

## F60 Mk2 DIGITAL PUMP CONTROLLER

THE ULTIMATE IN VERSATILE & FLEXIBLE PUMP CONTROL

SIMPLE TO USE AND VERY POWERFUL

### FEATURES

- Very simple to program
- Multi voltage operation
- Displays pressure and set points
- 15 Programmable timers built in
- Powerful 40 Amp solid state drive
- Dedicated 16 Amp alarm relay
- Detachable electrical housing
- 20 Bar 290 psi Pressure rating
- Suites pipes 25mm (1") & Larger
- Accepts remote input
- Weatherproof Housing



### FURTHER INFORMATION

Further information including installation guides, programming guides and videos can be found at the following web page: <http://www.kelco.com.au/f60-pump-controller>

### OUTLINE

The F60 Mk2 Digital pump controller monitors system pressure and flow to ensure complete pump protection. It can be set to control a single or dual pump system, with a wide range of functions.

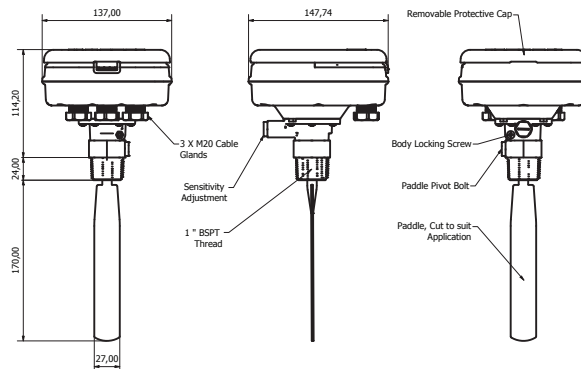
### ORDERING

The F60 Mk2 Digital Pump Controller is available in all thermoplastic construction with a 1" BSP process connection. The standard controller can operate from 220 ~ 240 VAC or from 24 VAC or DC. A dedicated 12 VDC model is also available.

Model Number	Description
<b>F60-MK2</b>	Standard model for 220 ~ 240 VAC and 24V AC or 24V DC operation.
<b>F60-12-MK2</b>	Low voltage model for 12V DC operation only.

# TECHNICAL DATA

## DIMENSIONS



## FUNCTIONS

The F60 Mk2 includes 5 unique operating modes each with a wide range of options. The table below sets out the functions and the modes they operate under.

MODES OF OPERATION	1	2	3	4	5
<b>Functions (# Settable)</b>					
# Select pressure units kPa or psi	Y	Y	Y	Y	Y
# Pre-start delay timer.	Y	Y	Y	Y	Y
# Start-up timer	Y	Y	Y	Y	Y
# Pressure Timer (Allows time for the pressure to rise)				Y	
# Run-on timer	Y	Y	Y	Y	Y
# Pressure dip timer				Y	Y
# Delayed restarting timer	Y	Y	Y	Y	Y
# Starting pressure		Y	Y		Y
# Stopping pressure			Y	Y	Y
# Cyclic running and stopping timers	Y	Y	Y	Y	
# Auto restart if run dry. Single or repeatable tries		Y	Y	Y	
# Anti-cycling	Y	Y	Y		
# Burst pipe detection	Y	Y	Y		
# Leak detector			Y		
# Dual pump control with or without dual flow swnsing					Y
# Starts the pump at a preset low pressure		Y	Y		Y
# Stops the pump at a preset high pressure			Y	Y	Y
Stops the pump if flow stops	Y	Y	Y	Y	Y
Displays the system pressure in preferred units	Y	Y	Y	Y	Y
Displays the high & low pressure set points			Y	Y	
Can start the pump using an external switch	Y	Y	Y	Y	Y
Starts & stops the pump on flow regardless of pressure	Y				
Displays the total time the pump ran in minutes				Y	
On a fault, displays the reason the pump was shut down	Y	Y	Y	Y	Y
Remote stop via an external switch opening its contacts	Y	Y	Y	Y	Y
Stops the pump if flow stops.	Y	Y	Y	Y	Y
Loss of prime protection for the pump(s).	Y	Y	Y	Y	Y

## SERVICEABILITY

The F60 Mk2 digital pump controller is not user serviceable. However, spare parts and paddles are available from Kelco Engineering or from your

## 3 PHASE PUMPING SYSTEMS

The F60 Mk2 can be used to control both single and 3-phase pumps provided a 220~240 VAC or 24VAC supply is available at the installation site.

## FEATURES

Operating Range	
Ambient Temperature Range.	1°C to 50°C
Liquid Temperature Range.	1°C to 60°C
Ingress Protection Rating.	IP64
Pre-Start Delay Timer. (In all modes)	Adjustable from 1 second to 18 hours in 1 second increments.
Start-up Timer. (In all modes)	Adjustable from 1 second to 15 minutes in 1 second increments.
Pressure Rise Timer (In mode 4 only)	Adjustable from 1 second to 15 minutes in 1 second increments.
Run-on Timer. (In all modes)	Adjustable from 1 second to 15 minutes in 1 second increments.
Pressure Dip Timer (In mode 4 only)	Adjustable from 1 second to 4 minutes in 1 second increments.
Delayed Restarting. (In modes 1 to 3 only)	Adjustable from 1 minute to 99 hours 59 minutes in 1 minute increments.
Cyclic Running & Stopping. (In all modes)	Running and stopping times both adjustable from 2 minutes to 99 hours 59 minutes in 1 minute increments.
Auto Restart if Run Dry (In all modes)	Adjustable from 1 minute to 99 hours 59 minutes in 1 minute increments.
Anti Cycling. (In modes 1 to 3 only)	Adjustable from 1 motor start per hour to 1800 motor starts per hour.
Burst Pipe Detector. (In mode 3 only)	Adjustable from 1 minute to 99 hours 59 minutes in 1 minute increments.
Maximum Operating Pressure Static or Dynamic.	20 Bars 290 psi
Minimum Burst Pressure.	> 30 Bars 435 psi
Starting Pressure Range.	0 to 2000 kPa or 0 to 290 psi in steps of 1 kPa or 1 psi
Stopping Pressure Range.	0 to 2000 kPa or 0 to 290 psi in steps of 1 kPa or 1 psi
Minimum Pressure Differential On to Off and Off to On.	1 kPa or 1 psi.
Recommended Pipe Size.	25 mm 1" or larger. (There is no upper limit)

## ELECTRICAL

Supply Voltage Standard Model	220 to 250 VAC or 18 to 25 VAC or DC (Multi Voltage Input)
Supply Voltage 12V DC Model	11 to 14 VDC - 65mA Current Draw
Maximum Motor Load all Models	Single phase motors up to 2.4kW maximum at 240VAC (P1). Three phase motors of all sizes via a suitable interposing contactor, no maximum motor size applies.
Relay 1 Contact Rating	16 Amps at 240 VAC resistive
Relay 2 Contact Rating	16 Amps at 240 VAC resistive

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