

KELCO

Q Series Heavy Duty Float Switch

Features

- 21 Amp MicroSwitch
- Extra strong Polypropylene float
- S.P.D.T three wire switch
- No mercury on lead components
- High quality CPE rubber cable
- No corrodible metal parts
- Sealed tamper proof design
- Highly chemical resistant
- Wide range of cable sizes available

Applications

- High and low level control
- Loss of prime protection for pumps
- Automatic control of sump pumps
- Control of tank filling and draining valves
- Control of levels in effluent & separation pits
- Level control in bulk liquid tanks
- Control of level warning equipment

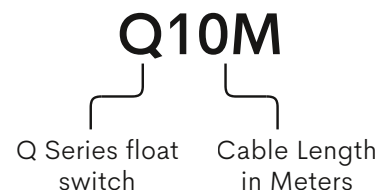
Outline

The Q Series float switch consists of a heavy duty polypropylene float double moulded onto a high quality three core cable. The float contains a single pole double throw (SPDT) switch, which can be used to give adjustable control over the level of liquid in tanks, pits and dams. By careful tethering of the cable the switch can be set to give an On or Off action at any desired position. The heavy duty switch can directly control small pump motors, and is also ideal for instrument or PLC signaling.

The switch is made of high grade polypropylene. Our high tech manufacturing process produces a sealed, seamless and glandless float that is totally tamper proof and extremely tough. The specially manufactured heavy duty cable fitted to the Q series switch is constructed from CPE Rubber, which is specifically designed for permanent immersion in water. The switch and cable are also resistant to oil, grease, fat, sewerage and a variety of chemicals.



Ordering



The cable length options for the Q Series switches are:
4m, 6m, 10m, 15m, 20m, 30m and 50m.

For the Q Series float switches, there is the option of a heavy grade polypropylene cable weight, the QCW. The QCW has a 316 stainless steel screw and nut.



Q SERIES DATA

Operating Environment

Maximum submergence	30 Meters, 300 Kpa Static Pressure
Maximum liquid temperature	60°C
Minimum liquid temperature	-20°C
Liquid specific gravity	>0.82
Liquid pH	1 to 14
Smallest diameter well that the switch can operate in	600 mm
Liquid level change for the switch to operate	300 mm (approximately)
Smallest opening through which the switch will fit	108 mm
Minimum distance between float and closest tethering point/cable weight	100 mm (See typical application)
Suitability for use in sodium hypochlorite	Fully compatible
Suitability for use in sea water	Fully compatible
Suitability for use in potable water	Fully compatible

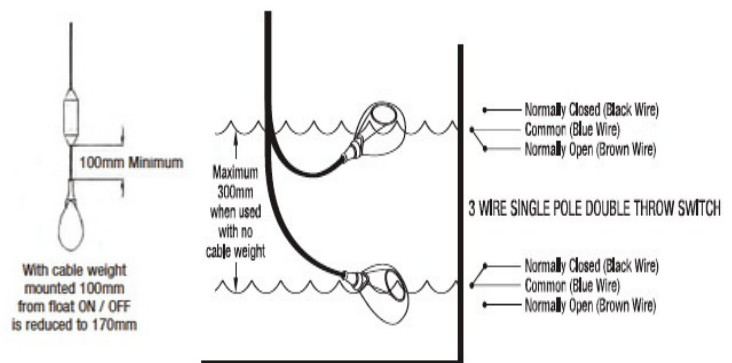
Cable Data

Cable type	Heavy duty EPR / CPE
Outer sheathing	CPE
Inner sheathing	R-EP-90
Cores	3 Cores, each 1 mm Sq Copper
Cable diameter	9 mm nominal
Core colours	Blue (Common) Black (Normally Closed) Brown (Normally Open)
Cable voltage rating Uo/U	600V / 1Kv
AC Test voltage	2.5 Kv
Cable current carrying capacity	18 Amps Continuous at a temperature of 30.5°C
Cable maximum tensile strength	15 N/mm2
Minimum bend radii	50 mm
Maximum ambient operating temperature	80°C
Minimum permissible ambient temperature	-40°C
Minimum permissible ambient temperature for fully flexible operation	-25°C
Cable maximum permissible short circuit temperature	250°C
Standard of construction	CNELEC HD 22.4 S4 & VDE0282-4/2005
Cable lengths available	4, 6, 10, 15, 20, 30, 50 Metres

Switch Data

Switch type	Single pole double throw
Contact type	1 mm
Contact material	Silver Alloy
Contact resistance	15 m ohms Max
Rated voltage AC	0 - 240V AC
Rated voltage DC	0 - 250V DC
Current rating resistive AC	21 A at 250V
Motor load current rating AC	4 A at 250V
Current rating resistive DC	0.05 A at 250V
Maximum lamp load AC	3A at 250V
Maximum operating frequency, electrical	60 operations per minute
Insulation resistive	100 Mega Ohms min (At 500V DC)
Dielectric strength between contacts	2000 VAC, 50/60 Hz for 1 minimum
Life expectancy mechanical	50,000,000 operations minimum
Life expectancy electrical	100,000 operations minimum
Approved standards	UL508 E41515 CSA C22.2 No.55 (File No LR21642)

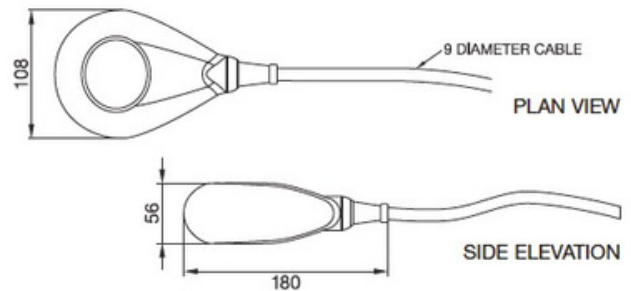
Typical Installation



Safety Note

The Q Series switches have been designed and built to be as tough as possible, and can withstand harsh environments. Great care should be taken to ensure the switch is only installed in positions where it will not be subjected to entanglement, severe agitation and abrasion against tank walls or moving equipment. If the application requires control of mains voltage, local electrical codes may require the switch to be isolated to a low voltage supply. This may be required, regardless of the high voltage rating of the float switch. Please check with your local electrical authority before connecting a Q Series float switch to a mains voltage supply.

Dimensions



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