

# DIGITAL CLOSED LOOP CONTROLLER FOR AC OR DC MOTOR DRIVES



OMDC-ASP10

## OMDC-ASP10



- Adjustable Minimum/Maximum and Accel/Decel
- Adjustable Equivalent to Proportional and Integral Gain Setting
- Pulse Input Capacity of 50,000 PPM, 833 Hz
- Programmable Power-On Initial Settings
- Front Panel Programming with Parameter Lockout Capability
- Display Programmable for Engineering Units
- NEMA 4X Rated Faceplate
- Universal Power Supply: 85 to 265 Vac
- Programmable Alarm-Form C 5 A @ 230 Vac Relay
- Multiple Operational Modes: Rate, Time, Follower
- Non-Volatile Memory Storage

The OMDC-ASP10 is a compact, economical control that can be used with conventional AC, DC, or Brushless DC adjustable speed drive systems to provide an LED display of set speeds and precise, digital closed loop motor speed control. An on-board microprocessor with non-volatile memory coupled with sophisticated internal software makes the OMDC-ASP10 the ultimate in accuracy and control. Target speeds are displayed directly in RPM, FPM, GPM, process time, or any other engineering unit of measure. Friendly front-panel field programming permits customizing the controller to the exact specifications for each application; maximum and minimum set speed, decimal points or colon, operating mode (master or follower), and the constant which takes into account motor gear ratios. The OMDC-ASP10 is simple to operate... just set the desired RPM, rate, or

time in the large ½" LED display by depressing the "up-down" pushbuttons, one digit at a time or fast sweep. The OMDC-ASP10 settings are exact and repeatable. It will precisely control speed to a remarkable  $\pm\frac{1}{2}$  RPM of set speed, long term. The panel mount unit is easy to install into a standard ½ DIN cutout. All wiring connects directly to a rugged screw type terminal strip through the easy access rear panel.

### SPECIFICATIONS:

**Temperature:** -10 to 45°C (14 to 113°F)  
**AC Input Voltage:** 85 to 265 Vac  
**Input Frequency:** 50 to 60 Hz  
**Transducer Signal Input:** 0-5 to 0-24 Vdc  
**On-Board Power Supply:** 5 Vdc, 50 mA for external sensors  
**Cutout:** 92 W x 45 mm H (3.62 x 1.77")  
**Dimensions:** 115 W x 58 H x 117 mm D (4.54 x 2.29 x 4.63")

**To Order Visit [omega.com/omdc-asp10](http://omega.com/omdc-asp10) for Pricing and Details**

MODEL NO.	DESCRIPTION
OMDC-ASP10	Digital closed loop controller for ac/dc speed control
OMDC-PU-40E	Shaft mounted pick-up sensor, 20 pulses per revolution
OMDC-PU-2E	Shaft mounted pick-up sensor, 1 pulse per revolution

*Comes complete with operator's manual.*

**Ordering Example:** OMDC-ASP10 digital closed loop speed controller, with OMDC-PU-2E pick-up sensor (1 pulse/revolution).

# ADVANCED DIGITAL CLOSED LOOP CONTROLLER FOR AC OR DC MOTOR DRIVES

## OMDC-ASP20



OMDC-ASP20

- Compact 1/2 DIN Cutout, with NEMA 4X Faceplate
- Microprocessor Based—True PID Closed Loop Control
- Field Programmable Operating Parameters
- RS232/422/485 Serial Interface—Remote Speed Setting and Continuous Output of Actual Shaft Speed, Set All Field Programmable Parameters
- Displays Actual or Desired Speed Directly in RPM, FPM, Process Time, or Other Engineering Units
- ±1/2 RPM of Set Speed Accuracy
- Master/Follower Operation
- Non-Volatile Memory Retains Speed Setting and All Field Programmable Parameters
- Internal A/D Interface—Use a Potentiometer, 4 to 20 mA or 0 to 5 Vdc Signal in Lieu of Digital Pick-Up Signal or to Control Target Speed, Current Program or Frequency Generator Output
- Inhibit Circuit Permits Start and Stop Without Breaking AC Lines; Pre-Selecting Speed, or Simultaneous Start-Up of Multiple Control Units
- Exclusive User Assignable Output—to Drive Relays or Alarms
- Independent Frequency Generator

The OMDC-ASP20 digital control unit, with an advanced 16-bit microprocessor, is designed for use with conventional AC frequency or DC drives, any horsepower, to provide: LED display of set or actual speed, closed loop motor speed control, Master or Follower modes, and Serial communications. This control features a true P-I-D algorithm, for extremely responsive and precise control over a wide variety of desired speeds and applications. Set or actual speed is displayed directly in RPM, FPM, Process Time, or other engineering units. Field programming permits customizing specific operating parameters. The integrated RS485/RS422/RS232 serial interface port is perfect for monitoring or control using almost any computer or

process controller. Units can even be attached in a Local Area Network, and can then be controlled and programmed either individually or all at once. Multiple programs allow the user to choose between a “menu” of up to six programmed configurations.

### SPECIFICATIONS:

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**AC Input Voltage:** 85 to 265 Vac  
**Input Frequency:** 50 to 60 Hz  
**Transducer Signal Input:** 0-5 to 0-24 Vdc  
**On-Board Power Supply:** 5 Vdc, 50 mA for external sensors  
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MODEL NO.	DESCRIPTION
OMDC-ASP20	Advanced digital closed loop controller for ac/dc speed control
OMDC-PU-40E	Shaft mounted pick-up sensor, 20 pulses per revolution
OMDC-PU-2E	Shaft mounted pick-up sensor, 1 pulse per revolution

*Comes complete with operator's manual.*

**Ordering Example:** OMDC-ASP20 advanced digital closed loop speed controller, with OMDC-PU-40E pick-up sensor (20 pulses/revolution), \$590 + 114 = \$704.