

Features

- Fully Automatic operation enabling both draining and filling simultaneously with a single device
- Adjustable sensitivity level from 1k to 200k Ω
- Includes provision for Manual start
- Protects submersible pumps against dry running and prevents overfilling
- Enables maximum utilization of incoming liquid (eg. water) supply
- Specially designed corrosion and shock resistant sensors to ensure trouble free operation.

Specification

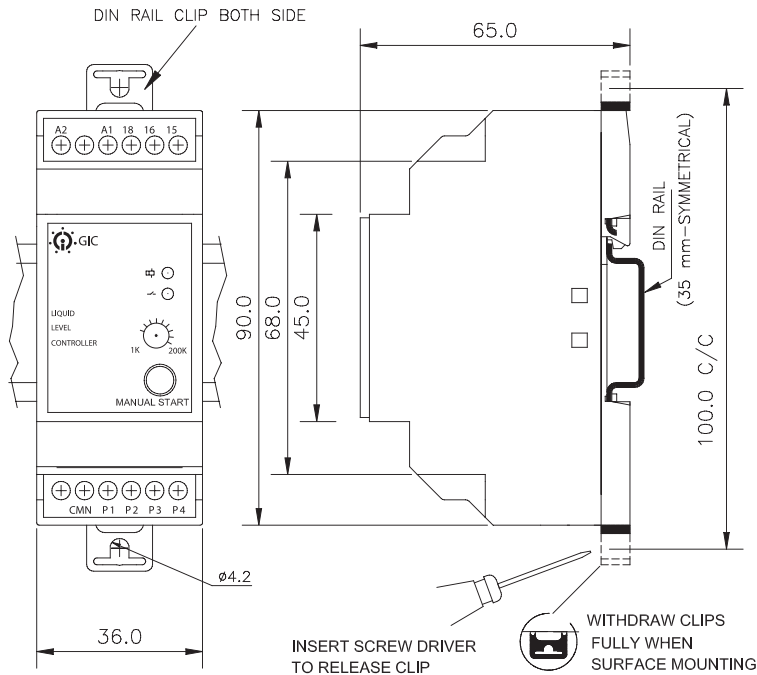
Parameters	MP008412	MP008413	MP008414
Supply Voltage	110V AC, $\pm 20\%$	240V AC, $\pm 20\%$	240V AC, $\pm 20\%$
Frequency	47Hz - 63Hz		
Power Consumption	3VA Max.		
Device Characteristics			
Conductive Sensor Probes	Stainless Steel SS304, 3 or 6Nos		
Sensor Length	10 cm		
Control Action Modes	Only Draining, Only Filling, Draining & Filling Simultaneous (One Tank or Two tanks)		
Sensitivity	1K to 200 K Ohm (Potentiometer adjustable)		
Sensor Voltage & Current	12 Vp-p, 100 Hz, < 1 mA		
Sensor cable	Cable gauge (Min):0.5 sq mm Tin coated, Cable dia(Min):1.5mm Max Cable Length-1000m (For set value < 50%) Max Cable Length-300m (For set value 100%) Max capacitances of wire- 80 nF / km		
Manual Start Switch	If Lower tank water level is greater than Low level & upper tank water level is below High level then by pressing a switch Relay can be switched ON manually.		
Output Control Mode	Relay ON/OFF		
Contact Ratings	1 C/O,8A@250V AC,Resistive,Terminal 15-Pole, Terminal 16-NC,Terminal 18-NO		
Utilization Category	AC-15: Rated Voltage (Ue):120/240V, Rated Current(Ie): 3.0/1.5A DC-13: Rated Voltage (Ue):24/125/250V, Rated Current(Ie): 2.0/0.22/0.1A		
Electrical Life	1 x 10 ⁵ Operations		
Mechanical Life	1 x 10 ⁷ Operations		
LED Indication	GREEN LED: Power ON, RED LED : Relay Output ON		
Operating Temperature	-10°C to +60°C		
Storage Temperature	-10°C to +70°C		

Liquid Level Controllers

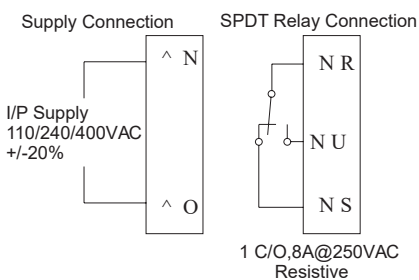
multicomp PRO

Relative Humidity	5 to 95 % RH (non condensing)
Mounting	Base/DIN Rail
Dimension (W x H x D)	36mm x 90mm x 65mm
Weight (unpacked)	235 g (Controller), 45 g (Sensor)

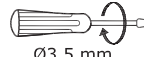

Mounting Dimensions



Connection Diagram



Terminal Torque & Capacity

 Ø3.5 mm	0.54 N.m (5 Lb.in) Terminal screw - M2.6
	1 x 0.2...3.3 mm ² Solid Wire
AWG	1 x 24 to 12

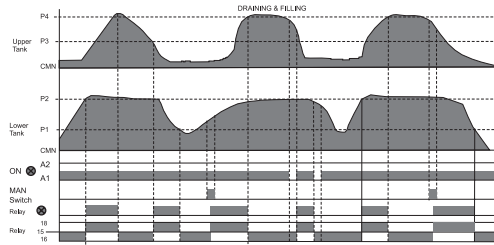
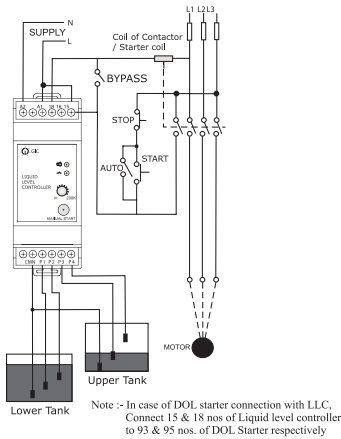
Dimensions : Millimetres

Newark.com/multicomp-pro
Farnell.com/multicomp-pro
sg.element14.com/b/multicomp-pro

multicomp PRO

Operating Function Diagram

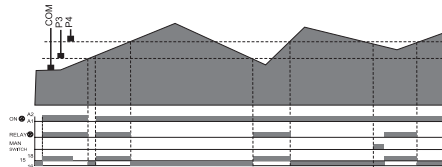
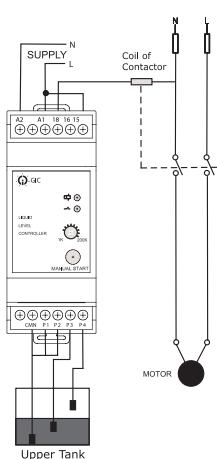
Simultaneous filling and draining with 6 Sensors



P1	P2	P3	P4	Relay & RED LED Indication
OUT	OUT	OUT	OUT	OFF
IN	OUT	OUT	OUT	OFF
IN	IN	OUT	OUT	ON
IN	IN	IN	OUT	ON
IN	IN	IN	IN	OFF
IN	IN	IN	OUT	OFF
IN	IN	OUT	OUT	ON
IN	OUT	OUT	OUT	ON
OUT	OUT	OUT	OUT	OFF

The system starts up whenever the upper tank requires liquid and the lower tank has sufficient level to supply it, and it stops when the liquid reaches its maximum level in the upper tank or if the Lower tank reaches its minimum level. If all Sensors are non conducting then Relay is "OFF". If Liquid level reaches "P1" Sensor then relay will be OFF (maintains previous state). When the level reaches "P2" Sensor then relay will be switched ON (As the liquid level has reached maximum level of Lower tank). Now Filling of Upper tank will start. When liquid level reaches "P3" Sensor, relay will be ON (maintains previous state). Now when liquid level reaches "P4" Sensor relay will be switched "OFF" (As *Liquid level has reached maximum level in the Upper tank). Now if Liquid level of upper tank is decreasing and it goes below "P4" Sensor, then the relay will be "OFF" (Maintains previous state), But when it falls below "P3" level, then relay will be switched "ON" until the liquid level is more than "P1" Sensor (i.e. until there is enough liquid in the upper tank).

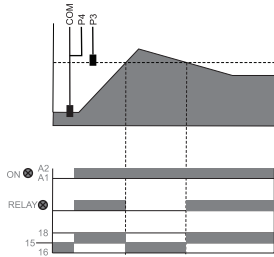
Filling Control (Single Tank Monitoring with 3 Sensors)



P3	P4	Relay & RED LED Indication
OUT	OUT	ON
IN	OUT	ON
IN	IN	OFF
IN	OUT	OFF
OUT	OUT	ON

When the level in the tank drops below the low level Sensor, the relay energises. The relay then remains energized until the level reaches the high level Sensor. As soon as the high level Sensor becomes submerged, the relay deenergizes and remains OFF until the level has dropped sufficiently below the low level Sensor. When "P3" & "P4" are non-conducting i.e. tank is empty, Relay is "ON". Whenever water level reaches "P3" Sensor, then again the relay will be ON (Maintains previous state of relay). But when water level touches the "P4" Sensor, then relay will be switched "OFF" (As Liquid reaches the maximum level). Again when water level decreases below "P4" level, then the relay will be switched "OFF" (Maintains previous state of relay). When water level reaches below "P3", then the relay will be switched "ON" (As the Liquid reaches minimum level)

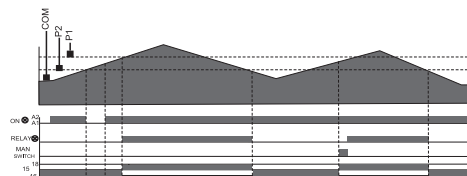
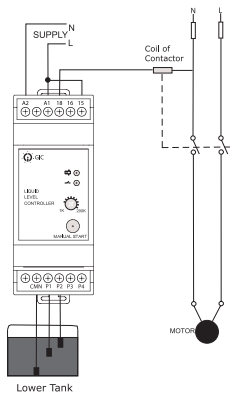
Filling Control (Single level Monitoring with two Sensors)



P3	Relay & RED LED Indication
OUT	ON
IN	OFF

The output relay switches "ON" which starts up the relay when the Minimum level Sensor "P3" is no longer in contact with the liquid and switches "OFF" when the liquid reaches "P3". This operation is not recommended for pump controlling

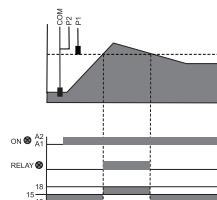
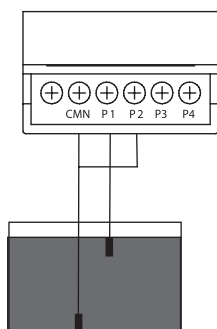
Draining Control (Single Tank Monitoring with 3 Sensors)



P1	P2	Relay & RED LED Indication
OUT	OUT	OFF
IN	OUT	OFF
IN	IN	ON
IN	OUT	ON
OUT	OUT	OFF

When the level in the tank rises sufficiently to submerge the high level Sensor, the relay energizes. The relay then remains energized until the level has dropped below the low level Sensor. As the liquid drops below the low level Sensor, the relay deenergizes and remains off until the level has risen sufficiently to submerge the high level Sensor. When "P1" & "P2" are non-conducting i.e. when the tank is empty, relay is "OFF". Whenever water level reaches "P1" Sensor, then again the relay will be "OFF" (maintains previous state of relay). But when water level touches the "P2" Sensor, then relay will be switched "ON" (as the Liquid reaches maximum level). Again, when water level decreases below "P2" level, then the relay will remain switched "ON" (maintains previous state of relay). When water level reaches below "P1", then relay will be switched "OFF" (as the liquid reaches minimum level)

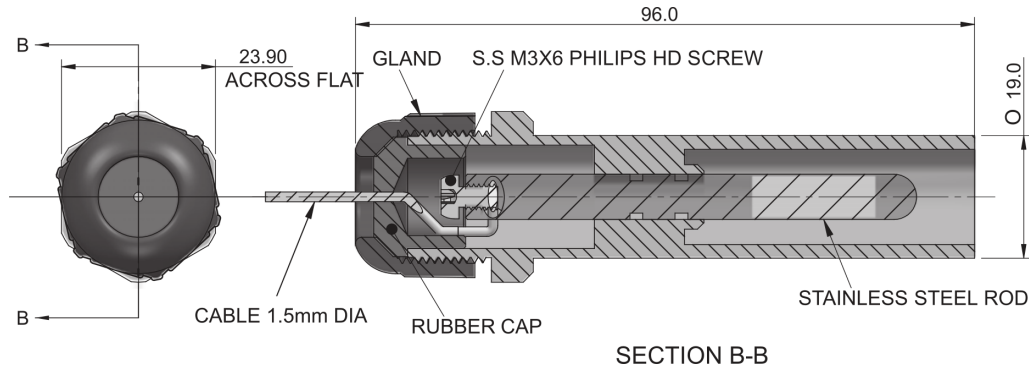
Draining Control (Single level Monitoring with two Sensors)



P1	Relay & RED LED Indication
OUT	OFF
IN	ON

The output relay switches ON, when liquid level goes above a maximum level, fixed by the Sensor "P1", when the level drops below a "P1" Sensor, relay switches "OFF". This operation is not recommended for pump controlling.

Sensor Diagram



A single pole electrode used for level control in wells or storage tanks. It comprises of stainless steel Sensor with plastic holder and cable gland. A sealed ring and cable gland prevents liquid from entering the cable terminal connector and causing its oxidation. Maximum operating temperature : -10°C to + 65°C Cable connection: Screw The external cable diameter must be 1.5 mm to warrant perfect sealing.

Part Number Table

Description	Part Number
Liquid Level Controller, 110V AC, 1CO, 1K to 200K Sensitivity	MP008412
Liquid Level Controller, 240V AC, 1CO, 1K to 200K Sensitivity	MP008413
Liquid Level Controller, 400V AC, 1CO, 1K to 200K Sensitivity	MP008414
Accessories, Set Of 3 Stainless Steel Sensors	MP008415

Important Notice : This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.