



PROMESS

# PRO Main Module

## Monitoring for Assembly and Test Applications

The **PRO** Main Module is a powerful and compact process monitoring and test device. The **PRO** electronics are housed in a compact enclosure that is DIN rail mountable for easy installation. The Ethernet port allows for easy communication back to the Promess application software running on the Promess HMI or a standard PC. Multiple **PRO** modules can also be networked to a central data collection point.

The **PRO** is powerful yet simple to use, making it perfect for monitoring assembly applications such as press-fit, staking, crimping, and riveting, yet powerful enough to tackle the more demanding test applications where accurate high-speed data collection and advanced analysis are required.

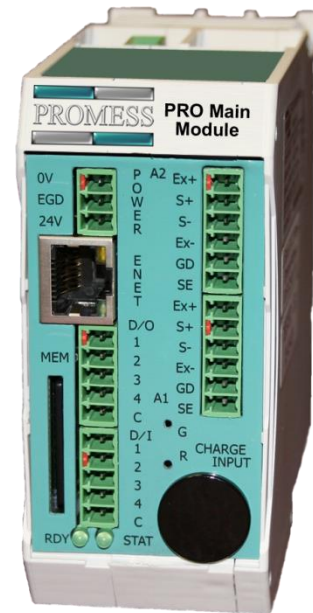
The Promess application software, which is included with the system, is used for the configuration of the program, the visualization of the real time process data, and the data collection of the process. The process data can be exported for further analysis using standard statistical packages. The intuitive **PRO** software guides you quickly through setup menus, as well as monitoring and data display screens.

The **PRO** system allows for the connection of a large range of sensors to monitor a variety of processes, some of which include force, distance, torque, pressure, and flow.

Promess provides the complete system: the electronics, software, sensors, as well as installation assistance. Promess will also assist in the design and selection of the sensors best suited for your specific application.

### Typical System Includes

- PRO Main Module
- Sensors
- Preamplifier
- PRO application software
- Integration and design assistance
- Training and calibration assistance



### Features

- In-Process Quality Verification
- Part Traceability
- Two high-speed 24 bit analog inputs per module
- One encoder input per module
- Compact modular design
- Easy to use programming and HMI software
- Advanced data analysis functionality:
  - Signature monitoring
  - Unlimited gauging points
  - Curve analysis tools
  - Integrated programming language with complete math functions
- Defined Database
- Data Export functions
- Fieldbus options
- Auto calibration for sensors
- Diagnostics for setup and troubleshooting
- Network multiple systems

### Options

- Promess HMI Display
- Fieldbus Module
- Expanded Input/Output Module
- Dual Encoder Module



## PRO Main Module Technical Data

### General

- Supply Voltage: 24 VDC, 0.5 A
- Operating Temperature: 10 to 48 °C (50 to 118 °F)
- Mounting: DIN rail
- Dimensions (H x W x D): 110 x 45 x 120 mm, (4.33 x 1.77 x 4.72 in)
- RS232 Serial Port: 1
- Ethernet Port: 10/100 Base-T, RJ45 connector

### Analog Inputs

- Number of Analog Inputs: 2
- Analog Input Ranges:  $\pm 10$  V,  $\pm 40$  mV
- Sampling frequency: 10 KHz per channel
- Resolution of A/D converter: 24 Bit
- Excitation voltage:  $\pm 5$  VDC

### Encoder Input

- Transducer Type: Linear scales or rotary encoders
- Input Voltage: 5 V TTL
- Signal Type: Quadrature
- Supply Voltage: +5 VDC / 150 mA maximum

### Digital Inputs

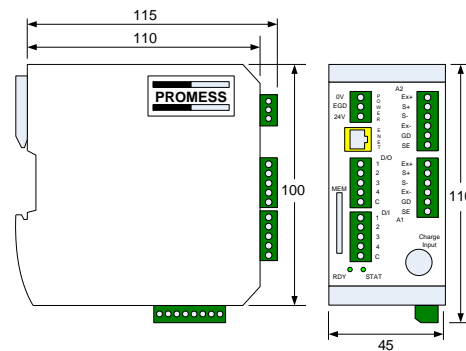
- Number of Inputs: 4 optically isolated
- Input Voltage: 24 VDC
- Input Current: 8 mA at 24 VDC

### Digital Outputs

- Number of Outputs: 4 optically isolated
- Nominal Voltage: 24 VDC, external power supply
- Output Current: 100 mA maximum

### PRO Main Module Dimensions

PRO Main Module





## Option Modules Information and Technical Data

### Fieldbus Module

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The Fieldbus Module allows for connection to a PLC with the following fieldbuses:

- Ethernet I/P
- ProfiBus
- ProfiNet
- Modbus TCP



### Expanded I/O Module

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The Expanded I/O Module can be used when additional discrete inputs and outputs are needed.

#### Digital Inputs

- Number of Inputs: 8 standard, optically isolated
- Input Voltage: 24 VDC
- Input Current: 8 mA at 24 VDC

#### Digital Outputs

- Number of Outputs: 8 standard, optically isolated
- Nominal Voltage: 24 VDC, external power supply
- Output Current: 100 mA maximum



### Dual Encoder Module

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The Dual Encoder Module allows for two additional encoder inputs. The inputs can be used for linear or rotational encoder feedback.

