



The most economical and compact fractional horsepower digital DC drive, with full PID control, leader/follower and process time capabilities

The Dynapar brand MDJR1 provides superior speed regulation and unique capabilities for control of small DC motors. Extruders, mixing pumps and material handling conveyors benefit from the elimination of speed variations from temperature, power line voltage or motor load changes; the result is consistently higher quality production. The MDJR1 also operates in minutes and seconds, for food and beverage applications that need to control the cooking time of ovens and broilers.

The follower mode of the MDJR1 precisely matches its motor speed to another motor, machine section or manufacturing process. With the assurance of zero cumulative error (drift) over time, it economically automates transfer lines, coating or draw of plastics film, and paper or plastics winding/unwinding.

The MDJR1 has a large, LED display. Actual process time or speed can be scaled into meaningful units (feet per minute, gallons per second, or RPM) for operator ease in monitoring and setting the desired speed.

General features include:

- Leader or follower operation
- Speed or Process Time (inverse speed) setpoints
- Fractional horsepower DC drive
- PID with velocity feedforward
- Programmable Accel/Decel ramp rate
- Speed display calibration in engineering units
- High and Low alarms in setpoint units or percentage of setpoint
- Three level security of setpoints, loop gains and program data
- NEMA4/IP66 front panel washdown rating
- Nonvolatile memory

Installation is simplified through the use of pluggable terminals and simple input and output diagnostics. The rugged metal enclosure and isolated drive output provide complete immunity from electrical noise and the universal power input is fully filtered for low emissions.

SPECIFICATIONS

Input Power: universal, 85 to 265 VAC, 50-60 Hz, 18 VA

Output Power: 0 to 90 VDC typical at 115 VAC input (0 to 180 VDC typical at 230 VAC input)

Maximum HP Rating: 1/3 HP at 115 VAC input; 2/3 HP at 230 VAC input

Overload Capacity: 200 % for 1 minute

Sensor Power: selectable, 5 or 12 VDC \pm 10%, 0 to 125 mA max

Display: 5 digit, 0.56" bright red 7-segment LED; 9 program and status display annunciators

Setpoints: Speed: 4 digit, programmable decimal point; Ratio: 4 digit, fixed decimal point X.XXX; Process Time: 4 digit, fixed format MM:SS; Jog Speed: 4 digit

Alarms: high and low; programmable as actual value or percentage of setpoint

Security: 3 levels: Program (Disable/Enable); Setup (Off/On) and Setpoint Adjustment (Incremental/Digit by Digit/Both/None)

Signal Inputs: Feedback and Reference: squarewave (pulse) or sinewave (magnetic), 20 kHz max each

Control Inputs: Auto/Manual; Trim Reset/Jog; Ramp Hold

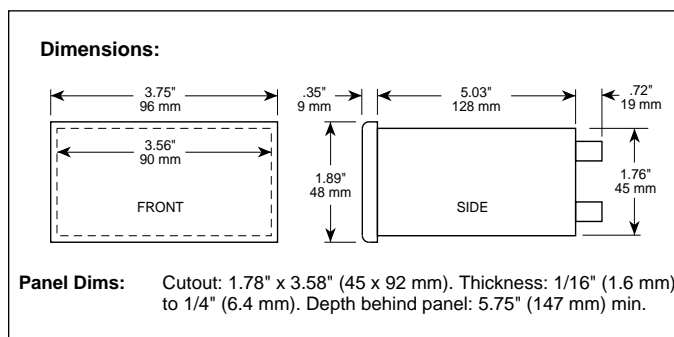
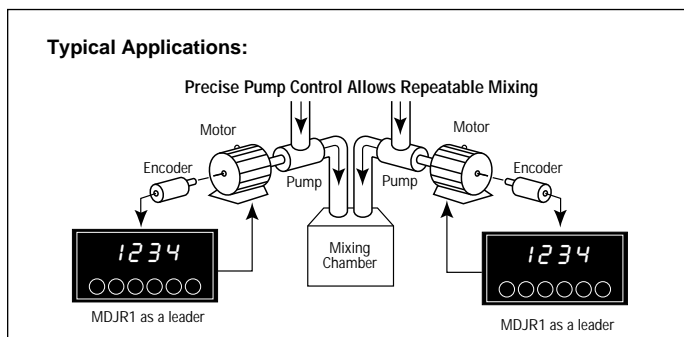
Alarm Outputs: open collector, 100 mA max. sink, 28 VDC max

Regulation: Leader (speed): 0.05%; Follower (ratio): 0.05% with zero long term drift; Process Time: 0.05%

Loop Time: 16 milliseconds

Operating Temperature: 32° to 122°F (0° to 50°C)

Model No.	Description
MDJR1U00	MDjr1 1/8 DIN Digital DC Drive





A new standard for price and performance in compact digital DC drives, with full PID control, leader/follower and process time capabilities

The Dynapar brand MDJR2 provides superior speed regulation and unique capabilities for control of DC motors. Extruders, mixing pumps and material handling conveyors benefit from the elimination of speed variations from temperature, power line voltage or motor load changes; the result is consistently higher quality production. The MDJR2 also operates in minutes and seconds, for food and beverage applications that need to control the cooking time of ovens and broilers.

The follower mode of the MDJR2 precisely matches its motor speed to another motor, machine section or manufacturing process. With the assurance of zero cumulative error (drift) over time, it economically automates transfer lines, coating or draw of plastics film, and paper or plastics winding/unwinding.

The MDJR2 has a large, LED display. Actual process time or speed can be scaled into meaningful units (feet per minute, gallons per second, or RPM) for operator ease in monitoring and setting the desired speed.

General features include:

- Leader or follower operation
- Speed or Process Time (inverse speed) setpoints
- Integral horsepower DC drive
- PID with velocity feedforward
- Programmable Accel/Decel ramp rate
- Speed display calibration in engineering units
- High and Low alarms in setpoint units or percentage of setpoint
- Three level security of setpoints, loop gains and program data
- NEMA4/IP66 front panel washdown rating
- Nonvolatile memory

Installation is simplified through the use of pluggable terminals and simple input and output diagnostics. The rugged metal enclosure and isolated drive output provide complete immunity from electrical noise and the universal power input is fully filtered for low emissions.

SPECIFICATIONS

Input Power: universal, 85 to 265 VAC, 50-60 Hz, 18 VA

Output Power: 0 to 90 VDC typical at 115 VAC input (0 to 180 VDC typical at 230 VAC input)

Maximum HP Rating: 1 HP at 115 VAC input; 2 HP at 230 VAC input

Overload Capacity: 200 % for 1 minute

Sensor Power: selectable, 5 or 12 VDC \pm 10%, 0 to 125 mA max

Display: 5 digit, 0.56" bright red 7-segment LED; 9 program and status display annunciators

Setpoints: Speed: 4 digit, programmable decimal point; Ratio: 4 digit, fixed decimal point X.XXX; Process Time: 4 digit, fixed format MM:SS; Jog Speed: 4 digit

Alarms: high and low; programmable as actual value or percentage of setpoint

Security: 3 levels: Program (Disable/Enable); Setup (Off/On) and Setpoint Adjustment (Incremental/Digit by Digit/Both/None)

Signal Inputs: Feedback and Reference: squarewave (pulse) or sinewave (magnetic), 20 kHz max each

Control Inputs: Auto/Manual; Trim Reset/Jog; Ramp Hold

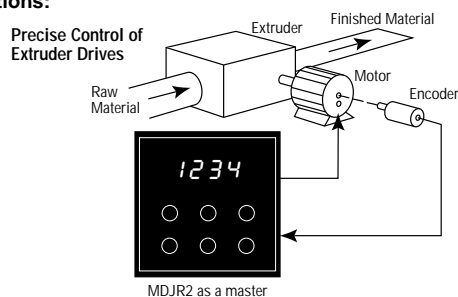
Alarm Outputs: open collector, 100 mA max. sink, 28 VDC max

Regulation: Leader (speed): 0.05%; Follower (ratio): 0.05% with zero long term drift; Process Time: 0.05%

Loop Time: 16 milliseconds

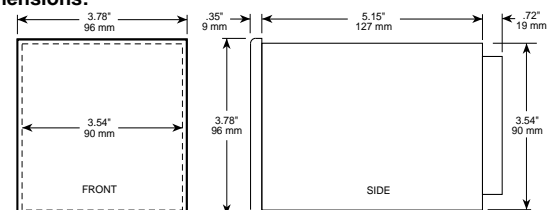
Operating Temperature: 32° to 122°F (0° to 50°C)

Typical Applications:



Model No.	Description
MDJR2U00	1/4 DIN Digital DC Drive

Dimensions:



Panel Dims: Cutout: 3.58" x 3.58" (92 x 92 mm). Thickness: 1/16" (1.6 mm) to 1/4" (6.4 mm). Depth behind panel: 5.75" (147 mm) min.