



# Multi-Channel Electronic Circuit Breakers



## Features

- Space saving ECB's with two, four, and eight channels
- Models range from 0.5-10A nominal current, adjustable for each channel via sealable selector switch
- One illuminated, three color button per channel simplifies switching (on/off), resetting, and on-site diagnostics
- Time-delayed switching of channels
- NEC Class 2 3.8 A fixed models available
- Remote input resets tripped channels or switches on/off any number of channels via pulse sequence.
- Easy to use Push-In CAGE CLAMP® terminals.

## Applications

- 24VDC Circuit Protection
- PLC Input Power
- PLC I/O points
- Sensors
- Motor Controlled Circuits
- Control Instrumentation
- Relays
- Actuators
- Valves

## Overview

The electronic circuit breaker distributes and monitors the load current over several circuits. They reliably recognize overloads and short circuits on an output. The circuit breakers' electronics permit brief current peaks and switch longer overloads off. The rated current for each output can be individually set with a current selector switch, which is accessible from the front. The outputs are time-delay and load-dependant activated to avoid overload current. If the rated current is exceeded for a set time, the output will be switched off automatically and can be switched on after a waiting time (thermal relaxation) using the pushbutton or the remote signal-input S1. The pushbutton can also be used to switch the output manually. The state of each output is also indicated with a multi-colored LED. Upon overload, the remaining circuits are separated from the defective current path without reverse feed, thanks to **Active Current Limiting**. A drop in voltage will not hinder the reliability of the respective circuit.

Multiple Channel Electronic Circuit Breaker Selection Chart

Part Number	Price	Channel Units	Weight	Nominal Output Current	Mounting	Output Voltage	Active Current Limitation	Connection	Wiring	Dimensions
<a href="#">787-1662-004-1000</a>	\$199.00	2	200g (0.44 lbs)	3.8 A Per Channel	35mm DIN Rail	24 VDC	Yes, NEC Class 2	Push-in CAGE CLAMP®	Diagram 2	PDF
<a href="#">787-1662-006-1000</a>	\$179.00	2	170g (0.37 lbs)	0.5-6 A Per Channel			Yes		Diagram 1	PDF
<a href="#">787-1662-106-000</a>	\$143.00	2	170g (0.37 lbs)	1-6 A Per Channel			No		Diagram 3	PDF
<a href="#">787-1662</a>	\$143.00	2	200g (0.44 lbs)	2-10 A Per Channel			No		Diagram 4	PDF
<a href="#">787-1664-004-1000</a>	\$278.00	4	205g (0.45 lbs)	3.8 A Per Channel			Yes, NEC Class 2		Diagram 6	PDF
<a href="#">787-1664-006-1000</a>	\$247.00	4	170g (0.37 lbs)	0.5-6 A Per Channel			Yes		Diagram 5	PDF
<a href="#">787-1664-106-000</a>	\$184.00	4	210g (0.46 lbs)	1-6 A Per Channel			No		Diagram 7	PDF
<a href="#">787-1664</a>	\$176.00	4	170g (0.37 lbs)	2-10 A Per Channel			No		Diagram 8	PDF
<a href="#">787-1668-006-1000</a>	\$420.00	8	440g (0.97 lbs)	0.5-6 A Per Channel			Yes		Diagram 9	PDF
<a href="#">787-1668-106-000</a>	\$296.00	8	490g (1.08 lbs)	1-6 A Per Channel			No		Diagram 10	PDF
<a href="#">787-1668</a>	\$296.00	8	440g (0.97 lbs)	2-10 A Per Channel			No		Diagram 11	PDF



# Multi-Channel Electronic Circuit Breakers

Multiple Channel ECB Specifications	
<b>Nominal Input Voltage</b>	24VDC
<b>Input Voltage Range</b>	18 – 30 VDC
<b>Total Number of Channels</b>	See Selection Chart
<b>Nominal Output Voltage</b>	24VDC
<b>Output Voltage Range</b>	18 – 30 VDC
<b>Voltage Drop</b>	See Product Insert
<b>Nominal Output Current</b>	See Selection Chart
<b>Trip Time</b>	16 ms to 5s (Load-dependent)
<b>Switch-On Capacity</b>	See Product Insert
<b>Switch-On Behavior</b>	Time-delayed channel switching (Load-dependent, min. 50ms / max. 5s )
<b>Active Current Limitation</b>	See Selection Chart
<b>Signaling</b>	2,4, or 8 x Status LED (green/yellow/red) 1 x Control input 2 x active signal output (U <sub>i</sub> max. 4 mA)
<b>Operation Status Indicator</b>	See LED Operation Table Below
<b>Remote Input</b>	18 – 30 VDC signal, for 500ms switches on/off and resets the tripped channels
<b>Fuse Protection</b>	15 A (Internal Fuse)
<b>Isolation Voltage</b>	DC 0.5 kV
<b>Protection Type</b>	IP20 (per EN 60529)
<b>Reverse Voltage Protection</b>	No
<b>Transient Suppression</b>	Suppressor diode (33V)
<b>Series/Parallel Operation of Single Channels</b>	Not Permitted
<b>Tightening Torque</b>	N/A
<b>Weight</b>	See Selection Chart
<b>Connectors</b>	Push-In CAGE CLAMP®, Input (+) 20-8AWG, Input (-), Output, Signaling 28-12 AWG
<b>Agency Approvals</b>	EN 60950; EN 61000-6-2; EN 61000-6-3; UL 508; UL 2367; DNV GL; CE; RoHS
<b>Surrounding Air Temperature (Operation)</b>	-25 to 70°C (-13 to 158°F)
<b>Surrounding Air Temperature (Storage)</b>	-25 to 85°C (-13 to 185°F)
<b>Relative Humidity</b>	5 to 96% (no condensation permissible)
<b>Derating</b>	No derating Models **787-1664 & 787-1668 (greater than or equal to 50°C (122°F); see instruction manual)
<b>Pollution Degree</b>	2

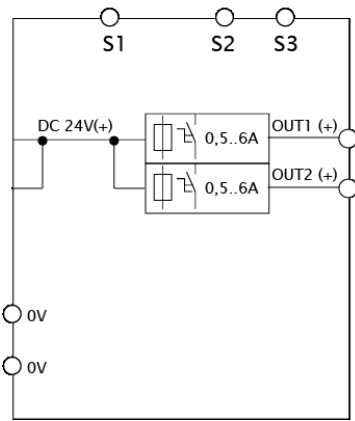
LED Operation		
State/Description	Output	LED
<b>Initialization</b>	Off	Off
<b>Output on, function OK</b>	On	Green
<b>Output Current &gt; rated current</b>	On	Green flashing
<b>Output was switched off manually or through signal input S1</b>	Off	Red
<b>Output was switched off automatically (over current), thermal relaxation active</b>	Off	Red flashing
<b>Output was switched off automatically (over current), thermal relaxation finished</b>	Off	Orange flashing
<b>Output malfunction (internal fuse blown)</b>	Off	Red flashing fast



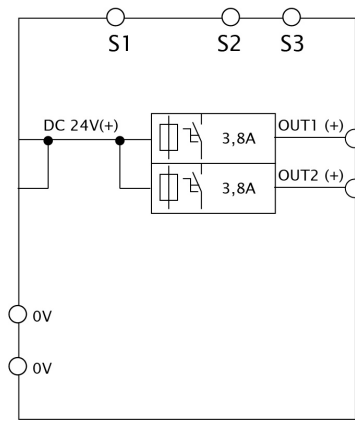
# Multi-Channel Electronic Circuit Breakers

## Wiring Diagrams

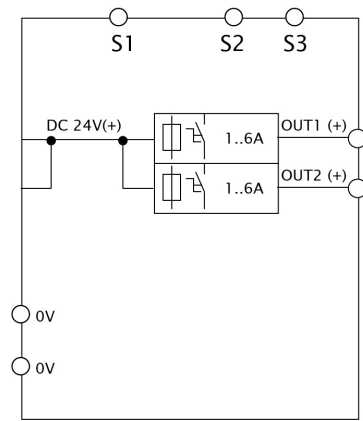
### Diagram 1



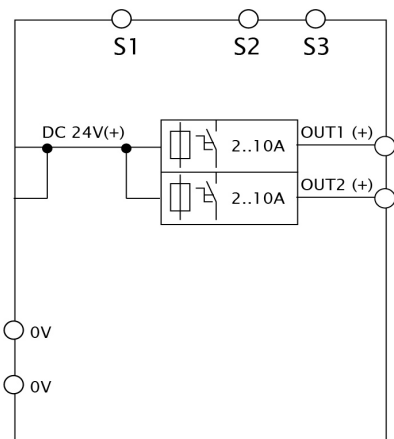
### Diagram 2



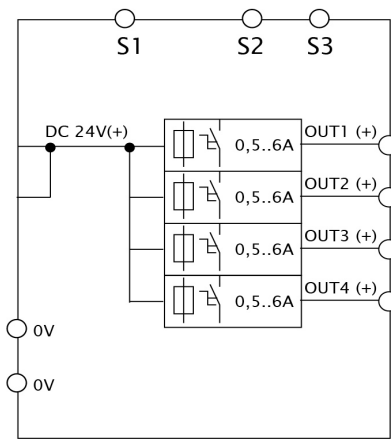
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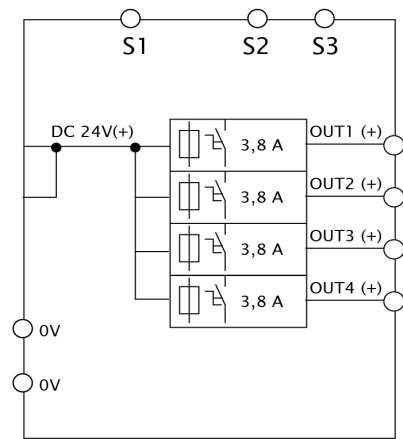
### Diagram 4



### Diagram 5



### Diagram 6

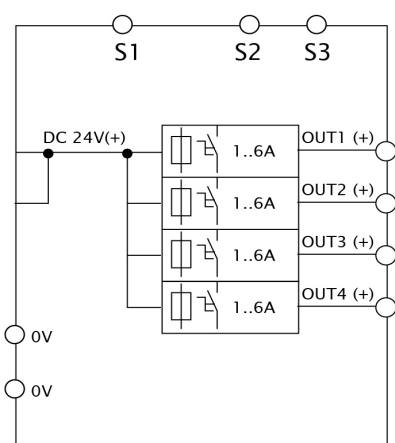




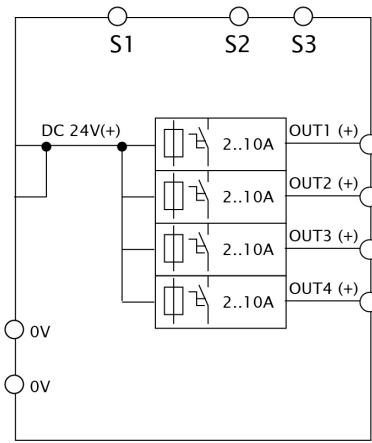
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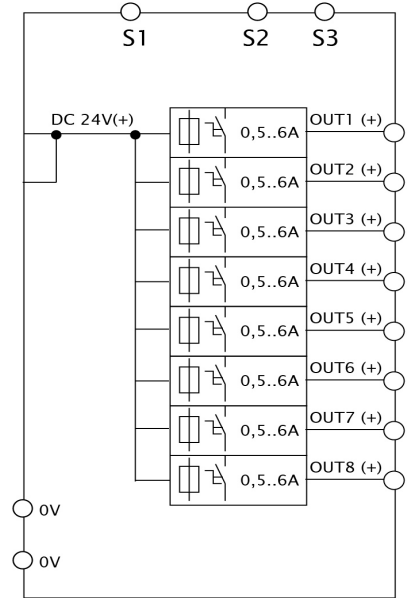
### Diagram 7



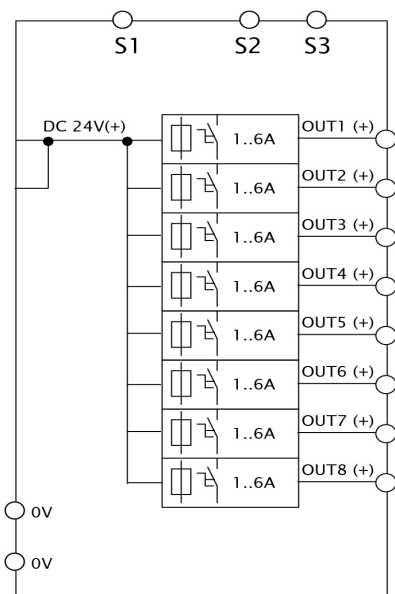
### Diagram 8



### Diagram 9



### Diagram 10



### Diagram 11

