DAVEY
SumpMaster

MULTI FUNCTIONAL SUMP CONTROLLER

Model Number:
DSM-F2

COMMERCIAL

APPLICATION

Ideal for underground carparks, industrial, buildings, homes and housing estates, rainwater harvesting and sewerage and water authorities.

FEATURES & BENEFITS

- **Provides fully automatic pump control and protection** via SumpMaster's purpose built central controller module

- **Able to adapt to varying flow demand** via the use of a choice of operating modes

- **Control of one or two pumps** via float switches

- **Programmable plain English menus, with security access code protection,** enable quick and easy parameter adjustment to suit individual site conditions

- **System Status LCD display includes calculated flow (instantaneous and totalised flows), hour run per pump, number of starts meter for each pump, system starts for the last hour**

- **System Protection includes adjustable high and low level shutdown settings** with adjustable delay timers in order to protect pumps

- **System Protection Alarms and fault resets can be accessed on site** via the display screen, or via external communications

- **User definable automatic rotation of the lead pump** in order to equalise the hours of operation to maximise pump life

- **System can be set to turn on all pumps in the event of a high level alarm;** especially good in case the normal on/off floats are comprimised in some way

- **Pumps can be operated in manual mode** for system commissioning and fault finding

- **8 programmable inputs** allow for external sensing functions, or remote control

- **2 programmable outputs to communicate with external sources** such as telemetry and building management systems

- **Soft starters to avoid large in-rush currents** for 5.5kW and 7.5kW models

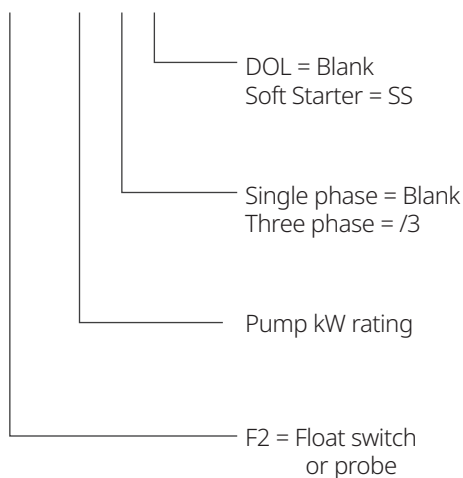- **Integrated RS485 Modbus communications** is compatible with most SCADA systems

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Pump Controllers

Item	Description
Controller Power Supply	240VAC 50-60Hz (+/-2Hz)
IP Rating	IP55
Pump Power Supply	Single phase 240V (up to 2.2kW) Three phase 380-440V (up to 7.5kW)
EMC/EMI Filtering	Designed to minimise conducted and radiated emissions "C" tick approved
Standard System Configuration	Tank Empty, 2 pumps, Multi level float switch control
Optional Configurations	Tank fill, single pump, single level float, probe, pressure transducer
Visual Alarm	Top mounted flashing neon
Audible Alarm	Inbuilt 92dBa @ 1 metre
Output Relays	4 Programmable, 5amp 250VAC
Inputs	8 x Switched - Voltage free, 24VDC supplied internally
Operating Temperature	0° to 45°C, non-condensing

MODEL CONFIGURATIONS

eg. DSM – F2 – 5.5/3 SS

DOL = Blank
Soft Starter = SS

Single phase = Blank
Three phase = /3

Pump kW rating

F2 = Float switch or probe

## MULTI-LEVEL SYSTEM OPERATION (Default Settings)

Tank Empty Mode - Multi Level

When the system level rises to system CUT IN 1 point the controller will start a cut in delay timer and if the level is still above CUT IN 1 point when the cut in timer expires then a pump is started. If the level does not reach CUT IN 2 point no further pumps are started.

When the level falls below CUT OUT 1 level the cut out timer is started, if the cut out timer expires and the level is still lower than CUT OUT 1 point then the pump will be turned off, unless the pump minimum run time has not been achieved and then it will remain on until the minimum run timer expires.

Should the level rise above CUT IN 1 point and a pump is started but this pump is unable to meet demand causing the level to rise above cut in 2 level, then CUT IN 2 timer is started and when CUT IN 2 timer elapses a second pump will start (If fitted and available).

After the level falls below CUT OUT 1 point the first pumps cut out timer will start, when it expires it will turn off the pump if the minimum pump run time has been achieved, the same will then occur for the second pump.
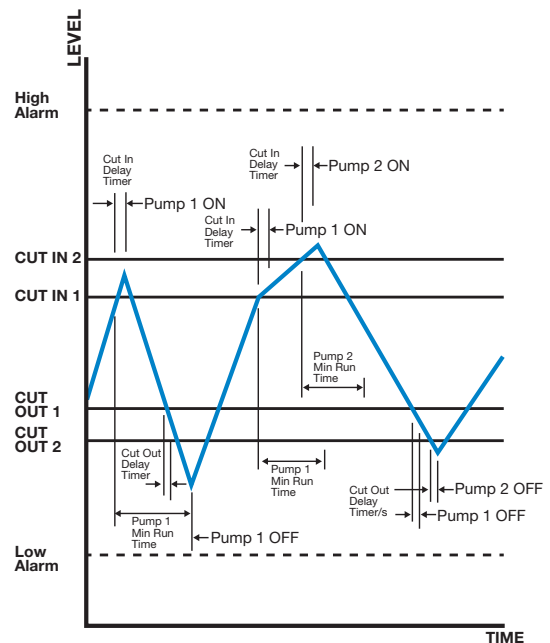
MULTI-LEVEL FLOAT CONNECTIONS (Default Settings)
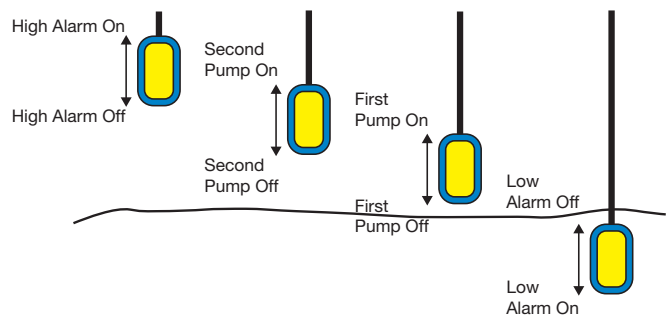
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Pump Controllers

Single Phase Models in Plastic Enclosures

Model	Suit Davey Models	Amps Range
DSM-F2-0.75	D75M, D75VM, D75SM, D75KM	8 to 10
DSM-F2-1.2	D120G,	10 to 13
DSM-F2-1.5	D150, D150V, D150S, D150G, D150K	13 to 16

Three Phase Models in Plastic Enclosures

Model	Suit Davey Models	Amps Range
DSM-F2-1.2/3	DT08, DT08V, DT08K, DT08S, DT12G,	1.6 to 2.5
DSM-F2-1.5/3	DT15, DT15V, DT15K, DT15S, DT15G	2.5 to 4
DSM-F2-2.2/3	DT22, DT22V, DT22K, DT22S, DT22G	4.0 to 6.0
DSM-F2-3.7/3	DT37, DT37G, DT37V, DT37KZN	6 to 8

Three Phase Models in Metal Enclosures with Soft Starters

Model	Suit Davey Models	Amps Range
DSM-F2-5.5/3SS	DT55, DT55V, DT55KZN	10 to 13
DSM-F2-7.5/3SS	DT75, DT75V, DT75K, DT75S, DT75KZN	13 to 17

HIGH LEVEL ALARM

High Level Alarm – Plastic Enclosure

Provides warning when water level in pit exceeds high level which could be due to high inflow, blocked outlets or pump breakdown. All models include audible buzzer and neon light to indicate a high or low level event.

Also able to be used instead to alarm for low water level which could be due to pump float switch jammed or failed.

(Inbuilt 80dBa @ 1 metre)

(Requires one FS750-10 float switch).

Model	Description
DSM-HLO	High Level Alarm w/ outputs for BMS etc
DSM-HLOM	Includes alarm mute & neon shut off

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