

GENERAL DESCRIPTION

These electric, actuator driven, precision pressure regulators are used for remote pressure adjustment. They can be controlled by switched line voltage inputs or operated from a voltage or current process command signal. A variety of pressure ranges and shift times are available to meet the most popular application requirements.

The MC-1100 is ideally suited for remote set-point control, remote brake and clutch control, remote web tension control, and pilot valve control.

All MC-1100 Series actuators are also available with an internal amplifier (excluding MC-1140). These amplifiers are all full-featured ac switching devices designed to work seamlessly with the unit for closed loop control.

FEATURES

- Explosion proof enclosure
- Permanently lubricated for any position mounting
- AC or DC input power versions
- Wide ambient temperature range
- Explosion proof enclosure
- High strength, corrosion resistant, cast aluminum enclosure rated for indoor/outdoor and hazardous dust installations
- End of travel position limit switches
- Variety of pressure ranges
- Maintains pressure setting when power is removed
- Regulator is virtually unaffected by changes in supply pressure
- Full one year warranty

POPULAR OPTIONS *(See Pages 197-206)*

- Internal or remote-mounted amplifier
- Anti-condensation heater and thermostat
- Various enclosure coatings
- Battery back-up, RP-4000



AMPLIFIER FEATURES

- Isolated, two-wire, 4-20mA feedback
- Customer-adjustable zero and span
- Adjustable deadband
- Accepts either voltage or current command inputs
- Selectable options for Loss-of-Signal action:
 - Lock in place
 - Run to preset
- Field selectable dynamic brake
- AC triac switching of AC motors

ACTUATOR SPECIFICATIONS

Temperature Limits: -40°F to 150°F (-40°C to 65°C)

Field Wiring: To barrier terminal blocks

Modulation Rate: Modulating duty

Approximate Weight: 12 to 16 lbs.(5.4 to 7.3 kg)

REGULATOR SPECIFICATIONS

Pipe Connections: 1/4-NPT, 3/8-NPT

Supply Pressure: 500 psi (34.5 bar) maximum

Flow Capacity: (100 psi/6.9 bar supply, 20 psi/1.4 bar set) 40 SCFM (19 liters/sec.) maximum

Exhaust Capacity: (Downstream pressure 5 psi/0.34 bar above set pressure) 5.5 SCFM (2.6 liters/sec.)

Effect of Supply Pressure Variation: Less than 0.1 psi (0.007 bar) for a 100 psi (6.9 bar) change

SPECIFICATION CHART

Actuator Model	Input Power Volts/Phase/Hz	Current (Amps)		Command Input	Input Impedance in ohms	Feedback	Loss of Power	Loss of Command Signal
		Run	Stall					
MC-1110-N	120/1/50/60	0.25	0.26	N/A	N/A	N/A	Lock in Place	N/A
MC-1110-D	120/1/50/60	0.25	0.26	4-20 mA	200	1000 ohm pot or 4-20 mA	Lock in Place	Lock in Place or Run to Preset
				0-5 Vdc or 0-10 Vdc	100,000			
MC-1140-N	24 Vdc	1.2	4.8	N/A	N/A	N/A	Lock in Place	N/A
MC-1170-N	240/1/50/60	0.14	0.15	N/A	N/A	N/A	Lock in Place	N/A
MC-1170-D	240/1/50/60	0.14	0.15	4-20 mA	200	1000 ohm pot or 4-20 mA	Lock in Place	Lock in Place or Run to Preset
				0-5 Vdc or 0-10 Vdc	100,000			

N/A = Not Applicable

ACTUATOR/AMPLIFIER SPECIFICATIONS

	MC-1110-D & MC-1170-D
<i>Position Accuracy</i>	1.0 % of full travel
<i>Repeatability</i>	0.5 % of full travel
<i>Hysteresis</i>	0.5 % of full travel
<i>Linearity</i>	+/-1 % of full travel
<i>Deadband</i>	0.75 % of full travel
<i>Resolution</i>	0.75 % of full travel

REMOTE AMPLIFIERS

Actuator	Remote Mounted Amplifier	Catalog Page
MC-1110-N & MC-1170-N	AD-8240	173
MC-1140-N	AD-7530	170

MC-1100 SERIES SELECTION CHART

Selection

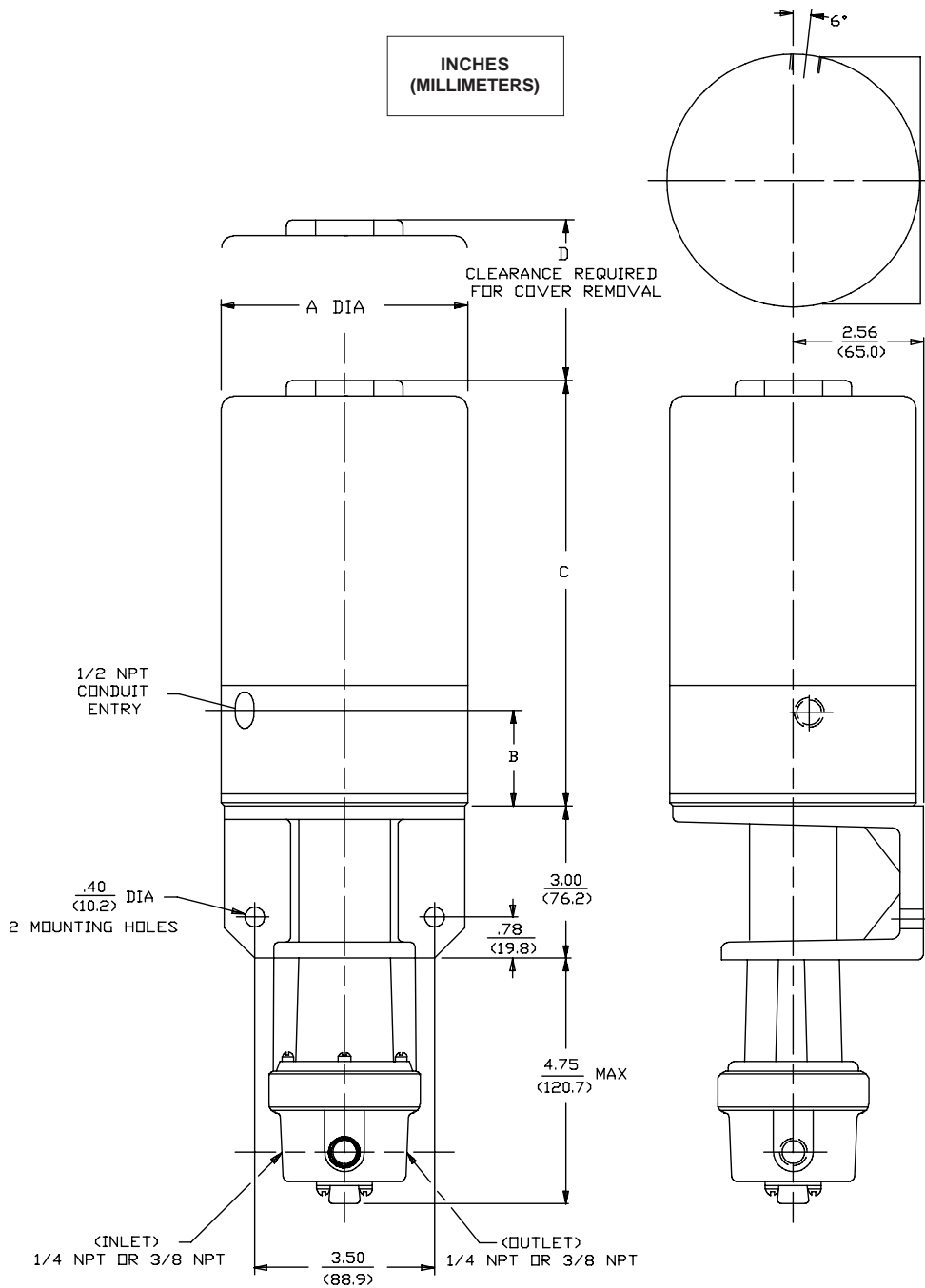
1	Basic Model	MC-1110-N	1 phase, 120 Vac, modulating duty, without built-in amplifier	
		MC-1110-D	MC-1110 above with built-in amplifier	
		MC-1140-N	24 Vdc (If amplifier desired, see remote model AD-7530)	
		MC-1170-N	1 phase, 240 Vac, modulating duty, without built-in amplifier	
		MC-1170-D	MC-1170 above with built-in amplifier	
2	Input Voltage	1: 120 Vac, (MC-1110)		
		2: 240 Vac, (MC-1170)		
		6: 24 Vdc, (MC-1140)		
3	Pressure Range and Shift Time (Nominal) <i>Must select pressure range and shift time for model selected.</i>	Pressure Range PSI (bar)	Shift Time (Minutes)	
			MC-1110 MC-1170	MC-1140
		3 to 15 (0.21 to 1.03)	7.5	6
			3.8	3
			1.9	1.5
			1	0.8
			0.5	0.4
			0.2	0.2
			0.28	
		0.14		
		0 to 20 (0 to 1.38)	25.2	20.1
			12.8	10.2
			6.4	5.1
			3.2	2.6
			1.6	1.3
			0.8	0.66
		0.5 to 30 (0.034 to 2.07 or 1 to 60 (0.069 to 4.14)	26	20.8
			13	10.5
			6.6	5.3
			3.3	2.7
1.7	1.3			
0.9	0.68			
2 to 150 (0.14 to 10.34 or 5 to 200 (0.34 to 13.79)	21.2	17		
	10.8	8.6		
	5.4	4.3		
	2.7	2.2		
	1.4	1.1		
		0.55		
4	Pipe Size	1/4: 1/4 NPT inlet and outlet pipe connections		
		3/8: 3/8 NPT inlet and outlet pipe connections		

MC-1100 STANDARD OPTIONS

Code	Description	Selection
Toggles, Lights		
A008	Local Auto/Manual and INC/OFF/DEC (Close Coupled Enclosure)	
A015	ON/OFF Toggle Power Switch (Close Coupled Enclosure)	
Feedback		
F001	Potentiometer, 1000 ohms	
F002	Tandem Potentiometer, 1000 ohms each	
F003	Potentiometer, 5000 ohms (Not for use with models with internal amplifiers)	
F004	Potentiometer, 10,000 ohms (Not for use with models with internal amplifiers)	
F005	Transmitter, 4-20 mA	
F006	One Potentiometer, 1000 ohms plus Transmitter, 4-20 mA	
F011	Anti Backlash Feedback Gearing	
F999	Special Potentiometer (consult factory)	
Heater		
H001	Anti-Condensation Heater (24 VDC)	
H002	Anti-Condensation Heater (120 VAC)	
H003	Anti-Condensation Heater (240 VAC)	
Identification/Certifications		
J001	CE Marking (AC input only)	
J002	Stainless Steel Tags	
J004	One year extended warranty	
J005	Two year extended warranty	
Auxiliary Switches		
S007	Aluminum Feedback Frame (Multi Turn)	
S008	Two nonadjustable end of travel position switches, SPST, 10 Amp, 120/240 Vac	
S013	Two nonadjustable end of travel position switches, SPDT, 10 Amp, 120/240 Vac	
Painting/Coating		
W001	JCI Standard Polyurethane Blue	
W002	Two Part Epoxy	
W003	Food Grade Epoxy	
W004	Baked On Epoxy	
W005	Teflon	

For a full description of options, go to the Complete Listing of Options starting on page 197.

MC-1100 MAJOR DIMENSIONS



MC-1100-N	A	B	C	D
NEMA 4, X-proof	4.88 (124)	1.84 (46.7)	8.65 (219.7)	6.28 (159.5)
MC-1100-D	A	B	C	D
NEMA 4 Enclosure	4.88 (124)	1.84 (46.7)	10.21 (259.3)	7.81 (198.4)

These dimensions are subject to change without notice and should not be used for preparation of drawings or fabrication of installation mounting. For current installation manuals and other product information, see www.jordancontrols.com.