



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

Emphatec'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.

Two versions are available – the SIGNEXT® version is cULus approved for use in standard applications while the DEPRO® version is cCSAus approved for use in Class 1 Division 2 / Zone 2 hazardous locations.

Ordering information

SIGNEXT® - ADM	330283
DEPRO® - ADM	330345

SIGNEXT® / DEPRO® - ADM	
Catalog Number:	SIGNEXT® Active Diode Module: 330283
	DEPRO® Active Diode Module: 330345
Voltage:	10-38Vdc
Current	25A
Continuous:	100A, 300µs
Surge:	
Voltage drop across module (input-output):	30-35mV @ ≤5A <40mV @ 10A <45mV @ 15A 50mV max. @ 20A or higher
Reverse polarity protection:	Automatically switches off if input polarity is reversed. Resets when polarity is corrected
Status LED:	Green, indicates input power is applied and polarity is correct
Reverse breakdown voltage:	30V min.
Operating ambient temperature:	-20 to +65 deg C @ 25A
Terminations:	Screw terminals, 26-10AWG 0.5-0.6Nm torque 7mm stripping length Multiple output terminals (2 x "+", 2 x "-")
Approvals (Pending):	<p style="text-align: center;">SIGNEXT® version: cULus Listed (UL508, CSA No.14)</p> <p style="text-align: center;">DEPRO® version: cCSAus Class 1 Division 2, Groups A,B,C and D Temperature code T4A Zone 2, Ex nA IIC</p>

