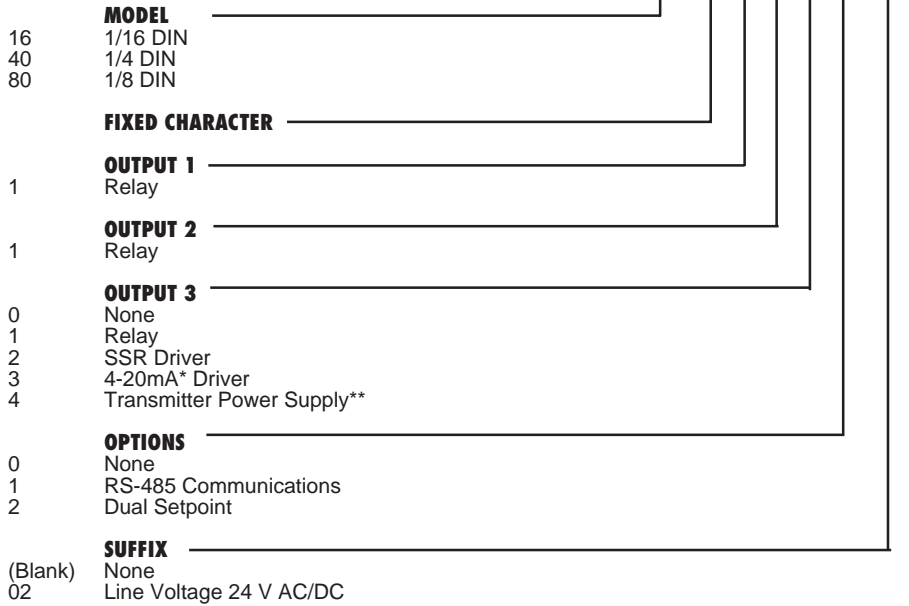


MIC 1167, 1807, 1407

1/16, 1/8 and 1/4 DIN VMD CONTROLLERS

ORDERING



* For alarm output only.
 ** Not available for MIC 1167

WARRANTY
 This instrument is backed by the Partlow comprehensive 2 year warranty. A complete warranty statement is published in the back of the product instruction manual. If you have further questions about warranties, please contact the Partlow factory.

ORDERING INFORMATION
 For pricing and additional ordering information, refer to Form 3265, Electronic Price Book, Page 11.



DESCRIPTION

Partlow's new MIC 1167, MIC 1807 and MIC 1407 Series of microbased, 1/16 DIN, 1/8 DIN and 1/4 DIN VMD process controllers have been designed specifically to drive valve motors, with a unique VMD tuning algorithm. The series consists of controllers with continuous on-line open loop tuning which gives stable control at all times. With pre-tune and auto-tune, the user set up is also much easier in what is generally considered to be a complex measurement area.

In addition to tuning the P and I terms, the auto-tune also reduces valve activity to an absolute minimum without compromising the control quality, thereby reducing wear and tear on mechanical components such as valves, contactors and relays.

This VMD series incorporates the latest in surface-mount and CMOS technology to ensure reliable and accurate control in a wide variety of applications.

CONTROLLERS

SPECIFICATIONS

Input

Thermocouple types	J, K, T, R, S, B, L and N
RTD	100 ohm (.00385 ohm/ohm/C)
Volts	0 to 5VDC, 1 to 5VDC, 0 to 10VDC and 2 to 10 VDC
Millivolts	0 to 50mVDC and 10 to 50mVDC
Milliamps	0 to 20mADC and 4 to 20mADC
Sensor Fault Detection	Displays cLL or cHH for thermocouple or RTD inputs and sensor break, SnSr. "Close Valve" input set to ON; alarms operate as if the process variable has gone over-range (TC & RTD) and under-range (V, mV, mA)
Dual Setpoint Selection Type	Voltage free or TTL compatible

Outputs

Outputs 1 & 2 Relay Only	SPDT (Output 1 - Open Valve, Output 2 - Close Valve) 2A @ 120V AC (Motor Drive) 2A @ 240V AC (resistive or independent contactor drive)
Output 3 Relay	SPDT 2A resistive @ 120/240V AC
SSR Driver	> 4.2V DC into 1 K ohm minimum
Current Output (retransmission only)	0 to 20mADC into 500 ohms max. 4 to 20mADC into 500 ohm max.
Volts DC Output (retransmission only)	0 to 10VDC 500 ohm minimum 0 to 5VDC 500 ohm minimum
Transmitter Power Supply (not available on 1167)	20 to 28VDC (24VDC nominal) 910 ohm (22mA @ 20VDC)
Display Digital Display	Four 7 segment LEDs 1/16 DIN: Top: .39", Bottom: .28" 1/8 DIN: Top: .39", Bottom: .28" 1/4 DIN: Top: .53", Bottom: .39"

Alarm Adjustment

Process Alarm	- Input Span
Deviation Alarm	- Input Span
Deviation Band Alarm	0 to Input Span

Control Adjustment

Proportional Band	0.5% to 999.9% of Input Span
Auto Reset Rate	1 sec to 99 min 59 sec/repeat
Motor Travel Time	0 sec to 99 min 59 sec
	5 sec to 5 min

Performance

Measurement Accuracy	- 0.25% of span, - 1 LSD at 20 deg C Note: Reduced performance with Type "B" thermocouple between 100-600C (212-1112F)
Ambient Temperature Error	0.01% of span /deg C change in ambient
Linearization Accuracy (TC and RTD)	Better than - 0.2 deg C any point, any 0.1 deg C range (- 0.05 deg C typical). Better than - 0.5 deg C any point, any 1 deg C range
Cold Junction Compensation	Better than - 0.7 deg C
Noise Rejection	Common mode: >120dB at 50/60Hz giving negligible effect at up to 264V 50/60Hz Series Mode: >500% of span (at 50/60 Hz) causes negligible effect 90 to 264VAC 50/60 Hz (standard) 20 to 50V AC 50/60Hz or 22 to 65V DC (optional)
Line Voltage	
Operating Temperature	0 to 55 C
Storage Temperature	-20 to 80 C
Humidity	20 to 95% non condensing
Source Resistance	1000 ohm maximum (thermocouple)
Lead Resistance	50 ohm per lead maximum balanced (Pt100)
EMI Susceptibility	Designed to meet EN50082 Part 2
EMI Emissions	Designed to meet EN50081 Part 2
Dimensions	1/16 DIN: Front Panel: 48mm x 48mm (1.89" x 1.89") 110mm deep (4.33") 1/8 DIN: Front Panel: 48mm x 96mm (1.89" x 3.78") 100mm deep (3.94") 1/4 DIN: Front Panel: 96mm x 96mm (3.78" x 3.78") 100mm deep (3.94")
Weight	1/16 DIN & 1/8 DIN: 8 ounces max. 1/4 DIN: 16 ounces max.
Front Panel Sealing	IP66/NEMA4 (1407 only)
Power Consumption	4 Watts

Agency Approvals

UL Recognized (pending)
cUL Certified for use in Canada (pending)

Digital Communications

Type	RS-485 serial communication port:
Protocol	Modbus RTU
Bit Rate	User configurable to 1200, 2400, 4800, 9600
Address	User configurable 1 to 32