

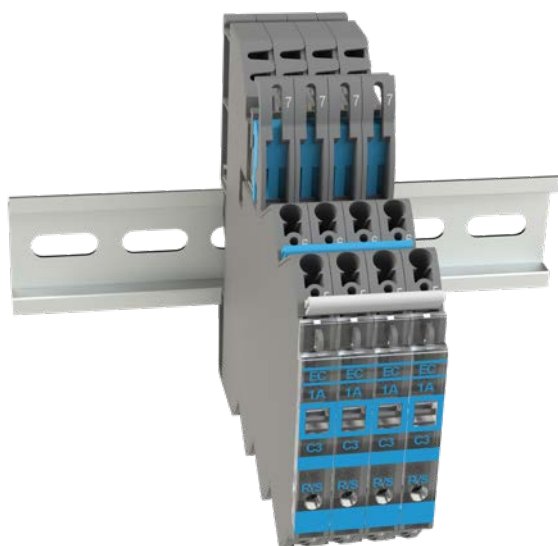
Circuit Protectors GECP Series

Electronic Circuit Protectors Overview

The Gladiator electronic circuit protectors (ECP's), provide reliable load monitoring and protection in 24VDC control circuits. The GECP-1CH-1-10A features include adjustable trip current range (1-10A), patented adjustable characteristics fast, medium, slow 1, slow 2, and slow 3. All ECP's output alarm signal at 90% of the load setting, remote set/reset. In addition to factory floor applications, the ECP's serve well in remote locations and other hard to access applications. Narrow construction ensures compact design even with multi-channel configurations. No derating required as Gladiator ECP's function independently of ambient temperature.

Features

- LED status indicator at 90% of the overload ratio
- Output trip alarm
- LED status indicator on/off/alarm
- Remote Set/Reset
- Ideal for remote locations
- Independent of ambient temperature, no derating required
- 35mm DIN rail mounting
- 5-year warranty



GECP-1CH-1-10A

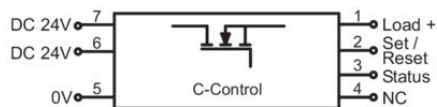
Single Channel Electronic Circuit Protectors

Part Number	Price	Voltage Rating	Amperage Rating	Number Of Channels	Input Voltage	Output Voltage	Trip Curve	Connection	Mounting	Drawing Link
<u>GECP-1CH-1-10A</u>	\$5ve2:	12/24 VDC	1-10A Adjustable	1	10-30 VDC	10-30 VDC	Selectable	Spring terminals	35mm DIN rail	<u>PDF</u>
<u>GECP-1CH-1A</u>	\$5ve3:	12/24 VDC	1A	1	10-30 VDC	10-30 VDC	Slow 1 curve	Spring terminals	35mm DIN rail	<u>PDF</u>
<u>GECP-1CH-2A</u>	\$5ve4:	12/24 VDC	2A	1	10-30 VDC	10-30 VDC	Slow 1 curve	Spring terminals	35mm DIN rail	<u>PDF</u>
<u>GECP-1CH-4A</u>	\$5ve5:	12/24 VDC	4A	1	10-30 VDC	10-30 VDC	Slow 1 curve	Spring terminals	35mm DIN rail	<u>PDF</u>
<u>GECP-1CH-6A</u>	\$5ve6:	12/24 VDC	6A	1	10-30 VDC	10-30 VDC	Slow 1 curve	Spring terminals	35mm DIN rail	<u>PDF</u>
<u>GECP-1CH-8A</u>	\$5ve9:	12/24 VDC	8A	1	10-30 VDC	10-30 VDC	Slow 1 curve	Spring terminals	35mm DIN rail	<u>PDF</u>

Max 40A per system when using with supply set [GECP-24V-SS](#).

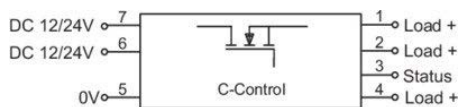
Wiring Diagrams

GECP-1CH-1-10A



- 1: + Output
- 2: Control input (Set/Reset)
- 3: Status output
- 4: NC
- 5: 0V
- 6: + Supply (alternative)
- 7: + Supply

GECP-1CH-1A, GECP-1CH-2A, GECP-1CH-4A, GECP-1CH-6A, GECP-1CH-8A



- 1: + Output
- 2: + Output
- 3: Status output
- 4: + Output
- 5: 0V
- 6: + Supply (alternative)
- 7: + Supply

LED Operation

Status LED	Explanation
LED Green, [ON]	Function is OK*
LED Green, Flashing 1Hz [Overload]	Load about 90% of 1 nominal
LED Green, Flashing 5Hz [Overload]	Load above 100% of 1 nominal
LED Red, [OFF]	Module switched off or acknowledged*
LED Red, Flashing 1Hz [Overload]	Output off due to overload/short circuit*
LED Red, Flashing 5Hz [Error]	Wiring error - feedback (internal error)
LED Red, Flashing Shortly [OFF]	Output off via remote set/reset
LED Red/Green, Flashing 1Hz [ON]	Target settings via rotary switch deviate from actual settings: NOTICE: Switching off and on via pushbutton required.
Button*** [ON/OFF]	Nominal operation: ON/OFF Load monitoring tripped: 1st push: acknowledge 2nd push: ON
Rotary Switch (I) - Switch Position**	GECP-1CH-1-10A - current adjustment 1-10A
Rotary Switch (C) - Switch Position**	Characteristic: 1: Fast, 2: Medium, 3: Slow-1, 4: Slow-2, 5: Slow-3

* If the operating voltage is switched off, the last status is saved. (Default)

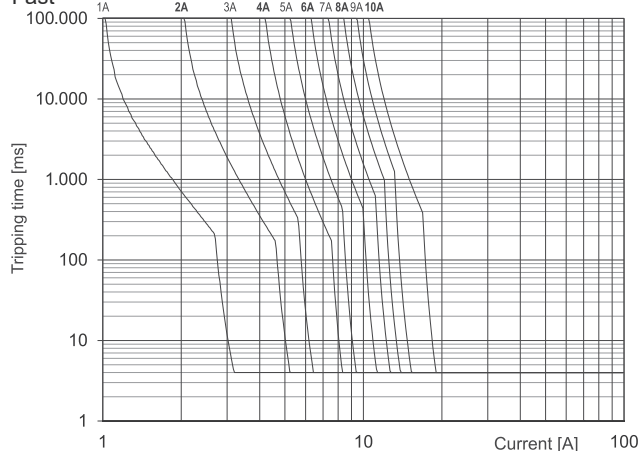
** Accept the setting - after switching on again via the button, not by Remote Set/Reset.

*** Master Function - switch off via pushbutton, can only be switched on again via pushbutton.

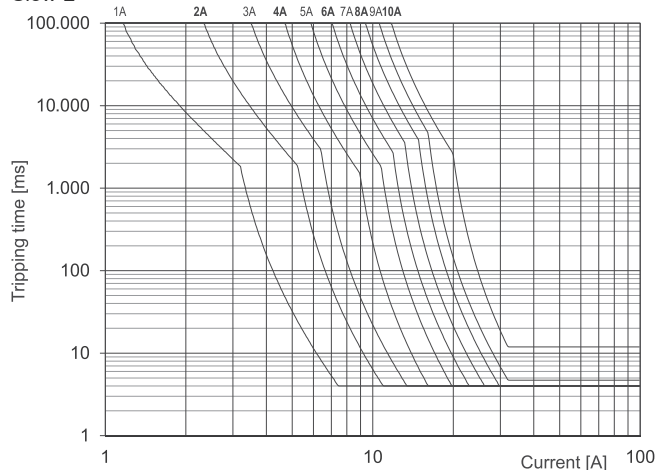
Characteristic Curves

NOTICE: Standard characteristics are shown here.

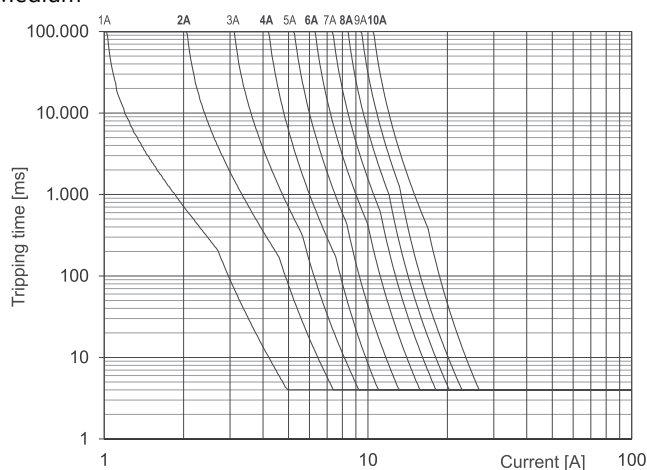
Fast



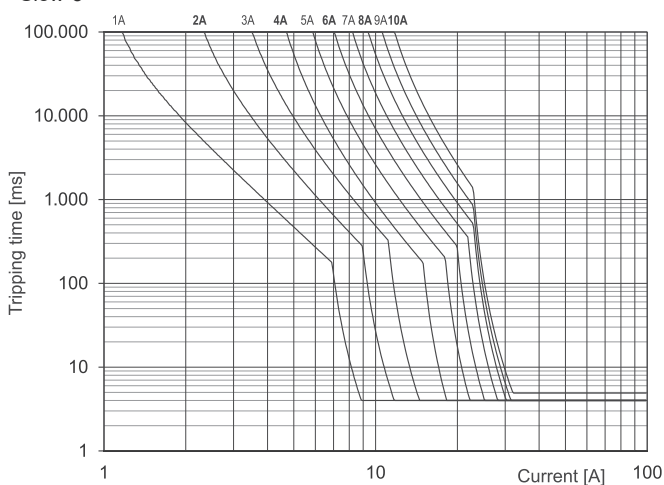
Slow-2



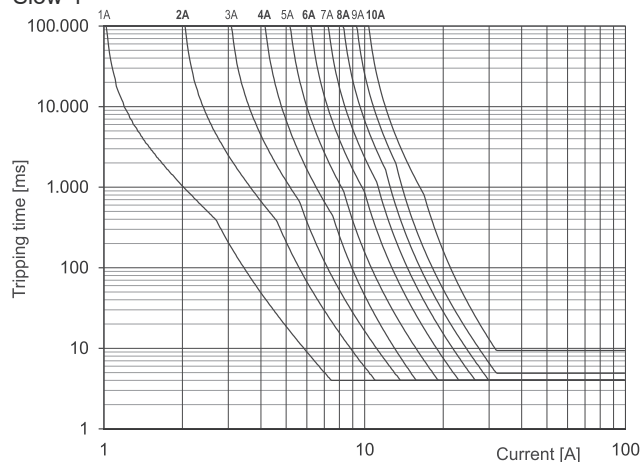
Medium



Slow-3



Slow-1



Technical Data

NOTICE: Always refer to the respective current data sheet.
This can be found on the product page of the product.

GECP Series Circuit Protectors

Supply Terminals

Overview

The GECP-24V-SS is used to supply 24V to the Electronic Circuit Protectors (ECP's) via 4- or 8-pin busbar, or by jumpering to the ECP's in the system.

The [GECP-0V-TERM](#) is used to bus together 0V signal to the ECP's in the system.

Features

- Single-channel design
- 40A maximum amperage rating
- 0VDC or 24VDC operating voltage
- 35mm DIN rail mounting



[GECP-24V-SS](#)



[GECP-0V-TERM](#)

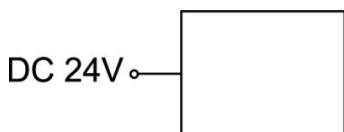


Supply Terminals					
Part Number	Price	Amperage Rating	Operating Voltage	Mounting	Drawing Link
GECP-24V-SS	\$5veb:	40A	24VDC	35mm DIN rail	PDF
GECP-0V-TERM	\$5vea:	40A	0VDC		PDF

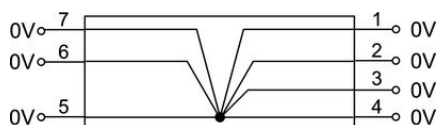
Note: End block included with [GECP-24V-SS](#).

Wiring Diagrams

[GECP-24V-SS](#)



[GECP-0V-TERM](#)



GECP Series Specifications

Specifications				
Part Number	GECP-1CH-1-10A	GECP-1CH-xA	GECP-0V-TERM	GECP-24V-SS
Input				
Voltage Rating U_N	12/24 VDC		12/24 VDC	12/24/48 VDC
Operation Voltage Range	10-30 VDC		—	
Total Number of Channels	1		—	
Rated Current I_N	DC 10A		DC 10A 6 x max	DC 40A max
Supply Current	DC 40A over Cu-rails 10 x 3 mm		—	
Reverse Voltage Protection	Internal electronics		No	
Connection Type Input	Screwless contact slide		—	Push-in 0.5 mm ² – 10mm ² UL Values/stranded 14-8 AWG
Conductor Cross Section	—		Single-wire: max. 10mm ² Finely stranded: max 10mm ² Finely stranded with AEH: max 6mm ²	
Control Input (Set/Reset)				
Signal Level	12/24 VDC according to EN 61131	—		
OFF	Pulse with falling edge > 100ms, < 800ms	—		
ON	Pulse with falling edge > 1s	—		
Output				
Voltage Rating U_n	—			12/24/48 VDC
Switching Element	MOSFET		—	
Output Current	DC 10A max		DC 40A max	
Voltage Drop	215 mV max (10A)		—	
Status Display Output	LED green: operating voltage present - no error LED red: error in load circuit		—	
Switch-on Capacity	10,000 µF		—	
Current Range	1 to 10A (Adjustable)	1 to 8A (see selection chart)	—	
Characteristic	Fast (1), Medium (2), slow 1(3), slow 2 (4), slow 3 (5)		—	
Connection Type Output	—			Screwless Contact Slide
Copper Bus Bar	—			3 x 10mm
Signal Output				
Signal Level	12–24VDC: operating voltage on standby, no error 0VDC: error, output switched off or manual “OFF”		—	
Switching Element	Transistor, collector with pull-up resistance		—	
General				
Housing Material	PA 6.6 (UL 94 V-0, NFF I2, F2)			
Housing Color	Gray			
Mounting	35mm DIN rail mountable (EN 60715)			
Mounting Position	Any			
Degree Of Protection	IP20			
Connection Type	Push-In 0.25 – 2.5 mm ² [24-14 AWG]			Push-In single wire/fine wire 0.50 – 10.0 mm ² [22-7 AWG] Fine stranded wire with ferrule, Finely stranded, ferrule with plastic collar 0.5 – 6mm ² [22-9 AWG] UL Values 14-8 AWG
Weight	0.102 kg [0.22 lbs]	0.105 kg [0.23 lbs]	0.102 kg [0.22 lbs]	0.07 kg [0.15 lbs]
Operating Temperature	-25 to 70°C [-13 to 158°F]	-25 to 50°C [-13 to 122°F]		
Storage Temperature	-40 to 85°C [-40 to 185°F]			
Relative Air Humidity	10 – 95% RH			
Vibration Resistance	4g according to EN 60068-2-6			
Shock resistance	15g according to EN 60068-2-27			
Certifications / Standards	CE, UKCA, UR (E530981), cULus (E191072), EN 61000-6-2, EN 61000-6-3, EN 61131-2 UL 60947-5-1	UR (E530981), cULus (E191072), EN60950-1, EN61131-1,2 EN61000, EN60947-4-1 EN55022	CE,UKCA, UR (E530981), cULus (E191072), EN 60947-1	CE, UKCA, UR (E530981), cULus (E191072) UL 60947-5-1

GECP Series Circuit Protectors

Busbar Features

- For busing power between 4 or 8 ECPs
- Copper with tin-plated surface
- 40A amperage rating
- 4- or 8-pin units available
- Must be used with 24V supply set part number [GECP-24V-SS](#)



GECP-BB-4

Busbars								
Part Number	Price	Amperage Rating	Number Of Pins	Material	Dimensions LxHxD mm [inch]	Operating And Storage Temperature	Weight	Drawing Link
GECP-BB-4	\$5ve7:	40A	4	CU, Copper tin-plated surface	50.4 x 10.0 x 3.0 [1.98 x 0.39 x 0.11]	-40 to 80°C [-40 to 176°F]	0.013 kg [0.02 lbs]	PDF
GECP-BB-8	\$5ve8:	40A	8		82.8 x 10.0 x 3.0 [3.25 x 0.39 x 0.11]		0.022 kg [0.04 lbs]	PDF

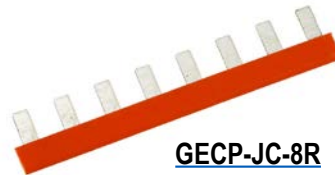
Note: Cut to length permitted.

Jumper Comb Features

- For jumpering status outputs, 0V input, or for the set / reset terminals
- 6A amperage rating
- Push-in terminals
- 8-pole
- PVC material with FeZn contacts
- Blue - normally used for 24V
- Red - normally used for signal
- White - normally used for 0V



GECP-JC-8B



GECP-JC-8R



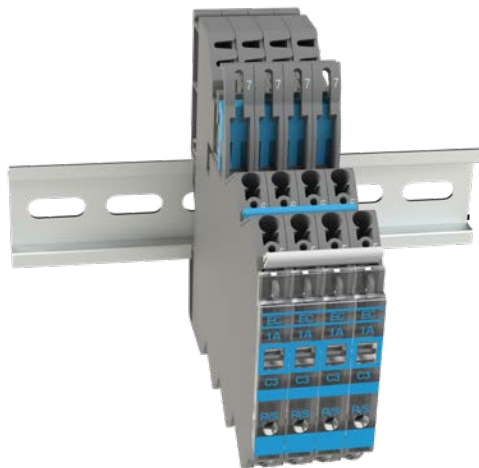
GECP-JC-8W

Insulated Jumper Combs											
Part Number	Price	Quantity	Amperage Rating	Type	Number Of Poles	Material	Operating Temperature	Storage Temperature	Weight	Color	Drawing Link
GECP-JC-8B	\$5vee:	1	6A	Push-in	8	PVC	-25 to 50°C [-13 to 122°F]	-40 to 85°C [-40 to 185°F]	0.003 kg [0.0006 lbs]	Blue	PDF
GECP-JC-8R	\$5ved:	1	6A	Push-in	8					Red	PDF
GECP-JC-8W	\$5vec:	1	6A	Push-in	8		-40 to 85°C [-40 to 185°F]			White	PDF

Note: Cut to length permitted.

GECP Series Circuit Protectors

Standalone System



1-Channel Protection Modules
 Fixed - 1, 2, 4, 6 and 8A
 Adjustable: 1-10A

Protection modules are standalone or can be integrated into a modular system using supply and ground modules

-See below

Modular System

