

PROGRAMMABLE LOGIC CONTROLLER (PLC)

MICRO-COMM

MODEL M1650

FULLY PROGRAMMABLE WITH PLUG-IN MEMORY MODULE

MICRO-COMM, MODBUS RTU AND ALLEN-BRADLEY DF1 PROTOCOLS

OPTIONAL FRONT PANEL DISPLAY & EXPANDABLE I/O

SERIAL AND ETHERNET COMMUNICATIONS

SIMULTANEOUS RTU-RTU & CTU-RTU COMMUNICATIONS

PLUG-IN TERMINAL BLOCKS

The M1650 PLC is a reliable, full-featured Programmable Logic Controller. It is a "smart" unit providing both programmability and interchangeability through a plug-in memory module. As an integrated component of a Supervisory Control and Data Acquisition System (SCADA), the M1650 provides input and output (I/O) monitoring and control with simultaneous "distributed" (RTU to RTU) and "central" (CTU to RTU) type control operations. Its universal communications interface can provide robust control and data transfer via radio, serial and Ethernet communication media.

APPLICATIONS

SCADA Systems:

- Water Distribution Control and Management
- Waste Water Control and Monitoring
- Golf Course Irrigation
- Agricultural Irrigation
- Gas and Oil Monitoring
- Electrical Distribution Monitoring

Local Control:

- Water Booster Pump Stations
- Sewage Lift Stations
- Constant and Variable Speed Pump Stations
- Metering Stations
- Water and Waste Water Treatment Plants



FEATURES

I/O

- 4 Form C Relay Outputs
- 4 Open Collector Outputs
- 8 Optically Isolated Discrete Inputs (2 are also High Speed Pulse Inputs)
- 4 Analog Inputs, 0-5V or 0-20mA
- 2 Additional On-Board Sensor Analog Inputs
Box Temperature, System Voltage
- 2 Analog Outputs, 0-20mA
- 2 High-Speed pulse inputs

Communications

- COM1, Radio Port, RS-232
Optional RF MODEM, 0-600 or 1200 baud
- COM2, Display/Programming, RS-232
- COM3, RS-485, Expansion I/O
- COM4, RS-232/RS-485
- Ethernet, 100Base-TX

Power Source

- 12 VDC Power Input

ORDER INFORMATION

Part#

- | | |
|--------------|----------------------|
| 548-001-L17 | 0-300 baud FSK modem |
| 548-001-L17A | 600 baud FSK modem |
| 548-001-L17B | 1200 baud FSK modem |

Micro-Comm has been providing process control solutions for more than 30 years.

Call us at **(913) 390-4500** or visit us online at www.micro-comm-inc.com

M1650 PLC

MICROCOMM

I/O

- 4 Form C Relay Outputs, 4A @ 250VAC General Use (4A @ 30VDC Resistive)
B300 Pilot Duty, Relay contact to coil isolation 4000Vrms
- 4 Open Collector Outputs, 100mA @ 12VDC (COM1 pins)
Internal clamping diode to 12V
- 8 Optically Isolated Discrete Inputs, Dry Contact or Open Collector to GND,
Optically Isolated, 4mA Wetting Current, 12VDC Wetting Voltage
2 High Speed Pulse Inputs (inputs DI7 / DI8)
0-1000Hz, 50% duty cycle, contact closure or open collector to GND
6 Low Speed pulse inputs (inputs DI1-DI6)
0-50Hz, 50% duty cycle, contact closure or open collector to GND
- 4 Analog Inputs, 12bit, 0-5V or 0-20mA, 0.1% accuracy,
0.001%/degC temp. coefficient,
+/- 24V over voltage on any one Analog Input
- 2 Additional On-Board Sensor Analog Inputs, 12bit
Box Temperature, 0-150°F
System Voltage, 0-25.5V
- 2 Analog Outputs, 0-20mA, 12 bit, 0.25% accuracy
900 ohm maximum loop resistance
- Expandable to 256 external modules

CPU AND MEMORY

- 32bit MCU running 25MHz
- 1MB FLASH, Application Program
- 1MB RAM, Data
- 9MB Serial FLASH, Configuration
- Realtime Clock with Lithium Battery Backup
- Ethernet coprocessor: 32-bit running 147.5MHz
with 8MB SDRAM, 2MB FLASH

COMMUNICATIONS

- COM1, DB25M, RS-232
Optional RF MODEM FSK 0-300, 600, or 1200 baud (Bell 202)
- COM2, DB9M, RS-232 w/flow control lines
- COM3, RS-485 4 wire, Pluggable Terminal Block
- COM4, RS-232/RS-485, 9pin Sub-D
- Ethernet, 100Base-TX, RJ-45

POWER SOURCE AND SUPPLIES

- Power Supply 12VDC Isolated Source with 8A Fuse,
Use 14 or 16 AWG Supply Connections
- Power Input 10.5-15VDC, 12VDC Nominal 0.5A, 8.0A Max with external loads
- Quiescent Current 200mA @ 13.8VDC
- Resistive Loads Only, DC Use
- The sum of the load currents must be 7.5A or less
- COM1 (pins 9,10,11) 10.5-15VDC, 4.0A Combined
- COM2 (pin 4) 10.5-15VDC, 1.0A
- COM3 (12V) 10.5-15VDC, 1.0A
- COM4 (pin 4) 10.5-15VDC, 1.0A
- 24VDC @ 20mA per Terminal, Sensor Excitation power supply
- Temperature Range -40 to 50 degC (-40 to 122 degF) Surrounding Air Temp
- Internal Battery Lithium 3V, 1200mAh, 2/3A Size
(Realtime Clock and NVRAM)



DIMENSIONS

- Height 9.75"
- Width 6.85"
- Depth 3.35" (with personality module)
- Weight 2.3 lb

FIELD WIRING

- Use Copper Conductors Only, 60°C
- Wire Range, 12-26 AWG
- Wire Strip Length, 0.310"
- Recommended Tightening Torque, 0.79 N-m / 7.0 lb-in.

ORDER INFORMATION

548-001-XXXX

Modem:

- L17 - 0-300 baud FSK modem
- L17A - 0-600 baud FSK modem
- L17B - 1200 baud FSK modem