

F40-240LC PUMP CONTROLLER

SIMPLE BUT POWERFUL
FOR ALL PIPE SIZES 25mm (1") AND LARGER



APPLICATIONS

- DOMESTIC WATER SUPPLY
- INDUSTRIAL PUMP CONTROL
- CONTROL OF TRANSFER PUMPS
- IRRIGATION PUMP CONTROL
- PRESSURE BOOSTING PUMPS
- WATER TREATMENT SYSTEMS
- WASHDOWN CONTROL
- POOL & SPA PUMPS
- BORE PUMP CONTROL

FEATURES

- SIMPLE, ONLY 1 DIAL TO SET
- ELIMINATES PRESSURE TANKS AND SWITCHES
- NO METAL PARTS IN CONTACT WITH WATER
- STARTS ON PRESSURE STOPS ON FLOW
- SUITS ALL PIPE SIZES 25mm (1") & LARGER
- AUTO RESTART AFTER RUNNING DRY
- DIRECTLY CONTROL PUMPS TO 2.4kW
- IGNORES MINOR FLOW FLUCTUATIONS
- INDICATOR LIGHTS FOR ALL FUNCTIONS
- SUITABLE FOR USE IN SEAWATER
- TOUGH RELIABLE CONSTRUCTION
- 20 Bar (300 psi) PRESSURE RATED
- WEATHERPROOF HOUSING IP67

INTRODUCTION

The F40LC Digital Pump Controller is a powerful self-contained microcomputer that controls and protects a pump under its command. The F40LC provides a seamless environment for the pump and gives the end user all the advantages of constant flow and at the same time protects the pump against damage from being run dry. Constant flow means a smooth supply free from the pressure fluctuations that plague conventional pressure controlled pumps.

THE BASIC PROBLEM

Pressure systems cycle between low and high pressure. Not because this gives the user any advantage but simply because a pressure differential is required to operate the pressure switch that normally controls such systems. The user sees the effect as annoying pressure fluctuations at the tap. If run dry for any reason, such a pressure system will run continuously and generally sustain serious damage because it has no means to sense the lack of water and shut down.

THE F40-240LC SOLUTION

The F40LC Digital Pump Controller monitors both flow and pressure and only lets the pump run if water is present. In a typical application the pump will start when there is a demand for flow or when the pressure falls. When demand ceases the controller continues to run the pump for 10 seconds to re-pressurise the system. The pump will then automatically shut down. Such a system allows the selection of a pump that has an essentially flat pressure and flow curve and delivers a steady constant pressure over widely varying flows. An air cell is not needed in the system but can be included to reduce the frequency of pump starts. With the F40LC controller the start-up pressure is set to start the pump at a pressure only marginally higher than the system's static pressure. If the demand is too low to actuate the F40LC's flow sensor, or if for any reason the pressure falls the F40LC's built in pressure sensor will detect the pressure fall, automatically run the pump, re-pressurise the system then shut down the pump and go back to monitoring the whole system.

DRY RUN PROTECTION

A pump under the control of an F40LC will start if the pressure drops, or on flow if a tap is turned on. If the system runs out of water the controller senses the loss of flow and the lack of pressure and stops the pump. A red warning light on the controller then indicates there is a problem.

AUTOMATIC RESTART FEATURE

If a pump under the control of the F40LC is run dry, the controller will shut it down and automatically try to restart it every 15 minutes for 1 hour. That is, it will try to restart the system 4 times. If the controller finds the pump is still running dry after the fourth attempt, it stops re-trying and flashes its red warning lights to indicate there is a problem.



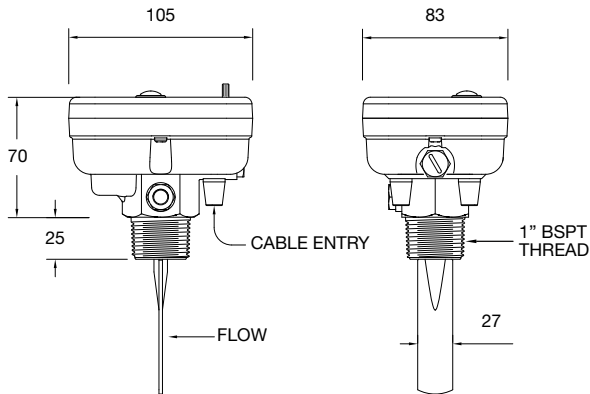
AUSTRALIAN MADE

TECHNICAL DATA

CONSTRUCTION

The F40LC pump controller is made from high compliance thermoplastic and has no metal parts in contact with water. It operates magnetically through a seal-less coupling system. It is ideal for use in potable drinking water, aggressive bore water, seawater and a huge variety of chemical solutions.

DIMENSIONS



ORDERING

The F40LC Digital Pump Controller is available in two basic 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 original equipment manufacturer's applications the controller is available fitted with a single 4 core lead for wiring back into a pump motor's junction box. This arrangement allows pumps to 2.4kW (3 HP) to be directly controlled through a single cable connection to the F40LC.

F40-240LC-S

SUPPLY VOLTAGE
240 = 220 TO 240VAC

CABLE

NO LETTER = 10Amp PLUG & PLAY
S = SINGLE CABLE 2M LONG WITH 4 CORES

OPERATING ENVIRONMENT

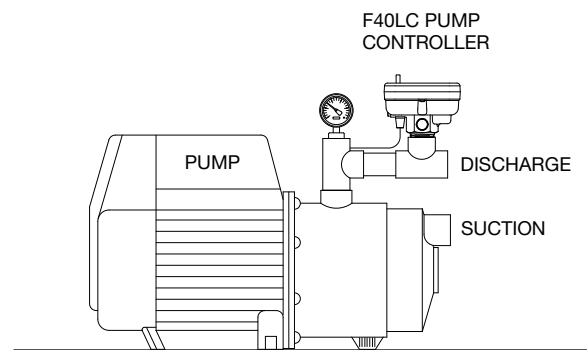
Supply F40-240LC	220 to 250VAC 50Hz
Ambient Temperature Range	1°C to 50°C
Liquid Temperature Range	1°C to 60°C, See note
Ingress Protection Rating	IP67

OPERATING RANGE

Start-up Timer	Fixed at 30 seconds
Run-on Timer	Fixed at 30 seconds
Restart Timer	Fixed to 4 restart attempts at 6 hour intervals
Pump Start Pressure Range	0 to 5 Bars in 16 steps of 33kPa each
Maximum Starting Pressure	500kPa (72 psi)
Minimum Starting Pressure	33kPa (4.7 psi)
Recommended Pipe Sizes	25mm (1") or larger (There is no upper limit)
Maximum Switched Load All Models	250VAC 50Hz 2.4kW (Motors up to 3HP)
Operating Pressure Range, Static or Dynamic	0 to 20 Bars (0 to 300 psi), See note below
Burst Pressure	50 Bars (750 psi)

NOTE: The F40LC pump controller must NOT be used in hot water applications (>60°C). The F40LC pump controller is rated to withstand water pressure to 20 Bars (300 psi) and must not be used in applications where the static or dynamic pressure exceeds this rating.

TYPICAL PUMP INSTALLATION



SPARE PARTS

Spare Paddles are available for the F40LC Digital Pump Controller.

WARRANTY

The Kelco F40LC Digital Pump Controller 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 F40LC Digital Pump Controller 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 F40LC Digital Pump Controller 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