CAROTRON
Driven by Excellence
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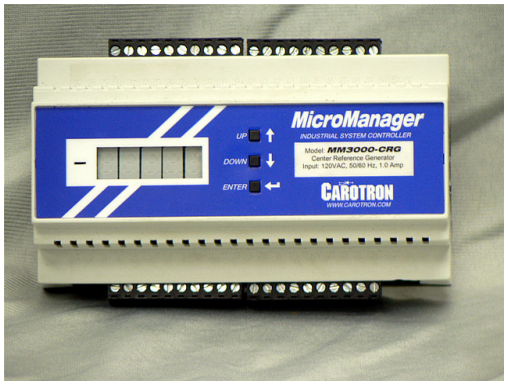
MicroManager

MM3000 Series
Dedicated Modular Controllers



MM3000-CRG MM3000-PID MM3000-CTCW

The **MicroManager 3000 Series** is a microprocessor based industrial system controller designed to handle a wide range of applications. The simple user interface allows high level microprocessor control of an application but without the need of a computer for configuration. Modbus® communication provides simple linking to HMI touch screens and other networked devices.

Model **MM3000-CRG** (Center Reference Generator) is designed for velocity mode winding applications and for torque mode winding/unwinding applications. In the velocity mode, the winder sets/controls the line speed. The MicroManager calculates the required center driven take-up speed to maintain the desired line speed. The MM3000-CRG can also be used on torque mode winders and unwinders (brake and driven).

Model **MM3000-PID** (Proportional-Integral-Derivative) is designed for velocity mode applications that use dancers or loadcells. In addition, the unit can also be used as a generic PID controller. In winding/unwinding applications, the MM3000-PID also uses internal algorithms to determine the required center driven speed based on roll diameter.

Model **MM3000-CTCW** (Constant Tension Center Winder) is designed for use with a torque mode drive to provide constant tension or taper tension control of a center driven winder. Web tension is regulated by controlling motor torque through varying levels of material roll diameter, line speed, and line acceleration. These diameter, friction, and inertia compensating torque signals can also be used with an optional loadcell feedback signal to provide closed loop tension control.

The Modbus RS485 communications port allows for all parameters to be read and for selected parameters to be changed. Limited programming capability is also available.

Electrical Specifications

A.C. Input Voltage Range - Single Phase
- 115 VAC ± 10%, 50/60 Hz ± 2 Hz
- Fused internally

Power Supply Output
- +12V regulated, 70mA max.

Digital Inputs (4 Total)
- Selectable Sinking or Sourcing Logic
- Vil=+10.5 VDC min to +12.0 VDC max
- Vih=0.0 VDC min to +8.5 VDC max

Analog Inputs (2 Total)
- 10 bit resolution (over-sampled to achieve 12 bit)
- Voltage Range: 0 to +12 VDC
- Input Impedance: 240kΩ

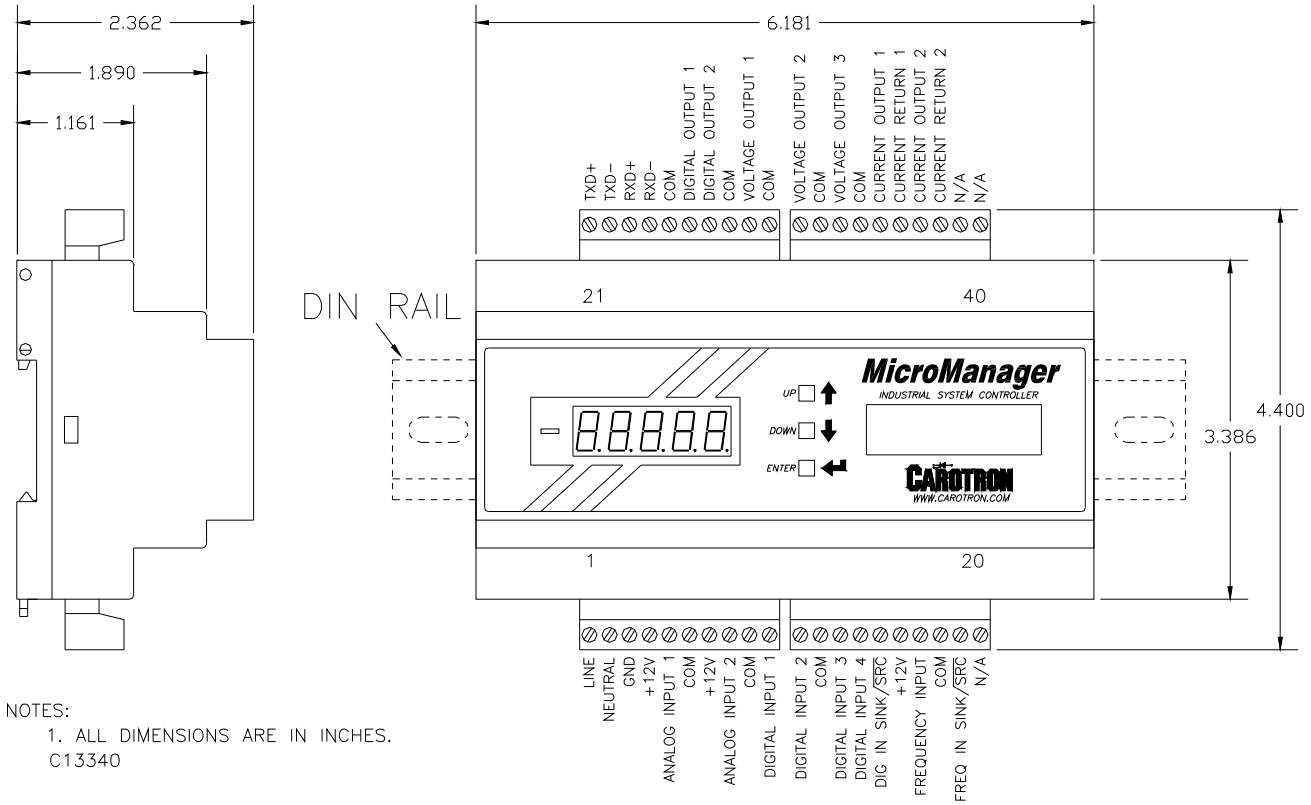
Frequency Inputs (1 Total)
- Frequency: 42kHz max, square wave (sink or source)
- Voltage: +12 VDC max
  Vil=0.0 VDC min to +1.5 VDC max
  Vih=+2.5 VDC min to +12.0 VDC max

Digital Outputs (2 Total)
- Open collector (sinking output)
- 100ma max, 30VDC max

Analog Outputs (3 Total)
- Outputs 1 & 2:
  12 bits, voltage 0 to +10 VDC max,
  or current 0 to +20 mADC max
- Output 3:
  10 bits, voltage only 0 to + 5 VDC max
- Output with respect to roll diameter is linear in Torque Mode and hyperbolic in Velocity Mode

Communications
- Modbus RTU RS485 Multidrop (2 or 4 wire)

Temperature Range
- Chassis: 0-55°C



NOTES:
1. ALL DIMENSIONS ARE IN INCHES.
C13340

MicroManager MM3000 Series

Physical Specifications: 4.400”H x 6.181W x 2.362”D

Shipping Weight: 2 lbs.

View or download the complete MicroManager Instruction Manuals from www.carotron.com .

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D.C. DRIVES, A.C. INVERTERS,
SOLID STATE STARTERS, SYSTEM INTERFACE
CIRCUITS AND ENGINEERED SYSTEMS

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