SIGNEXT® SSR
DC SSR and Current Limiter

- **DC solid state relay rated up to 20A**
- **Includes overcurrent protection with user adjustable threshold**
- **Digital output when current threshold is exceeded**
- **Mounts on 32mm and 35mm DIN rails**

We're not sure if this is a DC solid state relay with an overcurrent protection feature or an electronic DC circuit breaker with a relay function. Either way, it can control 24Vdc loads rated up to 20A, senses the load current and turns off if the current exceeds a user configurable trip point.

Using a 24Vdc control signal the load current can be turned on and off. The user can set a load current threshold (or trip point) above which the module turns off. Resetting the module after an overcurrent condition can be accomplished 3 ways:

- Pulsing the RST terminal with 24Vdc
- Pressing the on-board reset pushbutton
- Cycling the 24Vdc supply

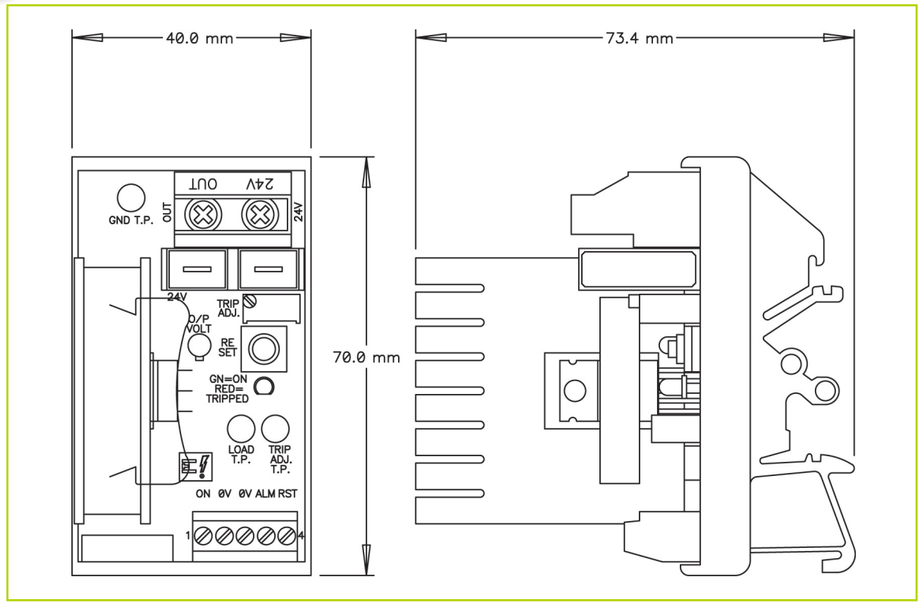
The trip point is adjusted using a multi-turn potentiometer. How does the user know what trip current level they have set it for? There are 2 methods. The first is to connect a voltmeter between 2 test points (mini-banana plug jacks) and calculating the trip point using the equation $V_{TEST} = I_{TRIP} \times 0.185$. A more accurate method involving applying a known load current and adjusting the trip point to an actual measured value is also possible (see "Adjustment" section on reverse).

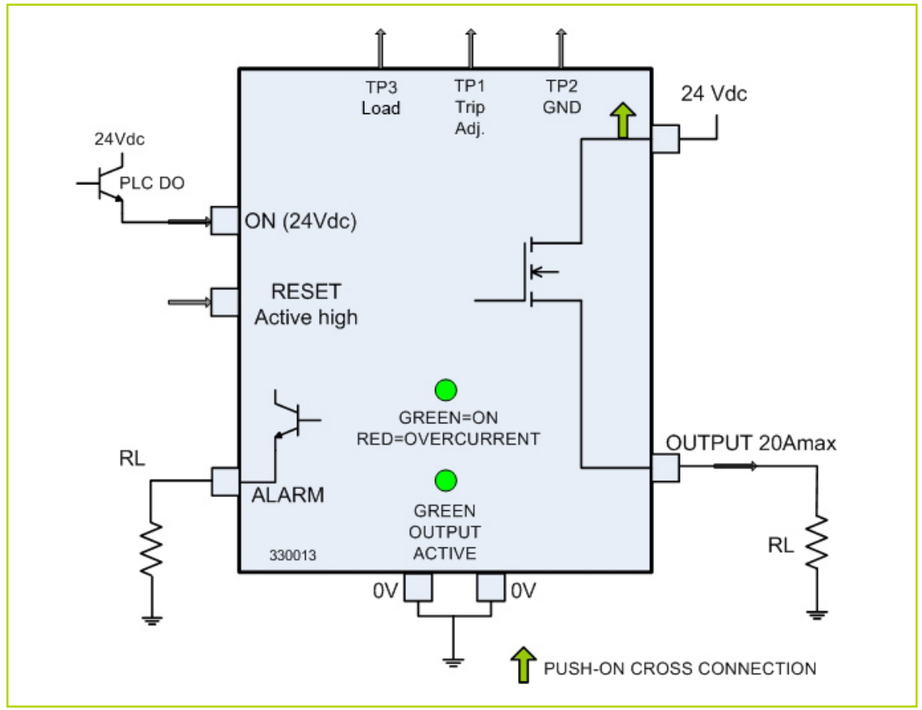
Other features include a trip alarm output, status LED and a cross connection method that allows 24Vdc to be bussed to multiple modules. The module mounts on both 32mm and 35mm DIN rails and requires only 40mm of rail space.

115 Anderson Ave. Markham ON L6E 1A4 www.emphatec.com

SPECIFICATIONS

Catalog number	330013
Supply Voltage:	24Vdc nominal, 20-28Vdc
Current:	20A max. via screw terminals 15A max. via push-on terminals
Wire size:	26-10AWG via screw terminals 16-14AWG using female crimp terminal
Output (load) voltage:	supply voltage - VDROP across output
VDROP across output:	=10mΩ nominal x ILOAD (0.14V @ 20A)
Continuous current:	=supply current max. (automatic turn-off if ILOAD≥ 25A nominal, red “TRIP” LED is not energized in automatic off mode)
Surge current:	25A max.
Type:	mosfet
Wire size:	26-10 AWG via screw terminals
Alarm voltage:	24Vdc nominal sourcing via “TRP” terminal
Alarm current:	50mA max.
Alarm function:	Active while unit is in overcurrent trip condition
Wire size:	26-12AWG
Control voltage:	24Vdc±10%
Control current:	2mA max.
Control function:	Energizing “ON” terminal turns SSR on (active high)
Wire size:	26-12AWG
Current trip point threshold:	0.5-20A
Function:	Output is switched off and remains off (latched) until module is reset
Adjustment:	Via “Trip Adj.” Potentiometer, trip point can be determined by measuring the voltage between test points (black=0V, red=VTEST); VTEST=ITRIP x 0.185. Some typical values are as follows: ITRIP VTEST 1.0 0.185 Vdc 2.0 0.370 2.5 0.463 3.0 0.555 5.0 0.925 7.5 1.388 10 1.850 12 2.220 15 2.775 20 3.700 An alternative and more accurate adjustment method is to apply the desired load current to the output, measuring the voltage at the white “Load T.P.” Test point and setting the trip adj. voltage to the Load T.P. Voltage + 10%
Switching time:	<120ms (total time to detect ILOAD>ITRIP and to switch off mosfet output)
Reset:	Via pushbutton or “RST” terminal (24Vdc @ 5mA). Cycling the supply will also reset the module.
Reset terminal wire size:	26-12AWG
Status LED’s “ON”	Indicates supply voltage is present green = control is energized, red = unit is latched off (ALM terminal is active)
Status LED’s “TRIP”:	green = control is energized, red = unit is latched off (ALM terminal is active)
Mounting:	32mm or 35mm DIN rail
Operating temperature:	-20° to +70° C.
Approvals:	c UL us LISTED E256770

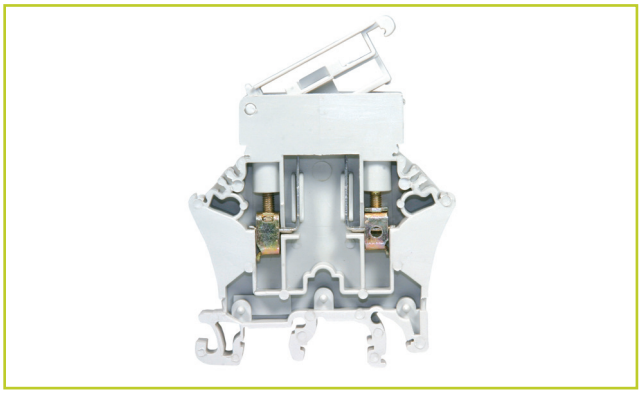




Other Overcurrent Protection Products

SIGNEXT® 8 Channel Circuit Breaker Module
- 8 circuit breakers in a 35mm wide package
- remote on/off and manual reset
- intended for 24Vdc applications

DEPRO® BC5F Class 1 Division 2 Certified Fuse Terminal
- accepts 5 x 20mm fuse up to 10A
- combifoot; mounts on 15, 32 and 35mm DIN rails



SIGNEXT® TB5F Fuse Terminal with Status Indication
- 5x20mm fuse rated up to 10A\low leakage current blown fuse indication
- Zero leakage current fuse status indication
- 6mm wide