

# Programmable Expansion Modules

## VEHICLE CONTROL AND INTERFACE MODULES



**Five programmable expansion modules, provide additional control and communication ability between the individual parts of an Antares auxiliary power system, the chassis and other vehicle systems**

They are used to increase automation, improve safety and conserve power.

These modules are part of our commitment to create auxiliary electrical systems tailored to the operational tasks on the vehicle - they provide the "glue" to bind a fully engineered system together.

As the units are designed, manufactured and programmed by us, they have a vehicle pedigree: rugged construction, low quiescent draw, automotive standards and are built in VCA approved, quality assured environments.

Each module has a specific purpose

**EM I - In-line expander**

**EM II - Multi line expander**

**EM III - Serial Data Link expander**

**EM IV - AC Current Sense expander**

**EM V - Reversing Output expander**

This leaflet gives a brief overview of what can be achieved, if you feel that they may be useful in your application then please contact one of our sales applications engineers.

## Where are they used?

All units are uniquely programmable, so it is the software that makes it tailored to the project.

The following list is a sample of the type of tasks that the expansion modules have been used for:

- Contactor control
- Time delays
- Power-save inverter control
- Load shedding based on voltage
- Landline current sensing and control
- RS232 to conventional I/O
- Conventional I/O to RS232
- PWM control
- Control line expansion
- Reversing (H bridge control)
- Analogue to digital signal processing
- Drive Changeover relays

..... and many other tasks

## Antares support

Antares have a reputation for supporting our customers and products, taking great pride giving engineering service. Whether you buy directly from us, through one of our partners, or have our equipment specified on your vehicles we are there to support you.

You can be assured of help with applications, installation, servicing and design. Put this to the test - we look forward to working with you.




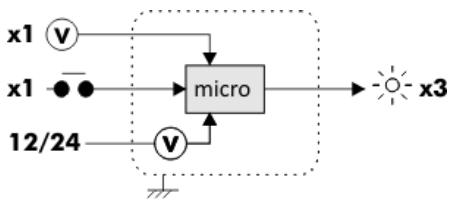

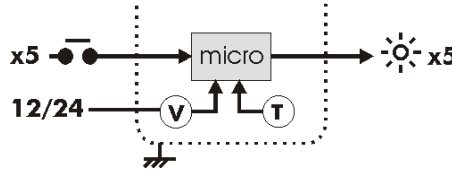
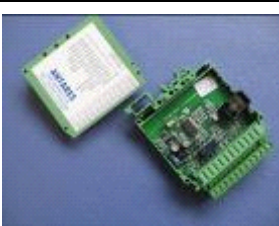
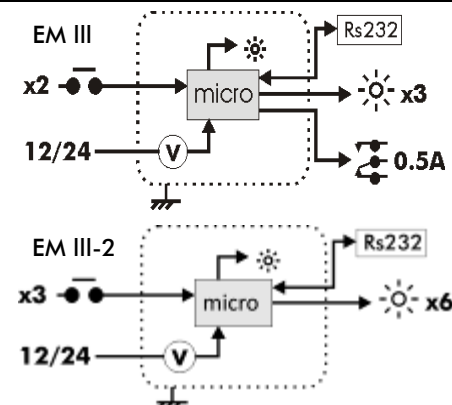

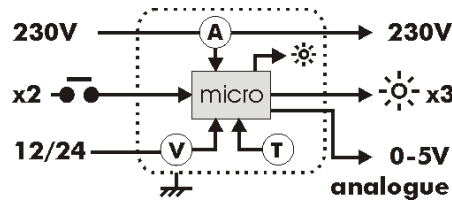

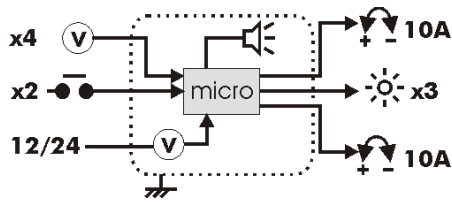
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**ANTARES**  
engineering with answers

# Programmable Expansion Modules

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	<b>EM I</b> In-line Expansion Module	<p>The output will be dependant on:</p> <ul style="list-style-type: none"><li>- specific voltage thresholds</li><li>- time delay switch on/off</li><li>- an external on/off.</li></ul> <p>Size: 67 x 35 x 20(H)mm Flange Mounted</p>																			
	<b>EM II</b> Multi In-line Expansion Module	<p>This is similar in application to the inline module above, but specifically to provide after-market ign switch headlamp control, (ie leave headlamps switched on, they go off when ign is turned off)</p> <p>Size: 95 x 80 x 27(H)mm Flange Mounted</p>																			
	<b>EM III</b> Serial Data Link Expansion Module	<p>This module can read/write to a serial interface and</p> <p>Two versions of EM3 are available: with a changeover switch control or with higher I/O capability</p> <p>It includes a status indicator to enable diagnostics</p> <p>Size: 104x72 x 33(H)mm DIN rail mounted</p>																			
	<b>EM IV</b> AC Current Sense Expansion Module	<p>This onboard 20A AC current sensor is used along with other inputs to create a 0-5V analogue control output and status or alarm signals</p> <p>Size: 104x72 x 33(H)mm Flange mounted</p>																			
	<b>EM V</b> Reversing Polarity Expansion Module	<p>This versatile module is typically used to control contactors and reversing motors. An onboard buzzer provides audible warnings</p> <p>Size: 104x72 x 33(H)mm Flange mounted</p>																			
<b>KEY</b>	<table><tr><td>(A)</td><td>CURRENT SENSE</td><td>(BUZZER)</td><td>BUZZER</td><td>(REVERSING)</td><td>REVERSING OUTPUT</td></tr><tr><td>(V)</td><td>VOLTAGE SENSE</td><td>(GND)</td><td>GND</td><td>(LED/RLY)</td><td>LED/RLY OUTPUT</td></tr><tr><td>(T)</td><td>TEMP SENSE</td><td>(Rs232)</td><td>SERIAL INTERFACE</td><td>(CHANGE)</td><td>CHANGEOVER</td></tr></table>			(A)	CURRENT SENSE	(BUZZER)	BUZZER	(REVERSING)	REVERSING OUTPUT	(V)	VOLTAGE SENSE	(GND)	GND	(LED/RLY)	LED/RLY OUTPUT	(T)	TEMP SENSE	(Rs232)	SERIAL INTERFACE	(CHANGE)	CHANGEOVER
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