

Protégé 4 Channel Analog Output Expander

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The Protégé 4 Channel Analog Output Expander enhances the total integration philosophy of the Protégé System by allowing the connection of any industrial automation actuator, valve or output device using the industry standard 0-20mA and 0-10V signals.

The Protégé 4 Channel Analog Output Expander is designed to interface with any industrial sensor that can receive a 0-20mA and 0-10V signal. The sensors can then be used for the control of Damper Vanes, Valves, Lighting Dimmers and Water Flow. Display of the outputs can be shown using the variable display functions in Protégé System Management Suite.

Precision Analog Circuitry

Utilizing a 32Bit processor the PRT-DAC4 Analog Expander provides a feature rich solution for industrial control applications:

- Automatic scaling provides a full 0-20mA output range on the current interface with predefined offsets.
- 12 Bit Precision flash DAC (Digital to Analog Converter) circuitry interfaces to the real world providing accuracy up to 4096 step over the selected output type.
- 4 100% independent analog outputs provide excellent noise and interface protection that allow the 0-20mA and 0-10V outputs to be used at the same time.

Channel Configuration Features

Configuration allows individual channels to be set up and programmed for specific functions without compromising other channels:

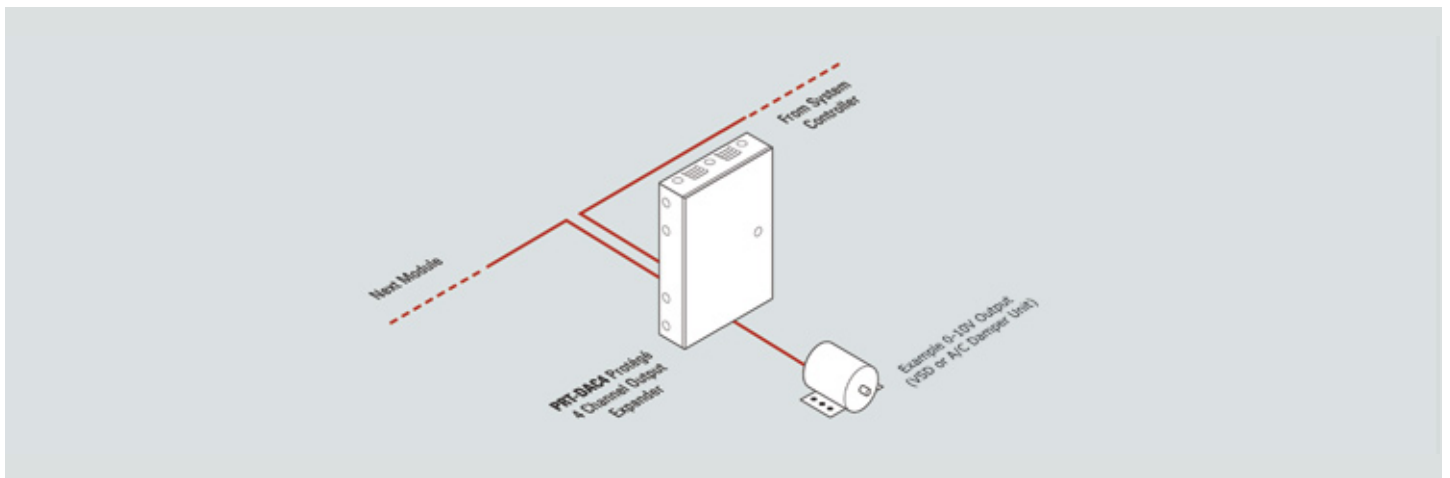
- Each channel features an independent enable.
- Channel can be configured to be 0-20mA or 0-10V independently in software with individual hardware connections to ensure no damage can be done to the outputs.
- Updates are sent only on difference, reducing updates while periodic 'maintenance' updates are sent.
- Log data can be enabled to allow a log of the information being sent to the output channel that can be recalled if required.

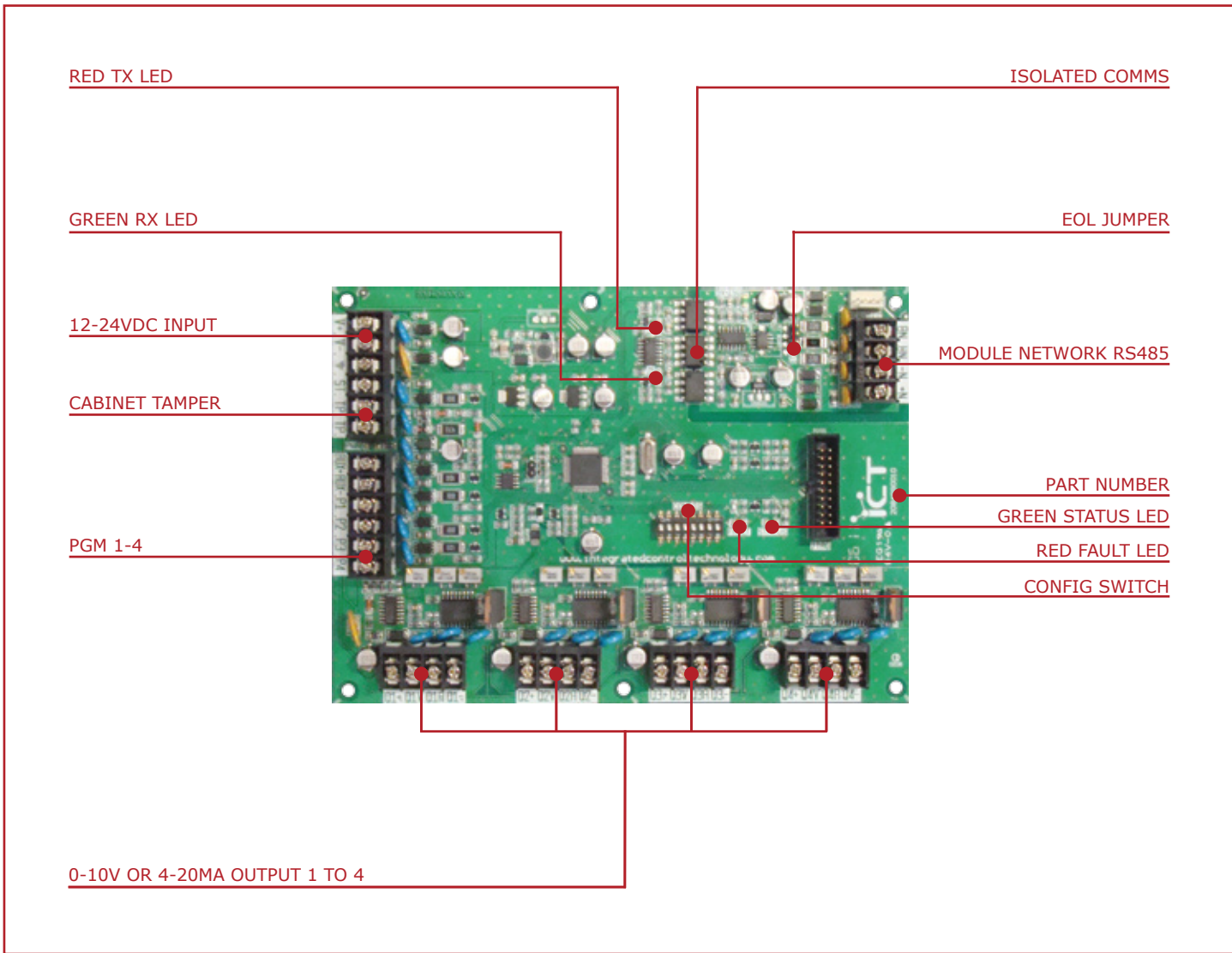
Connectivity and System Expansion

Expanding the Protégé System with 4 Analog Inputs and 4 Low current PGM outputs from the Analog Expander allows convenient cost effective expansion:

- Dedicated enclosure tamper switch.
- 4 Low Current PGM Outputs for driving any signalling device.
- 4 Analog Outputs (0-20mA and 0-10V).

Standard Configuration





Technical Specifications

Power	Operating Voltage Operating Current	8.5VDC to 25.5VDC 129mA (148mA Max)
Cable Specifications	Protégé RS-485 Encrypted System Network Communication Power Sensor Devices	Beldon Part Code 9842 or Equivalent. CAT5 / 5e (up to a maximum length of 300m). 24Awg Minimum Industrial instrumentation cable that complies with the local installation standards.
Analog Outputs (Channels)	Analog Accuracy	4 Selectable (0-20mA or 0-10V 10 Bit (4096 Steps)
Trouble Zones	Enclosure Tamper	Standard Normally Closed Contact
PGM (Outputs)	System PGMs	4 Open Collector (Negative, 50mA Max) Outputs. Programmable for all PGM functions.
Temperature	Operating Storage Humidity	5° to 55°C (41° to 131°F) -10° to +85°C (14° to 185°F) 0%-85% (Non Condensing)
Dimensions	Height Width Depth Weight	17mm (0.6") 183mm (7.2") 132mm (5.19") 85gms (2.99oz)

The size of conductor used for the supply of power to the Protégé 4 Channel Analog Output Expander should be adequate in size to prevent voltage drop at the power terminals of no more than 5% of the rated supply voltage.

International Compliance Standards:

The Protégé 4 Channel Analog Output Expander complies with the following international standards.

For an installation of the Protégé 4 Channel Analog Output Expander to comply with any of the standards all installation procedures and programming configuration settings must be made in accordance with the required standard.

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