

# Emphatec SigNext®/DePro®/DCPlus® - ADM

## Active Diode Modules



Weidmuller's Active Diode Modules provide the function of a diode but do not actually contain a diode. Instead a MOSFET is configured to behave like a diode but with a significantly lower forward voltage drop. This means less power dissipation and a more efficient design.

Diodes are often connected to the output of a power supply to isolate the supply in the event of an internal failure. This is particularly common when multiple power supplies are connected in parallel for redundancy or increased capacity. If a component in one power supply fails in a short circuit condition it must be isolated so that it does not short the output of any of power supplies connected in parallel. A diode does this by preventing current to flow to the input of the failed power supply. Typical diodes introduce a voltage drop of approximately 0.7V or 0.3V in the case of Schottky diodes. This means between 0.3W and 0.7W per amp of load current applied to the power supply. This can contribute greatly to the ambient temperature within a control cabinet.

The Active Diode Modules replace the diode with a MOSFET and lower the voltage drop to 50mV maximum. This means 1.25W of power dissipation at 25A versus 7.5-17.5W when traditional diodes are used. The result is a cooler control cabinet and a higher ambient operating temperature for the Active Diode Modules.

### Features

- Diode module for redundant power supply applications
- Emphatec SigNext® version for standard applications
- Emphatec DePro® and DCPlus® version for C1D2 applications
- 25A maximum current rating
- Low power dissipation: **just 1.25W at 25A!**

Two versions are available – the Emphatec SigNext® version is cULus approved for use in standard applications while the Emphatec DePro® version and Emphatec DCPlus® version are cCSAus approved for use in Class 1 Division 2 / Zone 2 hazardous locations.

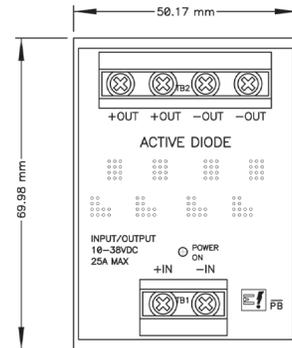
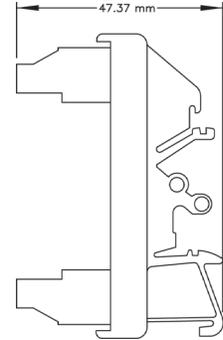
### Ordering Data

Type	Order Number
Emphatec SigNext® - ADM/25A	<b>330283</b>
Emphatec DePro® - ADM/25A	<b>330345</b>
Emphatec DCPlus® - ADM/15A	<b>330392</b>

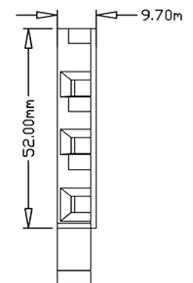
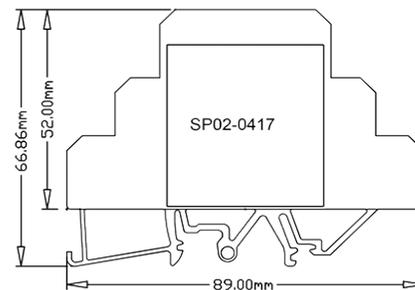
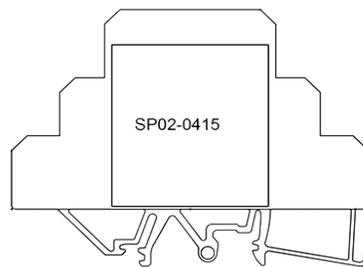
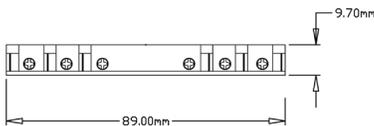
## Technical Data

Emphatec SigNext® / DePro®/DCPlus® - ADM : Active Diode Modules			
Order Number	330283 - SigNext® ADM	330345 - DePro® ADM	330392 - DCPlus® ADM
Voltage:	10-38Vdc		12-32Vdc
Current - Continuous:	25A		15A
Current - Surge:	100A, 300µs		50A, 300µs
Voltage drop across module (input-output):	30-35mV @ ≤5A <40mV @ 10A <45mV @ 15A 50mV max. @ 20A or higher		<45mV @ 15A
Reverse polarity protection:	Automatically switches off if input polarity is reversed. Resets when polarity is corrected		
LED:	Green, indicates input power is applied and polarity is correct		
Reverse breakdown voltage:	30V min.		32Vdc min.
Temperature - operating:	-20°C to +65°C @ 25A		-20°C to +40°C operating
Terminations:	Screw terminals, 26-10AWG 0.5-0.6Nm torque 7mm stripping length Multiple output terminals (2 x "+", 2 x "-")		26-12 AWG 0.5-0.6N tightening torque 6mm stripping length
Approvals (Pending):	cULus Listed (UL508, CSA No.14)	cCSAus Class 1 Division 2, Groups A,B,C and D Temperature code T4A Zone 2, Ex nA IIC	cCSAus Class 1 Division 2, Groups A, B, C and D Temperature code T6 Ex nA IIC Zone 2, AEx nA IIC

#330283



#330392



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Subject to technical changes

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