

## F60 MK3 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 alarm relay
- Detachable electrical housing
- 20 Bar 290 psi Pressure rating
- Suits 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: <https://www.kelco.com.au/f60-mk3-advanced-pump-controller/>

#### OUTLINE

The F60 MK3 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.

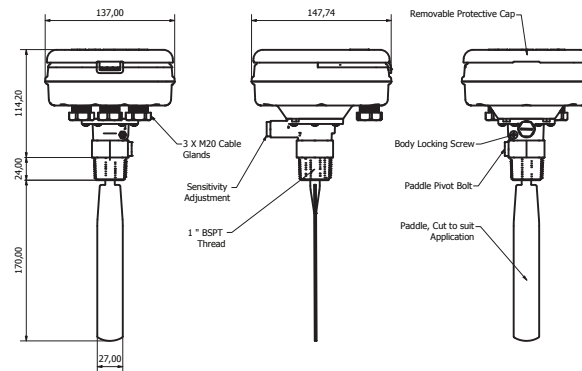
#### ORDERING

The F60 MK3 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
F60 MK3	Standard model for 220 ~ 240 VAC and 24V AC or 24V DC operation.
F60-12-MK3	Low voltage model for 12V DC operation only.

# TECHNICAL DATA

## DIMENSIONS



## FUNCTIONS

The F60 MK3 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 MK3 digital pump controller is not user serviceable. However, spare parts and paddles are available from Kelco Engineering or from your distributor.

## 3 PHASE PUMPING SYSTEMS

The F60 MK3 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.	> 25 Bars 360 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 240 VAC or 18 to 25 VAC or DC (Multi Voltage Input)
Supply Voltage 12V DC Model	11 to 14 VDC - 65mA Current Draw
Relay 1 Normally open contacts when linked to the HD terminal. See manual for more details.	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 when an interposing contactor is used.
Relay 1 Normally open contact rating when HD terminal is NOT used.	10 Amps at 240 VAC resistive
Relay 1 Normally closed Contact Rating	3.5 Amps at 240 VAC resistive
Relay 2 Normally open contacts	3.5 Amps at 240 VAC resistive

## KELCO Engineering Pty Ltd

ABN 20 002 834 844 Head office and factory: 9/9 Powells Road Brookvale NSW 2100 Australia. Postal Address: PO Box 7485 Warringah Mall Post Shop Brookvale NSW 2100 Australia. Phone: +61 2 9905 6425 Fax: +61 2 9905 6420 Email: Sales@kelco.com.au Web: www.Kelco.com.au

PLEASE NOTE: Kelco Engineering Pty Ltd reserves the right to change the specification of this product without notice. Users will use their own judgment to determine the appropriateness of using of Kelco Products in an application, any safety measures required and that the product is properly installed for that application. To the extent permitted by law Kelco Engineering Pty Ltd disclaims and excludes all and any liability for the use of this product in any particular application or for defective installation. The Kelco F60 MK3 is warranted against malfunction by a 12 month return to base manufacturer's warranty. Full details of our warranty and limitation of liability can be found in this document or downloaded from: <http://www.kelco.com.au/warranty>.