SERFILCO®

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BULLETIN
A-316
06/30/20

P-20 PUMP PROTECTOR

DIGITAL MOTOR LOAD MONITOR
Shuts down pump in the event of:

- **DRY RUN**
- **CAVITATION**
- **DAMAGED IMPELLER**
- **CLOSED INLET VALVE**
- **CLOSED OUTLET VALVE**
- **BLOCKAGES**

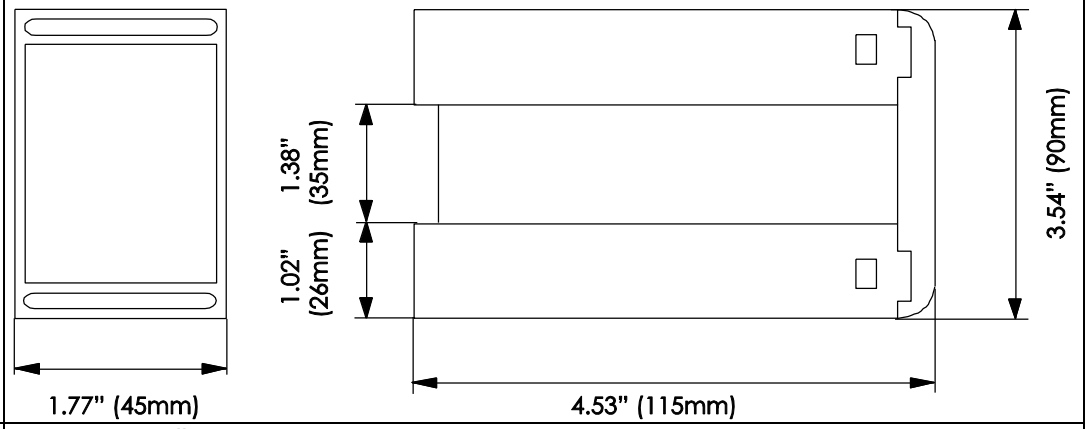
The P-20 digital motor load monitor uses a unique and patented method of measuring the torque of a pump's drive motor. By monitoring the "normal" load level any deviation from this range changes the state of the internal relay activating a red LED alarm light. The output relay will shut down the pump, activate additional alarm and/or communicate with other equipment in the process. Designed for use in conjunction with a motor starter, the P-20 protector will monitor motor underload OR overload. In pumping applications, conditions such as dry run, cavitation, damaged impeller, closed valves or blockages will create an "abnormal" underload condition, which the P-20 will detect and subsequently shut down the pump and provide communication to users and /or processes.

ORDERING INFORMATION

Each P-20 Pump Protector comes complete with monitor, current transformer, and installation instruction manual.

PART NUMBERS FOR P-20 PUMP PROTECTOR ONLY						
AMP RANGE	PHASE x VOLTAGE					
	1x100-240 VAC 3x100-240 VAC		3x380-500 VAC		3x525-690 VAC	
	MODEL	PCN	MODEL	PCN	MODEL	PCN
.4-10	P-20-240-10	99-2301-10	P-20-480-10	99-2302-10	P-20-575-10	99-2303-10
10.1-25	P-20-240-25	99-2301-25	P-20-480-25	99-2302-25	P-20-575-25	99-2303-25
26-50	P-20-240-50	99-2301-50	P-20-480-50	99-2302-50	P-20-575-50	99-2303-50

COMPLETE MOTOR STARTER WITH P-20 PUMP PROTECTOR (SPECIFY VOLTAGE, HP, and FLA WHEN ORDERING)	1 PHASE 3 PHASE	O-MS1P-P20 O-MS3P-P20

Dimensions (WxHxD)	1.77" x 3.54" x 4.53" (45x90x115mm) 
Mounting	35 mm DIN rail 46277
Weight	10.5 oz. (0.30 kg)
Supply voltage (±10%)	1x100-240 VAC, 3x100-240 VAC, 3x380-500 VAC 3x525-690 VAC
Frequency	50 or 60 Hz
Current input	Current transformer; CTM 010, 025, 050, and 100. Input 0-55 mA. (>100 A extra transformer needed)
Power consumption	Max. 6 VA
Start-up delay	1-999 s
Hysteresis	0-50% of rated motor power
Response delay max	0.1-500 s
Response delay min	0.1-500 s
Relay output	5 A/240 VAC Resistive, 1.5 A/240 VAC Pilot duty/AC12
Analogue output	Max. load 500 ohm
Digital input	Max. 240 VAC or 48 VDC. High: ≥24 VAC/DC Low: <1 VAC/DC. Reset >50 ms
Fuse	Max. 10 A
Terminal wire size	Use 75°C copper (CU) wire only. 0.2-4.0mm^2 single core (AWG12). 0.2-2.5mm^2 flexible core (AWG14), stripped length 8mm (0.32")
Terminal tightening torque	0.56-0.79 Nm (5-7 lb-in)
Accuracy	±2%, ±1 unit cos phi>0.5; excl. current transformer: +68° F (+20°C)
Repeatability	±1 unit 24h; +68°F (+20°C)
Temperature tolerance	Max. 0.1%/°C
Operating temperature	-4°F to +122°F (-20 to +50°C)
Storage temperature	-22°F to +176°F (-30 to +80°C)
Protection class	IP20
RoHS directive	2002/95/EC
Approved to	CE (up to 690VAC), UL and cUL (up to 600VAC)