

PG20 PRESSURE GUARD

UNIVERSAL OVER & UNDER PRESSURE TRIP SWITCH
RANGE 0 to 20 Bars (0 to 300 psi)



The Kelco PG20 Pressure Guard is a dedicated pressure operated safety device that can be set to shut down a pump if the system pressure exceeds a preset level or falls below a preset level. It can be set for over pressure protection, under pressure protection or both.

INTRODUCTION

In pumping systems it is often desirable to protect pipework and equipment against excess pressure. For example, a high head bore pump can easily burst low class poly pipe if the standing water level in a bore is unusually high. Pumps can also benefit from dry run protection. A simple transfer pump can be badly damaged if run dry. A dedicated pressure trip switch that shuts down a pump on either excessively high or low pressure or on no pressure is a great benefit in many applications.

More complicated pumping systems that may have pressure switches or any type of controls will benefit from a dedicated pressure trip switch that acts as a guard over the whole system and shuts down the process if pressure rises or falls beyond settable levels.

THE PG20 PRESSURE GUARD

The PG20 Pressure Guard is a dedicated digitally operated pressure actuated trip switch. In a system operating normally the Pressure Guard is simply a closed switch that allows the system to operate unimpeded. If for any reason the system pressure rises or falls beyond preset limits the Pressure Guard will trip out, shut down the process and flash a red warning light. The system will not restart until attended to. Once tripped the Pressure Guard has to be manually reset by pressing its reset button. This ensures that whatever caused the fault is investigated and attended to.

DEDICATED FUNCTIONS

The PG20 Pressure Guard has 2 main control dials, one for setting the high pressure trip point and one for setting the low pressure trip point. Either dial can be set to zero. If the low pressure cut out dial is set to zero the PG20 becomes a dedicated high pressure switch with no low pressure cut out. Likewise, if the high pressure dial is set to zero the unit becomes a dedicated low pressure cut out switch with no high pressure limit. In addition, both the high and low pressure dials can be set so the PG20 holds the system between a set upper limit and a set low limit.

SELF-TESTING

The PG20 Pressure Guard tests its own operation every time it is powered up. Unlike mechanical switches that may sit undisturbed for years and fail on the one occasion when they are required to operate, the Pressure Guard is an active participant in the overall system in which it operates and runs a self diagnostic routine every time it is powered up or its reset button is pressed.

APPLICATIONS

- BURST PROTECTION FOR PIPE SYSTEMS
- DRY RUN PROTECTION FOR PUMPS
- SAFETY CONTROL FOR PUMPS

FEATURES

- SELF TESTING EACH TIME IT STARTS
- 2 DIGITALLY ADJUSTABLE SETPOINTS
- DIGITAL FINE TUNING ADJUSTMENT
- ZERO TO 3 MINUTE START TIMER
- CORROSION RESISTANT CONSTRUCTION
- SUITABLE FOR SEA WATER USE
- WARNING LIGHTS FOR ALL FUNCTIONS
- TOUGH RELIABLE CONSTRUCTION
- WEATHERPROOF HOUSING IP67
- 20 Bar (300 psi) RATED



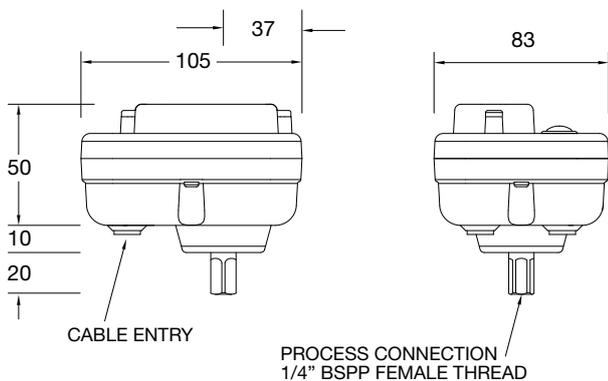
AUSTRALIAN MADE

TECHNICAL DATA

LOW PRESSURE DIP TIMER

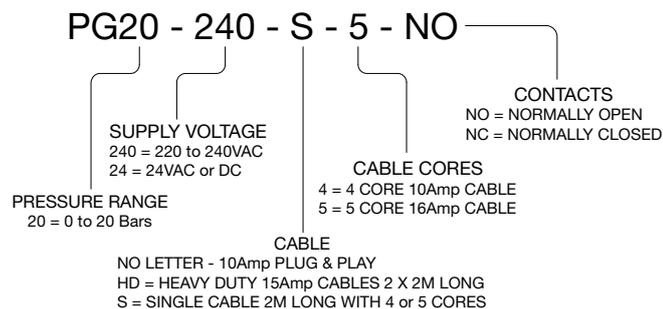
The PG20 has a built-in automatic timer that allows the system to continue to operate for up to 10 seconds if the pressure dips to below the low pressure preset trip point. When used as a low pressure cut out for loss of prime protection the PG20 will tolerate the system's pressure dropping to below the preset trip point for up to 10 seconds to allow the system's pressure time to stabilize. Valves opening and closing can cause pressure to momentarily dip to an unacceptably low level. The PG20 Pressure Guard's built-in automatic dip timer ensures such momentary dips in pressure do not cause false alarms by tripping out and shutting down the system. When used for high pressure protection no timer is used. The PG20 instantly shuts down the system as soon as it senses pressure higher than its preset limit.

DIMENSIONS



ORDERING

The PG20 is available in several configurations to suit specific applications. It is available in either 240V AC or as a universal 12 to 24V AC or DC device with a single 5-core cable for use in single and 3-phase control circuit applications. The part numbering system below sets out how to order a specific configuration. Against special order it can be supplied in additional configurations that are also set out in the part numbering system.



CONSTRUCTION

The PG20 Pressure Guard 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.

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 PG20-240 (240VAC Model)	220 to 250VAC 50Hz
Supply PG20-24-S-5 (24VAC/DC Model)	12 to 28 Volts AC or DC at 100mA

OPERATING RANGE

High Pressure Cut Out	Adjustable from 5 to 19 Bars in 15 steps
Low Pressure Cut Out	Adjustable from 1 to 15 Bars in 15 steps
Fine Tune Adjustment	Range is plus to minus 1 Bar in 16 steps
Start Timer Adjustment Range	Adjustable from zero to 180 seconds in 16 steps
Maximum Switched Load PG20-240-S-5	240VAC 50Hz 6Amps For control circuit applications only
Maximum Switched Load PG20-24-S-5	240VAC 50Hz 6Amps For control circuit applications only
Operating Pressure Range	0 to 20 Bars (0 to 300 psi), See note below
Burst Pressure	45 Bars (650 psi)

WARNING SAFETY NOTE: In the interests of safety the PG20 Pressure Guard must NOT be used in hot water applications (>60°C).

The PG20 Pressure Guard 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.

WARRANTY

The Kelco PG20 Pressure Guard 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/>

STANDARDS

The PG20 Pressure Guard is certified to Australian Standards: -
AS60529-2004
AS61010.1: 2003
AS/NZS CISPR 14.1:2003

MADE IN AUSTRALIA BY

KELCO Engineering Pty Ltd

ABN 20 002 834 844

Head Office and Factory: 9/9 Powells Road BROOKVALE 2100 AUSTRALIA

Postal Address: PO Box 496 BROOKVALE NSW 2100

Phone: +61 2 9905 6425 Fax: +61 2 9905 6420

Email: sales@kelco.com.au Web: www.kelco.com.au

PLEASE NOTE: The Kelco PG20 Pressure Guard is the subject of Australian and International patent and trademark applications.

Kelco Engineering Pty Ltd reserves the right to change the specification of this product without notice. Kelco Engineering Pty Ltd accepts no liability for personal injury or economic loss as a consequence of the use of this product. All rights reserved copyright Kelco Engineering Pty Ltd © 2010