

# KELCO

## D40 Liquid Level Switch

### Features

- 5 to 500V AC 15A 1.5kW (2HP) Switch
- No metal parts in contact with liquids
- 60mm level change on to off or off to on
- Highly reliable magnetic action
- Fully sealed IP67 electrical housing
- M20 cable gland built in

### Application

- Confined locations in sumps and pits
- Bund area warning alarms
- Cooling tower water level control
- Bilge water level alarm for boats
- Suits effluent & high solids uses
- Suitable for sea water & chemicals
- Level monitoring in wells & bores

### Operating Principle

The D40 level switch operates on Archimedes principle. When the non floating Polypropylene displacer suspended from the switch is immersed in liquid its weight is reduced by an amount equal to the weight of the liquid it displaces.

This weight change is detected by a magnet and is used to actuate a powerful switch inside the electrical head of the D40. The D40 is designed to be used in water with a specific gravity of 0.95 or greater.

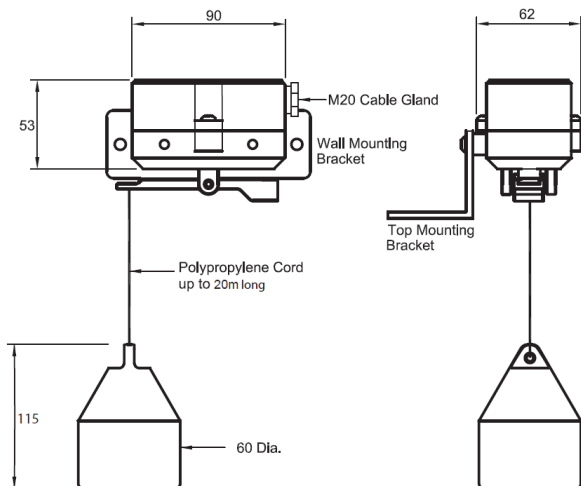
### Construction

The D40 level switch is constructed from solid billet aluminium. The displacer supplied with the switch is made from Polypropylene. The displacer is suspended from the underside of the D40 with chemically resistant Polypropylene cord (supplied). The D40 is supplied with two mounting brackets suitable for direct mounting on walls, tank lids or horizontal beams. The D40 level switch has no metal parts that come in contact with liquid regardless of the mounting method used. The actuating arm of the D40 operates the switch magnetically through the solid metal wall of the electrical housing.



# D40 SERIES DATA

## Dimensions



## Operating Limitations

Fixed switching differential	40mm +/- 5mm
Maximum distance between D40 & displacer	20 metres ( 3m of cord is supplied as standard)
Minimum distance from displacer to the floor of a tank or sump	20mm
Minimum inside diameter of pipe housing or shroud	65mm
Maximum liquid temperature	90°C
Specific gravity of process liquid	0.95 or greater
Ingress protection rating (weatherproof rating)	IP56 & IP68 to 1 meter submergence.

## Electrical Data for the D40

The standard D40 level switch houses a S.P.D.T (Single Pole Double Throw) switch. The standard switch is suitable for all general control circuit applications up to 500V AC. It is ideal for the control of pump starters, relay logic circuits, and for the direct control of contactors and timers. The standard switch can operate at ANY voltage from 5 to 500VAC. It is rated to directly control motors up to 1.5kW (2HP) at 240VAC.

RATED VOLTAGE	NON INDUCTIVE LOADS				INDUCTIVE LOADS			
	RESISTIVE LOAD		LAMP LOAD		INDUCTIVE LOAD		MOTOR LOAD	
	NO	NC	NO	NC	NO	NC	NO	NC
125 VAC	20 A		7.5 A		20 A		12.5 A	
250 VAC	20 A		7.5 A		20 A		8.3 A	
500 VAC	15 A		4 A		10 A		2 A	
8 VDC	20 A		3 A	1.5 A	20 A		12.5 A	
14 VDC	20 A		3 A	1.5 A	15 A		12.5 A	
30 VDC	6 A		3 A	1.5 A	5 A		5 A	
125 VDC	0.5 A		0.5 A		0.05 A		0.05 A	
250 VDC	0.25 A		0.25 A		0.03 A		0.05 A	

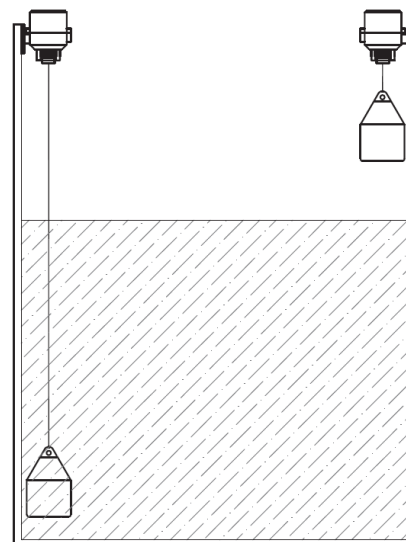
Maximum Switched Voltage	500VAC
Maximum Switched Current	15A
Minimum Switched Voltage	5VDC
Minimum Switched Current	160mA

Note: Do not apply maximum voltage at maximum current across the switch contacts. See main data table for current limits at specific voltages and for specific loads.

## Typical Application

Low level switching

High level switching



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