

E20 LOSS OF PRIME PRESSURE SWITCH

RANGE 0 to 20 Bars (0 to 300 psi)



The E20 Loss of Prime Pressure Switch is a solid-state digital pressure switch specifically for the control and protection of industrial, agricultural and domestic pressure pumps.

INTRODUCTION

Pressure switches normally have two set points, a low pressure cut in point and a high pressure cut out point. A pump under the control of such a switch operates between the two set points. If pressure is lost due to the pump running dry or due to a burst pipe, the pump will continue to run simply because the pressure will be low and the pressure switch remains on. In such a situation the pump will invariably sustain substantial damage due to being run dry.

The E20 pressure switch addresses this problem by providing a third adjustable switch point that can be set below the normal operating range to turn the pump off and prevent it being damaged if it runs dry.

THE E20 PRESSURE SWITCH

The E20 features a solid-state ceramic pressure sensor that is both corrosion resistant and highly accurate. A microprocessor monitors the system pressure and directly controls a powerful hybrid drive that in turn controls the pump motor. The result is an easy to set, accurate and reliable pressure switch that will switch the pump off and prevent damage if pressure is lost.

LOSS OF PRIME FEATURE

The E20 has a digitally settable trip point that is fully adjustable, graduated and accurate.

Unlike mechanical loss of prime pressure switches, the E20 will tolerate the pressure dipping to below its trip point for up to 30 seconds. If the pressure recovers within the 30 seconds the pump continues running seamlessly. If, however, the pressure does not recover and the trip is actuated, the pump will be automatically shut down and the E20 will flash a red warning light to indicate the loss of pressure. Restarting the pump is as simple as pressing the built-in reset button.

The built-in automatic 30 second run on timer means that pressure fluctuations that occur in the normal operation of the pump system will be ignored and only a genuine loss of pressure will actuate the E20's pump protection system.

The adjustable trip point feature of the E20 allows a system to be tuned to its operating environment. For example, in applications where standing water levels can change dramatically such as in bore pump systems, the ability to tune the trip point to a setting that tolerates changes in pressure but trips out when a genuine loss of prime occurs is a major advantage over normal pressure switches.

CONSTRUCTION

The E20 pressure switch is corrosion resistant. It is constructed from high impact glass reinforced thermoplastic, ceramic, and 316 stainless steel. It is ideal for use in potable water, aggressive bore water, seawater, and a huge variety of chemical solutions.



AUSTRALIAN MADE

APPLICATIONS

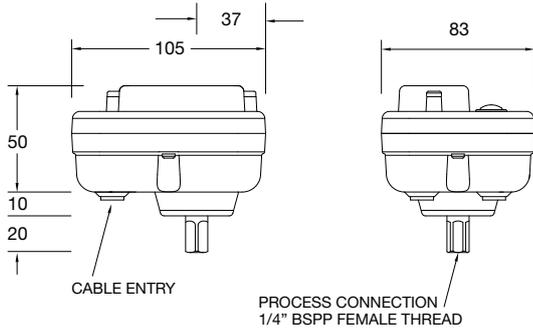
- HIGH PRESSURE DOMESTIC SYSTEMS
- INDUSTRIAL PUMP CONTROL
- IRRIGATION PUMP CONTROL
- WASHDOWN SYSTEMS
- WATER TREATMENT
- PNEUMATIC CONTROL
- BORE PUMP CONTROL
- SEAWATER PUMPS
- EFFLUENT CONTROL

FEATURES

- 3 DIGITALLY ADJUSTABLE SETPOINTS
- DIGITAL FINE TUNING ADJUSTMENT
- CORROSION RESISTANT CONSTRUCTION
- SUITABLE FOR SEA WATER USE
- CONTROL MOTORS TO 3.75kW (P1)
- SIMPLE PLUG IN INSTALLATION
- AUTOMATIC OVERRIDE ON START-UP
- LOSS OF PRESSURE WARNING LIGHT
- INDICATOR LIGHTS FOR ALL FUNCTIONS
- TOUGH RELIABLE CONSTRUCTION
- WEATHERPROOF HOUSING IP67
- 20 Bar (300 Psi) RATED

TECHNICAL DATA

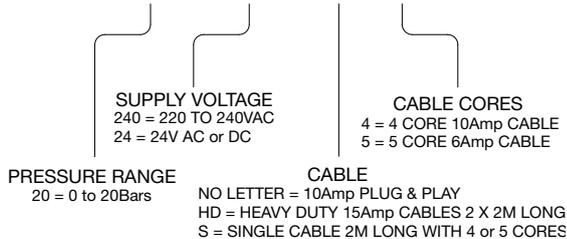
DIMENSIONS



ORDERING

The E20 Digital Pressure Switch is available in a number of configurations to suit specific applications. For directly controlling pumps up to 2.4kW (3HP) it can be supplied as 'Plug & Play' with 10Amp leads and fitted with a plug and socket. For large fixed installations it can also be supplied in a heavy duty form fitted with 2 metre long 15A cables. It can also be supplied with a single 2 meter long cable that has either 4 or 5 cores. The single cable models are for the direct control of pump motors to 2.4kW (3HP) (4 core version), applications. In addition there is a universal low voltage AC/DC model available. The part numbering system below sets out how to order a specific configuration.

E20 - 240 - S - 5



Please Note: The universal 24V AC/DC model is only available in E20-24-S-5 configuration, that is; with a single 5-core cable for control circuit applications only.

OPERATING ENVIRONMENT

Ambient Temperature Range	1°C to 50°C
Liquid Temperature Range	1°C to 60°C, See note below
Ingress Protection Rating	IP67
Supply E20-240 (240VAC Model)	220 to 240VAC 50Hz
Supply E20-24-S-5 (24V AC/DC Model)	12 to 28Volts AC or DC at 80mA Max
Maximum Operating Pressure	20 Bars (300 psi)

WARRANTY

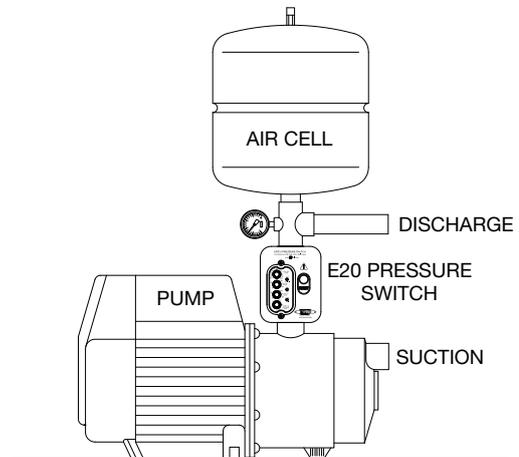
The Kelco E20 Loss of Prime Pressure Switch is protected by a 12 months return to base warranty. Full details of our warranty can be downloaded from: - <http://www.kelco.com.au/menu/information/warranty-statement/>

OPERATING RANGE

Start-up Timer	Automatic and limited to 30 seconds Max.
Cut out Pressure	Adjustable from 2 to 20 Bars in 16 steps
Cut in Pressure	Adjustable from 1 to 19 Bars in 16 steps
Trip Pressure	Adjustable from 0 to 18 Bars in 16 steps
Fine Tune Adjustment	Adjustable Range +/-1 Bar in 16 steps
Minimum Differential Pressure On to Off	1 Bar (100kPa)~(14.7 psi)
Maximum Differential Pressure On to Off	19 Bars (1900kPa)~(274psi)
Maximum Switched Load E20-240 (Plug & Play Model)	240VAC 50Hz 2.4kW (Motors up to 3HP)
Maximum Switched Load E20-240-HD Model Only	240VAC 50Hz 3.75kW (Motors up to 5HP)
Maximum Switched Load E20-240-S-4	240VAC 50Hz 2.4kW (Motors up to 3HP)
Maximum Switched Load E20-240-S-5	240VAC 50Hz 6 Amps. For control circuit applications only
Maximum Switched Load E20-24-S-5	240VAC 50Hz 6 Amps. For control circuit applications only
Operating Pressure Range	0 to 20 Bars (0 to 300psi) See note below
Burst Pressure	45 Bars (650psi)

WARNING SAFETY NOTE: In the interests of safety the E20 pressure switch must NOT be used in hot water applications (>60°C).

The E20 pressure switch is designed to operate at pressures up to 20 Bars (300 psi) and must not be used in applications where either the static or dynamic pressure exceeds this rating.



STANDARDS

The E20 Loss of Prime Pressure Switch is certified to Australian Standards: -

AS60529-2004
AS61010.1: 2003
AS/NZS CISPR 14.1:2003

MADE IN AUSTRALIA BY

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PLEASE NOTE: The Kelco E20 Pressure Switch is the subject of Australian and International patent and trademark applications.

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