





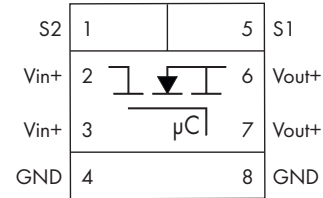
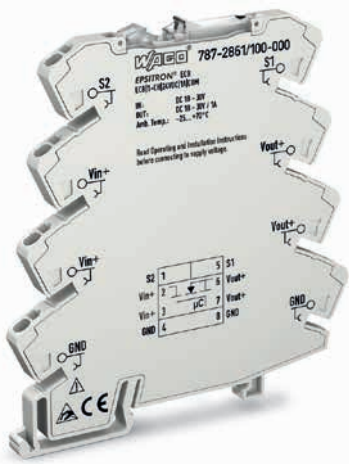
Model Code Key:

# 787-xx6a/bbcc-defg



# Electronic Circuit Breaker (ECB)

## EPSITRON®



### Features:

- Space-saving ECB with one channel and 1 A nominal current
- 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 – 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 in interconnected operation

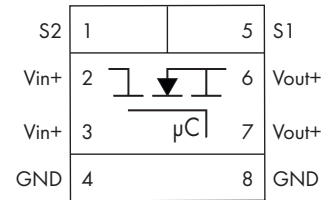
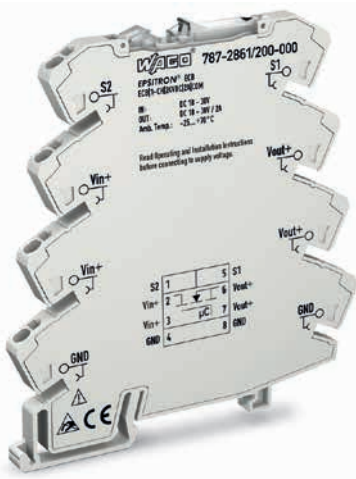
Technical Data	
<b>Input</b>	
Nominal input voltage $U_{1,nom}$	24 VDC
Input voltage range	18 ... 30 VDC
<b>Output</b>	
Nominal output voltage $U_{o,nom}$	$U_{1,nom}$ – voltage drop
Nominal current	1 ADC (fixed setting)
Voltage drop	20 mV at 1 A
Trip time	Load-dependent (4 ms ... 100 s)
Switch-on capacity	> 50000 µF per channel
Switch-on behavior	Time-delayed channel switching (min. 2 ms/max. 200 ms)
Active current limitation	No
Operation status indicator	LED (green/red/orange)
Signaling	Status output, high-side switching, can also be combined as a group output for up to 30 devices
Remote input	18 ... 30 VDC signal, switches on/off and resets the channel
<b>Efficiency/Power Losses</b>	
Efficiency	99 % (typ.)
Power loss $P_i$	0.5 W (nominal load)
<b>Fuse Protection</b>	
Internal fuse	15 AT

Description	Item No.	Pack. Unit
Electronic circuit breaker, DC 24 V / 1 x 1 A	787-2861/100-000	1
<b>Technical Data</b>		
<b>Environmental Requirements</b>		
Ambient operating temperature	-25 ... +70 °C	
Storage temperature	-40 ... +85 °C	
Relative humidity	10 ... 95 % (no condensation permissible)	
Derating	No Derating	
<b>Safety and Protection</b>		
Test voltage	500 VDC (bus modules to housing)	
Protection class	III	
Reverse voltage protection	No	
Protection type	IP20 per EN 60529	
Overvoltage protection	Via 33 V suppressor diode at input	
Feedback voltage	Max. DC 35 VDC	
Series connection of several Devices	Not permitted	
Parallel operation of single channels	Not permitted	
MTBF	1,263,074 h (per MIL-HDBK-217F2)	
<b>Connection and Mounting Type</b>		
Connection technology	Push-in CAGE CLAMP® (WAGO 857 Series)	
Conductor range	Solid 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG Fine-stranded 0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG	
Strip length	9 ... 15 mm / 0.35 ... 0.39 inch	
Mounting type	DIN-rail mount (EN 60715)	
<b>Dimensions and Weight</b>		
Dimensions (mm) W x H x D	6 x 97.8 x 94, height from upper-edge of DIN-rail	
Weight	40 g	
<b>General Specifications</b>		
Standards/approvals	EN 61000-6-2, EN 61000-6-3, UL 61010-1*, UL 2367*, GL* (*pending)	



# Electronic Circuit Breaker (ECB)

## EPSITRON®



### Features:

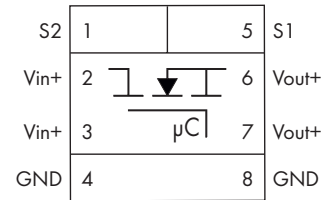
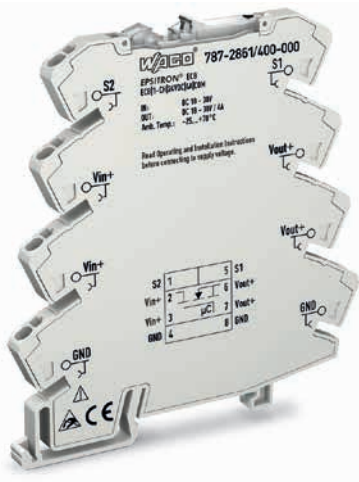
- Space-saving ECB with one channel and 2 A nominal current
- Reliably and safely trips in the event of an overload and short circuit on the secondary side
- Switch-on capacity > 50,000 µF
- Enables the use of an economical, standard power supply
- Minimizes wiring via two voltage outputs and maximizes commoning options on both input and output sides (e.g., commoning of the output voltage on 857 and 2857 Series devices)
- Status signal – 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 in interconnected operation

Technical Data	
<b>Input</b>	
Nominal input voltage $U_{1,nom}$	24 VDC
Input voltage range	18 ... 30 VDC
<b>Output</b>	
Nominal output voltage $U_{o,nom}$	$U_{1,nom}$ – voltage drop
Nominal current	2 ADC (fixed setting)
Voltage drop	40 mV at 2 A
Trip time	Load-dependent (4 ms ... 100 s)
Switch-on capacity	> 50000 µF per channel
Switch-on behavior	Time-delayed channel switching (min. 2 ms/max. 200 ms)
Active current limitation	No
Operation status indicator	LED (green/red/orange)
Signaling	Status output, high-side switching, can also be combined as a group output for up to 30 devices
Remote input	18 ... 30 VDC signal, switches on/off and resets the channel
<b>Efficiency/Power Losses</b>	
Efficiency	99 % (typ.)
Power loss $P_i$	0.5 W (nominal load)
<b>Fuse Protection</b>	
Internal fuse	15 AT

Description	Item No.	Pack. Unit
Electronic circuit breaker, DC 24 V / 1 x 2 A	787-2861/200-000	1
<b>Technical Data</b>		
<b>Environmental Requirements</b>		
Ambient operating temperature	-25 ... +70 °C	
Storage temperature	-40 ... +85 °C	
Relative humidity	10 ... 95 % (no condensation permissible)	
Derating	No Derating	
<b>Safety and Protection</b>		
Test voltage	500 VDC (bus modules to housing)	
Protection class	III	
Reverse voltage protection	No	
Protection type	IP20 per EN 60529	
Overvoltage protection	Via 33 V suppressor diode at input	
Feedback voltage	Max. DC 35 VDC	
Series connection of several Devices	Not permitted	
Parallel operation of single channels	Not permitted	
MTBF	1,262,142 h (per MIL-HDBK-217F2)	
<b>Connection and Mounting Type</b>		
Connection technology	Push-in CAGE CLAMP® (WAGO 857 Series)	
Conductor range	Solid 0.08 ... 2.5 mm² / 28 ... 14 AWG Fine-stranded 0.34 ... 2.5 mm² / 22 ... 14 AWG	
Strip length	9 ... 15 mm / 0.35 ... 0.39 inch	
Mounting type	DIN-rail mount (EN 60715)	
<b>Dimensions and Weight</b>		
Dimensions (mm) W x H x D	6 x 97.8 x 94, height from upper-edge of DIN-rail	
Weight	40 g	
<b>General Specifications</b>		
Standards/approvals	EN 61000-6-2, EN 61000-6-3, UL 61010-1*, UL 2367*, GL* (*pending)	

# Electronic Circuit Breaker (ECB)

## EPSITRON®



### Features:

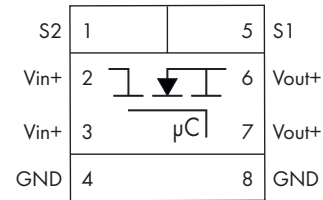
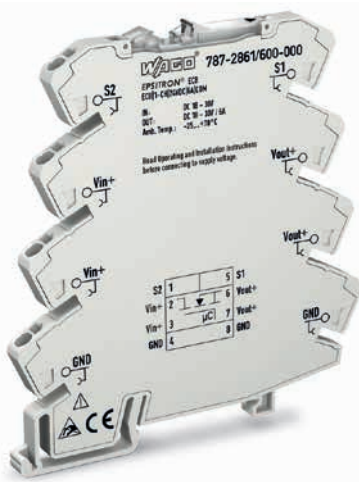
- Space-saving ECB with one channel and 4 A nominal current
- Reliably and safely trips in the event of an overload and short circuit on the secondary side
- Switch-on capacity > 50,000 µF
- Enables the use of an economical, standard power supply
- Minimizes wiring via two voltage outputs and maximizes commoning options on both input and output sides (e.g., commoning of the output voltage on 857 and 2857 Series devices)
- Status signal – 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 in interconnected operation

Technical Data	
<b>Input</b>	
Nominal input voltage $U_{1,nom}$	24 VDC
Input voltage range	18 ... 30 VDC
<b>Output</b>	
Nominal output voltage $U_{o,nom}$	$U_{1,nom}$ – voltage drop
Nominal current	4 ADC (fixed setting)
Voltage drop	80 mV at 1 A
Trip time	Load-dependent (4 ms ... 100 s)
Switch-on capacity	> 50000 µF per channel
Switch-on behavior	Time-delayed channel switching (min. 2 ms/max. 200 ms)
Active current limitation	No
Operation status indicator	LED (green/red/orange)
Signaling	Status output, high-side switching, can also be combined as a group output for up to 30 devices
Remote input	18 ... 30 VDC signal, switches on/off and resets the channel
<b>Efficiency/Power Losses</b>	
Efficiency	99 % (typ.)
Power loss $P_i$	0.5 W (nominal load)
<b>Fuse Protection</b>	
Internal fuse	15 AT

Description	Item No.	Pack. Unit
Electronic circuit breaker, DC 24 V / 1 x 4 A	787-2861/400-000	1
<b>Technical Data</b>		
<b>Environmental Requirements</b>		
Ambient operating temperature	-25 ... +70 °C	
Storage temperature	-40 ... +85 °C	
Relative humidity	10 ... 95 % (no condensation permissible)	
Derating	No Derating	
<b>Safety and Protection</b>		
Test voltage	500 VDC (bus modules to housing)	
Protection class	III	
Reverse voltage protection	No	
Protection type	IP20 per EN 60529	
Overvoltage protection	Via 33 V suppressor diode at input	
Feedback voltage	Max. DC 35 VDC	
Series connection of several Devices	Not permitted	
Parallel operation of single channels	Not permitted	
MTBF	1,258,733 h (per MIL-HDBK-217F2)	
<b>Connection and Mounting Type</b>		
Connection technology	Push-in CAGE CLAMP® (WAGO 857 Series)	
Conductor range	Solid 0.08 ... 2.5 mm² / 28 ... 14 AWG Fine-stranded 0.34 ... 2.5 mm² / 22 ... 14 AWG	
Strip length	9 ... 15 mm / 0.35 ... 0.39 inch	
Mounting type	DIN-rail mount (EN 60715)	
<b>Dimensions and Weight</b>		
Dimensions (mm) W x H x D	6 x 97.8 x 94, height from upper- edge of DIN-rail	
Weight	40 g	
<b>General Specifications</b>		
Standards/approvals	EN 61000-6-2, EN 61000-6-3, UL 61010-1*, UL 2367*, GL* (*pending)	

# Electronic Circuit Breaker (ECB)

## EPSITRON®



### Features:

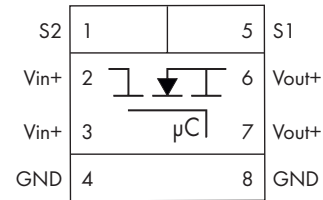
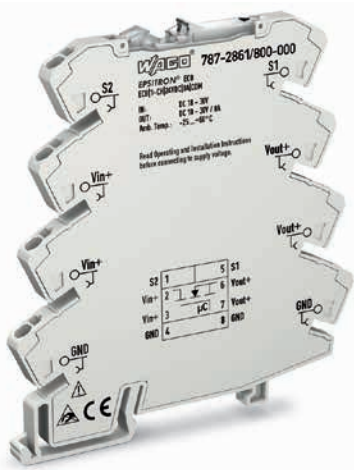
- Space-saving ECB with one channel and 6 A nominal current
- Reliably and safely trips in the event of an overload and short circuit on the secondary side
- Switch-on capacity > 50,000  $\mu\text{F}$
- Enables the use of an economical, standard power supply
- Minimizes wiring via two voltage outputs 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 – 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 in interconnected operation

Technical Data	
<b>Input</b>	
Nominal input voltage $U_{1, \text{nom}}$	24 VDC
Input voltage range	18 ... 30 VDC
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	$U_{1, \text{nom}}$ – voltage drop
Nominal current	6 ADC (fixed setting)
Voltage drop	120 mV at 6 A
Trip time	Load-dependent (4 ms ... 100 s)
Switch-on capacity	> 50000 $\mu\text{F}$ per channel
Switch-on behavior	Time-delayed channel switching (min. 2 ms/max. 200 ms)
Active current limitation	No
Operation status indicator	LED (green/red/orange)
Signaling	Status output, high-side switching, can also be combined as a group output for up to 30 devices
Remote input	18 ... 30 VDC signal, switches on/off and resets the channel
<b>Efficiency/Power Losses</b>	
Efficiency	99 % (typ.)
Power loss $P_i$	0.5 W (nominal load)
<b>Fuse Protection</b>	
Internal fuse	15 AT

Description	Item No.	Pack. Unit
Electronic circuit breaker, DC 24 V / 1 x 6 A	787-2861/600-000	1
<b>Technical Data</b>		
<b>Environmental Requirements</b>		
Ambient operating temperature	-25 ... +60 °C	
Storage temperature	-40 ... +85 °C	
Relative humidity	10 ... 95 % (no condensation permissible)	
Derating	No Derating	
<b>Safety and Protection</b>		
Test voltage	500 VDC (bus modules to housing)	
Protection class	III	
Reverse voltage protection	No	
Protection type	IP20 per EN 60529	
Overvoltage protection	Via 33 V suppressor diode at input	
Feedback voltage	Max. DC 35 VDC	
Series connection of several Devices	Not permitted	
Parallel operation of single channels	Not permitted	
MTBF	1,253,313 h (per MIL-HDBK-217F2)	
<b>Connection and Mounting Type</b>		
Connection technology	Push-in CAGE CLAMP® (WAGO 857 Series)	
Conductor range	Solid 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG Fine-stranded 0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG	
Strip length	9 ... 15 mm / 0.35 ... 0.39 inch	
Mounting type	DIN-rail mount (EN 60715)	
<b>Dimensions and Weight</b>		
Dimensions (mm) W x H x D	6 x 97.8 x 94, height from upper-edge of DIN-rail	
Weight	40 g	
<b>General Specifications</b>		
Standards/approvals	EN 61000-6-2, EN 61000-6-3, UL 61010-1*, UL 2367*, GL* (*pending)	

# Electronic Circuit Breaker (ECB)

## EPSITRON®



### Features:

- Space-saving ECB with one channel and 8 A nominal current
- 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 – 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 in interconnected operation

Technical Data	
<b>Input</b>	
Nominal input voltage $U_{1, \text{nom}}$	24 VDC
Input voltage range	18 ... 30 VDC
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	$U_{1, \text{nom}}$ – voltage drop
Nominal current	8 ADC (fixed setting)
Voltage drop	160 mV at 8 A
Trip time	Load-dependent (4 ms ... 100 s)
Switch-on capacity	> 50000 µF per channel
Switch-on behavior	Time-delayed channel switching (min. 2 ms/max. 200 ms)
Active current limitation	No
Operation status indicator	LED (green/red/orange)
Signaling	Status output, high-side switching, can also be combined as a group output for up to 30 devices
Remote input	18 ... 30 VDC signal, switches on/off and resets the channel
<b>Efficiency/Power Losses</b>	
Efficiency	99 % (typ.)
Power loss $P_i$	0.5 W (nominal load)
<b>Fuse Protection</b>	
Internal fuse	15 AT

Description	Item No.	Pack. Unit
Electronic circuit breaker, DC 24 V / 1 x 8 A	787-2861/800-000	1
<b>Technical Data</b>		
<b>Environmental Requirements</b>		
Ambient operating temperature	-25 ... +35 °C (module assembly) -25 ... +65 °C (distance between modules 6 mm)	
Storage temperature	-40 ... +85 °C	
Relative humidity	10 ... 95 % (no condensation permissible)	
Derating	No Derating	
<b>Safety and Protection</b>		
Test voltage	500 VDC (bus modules to housing)	
Protection class	III	
Reverse voltage protection	No	
Protection type	IP20 per EN 60529	
Overvoltage protection	Via 33 V suppressor diode at input	
Feedback voltage	Max. DC 35 VDC	
Series connection of several Devices	Not permitted	
Parallel operation of single channels	Not permitted	
MTBF	1,245,816 h (per MIL-HDBK-217F2)	
<b>Connection and Mounting Type</b>		
Connection technology	Push-in CAGE CLAMP® (WAGO 857 Series)	
Conductor range	Solid 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG Fine-stranded 0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG	
Strip length	9 ... 15 mm / 0.35 ... 0.39 inch	
Mounting type	DIN-rail mount (EN 60715)	
<b>Dimensions and Weight</b>		
Dimensions (mm) W x H x D	6 x 97.8 x 94, height from upper-edge of DIN-rail	
Weight	40 g	
<b>General Specifications</b>		
Standards/approvals	EN 61000-6-2, EN 61000-6-3, UL 61010-1*, UL 2367*, GL* (*pending)	

## Electronic Circuit Breakers (ECB)

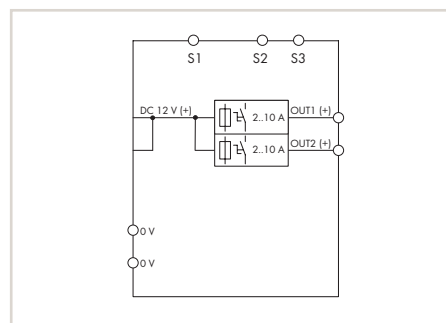
### EPSITRON® 787 Series



Similar to pictured device

#### Features:

- Space-saving electronic circuit breaker with 2 channels
- 2 ... 10 A nominal current, adjustable for each channel via sealable selector switch
- 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
- Tripped message (group signal)
- Status message for each channel via pulse sequence
- Remote input resets all tripped channels or switches on/off any number of channels via pulse sequence



EPSITRON® Electronic Circuit Breaker,  
2-channel, input voltage: 12 VDC,  
2 ... 10 A adjustable, communication capability

Item No.	Pack. Unit
787-1662/000-100	1

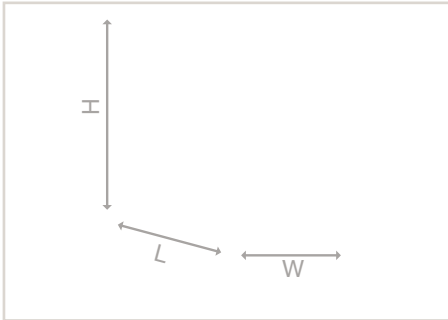
Technical Data		Safety and Protection	
<b>Input</b>		<b>Test voltage</b>	
Nominal input voltage $U_{I, nom}$	12 VDC	Protection class	500 VDC (terminals to enclosure)
Input voltage range	10 ... 16 VDC	Reverse voltage protection	III
<b>Output</b>		Degree of protection	No
Nominal output voltage $U_{O, nom}$	2 x 12 VDC	Overvoltage protection	IP20 per EN 60529
Nominal current	Max. 2 x 10 ADC 2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)	Feedback voltage	Via 33 V suppressor diode at input
Voltage drop	200 mV at 10 A	Series connection of several devices	Max. 35 VDC
Trip time	Load-dependent (16 ms ... 100 s)	Parallel operation of single channels	Not permitted
Switch-on capacity	> 50,000 µF per channel	<b>Connection and Type of Mounting</b>	
Switch-on behavior	Time-delayed channel switching (load-dependent min. 50 ms to 5 s)	Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
Active current limitation	No	Conductor range	Input (+): 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG Input (-), output, signaling: 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Operational indication	LED green (OK channel) LED red (tripped channel)	Strip length	Input (+): 13 ... 15 mm / 0.51 ... 0.59 inch Input (-), output, signaling: 8 ... 9 mm / 0.31 ... 0.35 inch
Signaling	2 x LED (green/red/orange)	Type of mounting	DIN-rail mounting (EN 60715)
Remote input	Reactivation of all tripped channels via 9 ... 30 VDC pulse for min. 500 ms. Switching on/off any number of channels via pulse sequence.	<b>Dimensions and Weight</b>	
<b>Efficiency/Power Losses</b>		Dimensions (mm) W x H x L	45 x 90 x 115.5, Length from up-per-edge of DIN-35 rail
Efficiency	99 % (typ.)	Weight	170 g
Power loss $P_V$	0.53 W (stand-by) / 5.5 W (at 2 x 10 A)	<b>Fuse Protection</b>	
<b>General Specifications</b>		Internal fuse	
Standards/Approvals		15 AT per channel	
Environmental Requirements		General Specifications	
Ambient operating temperature	-25 ... +70 °C	Standards/Approvals	
Storage temperature	-25 ... +85 °C	UL 508 *, UL 2367 *, GL, EN 60950, EN 61000-6-2, EN 61000-6-3 (* pending)	
Relative humidity	5 % ... 96 % (no condensation permissible)	Environmental Requirements	
Derating	No derating	Ambient operating temperature	
Degree of pollution	2 (acc. to EN 50178)	Storage temperature	



# Electronic Circuit Breakers with Active Current Limitation

## EPSITRON®

### 787 Series



#### Features:

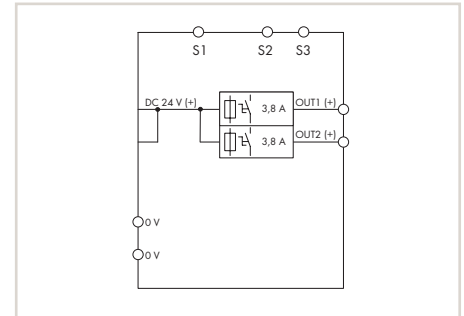
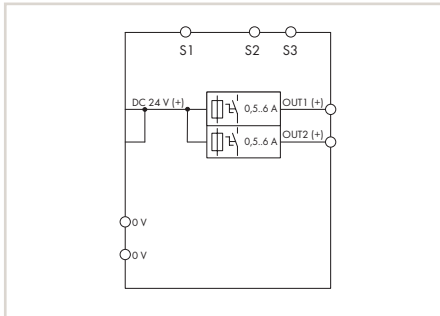
- Space-saving electronic circuit breaker with 2 channels
- 0.5 ... 6 A nominal current, adjustable for each channel via sealable selector switch
- Active current limitation
- Switch-on capacity > 65000  $\mu$ F per channel
- One illuminated, three-colored button per channel simplifies switching (on/off), 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 all tripped channels or switches on/off any number of channels via pulse sequence

#### Technical Data

<b>Input</b>	
Nominal input voltage $U_{i, nom}$	24 VDC
<b>Output</b>	
Nominal output voltage $U_{o, nom}$	2 x 24 VDC
Trip time	Load-dependent (16 ms ... 5 s)
Switch-on capacity	> 65000 $\mu$ F per channel
Switch-on behavior	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Active current limitation	Yes
Operational indication	LED green (OK channel) LED red (tripped channel)
Signaling	2 x LED (green/red/orange)
Remote input	Reactivation of all tripped channels via pulse sequence, 15 ... 30 VDC for min. 500 ms Switching on/off any number of channels via pulse sequence
<b>Efficiency/Power Losses</b>	
Efficiency	99 % (typ.)
<b>Environmental Requirements</b>	
Ambient operating temperature	-25 ... +70 °C
Storage temperature	-25 ... +85 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Derating	No derating
<b>Safety and Protection</b>	
Test voltage	500 VDC (terminals to enclosure)
Protection class	III
Reverse voltage protection	No
Degree of protection	IP20 per EN 60529
Overvoltage protection	Via 33 V suppressor diode at input
Series connection of several devices	Not permitted
Parallel operation of single channels	Not permitted
<b>Connection and Type of Mounting</b>	
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
Conductor range	Input (+): 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG Input (-), output, signaling: 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	Input (+): 13 ... 15 mm <sup>2</sup> / 0.51 ... 0.59 inch Input (-), output, signaling: 8 ... 9 mm / 0.31 ... 0.35 inch
Type of mounting	DIN-rail mounting (EN 60715)
<b>Dimensions and Weight</b>	
Dimensions (mm) W x H x L	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail
Weight	170 g



Similar to pictured device



EPSITRON® Electronic Circuit Breaker, 2-channel, input voltage: 24 VDC, 0.5 ... 6 A adjustable, active current limitation, communication capability

Item No.	Pack. Unit
787-1662/006-1000	1

EPSITRON® Electronic Circuit Breaker, 2-channel, input voltage: 24 VDC, 3.8 A, active current limitation, NEC Class 2, communication capability

Item No.	Pack. Unit
787-1662/004-1000	1

**Electrical Data**

Input voltage range	18 ... 30 VDC
Nominal current	Max. 2 x 6 ADC, (0.5, 1, 2, 3, 4, 6 A adjustable for each channel via selector switch)
Voltage drop	Voltage drop 145 mV at 6 A
Power loss $P_v$	0.55 W (stand-by) / 2.5 W (nominal load)
Internal fuse	15 AT per channel
Degree of pollution	2 (acc. to EN 50178)
Feedback voltage	Max. 35 VDC

**General Specifications**

Standards/Approvals	UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3
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Input voltage range	20 ... 28.8 VDC
Nominal current	2 x 3.8 ADC, NEC Class 2 (at 20 ... 24 VDC); 2 x 3.2 ADC, NEC Class 2 (at 28 VDC) fixed nominal current
Voltage drop	125 mV at 3.8 A
Power loss $P_v$	0.65 W (stand-by) / 1.6 W (at 2 x 3.8 A)
Internal fuse	None
Degree of pollution	2 (acc. to EN 50178)
Feedback voltage	Max. 28.8 VDC

Standards/Approvals	UL 508, UL 2367, GL *, EN 60950, EN 61000-6-2, EN 61000-6-3 (* pending)
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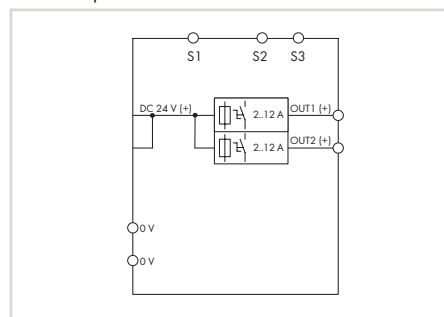
## Electronic Circuit Breakers with Active Current Limitation

EPSITRON®

787 Series



Similar to pictured device



EPSITRON® Electronic Circuit Breaker,  
2-channel, input voltage: 24 VDC,  
2 ... 12 A adjustable, active current limitation,  
communication capability

Item No.	Pack. Unit
787-1662/212-1000	1

**Electrical Data**

Input voltage range	18 ... 30 VDC
Nominal current	Max. 2 x 12 ADC, (2, 4, 6, 8, 10, 12 A adjustable for each channel via selector switch)
Voltage drop	210 mV at 12 A
Power loss $P_v$	0.55 W (stand-by) / 5.6 W (at 2 x 12 A)
Internal fuse	15 AT per channel
Degree of pollution	2 (acc. to EN 50178)
Feedback voltage	Max. 35 VDC

**General Specifications**

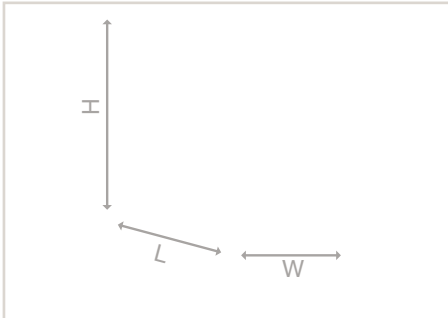
Standards/Approvals	UL 508, UL 2367, GL *, EN 60950, EN 61000-6-2, EN 61000-6-3 (* pending)
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# Electronic Circuit Breakers without Active Current Limitation

## EPSITRON®

### 787 Series



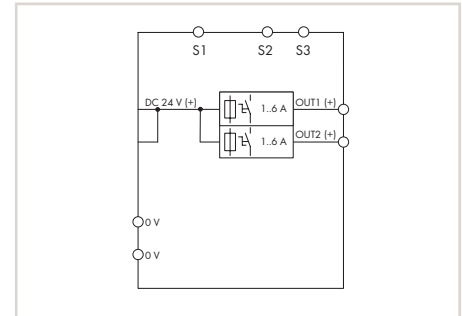
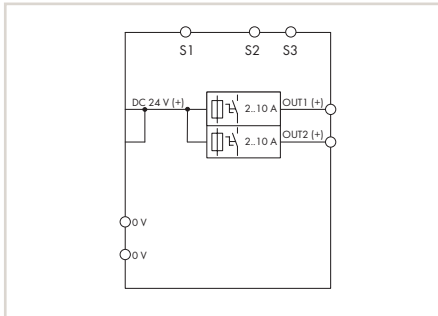
#### Features:

- Space-saving electronic circuit breaker with 2 channels
- 2 ... 10 A nominal current, adjustable for each channel via sealable selector switch
- Switch-on capacity > 50000  $\mu$ 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 (only devices with communication capability)
- Remote input for switching on/off any number of channels via pulse sequence (only devices having communication capability)  
Note: The pulse sequence only supports devices which are designated as having "communication capability"

#### Technical Data

<b>Input</b>	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
Input voltage range	18 ... 30 VDC
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	2 x 24 VDC
Trip time	Load-dependent (16 ms ... 100 s)
Switch-on capacity	> 50000 $\mu$ F per channel
Switch-on behavior	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Active current limitation	No
Operational indication	LED green (OK channel), LED red (tripped channel)
Signaling	2 x LED (green/red/orange)
Reactivation of all tripped channels via 15 ... 30 VDC impulse sequence for min. 500 ms.	
Switching on/or any number of channels via pulse sequence possible (except devices with potential-free signal contact, 787-166x/xxx-xx5x).	
Remote input	
<b>Efficiency/Power Losses</b>	
Efficiency	99 % (typ.)
<b>Fuse Protection</b>	
Internal fuse	15 AT per channel
<b>Environmental Requirements</b>	
Ambient operating temperature	-25 ... +70 °C
Storage temperature	-25 ... +85 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Derating	No derating
<b>Safety and Protection</b>	
Test voltage	500 VDC (terminals to enclosure)
Protection class	III
Reverse voltage protection	No
Degree of protection	IP20 per EN 60529
Overvoltage protection	Via 33 V suppressor diode at input
Feedback voltage	Max. 35 VDC
Series connection of several devices	Not permitted
Parallel operation of single channels	Not permitted
<b>Connection and Type of Mounting</b>	
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
Conductor range	Input (+): 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG Input (-), output, signaling: 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	Input (+): 13 ... 15 mm <sup>2</sup> / 0.51 ... 0.59 inch Input (-), output, signaling: 8 ... 9 mm / 0.31 ... 0.35 inch
Type of mounting	DIN-rail mounting (EN 60715)
<b>Dimensions and Weight</b>	
Dimensions (mm) W x H x L	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail
Weight	170 g





EPSITRON® Electronic Circuit Breaker, 2-channel, input voltage: 24 VDC, 2 ... 10 A adjustable, communication capability

Item No.	Pack. Unit
787-1662	1

EPSITRON® Electronic Circuit Breaker, 2-channel, input voltage: 24 VDC, 1 ... 6 A adjustable, communication capability

Item No.	Pack. Unit
787-1662/106-000	1

**Electrical Data**

Nominal current	Max. 2 x 10 ADC, (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
Factory preset	
Voltage drop	200 mV at 10 A
Power loss P <sub>v</sub>	0.85 W (stand-by) / 5.5 W (nominal load)
Degree of pollution	2 (acc. to EN 50178)
<b>General Specifications</b>	
Standards/Approvals	UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3

Nominal current	2 x 6 ADC (max), (1, 2, 3, 4, 5, 6 A adjustable for each channel via selector switch)
Factory preset	
Voltage drop	120 mV at 6 A
Power loss P <sub>v</sub>	0.85 W (stand-by) / 2.5 W (nominal load)
Degree of pollution	2 (acc. to EN 50178)
<b>General Specifications</b>	
Standards/Approvals	UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3

Nominal current	2 x 6 ADC (max), (1, 2, 3, 4, 5, 6 A adjustable for each channel via selector switch)
Factory preset	
Voltage drop	120 mV at 6 A
Power loss P <sub>v</sub>	0.85 W (stand-by) / 2.5 W (nominal load)
Degree of pollution	2 (acc. to EN 50178)
<b>General Specifications</b>	
Standards/Approvals	UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3

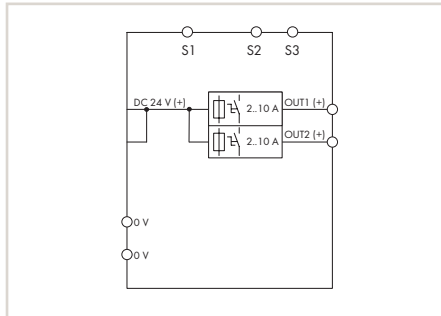
# Electronic Circuit Breakers without Active Current Limitation

**EPSITRON®**

787 Series



Similar to pictured device



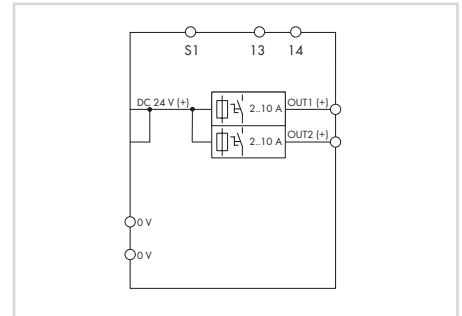
*EPSITRON®* Electronic Circuit Breaker, 2-channel, input voltage: 24 VDC, 2 ... 10 A adjustable, communication capability, specialty configuration

Item No.	Pack. Unit
787-1662/000-004	1

Group signal S3 reports "channel switched off" and "tripped channel"



Similar to pictured device



*EPSITRON®* Electronic Circuit Breaker, 2-channel, input voltage: 24 VDC, 2 ... 10 A adjustable, potential-free signal contact 13/14, specialty configuration

Item No.	Pack. Unit
787-1662/000-054	1

Potential-free signal contact 13 / 14 reports "channel switched off" and "tripped channel"; does not support communication via pulse sequence

**Electrical Data**

Nominal current	Max. 2 x 10 ADC, (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
Factory preset	2 ADC (when switched off)
Voltage drop	200 mV at 10 A
Power loss P <sub>v</sub>	0.84 W (stand-by) / 5.5 W (at 2 x 10 A)
Degree of pollution	2 (acc. to EN 50178)
<b>General Specifications</b>	
Signaling	
Standards/Approvals	UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3

Nominal current	Max. 2 x 10 ADC, (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
Factory preset	2 ADC (when switched off)
Voltage drop	200 mV at 10 A
Power loss P <sub>v</sub>	0.84 W (stand-by) / 5.5 W (at 2 x 10 A)
Degree of pollution	2 (acc. to EN 50178)
<b>General Specifications</b>	
Signaling	Potential-free signal contact 13 / 14, max. 58 VDC / 40 A AC, 100 mA
Standards/Approvals	UL 508 *, UL 2367 *, GL *, EN 60950, EN 61000-6-2, EN 61000-6-3 (* pending)

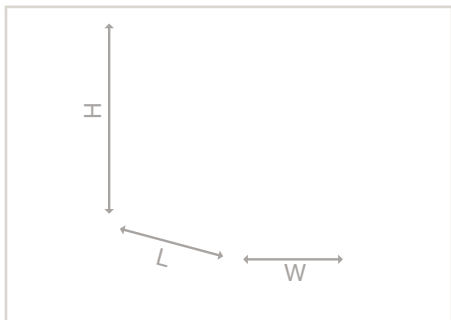
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## Electronic Circuit Breakers (ECB)

### EPSITRON®

### 787 Series



#### Features:

- Space-saving electronic circuit breaker with 2 channels
- 2 ... 10 A nominal current, adjustable for each channel via sealable selector switch
- Switch-on capacity > 23000 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 (only devices with communication capability)
- Remote input resets all tripped channels
- Remote input for switching on/off any number of channels via pulse sequence (only devices with communication capability)

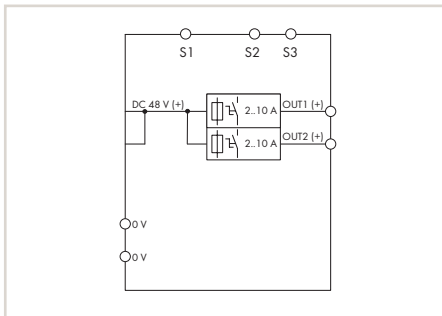
Note: The pulse sequence only supports devices which are designated as having "communication capability"

#### Technical Data

<b>Input</b>	
Nominal input voltage $U_{i, nom}$	48 VDC
Input voltage range	32 ... 58 VDC
<b>Output</b>	
Nominal output voltage $U_{o, nom}$	2 x 48 VDC
Nominal current	Max. 2 x 10 ADC, (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
Voltage drop	175 mV at 10 A
Trip time	Load-dependent (16 ms ... 100 s)
Switch-on capacity	> 23000 µF per channel at 48 VDC, 2.5 mm <sup>2</sup> cable cross-section and 2.5 m cable length
Switch-on behavior	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Active current limitation	No
Operational indication	LED green (OK channel), LED red (tripped channel)
Signaling	2 x LED (green/red/orange)
<b>Efficiency/Power Losses</b>	
Efficiency	99 % (typ.)
Power loss $P_v$	0.84 W (stand-by) / 4.5 W (at 2 x 10 A)
<b>Fuse Protection</b>	
Internal fuse	15 AT per channel
<b>General Specifications</b>	
Standards/Approvals	UL 508 *, UL 2367 *, GL *, EN 60950, EN 61000-6-2, EN 61000-6-3 (* pending)
<b>Environmental Requirements</b>	
Ambient operating temperature	-25 ... +70 °C
Storage temperature	-25 ... +85 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Derating	No derating
Degree of pollution	2 (acc. to EN 50178)
<b>Safety and Protection</b>	
Test voltage	500 VDC (terminals to enclosure)
Protection class	III
Reverse voltage protection	No
Degree of protection	IP20 per EN 60529
Overvoltage protection	Via 68 V suppressor diode at input
Feedback voltage	Max. 58 VDC
Series connection of several devices	Not permitted
Parallel operation of single channels	Not permitted
<b>Connection and Type of Mounting</b>	
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
Conductor range	Input (+): 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG Input (-), output, signaling: 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	Input (+): 13 ... 15 mm / 0.51 ... 0.59 inch Input (-), output, signaling: 8 ... 9 mm / 0.31 ... 0.35 inch
Type of mounting	DIN-rail mounting (EN 60715)
<b>Dimensions and Weight</b>	
Dimensions (mm) W x H x L	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail
Weight	170 g



Similar to pictured device

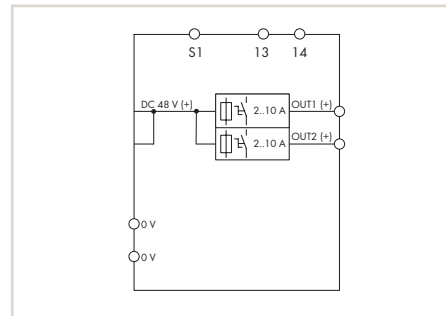


EPSITRON® Electronic Circuit Breaker, 2-channel, input voltage: 48 VDC, 2 ... 10 A adjustable, communication capability

Item No.	Pack. Unit
787-1662/000-200	1



Similar to pictured device



EPSITRON® Electronic Circuit Breaker, 2-channel, input voltage: 48 VDC, 2 ... 10 A adjustable, potential-free signal contact 13/14

Item No.	Pack. Unit
787-1662/000-250	1

Potential-free signal contact 13 / 14 reports "channel switched off" and "tripped channel"; does not support communication via pulse sequence

**Electrical Data**

Remote input

Reactivation of all tripped channels via 15 ... 58 VDC pulse for min. 500 ms  
Switching on/off any number of channels via pulse sequence

Signaling

Reactivation of all tripped channels via 15 ... 58 VDC pulse for min. 500 ms

Potential-free signal contact 13 / 14, max. 58 VDC / 40 A AC, 100 mA



## Electronic Circuit Breakers (ECB)

### EPSITRON®

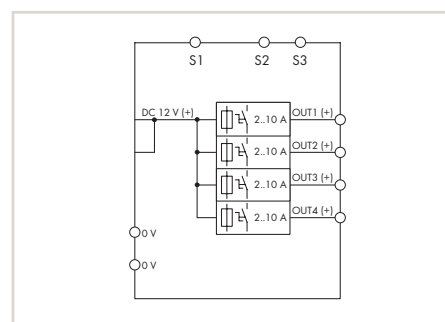
### 787 Series



Similar to pictured device

#### Features:

- Space-saving electronic circuit breaker with 4 channels
- 2 ... 10 A nominal current, adjustable for each channel via sealable selector switch
- 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
- Tripped message (group signal)
- Status message for each channel via pulse sequence
- Remote input resets all tripped channels or switches on/off any number of channels via pulse sequence



EPSITRON® Electronic Circuit Breaker, 4-channel, input voltage: 12 VDC, 2 ... 10 A adjustable, communication capability

Item No.	Pack. Unit
787-1664/000-100	1

#### Technical Data

Input	
Nominal input voltage $U_{i, nom}$	12 VDC
Input voltage range	10 ... 16 VDC
Output	
Nominal output voltage $U_{o, nom}$	4 x 12 VDC
Nominal current	Max. 4 x 10 ADC, (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
Voltage drop	200 mV at 10 A
Trip time	Load-dependent (16 ms ... 100 s)
Switch-on capacity	> 50,000 µF per channel
Switch-on behavior	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Active current limitation	No
Operational indication	LED green (OK channel) LED red (tripped channel)
Signaling	4 x LED (green/red/orange)
Remote input	Reactivation of all tripped channels via 9 ... 30 VDC pulse for min. 500 ms. Switching on/off any number of channels via pulse sequence
Efficiency/Power Losses	
Efficiency	99 % (typ.)
Power loss $P_v$	0.53 W (stand-by) / 10 W (at 4 x 10 A)
Fuse Protection	
Internal fuse	15 AT per channel
General Specifications	
Standards/Approvals	UL 508*, UL 2367*, GL, EN 60950, EN 61000-6-2, EN 61000-6-3 (*pending)
Environmental Requirements	
Ambient operating temperature	-25 ... +70 °C
Storage temperature	-25 ... +85 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Derating	≥ +50 °C: see instruction manual
Degree of pollution	2 (acc. to EN 50178)

#### Safety and Protection

Test voltage	500 VDC (terminals to enclosure)
Protection class	III
Reverse voltage protection	No
Degree of protection	IP20 per EN 60529
Overvoltage protection	Via 33 V suppressor diode at input
Feedback voltage	Max. 35 VDC
Series connection of several devices	Not permitted
Parallel operation of single channels	Not permitted
Connection and Type of Mounting	
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
Conductor range	Input (+): 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG Input (-), output, signaling: 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	Input (+): 13 ... 15 mm / 0.51 ... 0.59 inch Input (-), output, signaling: 8 ... 9 mm / 0.31 ... 0.35 inch
Type of mounting	DIN-rail mounting (EN 60715)
Dimensions and Weight	
Dimensions (mm) W x H x L	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail
Weight	170 g

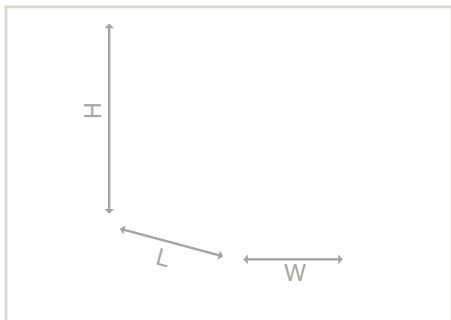
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# Electronic Circuit Breakers with Active Current Limitation

## EPSITRON®

### 787 Series



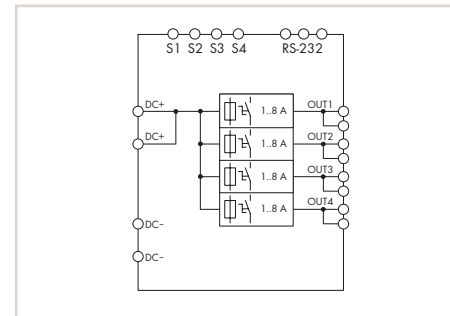
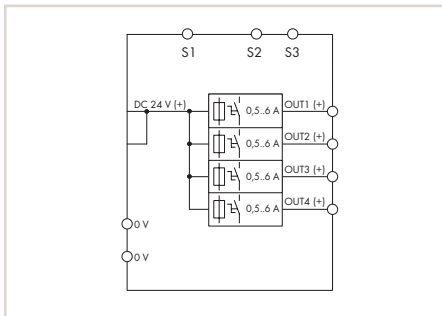
#### Features:

- Space-saving electronic circuit breaker with 4 channels
- 0.5 ... 6 A nominal current, adjustable for each channel via sealable selector switch
- Active current limitation
- High switch-on capacity per channel
- One illuminated, three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics (787-1664/xxx-1xxx), alternatively with display and function buttons (787-861)
- Time-delayed switching of channels
- Tripped message (group signal)
- Status message for each channel via pulse sequence (only devices with communication capability)
- Remote input resets all tripped channels
- Remote input for switching on/off any number of channels via pulse sequence (only devices with communication capability, 787-1664/xxx-100x)
- Current and voltage monitoring via RS-232 interface and LCD (only 787-861)
- 4 active signal outputs for watchdog functions (only 787-861)

#### Technical Data

<b>Input</b>	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	4 x 24 VDC
Active current limitation	Yes
<b>Environmental Requirements</b>	
Storage temperature	-25 ... +85 °C
Derating	No derating
<b>Safety and Protection</b>	
Test voltage	500 VDC (terminals to enclosure)
Protection class	III
Reverse voltage protection	No
Degree of protection	IP20 per EN 60529
Oversvoltage protection	Via 33 V suppressor diode at input
Series connection of several devices	Not permitted
Parallel operation of single channels	Not permitted
<b>Connection and Type of Mounting</b>	
Conductor range	Input (+): 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG Input (-), output, signaling: 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	Input (+): 13 ... 15 mm <sup>2</sup> / 0.51 ... 0.59 inch Input (-), output, signaling: 8 ... 9 mm / 0.31 ... 0.35 inch
Type of mounting	DIN-rail mounting (EN 60715)

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**EPSITRON® Electronic Circuit Breaker, 4-channel, input voltage: 24 VDC, 0.5 ... 6 A adjustable, active current limitation, communication capability**

Item No.	Pack. Unit
787-1664/006-1000	1

**EPSITRON® Electronic Circuit Breaker, 4-channel, input voltage: 24 VDC, 1 ... 8 A adjustable, active current limitation, RS-232 interface**

Item No.	Pack. Unit
787-861	1

**Electrical Data**

Input voltage range	18 ... 30 VDC
Nominal current	Max. 4 x 6 ADC, (0.5, 1, 2, 3, 4, 6 A adjustable for each channel via selector switch)
Voltage drop	145 mV at 6 A
Trip time	Load-dependent (16 ms ... 5 s)
Switch-on capacity	> 65,000 µF per channel
Switch-on behavior	Time-delayed channel switching (load-dependent min. 50 ms to 5 s)
Operational indication	LED green (OK channel) LED red (tripped channel)
Signaling	4 x LED (green/red/orange)
LineMonitor, parameter setting	
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	99 % (typ.)
Power loss P <sub>v</sub>	0.77 W (stand-by) / 4.3 W (nominal load)
Internal fuse	15 AT per channel
Ambient operating temperature	-25 ... +70 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Feedback voltage	Max. 35 VDC
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
<b>Mechanical Data</b>	
Dimensions (mm) W x H x L	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail
Weight	170 g
<b>General Specifications</b>	
Standards/Approvals	UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3

Input voltage range	18 ... 30 VDC
Nominal current	4 x 1 ... 8 ADC (adjustable for each channel in 1 A steps)
Voltage drop	140 mV at 8 A
Trip time	100 ms (100 ms ... 1.5 s; adjustable, depending on nominal current)
Switch-on capacity	20,000 µF (max.)
Switch-on behavior	Time-delayed channel switching (250 ms each)
Operational indication	LED green (all channels OK), LED yellow (warning), LED red (at least one channel has tripped)
Signaling	LCD, 4 x signal output 24 VDC, 25 mA
LineMonitor, parameter setting	via LCD and RS-232 serial interface
Remote input	
Efficiency	96 % (typ.)
Power loss P <sub>v</sub>	2 W (stand-by) / 8.2 W (nominal load)
Internal fuse	15 AT
Ambient operating temperature	-25 ... +60 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Feedback voltage	Max. 33 VDC
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 231 Series
<b>Mechanical Data</b>	
Dimensions (mm) W x H x L	40 x 171 x 163, Length from upper-edge of DIN-35 rail
Weight	800 g
<b>General Specifications</b>	
Standards/Approvals	EN 60950, UL 508, EN 61000-6-2, EN 61000-6-3

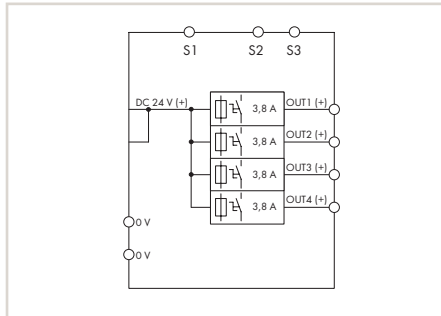
# Electronic Circuit Breakers with Active Current Limitation

## EPSITRON®

### 787 Series



Similar to pictured device

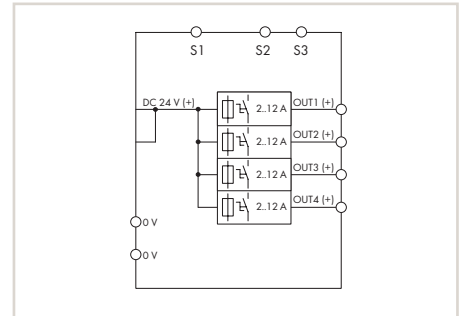


EPSITRON® Electronic Circuit Breaker, 4-channel, input voltage: 24 VDC, 3.8 A, active current limitation, NEC Class 2, communication capability

Item No.	Pack. Unit
787-1664/004-1000	1



Similar to pictured device



EPSITRON® Electronic Circuit Breaker, 4-channel, input voltage: 24 VDC, 2 ... 12 A adjustable, active current limitation, communication capability

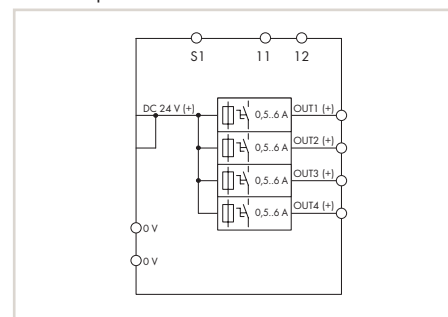
Item No.	Pack. Unit
787-1664/212-1000	1

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Electrical Data	
Input voltage range	20 ... 28.8 VDC
Nominal current	4 x 3.8 ADC, NEC Class 2 (at 20 ... 24 VDC); 4 x 3.2 A, NEC Class 2 (at 28 VDC) fixed nominal current
Voltage drop	150 mV at 3.8 A
Trip time	Load-dependent (16 ms ... 5 s)
Switch-on capacity	> 65,000 µF per channel
Switch-on behavior	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Operational indication	LED green (OK channel) LED red (tripped channel)
Signaling	4 x LED (green/red/orange)
LineMonitor, parameter setting	
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	99 % (typ.)
Power loss P <sub>v</sub>	0.82 W (stand-by) / 3.1 W (at 4 x 3.8 A)
Internal fuse	None
Ambient operating temperature	-25 ... +70 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Feedback voltage	Max. 28.8 VDC
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
Mechanical Data	
Dimensions (mm) W x H x L	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail
Weight	170 g
General Specifications	
Standards/Approvals	UL 508, UL 2367, GL *, EN 60950, EN 61000-6-2, EN 61000-6-3 (* pending)
	18 ... 30 VDC
	4 x 12 ADC (max.), (2, 4, 6, 8, 10, 12 A adjustable for each channel via selector switch)
	240 mV at 12 A
	Load-dependent (16 ms ... 5 s)
	> 65,000 µF per channel
	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
	LED green (OK channel) LED red (tripped channel)
	4 x LED (green/red/orange)
	Reactivation of all tripped channels via 15 ... 30 VDC pulse for min. 500 ms Switching on/off any number of channels via pulse sequence.
	99 % (typ.)
	0.77 W (stand-by) / 12.3 W (at 4 x 12 A)
	15 AT per channel
	-25 ... +70 °C
	5 % ... 96 % (no condensation permissible)
	Max. 35 VDC
	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail
	170 g
	UL 508, UL 2367, GL *, EN 60950, EN 61000-6-2, EN 61000-6-3 (* pending)



Similar to pictured device



EPSITRON® Electronic Circuit Breaker,  
4-channel, input voltage: 24 VDC,  
0.5 ... 6 A adjustable, active current limitation,  
potential-free signal contact 11/12, specialty  
configuration

Item No.	Pack. Unit
787-1664/006-1054	1

Potential-free signal contact 11 / 12 reports "channel switched off" and "tripped channel"; does not support communication via pulse sequence

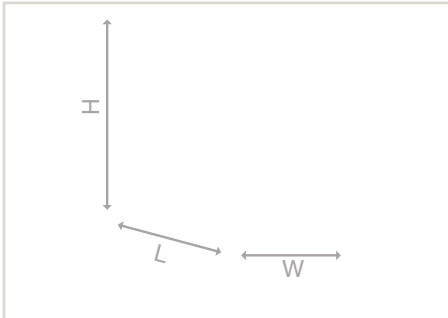
#### Electrical Data

Input voltage range	18 ... 30 VDC
Nominal current	Max. 4 x 6 ADC, (0.5, 1, 2, 3, 4, 6 A adjustable for each channel via selector switch)
Voltage drop	145 mV at 6 A
Trip time	Load-dependent (16 ms ... 5 s)
Switch-on capacity	> 58,000 µF per channel
Switch-on behavior	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Operational indication	LED green (OK channel) LED red (tripped channel)
Signaling	4 x LED (green/red/orange) Potential-free signal contact 11 / 12, max. 58 VDC / 40 A AC, 100 mA
LineMonitor, parameter setting	
Remote input	Reactivation of all tripped channels via 15 ... 30 VDC pulse for min. 500 ms
Efficiency	99 % (typ.)
Power loss $P_V$	0.77 W (stand-by) / 4.3 W (at 4 x 6 A)
Internal fuse	15 AT per channel
Ambient operating temperature	-25 ... +70 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Feedback voltage	Max. 35 VDC
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
<b>Mechanical Data</b>	
Dimensions (mm) W x H x L	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail
Weight	170 g
<b>General Specifications</b>	
Standards/Approvals	UL 508, UL 2367, GL *, EN 60950, EN 61000-6-2, EN 61000-6-3 (* pending)

## Electronic Circuit Breakers without Active Current Limitation

### EPSITRON®

### 787 Series



#### Features:

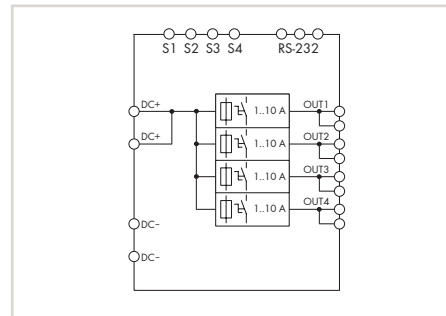
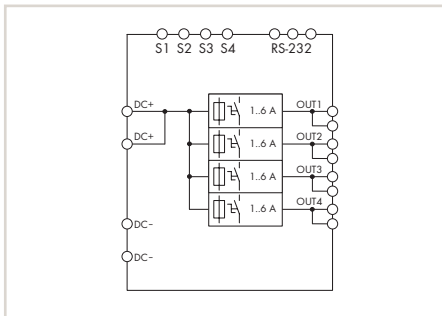
- Electronic circuit breaker with 4 channels, parameterizable
- Time-delayed switching of channels
- Potential-free signal contact (only 787-860, -862, -1664/xxx-xx5x)
- Current and voltage monitoring via RS-232 interface and LCD (only 787-860, -862)
- 4 active signal outputs for watchdog functions (only 787-860, -862)
- Tripped message (group signal)
- Remote input resets all tripped channels
- One illuminated, three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics (787-1664/xxx-xxxx)
- Status message for each channel via pulse sequence (only devices with communication capability, 787-1664/xxx-xx0x)
- Remote input for switching on/off any number of channels via pulse sequence (only devices with communication capability, 787-1664/xxx-xx0x)

#### Technical Data

<b>Input</b>	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
Input voltage range	18 ... 30 VDC
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	4 x 24 VDC
Active current limitation	No
<b>Safety and Protection</b>	
Test voltage	500 VDC (terminals to enclosure)
Protection class	III
Reverse voltage protection	No
Degree of protection	IP20 per EN 60529
Overvoltage protection	Via suppressor diode at input
Feedback voltage	Max. 33 VDC
Series connection of several devices	Not permitted
Parallel operation of single channels	Not permitted
<b>Connection and Type of Mounting</b>	
Conductor range	Input (+): 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG Input (-), output, signaling: 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	Input (+): 13 ... 15 mm <sup>2</sup> / 0.51 ... 0.59 inch Input (-), output, signaling: 8 ... 9 mm / 0.31 ... 0.35 inch
Type of mounting	DIN-rail mounting (EN 60715) in 2 positions

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**EPSITRON® Electronic Circuit Breaker,**  
4-channel, input voltage: 24 VDC,  
1 ... 6 A adjustable, RS-232 interface

Item No.	Pack. Unit
787-860	1

**EPSITRON® Electronic Circuit Breaker,**  
4-channel, input voltage: 24 VDC,  
1 ... 10 A adjustable, RS-232 interface

Item No.	Pack. Unit
787-862	1

**Electrical Data**

Nominal current	4 x 1 ... 6 ADC (adjustable for each channel in 1 A steps)
Factory preset	
Voltage drop	140 mV at 6 A
Trip time	100 s (100 ms .. 600 s; adjustable)
Switch-on capacity	20,000 µF (max.)
Switch-on behavior	Time-delayed channel switching (250 ms each)
Operational indication	LED green (all channels OK), LED yellow (warning), LED red (at least one channel has tripped)
Signaling	LCD, 4 x 24 VDC signal output, 25 mA
Remote input	Reactivation of all tripped channels via 18 ... 30 VDC pulse for min. 50 ms
LineMonitor, parameter setting	via LCD and RS-232 serial interface
Efficiency	96 % (typ.)
Power loss P <sub>v</sub>	2 W (stand-by) / 5.5 W (nominal load)
Internal fuse	15 AT
Ambient operating temperature	-10 ... +60 °C
Storage temperature	-25 ... +85 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Derating	
Degree of pollution	
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 231 Series

**Mechanical Data**

Dimensions (mm) W x H x L	40 x 171 x 163, Length from upper-edge of DIN-35 rail
Weight	800 g

**General Specifications**

Standards/Approvals	EN 60950, UL 508, EN 61000-6-2, EN 61000-6-3
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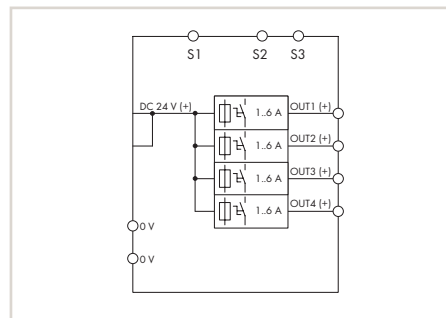
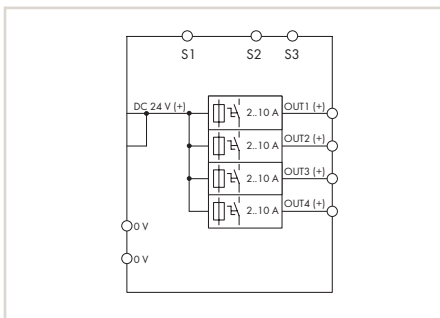
Nominal current	4 x 1 ... 10 ADC (adjustable for each channel in 1 A steps)
Factory preset	
Voltage drop	140 mV at 6 A; 240 mV at 10 A
Trip time	100 s (100 ms .. 600 s; adjustable)
Switch-on capacity	20,000 µF (max.)
Switch-on behavior	Time-delayed channel switching (250 ms each)
Operational indication	LED green (all channels OK), LED yellow (warning), LED red (at least one channel has tripped)
Signaling	LCD, 4 x 24 VDC signal output, 25 mA
Remote input	Reactivation of all tripped channels via 18 ... 30 VDC pulse for min. 50 ms
LineMonitor, parameter setting	via LCD and RS-232 serial interface
Efficiency	96 % (typ.)
Power loss P <sub>v</sub>	2 W (stand-by) / 12 W (nominal load)
Internal fuse	15 AT
Ambient operating temperature	-10 ... +60 °C
Storage temperature	-25 ... +85 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Derating	
Degree of pollution	
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 231 Series

Dimensions (mm) W x H x L	40 x 171 x 163, Length from upper-edge of DIN-35 rail
Weight	800 g

Standards/Approvals	EN 60950, UL 508, EN 61000-6-2, EN 61000-6-3
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# Electronic Circuit Breakers without Active Current Limitation

## EPSITRON® 787 Series



EPSITRON® Electronic Circuit Breaker,  
4-channel, input voltage: 24 VDC,  
2 ... 10 A adjustable, communication capability

EPSITRON® Electronic Circuit Breaker,  
4-channel, input voltage: 24 VDC,  
1 ... 6 A adjustable, communication capability

Item No.	Pack. Unit
787-1664	1

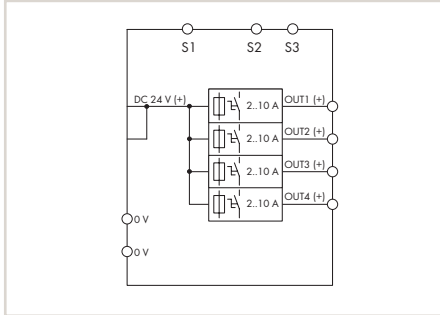
Item No.	Pack. Unit
787-1664/106-000	1

### Electrical Data

Nominal current	Max. 4 x 10 ADC, (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)	Max. 4 x 6 ADC, (1, 2, 3, 4, 5, 6 A adjustable for each channel via selector switch)
Factory preset		
Voltage drop	200 mV at 10 A	120 mV at 6 A
Trip time	Load-dependent (16 ms ... 100 s)	Load-dependent (16 ms ... 100 s)
Switch-on capacity	> 50,000 µF per channel	> 50,000 µF per channel
Switch-on behavior	Time-delayed channel switching (load-dependent, min. 50 ms / max. 5 s)	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Operational indication	LED green (channel OK), LED red (tripped channel)	LED green (OK channel) LED red (tripped channel)
Signaling	4 x LED (green/red/orange)	4 x LED (green/red/orange)
Remote input	Reactivation of all tripped channels via pulse sequence, 15 ... 30 VDC for min. 500 ms Switching on/off any number of channels via pulse sequence.	Reactivation of all tripped channels via pulse sequence, 15 ... 30 VDC for min. 500 ms Switching on/off any number of channels via pulse sequence.
LineMonitor, parameter setting		
Efficiency	99 % (typ.)	99 % (typ.)
Power loss P <sub>v</sub>	0.84 W (stand-by) / 10 W (at 4 x 10 A)	0.84 W (stand-by) / 4.2 W (at 4 x 6 A)
Internal fuse	15 AT per channel	15 AT per channel
Ambient operating temperature	-25 ... +70 °C	-25 ... +70 °C
Storage temperature	-25 ... +85 °C	-25 ... +85 °C
Relative humidity	5 % ... 96 % (no condensation permissible)	5 % ... 96 % (no condensation permissible)
Derating	≥ +50 °C: see instruction manual	No derating
Degree of pollution		
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
<b>Mechanical Data</b>		
Dimensions (mm) W x H x L	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail
Weight	170 g	170 g
<b>General Specifications</b>		
Standards/Approvals	UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3	UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3



Similar to pictured device



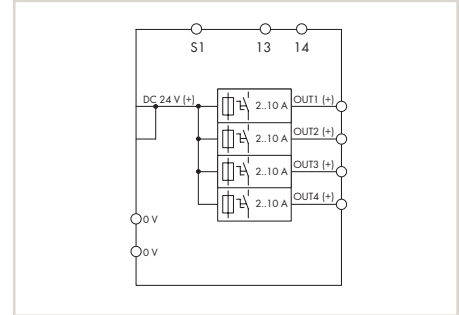
EPSITRON® Electronic Circuit Breaker, 4-channel, input voltage: 24 VDC, 2 ... 10 A adjustable, communication capability, speciality configuration

Item No.	Pack. Unit
787-1664/000-004	1

Group signal S3 reports "channel switched off" and "tripped channel"



Similar to pictured device



EPSITRON® Electronic Circuit Breaker, 4-channel, input voltage: 24 VDC, 2 ... 10 A adjustable, potential-free signal contact 13/14, speciality configuration

Item No.	Pack. Unit
787-1664/000-054	1

Potential-free signal contact 13 / 14 reports "channel switched off" and "tripped channel"; does not support communication via pulse sequence

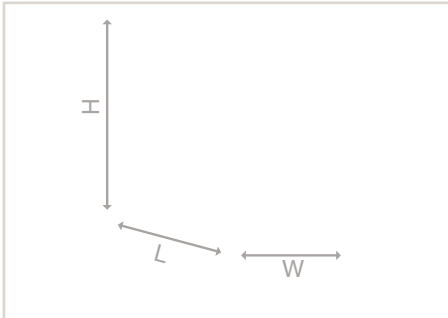
**Electrical Data**

Nominal current	Max. 4 x 10 ADC, (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)	Max. 4 x 10 ADC, (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
Factory preset	2 ADC (when switched off)	2 ADC (when switched off)
Voltage drop	200 mV at 10 A	200 mV at 10 A
Trip time	Load-dependent (16 ms ... 100 s)	Load-dependent (16 ms ... 100 s)
Switch-on capacity	> 50,000 µF per channel	> 50,000 µF per channel
Switch-on behavior	Time-delayed channel switching (load-dependent, min. 50 ms / max. 5 s)	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Operational indication	LED green (channel OK), LED red (tripped channel)	LED green (OK channel), LED red (tripped channel)
Signaling	4 x LED (green/red/orange)	4 x LED (green/red/orange); Potential-free signal contact 13 / 14, max. 58 VDC / 40 A AC, 100 mA
Remote input	Reactivation of all tripped channels via pulse sequence, 15 ... 30 VDC for min. 500 ms Switching on/off any number of channels via pulse sequence.	Reactivation of all tripped channels via pulse sequence, 15 ... 30 VDC for min. 500 ms
LineMonitor, parameter setting		
Efficiency	99 % (typ.)	99 % (typ.)
Power loss P <sub>v</sub>	0.84 W (stand-by) / 10 W (at 4 x 10 A)	0.84 W (stand-by) / 10 W (at 4 x 10 A)
Internal fuse	15 AT per channel	15 AT per channel
Ambient operating temperature	-25 ... +70 °C	-25 ... +70 °C
Storage temperature	-25 ... +85 °C	-25 ... +85 °C
Relative humidity	5 % ... 96 % (no condensation permissible)	5 % ... 96 % (no condensation permissible)
Derating	≥ +50 °C: see instruction manual	≥ +50 °C: see instruction manual
Degree of pollution	2 (acc. to EN 50178)	2 (acc. to EN 50178)
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
<b>Mechanical Data</b>		
Dimensions (mm) W x H x L	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail
Weight	170 g	170 g
<b>General Specifications</b>		
Standards/Approvals	UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3	UL 508*, UL 2367*, GL*, EN 60950, EN 61000-6-2, EN 61000-6-3 (* pending)

## Electronic Circuit Breakers (ECB)

### EPSITRON®

### 787 Series



#### Features:

- Space-saving electronic circuit breaker with 4 channels
- 2 ... 10 A nominal current, adjustable for each channel via sealable selector switch
- Switch-on capacity > 23000 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 (only devices with communication capability)
- Remote input resets all tripped channels
- Remote input for switching on/off any number of channels via pulse sequence (only devices with communication capability)

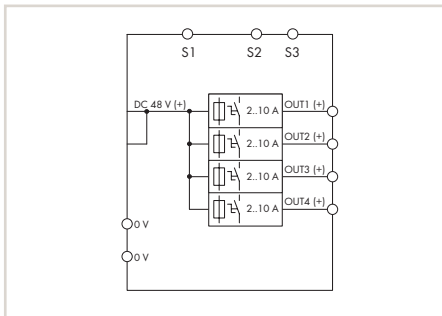
Note: The pulse sequence only supports devices which are designated as having "communication capability"

#### Technical Data

<b>Input</b>	
Nominal input voltage $U_{i, \text{nom}}$	48 VDC
Input voltage range	32 ... 58 VDC
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	4 x 48 VDC
Nominal current	Max. 4 x 10 ADC, (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
Voltage drop	175 mV at 10 A
Trip time	Load-dependent (16 ms ... 100 s)
Switch-on capacity	> 23,000 µF per channel at 48 VDC, 2.5 mm <sup>2</sup> cable cross-section and 2.5 m cable length
Switch-on behavior	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Active current limitation	No
Operational indication	LED green (OK channel) LED red (tripped channel)
Signaling	4 x LED (green/red/orange)
<b>Efficiency/Power Losses</b>	
Efficiency	99 % (typ.)
Power loss $P_v$	0.84 W (stand-by) / 8 W (at 4 x 10 A)
<b>Fuse Protection</b>	
Internal fuse	15 AT per channel
<b>General Specifications</b>	
Standards/Approvals	UL 508 *, UL 2367 *, GL *, EN 60950, EN 61000-6-2, EN 61000-6-3 (* pending)
<b>Environmental Requirements</b>	
Ambient operating temperature	-25 ... +70 °C
Storage temperature	-25 ... +85 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Derating	≥ +50 °C: see instruction manual
Degree of pollution	2 (acc. to EN 50178)
<b>Safety and Protection</b>	
Test voltage	500 VDC (terminals to enclosure)
Protection class	III
Reverse voltage protection	No
Degree of protection	IP20 per EN 60529
Overvoltage protection	Via 68 V suppressor diode at input
Feedback voltage	Max. 58 VDC
Series connection of several devices	Not permitted
Parallel operation of single channels	Not permitted
<b>Connection and Type of Mounting</b>	
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
Conductor range	Input (+): 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG Input (-), output, signaling: 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	Input (+): 13 ... 15 mm / 0.51 ... 0.59 inch Input (-), output, signaling: 8 ... 9 mm / 0.31 ... 0.35 inch
Type of mounting	DIN-rail mounting (EN 60715)
<b>Dimensions and Weight</b>	
Dimensions (mm) W x H x L	45 x 90 x 115.5, Length from upper-edge of DIN-35 rail
Weight	170 g



Similar to pictured device

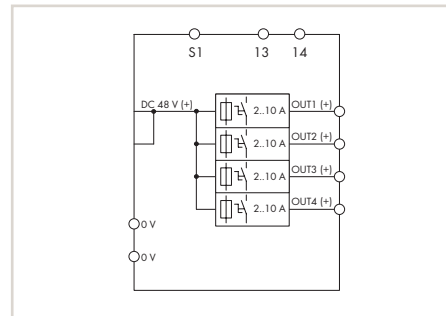


EPSITRON® Electronic Circuit Breaker, 4-channel, input voltage: 48 VDC, 2 ... 10 A adjustable, communication capability

Item No.	Pack. Unit
787-1664/000-200	1



Similar to pictured device



EPSITRON® Electronic Circuit Breaker, 4-channel, input voltage: 48 VDC, 2 ... 10 A adjustable, potential-free signal contact 13/14

Item No.	Pack. Unit
787-1664/000-250	1

Potential-free signal contact 13 / 14 reports "channel switched off" and "tripped channel"; does not support communication via pulse sequence

**Electrical Data**

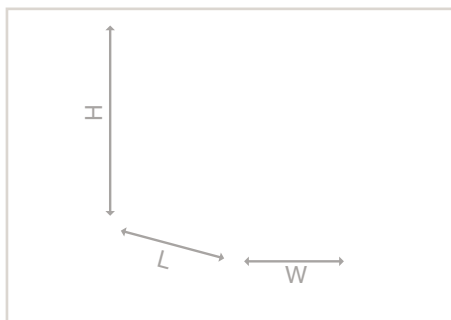
Remote input	Reactivation of all tripped channels via 15 ... 58 VDC pulse for min. 500 ms Switching on/off any number of channels via pulse sequence.
Signaling	

	Reactivation of all tripped channels via 15 ... 58 VDC pulse for min. 500 ms
	Potential-free signal contact 13 / 14, max. 58 VDC / 40 A AC, 100 mA

# Electronic Circuit Breakers with Active Current Limitation

## EPSITRON®

### 787 Series



#### Features:

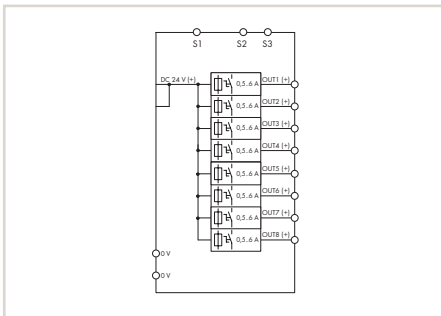
- Space-saving electronic circuit breaker with 8 channels
  - 0.5 ... 6 A nominal current, adjustable for each channel via sealable selector switch
  - Active current limitation
  - Switch-on capacity > 65000 µF per channel
  - One illuminated, three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
  - Time-delayed switching of channels
  - Tripped message (group signal)
  - Status message for each channel via pulse sequence (only devices with communication capability)
  - Remote input resets all tripped channels
  - Remote input for switching on/off any number of channels via pulse sequence (only devices having communication capability)
- Note: The pulse sequence only supports devices which are designated as having "communication capability"

#### Technical Data

<b>Input</b>	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
Input voltage range	18 ... 30 VDC
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	8 x 24 VDC
Nominal current	Max. 8 x 6 ADC, (0.5, 1, 2, 3, 4, 6 A adjustable for each channel via selector switch)
Voltage drop	155 mV at 6 A
Trip time	Load-dependent (16 ms ... 5 s)
Switch-on behavior	Time-delayed channel switching (load-dependent min. 50 ms to 5 s)
Active current limitation	Yes
Operational indication	LED green (OK channel) LED red (tripped channel)
Signaling	8 x LED (green/red/orange)
<b>Efficiency/Power Losses</b>	
Efficiency	99 % (typ.)
<b>Fuse Protection</b>	
Internal fuse	15 AT per channel
<b>General Specifications</b>	
Standards/Approvals	UL 508*, UL 2367*, GL, EN 60950, EN 61000-6-2, EN 61000-6-3 (*pending)
<b>Environmental Requirements</b>	
Ambient operating temperature	-25 ... +70 °C
Storage temperature	-25 ... +85 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Derating	No derating
<b>Safety and Protection</b>	
Test voltage	500 VDC (terminals to enclosure)
Protection class	III
Reverse voltage protection	No
Degree of protection	IP20 per EN 60529
Overvoltage protection	Via 33 V suppressor diode at input
Feedback voltage	Max. 35 VDC
Series connection of several devices	Not permitted
Parallel operation of single channels	Not permitted
<b>Connection and Type of Mounting</b>	
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
Conductor range	Input (+): 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG Input (-), output, signaling: 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	Input (+): 13 ... 15 mm <sup>2</sup> / 0.51 ... 0.59 inch Input (-), output, signaling: 8 ... 9 mm / 0.31 ... 0.35 inch
Type of mounting	DIN-rail mounting (EN 60715)
<b>Dimensions and Weight</b>	
Dimensions (mm) W x H x L	42 x 127 x 142.5, Length from upper-edge of DIN-35 rail
Weight	440 g



Similar to pictured device

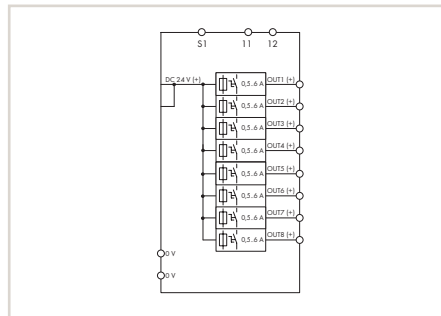


EPSITRON® Electronic Circuit Breaker, 8-channel, input voltage: 24 VDC, 0.5 ... 6 A adjustable, active current limitation, communication capability

Item No.	Pack. Unit
787-1668/006-1000	1



Similar to pictured device



EPSITRON® Electronic Circuit Breaker, 8-channel, input voltage: 24 VDC, 0.5 ... 6 A adjustable, active current limitation, potential-free signal contact 11/12, specialty configuration

Item No.	Pack. Unit
787-1668/006-1054	1

Potential-free signal contact 11 / 12 reports "channel switched off" and "tripped channel"; does not support communication via pulse sequence

**Electrical Data**

Factory preset	
Switch-on capacity	> 65,000 µF per channel
Remote input	Reactivation of all tripped channels via pulse sequence, 15 ... 30 VDC for min. 500 ms Switching on/off any number of channels via pulse sequence.
Power loss P <sub>v</sub>	8.6 W (nominal load)
Degree of pollution	
Signaling	

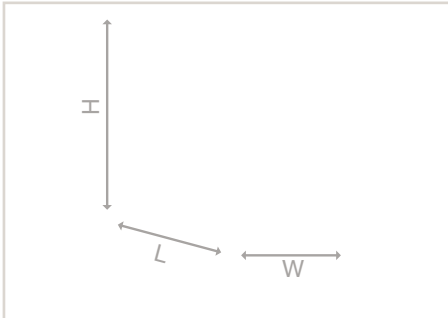
0.5 ADC (when switched off)	
Switch-on capacity	> 58,000 µF per channel
Remote input	Reactivation of all tripped channels via pulse sequence, 15 ... 30 VDC for min. 500 ms
Power loss P <sub>v</sub>	1.15 W (stand-by) / 8.6 W (at 8 x 6 A)
Degree of pollution	2 (acc. to EN 50178)
Signaling	Potential-free signal contact 11 / 12, max 58 VDC / 40 A AC, 100 mA



# Electronic Circuit Breakers without Active Current Limitation

## EPSITRON®

### 787 Series



#### Features:

- Space-saving electronic circuit breaker with 8 channels
- 1 ... 6 A nominal current, adjustable for each channel via sealable selector switch
- 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
- Tripped message (group signal)
- Status message for each channel via pulse sequence (only devices with communication capability)
- Remote input resets all tripped channels
- Remote input for switching on/off any number of channels via pulse sequence (only devices having communication capability)

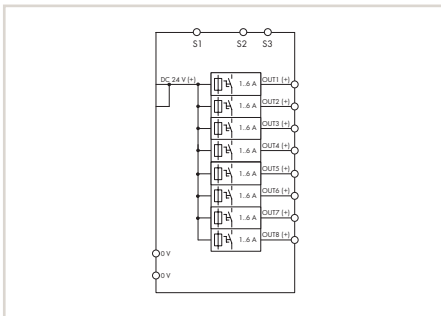
Note: The pulse sequence only supports devices which are designated as having "communication capability"

#### Technical Data

<b>Input</b>	
Nominal input voltage $U_{i, \text{nom}}$	24 VDC
Input voltage range	18 ... 30 VDC
<b>Output</b>	
Nominal output voltage $U_{o, \text{nom}}$	8 x 24 VDC
Switch-on capacity	> 50,000 µF per channel
Active current limitation	No
Operational indication	LED green (OK channel), LED red (tripped channel)
Signaling	8 x LED (green/red/orange)
Remote input	Reactivation of all tripped channels via pulse sequence, 15 ... 30 VDC for min. 500 ms Switching on/off any number of channels via pulse sequence
<b>Efficiency/Power Losses</b>	
Efficiency	99 % (typ.)
<b>Fuse Protection</b>	
Internal fuse	15 AT per channel
<b>Environmental Requirements</b>	
Ambient operating temperature	-25 ... +70 °C
Storage temperature	-25 ... +85 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
<b>Safety and Protection</b>	
Test voltage	500 VDC (terminals to enclosure)
Protection class	III
Reverse voltage protection	No
Degree of protection	IP20 per EN 60529
Overvoltage protection	Via 33 V suppressor diode at input
Feedback voltage	Max. 35 VDC
Series connection of several devices	Not permitted
Parallel operation of single channels	Not permitted
<b>Connection and Type of Mounting</b>	
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
Conductor range	Input (+): 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG Input (-), output, signaling: 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	Input (+): 13 ... 15 mm <sup>2</sup> / 0.51 ... 0.59 inch Input (-), output, signaling: 8 ... 9 mm / 0.31 ... 0.35 inch
Type of mounting	DIN-rail mounting (EN 60715)
<b>Dimensions and Weight</b>	
Dimensions (mm) W x H x L	42 x 127 x 142.5, Length from upper-edge of DIN-35 rail



Similar to pictured device

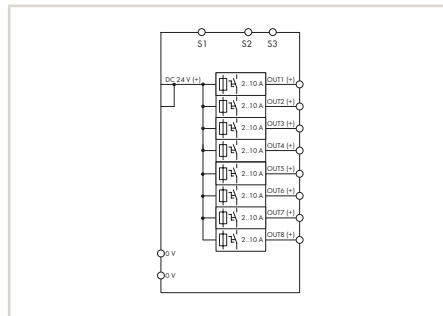


**EPSITRON® Electronic Circuit Breaker, 8-channel, input voltage: 24 VDC, 1 ... 6 A adjustable, communication capability**

Item No.	Pack. Unit
787-1668/106-000	1



Similar to pictured device



**EPSITRON® Electronic Circuit Breaker, 8-channel, input voltage: 24 VDC, 2 ... 10 A adjustable, communication capability**

Item No.	Pack. Unit
787-1668	1

5

**Electrical Data**

Nominal current	Max. 8 x 6 ADC, (1, 2, 3, 4, 5, 6 A adjustable for each channel via selector switch)
Factory preset	
Voltage drop	120 mV at 6 A
Trip time	Load-dependent (16 ms ... 100 s)
Switch-on behavior	Time-delayed channel switching (load-dependent min. 50 ms to 5 s)
Power loss P <sub>v</sub>	8 W (nominal load)
Derating	No derating
<b>Mechanical Data</b>	
Weight	440 g
<b>General Specifications</b>	
Standards/Approvals	UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3

Nominal current	Max. 8 x 10 ADC, (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
Factory preset	
Voltage drop	200 mV at 10 A
Trip time	Load-dependent (16 ms ... 100 s)
Switch-on behavior	Time-delayed channel switching (load-dependent min. 50 ms to 5 s)
Power loss P <sub>v</sub>	1.3 W (stand-by) / 20 W (nominal load)
Derating	≥ +50 °C: see instruction manual
<b>Mechanical Data</b>	
Weight	440 g
<b>General Specifications</b>	
Standards/Approvals	UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3

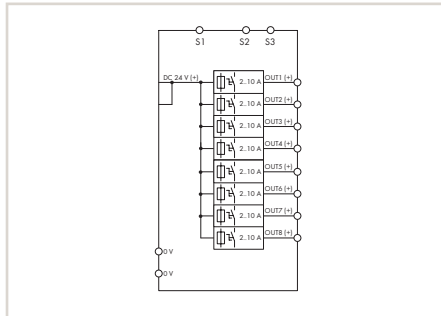
# Electronic Circuit Breakers (ECB)

EPSITRON®

787 Series



Similar to pictured device



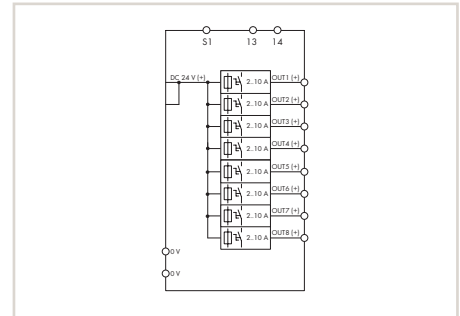
EPSITRON® Electronic Circuit Breaker, 8-channel, input voltage: 24 VDC, 2 ... 10 A adjustable, communication capability, specialty configuration

Item No.	Pack. Unit
787-1668/000-004	1

Group signal S3 reports "channel switched off" and "tripped channel"



Similar to pictured device



EPSITRON® Electronic Circuit Breaker, 8-channel, input voltage: 24 VDC, 2 ... 10 A adjustable, potential-free signal contact 13/14, specialty configuration

Item No.	Pack. Unit
787-1668/000-054	1

Potential-free signal contact 13 / 14 reports "channel switched off" and "tripped channel"; does not support communication via pulse sequence

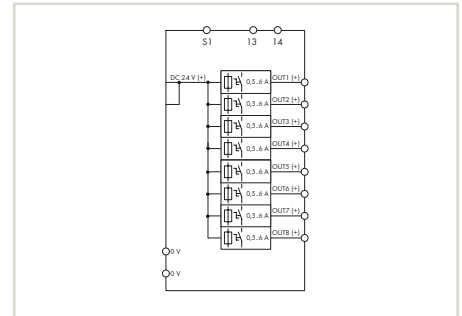
## Electrical Data

Nominal current	Max. 8 x 10 ADC, (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
Factory preset	2 ADC (when switched off)
Voltage drop	200 mV at 10 A
Trip time	Load-dependent (16 ms ... 100 s)
Switch-on behavior	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Power loss P <sub>v</sub>	1.3 W (stand-by) / 20 W (nominal load)
Derating	≥ +50 °C: see instruction manual
Signaling	
<b>Mechanical Data</b>	
Weight	420 g
<b>General Specifications</b>	
Standards/Approvals	UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3

Nominal current	Max. 10 ADC per channel; max. 70 ADC in total (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
Factory preset	2 ADC (when switched off)
Voltage drop	200 mV at 10 A
Trip time	Load-dependent (16 ms ... 100 s)
Switch-on behavior	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Power loss P <sub>v</sub>	1.32 W (stand-by) / 20 W (at 8 x 10 A)
Derating	≥ +50 °C: see instruction manual
Signaling	Potential-free signal contact 13 / 14, max. 58 VDC / 40 A AC, 100 mA
<b>Mechanical Data</b>	
Weight	440 g
<b>General Specifications</b>	
Standards/Approvals	UL 508 *, UL 2367 *, GL *, EN 60950, EN 61000-6-2, EN 61000-6-3 (* pending)



Similar to pictured device



**EPSITRON®** Electronic Circuit Breaker,  
8-channel, input voltage: 24 VDC,  
0.5 ... 6 A adjustable, potential-free signal contact  
13/14

Item No.	Pack. Unit
787-1668/106-054	1

Potential-free signal contact 13 / 14 reports "channel switched off" and "tripped channel"; does not support communication via pulse sequence

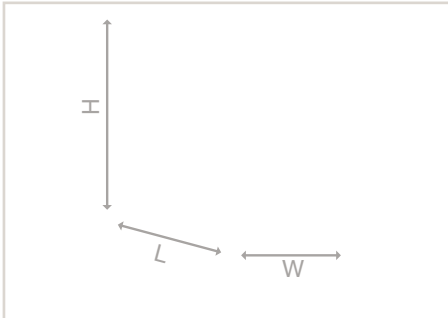
#### Electrical Data

Nominal current	Max. 8 x 6 ADC, (0.5, 1, 2, 3, 4, 6 A adjustable for each channel via selector switch)
Factory preset	0.5 ADC (when switched off)
Voltage drop	120 mV at 6 A
Trip time	Load-dependent (16 ms ... 100 s)
Switch-on behavior	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Power loss $P_V$	0.84 W (stand-by) / 8 W (at 8 x 6 A)
Derating	No derating
Signaling	Potential-free signal contact 13 / 14, max. 58 VDC / 40 A AC, 100 mA
<b>Mechanical Data</b>	
Weight	440 g
<b>General Specifications</b>	
Standards/Approvals	UL 508 *, UL 2367 *, GL *, EN 60950, EN 61000-6-2, EN 61000-6-3 (* pending)

## Electronic Circuit Breakers (ECB)

### EPSITRON®

### 787 Series



#### Features:

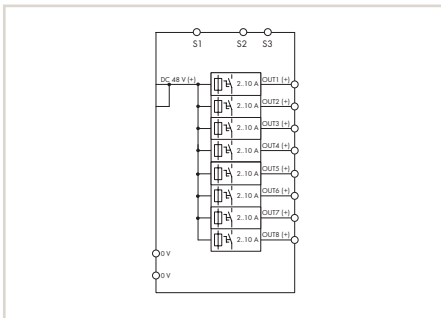
- Space-saving electronic circuit breaker with 8 channels
  - 2 ... 10 A nominal current, adjustable for each channel via sealable selector switch
  - Switch-on capacity > 23000 µF per channel
  - One illuminated, three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
  - Time-delayed switching of channels
  - Tripped message (group signal)
  - Status message for each channel via pulse sequence (only devices with communication capability)
  - Remote input for switching on/off any number of channels via pulse sequence (only devices having communication capability)
- Note: The pulse sequence only supports devices which are designated as having "communication capability"

#### Technical Data

<b>Input</b>	
Nominal input voltage $U_{i, nom}$	48 VDC
Input voltage range	32 ... 58 VDC
<b>Output</b>	
Nominal output voltage $U_{o, nom}$	8 x 48 VDC
Nominal current	Max. 10 ADC per channel; max. 70 ADC in total (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
Voltage drop	200 mV at 10 A
Trip time	Load-dependent (16 ms ... 100 s)
Switch-on capacity	> 23,000 µF per channel at 48 VDC, 2.5 mm <sup>2</sup> cable cross-section and 2.5 m cable length
Switch-on behavior	Time-delayed switching of channels (load-dependent min. 50 ms to 5 s)
Active current limitation	No
Operational indication	LED green (OK channel), LED red (tripped channel)
Signaling	8 x LED (green/red/orange)
<b>Efficiency/Power Losses</b>	
Efficiency	99 % (typ.)
Power loss $P_v$	1.3 W (stand-by) / 20 W (at 8 x 10 A)
<b>Fuse Protection</b>	
Internal fuse	15 AT per channel
<b>General Specifications</b>	
Standards/Approvals	UL 508*, UL 2367*, GL*, EN 60950, EN 61000-6-2, EN 61000-6-3 (*pending)
<b>Environmental Requirements</b>	
Ambient operating temperature	-25 ... +70 °C
Storage temperature	-25 ... +85 °C
Relative humidity	5 % ... 96 % (no condensation permissible)
Derating	≥ +50 °C: see instruction manual
Degree of pollution	2 (acc. to EN 50178)
<b>Safety and Protection</b>	
Test voltage	500 VDC (terminals to enclosure)
Protection class	III
Reverse voltage protection	No
Degree of protection	IP20 per EN 60529
Overvoltage protection	Via 68 V suppressor diode at input
Feedback voltage	Max. 58 VDC
Series connection of several devices	Not permitted
Parallel operation of single channels	Not permitted
<b>Connection and Type of Mounting</b>	
Connectors	Input (+): WAGO 831 Series Input (-), output, signaling: WAGO 721 Series
Conductor range	Input (+): 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG Input (-), output, signaling: 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	Input (+): 13 ... 15 mm / 0.51 ... 0.59 inch Input (-), output, signaling: 8 ... 9 mm / 0.31 ... 0.35 inch
Type of mounting	DIN-rail mounting (EN 60715)
<b>Dimensions and Weight</b>	
Dimensions (mm) W x H x L	42 x 127 x 142.5, Length from upper-edge of DIN-35 rail
Weight	440 g



Similar to pictured device

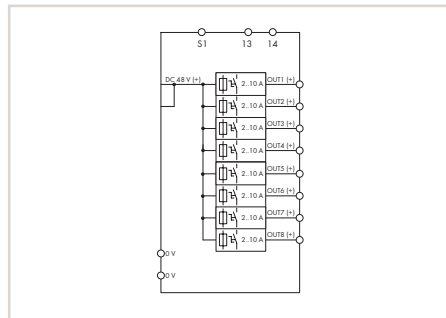


EPSITRON® Electronic Circuit Breaker, 8-channel, input voltage: 48 VDC, 2 ... 10 A adjustable, communication capability

Item No.	Pack. Unit
787-1668/000-200	1



Similar to pictured device



EPSITRON® Electronic Circuit Breaker, 8-channel, input voltage: 48 VDC, 2 ... 10 A adjustable, potential-free signal contact 13/14

Item No.	Pack. Unit
787-1668/000-250	1

Potential-free signal contact 13 / 14 reports "channel switched off" and "tripped channel"; does not support communication via pulse sequence

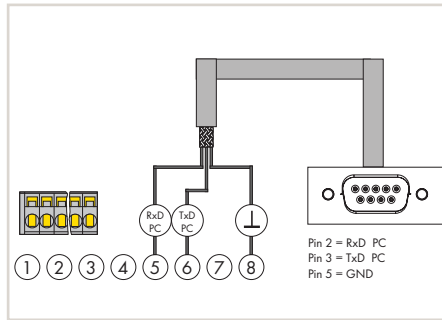
**Electrical Data**

Remote input	Reactivation of all tripped channels via 15 ... 58 VDC pulse for min. 500 ms Switching on/off any number of channels via pulse sequence.
Signaling	

	Reactivation of all tripped channels via 15 ... 58 VDC pulse for min. 500 ms
	Potential-free signal contact 13 / 14, max. 58 VDC / 40 A AC, 100 mA

## Accessories

### EPSITRON® Communication Cable with an RS-232 Interface 787 Series



Similar to pictured device

Wiring diagram shows 787-890

The communication cables are used for configuration and visualization via PC or controller. The communication cables are suitable for 787-1675 or all 787-8xx Series devices equipped with an RS-232 serial interface. Download the corresponding PC software for all 787 Series devices at [www.wago.com/epsitron](http://www.wago.com/epsitron).

Function blocks for communication with the WAGO-I/O-SYSTEM 750 and other control systems are also available.

**Note:** The 787-890 or 787-892 Communication Cables are not electrically isolated.

#### Technical Data

Type of signal

Connectors

Isolation

Conductor range

Ambient operating temperature

Degree of protection

Length

Serial Signal (RS-232)

1 x 8-pole 733-108 Female Connector with strain relief (module side, 787-890, 787-8xx), or 1 x 4-pole 734-104 Female Connector with strain relief (787-892 module side, 787-1675), 1 x 9-pole D-sub female connector (PC/controller side)

No

3 x 0.34 mm<sup>2</sup> (AWG 22), shielded

-10 ... +70 °C

IP20

1.8 m

#### Communication cable with an RS-232 interface

for	Item No.	Pack. Unit
787-8xx	787-890	1
787-1675	787-892	1

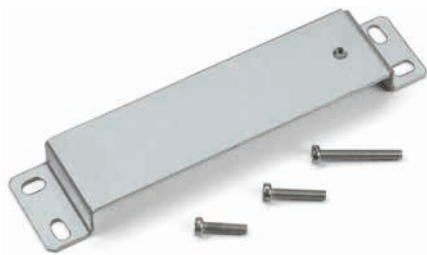


## Accessories

### EPSITRON® Wall-Mount Adapter/Carrier Rail Adapters

#### 787 Series

##### EPSITRON® Wall-Mount Adapter



The 787-895 Wall-Mount Adapter secures 787-8xx devices on mounting plate or wall without DIN-35 rail. This adapter replaces the rail support of the 787-8xx device. The adapter is secured to the 787-8xx device via provided screws.

#### Technical Data

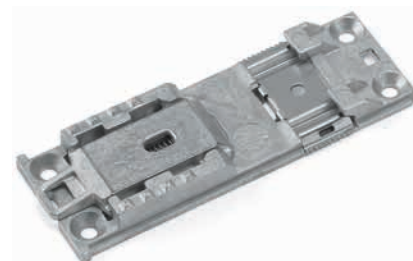
Material	Galvanized sheet steel
Dimensions (mm) W x H x L	35 x 15 x 158.5
Fixing	Mounting holes: 4 slots, 5.3 mm x 9 mm Mounting hole spacing: 143 mm x 19.5 mm
Included	Wall-mount adapter 1x screw M4 x 16 1x screw M4 x 20 1x screw M4 x 30

Wall-mount adapter, secures 787-8xx devices on a mounting plate or wall, without DIN-35 rail

Item No.	Pack. Unit
787-895	5

5

### EPSITRON® Carrier Rail Adapters



Carrier rail adapter for mounting 787-8xx devices to a DIN-35 rail. The 787-896 Carrier Rail Adapter allows both the vertical and horizontal mounting of 787-8xx devices. Mounting the adapter to the device is performed by sliding both single parts into the guide slots of the cooling element and then screwing; this allows the position to be easily changed.

Carrier rail adapter made of zinc die-cast for mounting 787-8xx devices to a DIN-35 rail. The 787-897 Carrier Rail Adapter allows horizontal mounting of 787-8xx devices. Mounting the adapter to the device is performed by sliding both single parts into the guide slots of the cooling element and then screwing; this allows the position to be easily changed. this allows the position to be easily changed.

Carrier rail adapter, for mounting 787-8xx devices to a DIN-35 rail

Item No.	Pack. Unit
787-896	1

Carrier rail adapter, Zinc die-cast, for mounting 787-8xx devices to a DIN-35 rail

Item No.	Pack. Unit
787-897	1

#### Technical Data

Material	Galvanized sheet steel
Dimensions (mm) W x H x L	35 x 136.5 x 15.5
Mounting	By sliding both single parts into the guide slot and then screwing
Included	Carrier rail adapter Assembly instructions

Material	Zinc die-cast
Dimensions (mm) W x H x L	37 x 102.5 x 10.5
Mounting	By pressing the adapter into the guide slot
Included	Carrier rail adapter Assembly instructions