

PUMP[®]SMART

CONTROL SOLUTIONS

PS10 - PS20 Pump Load Monitors

PumpSmart Protection for Fixed Speed Applications

Simplicity

No external process sensors required
Can be mounted onto existing equipment

Reliability & Safety

Protection from dry running and overload conditions
means reduced maintenance and downtime

Flexibility

110 – 575 AC Voltages
Up to 999 FLA Motor sizes

Developed for fixed speed pumping applications, the PumpSmart PS10 and PS20 Pump Load Monitors offer unsurpassed protection for underload and overload conditions that most often result in mechanical seal damage or pump failure.



The PS10 and PS20 Pump Load Monitors measure the motor input power in combination with a proprietary algorithm to accurately determine the pump's load.

During dry-run conditions, pump power is reduced and recognized by the PumpSmart Pump Load Monitor. During run-out conditions, power increases, which is also a recognizable condition. Power increase is also experienced when internal wear results from upset conditions. Customers may configure the devices to automatically shutdown the pump or warn the operator via integrated relay output(s).

PS10 Pump Load Monitor

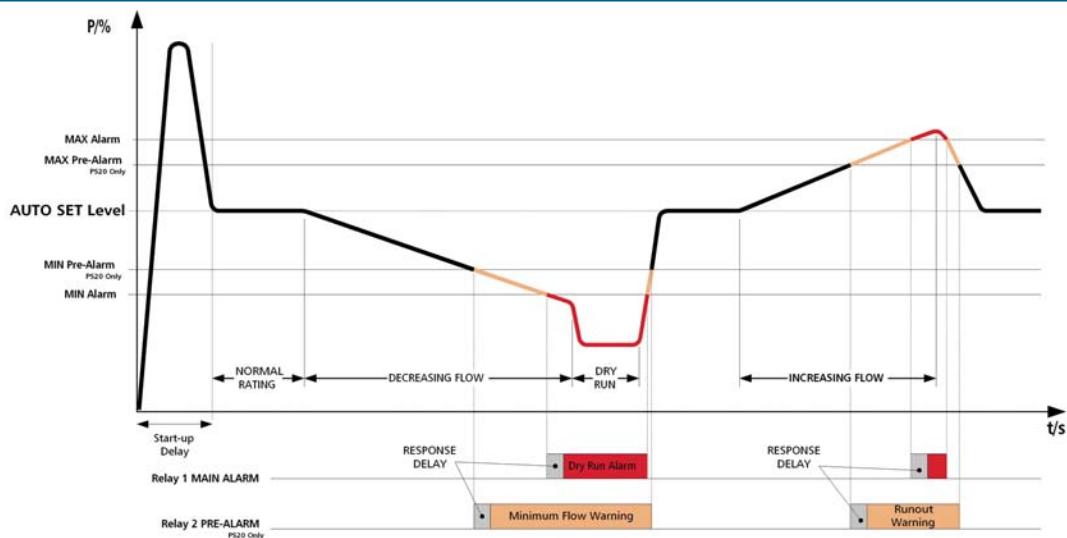
The PS10 offers single underload or overload condition protection for pumps up to 40 HP (50 Amps MAX). Alarm setpoints can be entered either manually or automatically set using the Auto-Set functionality during normal operation.

PS20 Pump Load Monitor

The PS20 offers two underload and two overload condition protection functions (four total) as well as the ability to output pump load through an integrated 4-20 mA output. A six button keypad and LCD readout enables greater configuration and operation options. The PS20 can be applied on motors up to 999 F.L. Amps.

Pump Load Measurement

The instantaneous power supplied to the pump by the electrical motor is monitored by measuring the input power and by calculating the motor power losses with a proprietary algorithm. The value of the real motor shaft power is used to accurately determine overload and underload conditions.



TECHNICAL DATA

	PS10	PS20
Alarm Setpoints	1 1 Underload or 1 Overload	4 2 Underload and 2 Overload
Dimensions	45mm x 90mm x 115mm [1.77" x 3.54" x 4.53"]	45mm x 90mm x 115mm [1.77" x 3.54" x 4.53"]
Weight	0.3 kg [10.5 Oz]	0.3 kg [10.5 Oz]
Enclosure	IP20 NEMA 1	IP20 NEMA 1
Mounting	35mm DIN-rail 46277	35mm DIN-rail 46277
Power Consumption/Fuse	6VA (10A) Maximum	6VA (10A) Maximum
Motor Voltage(s)	1P x 100-240 VAC \pm 10% 3P x 100-600 VAC \pm 10% 3P x 600-690 VAC \pm 10%	1P x 100-240 VAC \pm 10% 3P x 100-240 VAC \pm 10% 3P x 380-500 VAC \pm 10% 3P x 500-600 VAC \pm 10% 3P x 600-690 VAC \pm 10%
Frequency	50Hz or 60 Hz	50Hz or 60 Hz
Analog Output Motor Power	None	Programmable, self powered 4-20 mA, 20-4 mA, 0-20 mA, 20-0 mA, Max Load 500 Ω
Relay Output	Main Alarm 5A / 240 VAC Resistive 1.5A / 240 VAC Pilot Duty/AC12	Main Alarm (R1) – Pre Alarm (R2) 5A / 240 VAC Resistive 1.5A / 240 VAC Pilot Duty/AC12
Current Input	50A Max w/ Current Transformers (p/n) A08180A01,02,03	100A Max w/ Current Transformers (p/n) A08180A01,02,03,04 101-999A w/ A08180A01 and Standard Current Transformers (p/n) A08180A05,06,07,08
Digital Input External Reset	48VDC or 240 VAC Maximum High: >24 VAC/VDC Low: <1 VAC/VDC	48VDC or 240 VAC Maximum High: >24 VAC/VDC Low: <1 VAC/VDC
Approvals	UL / cUL	UL / cUL

PumpSmart

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