

LIQUIFLEX

NON-CONTACT PROGRAMMABLE LEVEL CONTROLLER
LIQUIDS ONLY FOR TANKS & VESSELS UP TO 10M DEEP



Level measurement and control has attained new levels of performance and reliability with the introduction of the second generation Liquiflex systems.

Although similar in looks, the new Liquiflex system incorporates the very latest technological developments and sets new standards within the industry.

FLEXIBLE

Liquiflex was originally designed to provide a single solution for all the needs of the water and waste treatment industry. In sewage pumping stations, to control pumps, on open channels to record flows and on differential levels to control rakes. However its use soon extended to many other industries.

USER FRIENDLY

Liquiflex requires no complex codes or programming language. If the empty distance is 7.35 metres, you simply enter 7.35 in the appropriate parameter. The integral keypad provides immediate access to authorised users. Retrieval of stored data is available without interruption of normal running.

PEACE OF MIND

Liquiflex has a true user definable access code preventing unauthorised changes to the program. We know of no other competitive system that offers the same level of security and attendant "peace of mind".

RELIABLE

The Liquiflex system uses well proven windowing techniques and powerful echo processing routines. Inclusion of a thermistor network in the new RZ transducer series automatically compensates for temperature changes, ensuring optimum performance at all times.

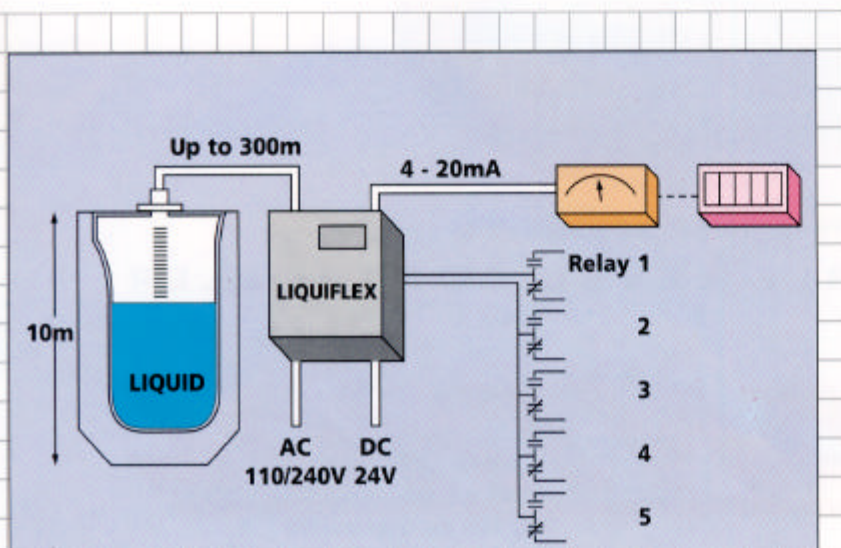
MULTIPLE POWER

Multiple power supply choices are a feature of the new Liquiflex system. 115 or 230 Volt 50/60 Hz can be connected and the system will automatically detect which. For those who want to operate on safer low voltage DC or provide back-up in case of power failure, a separate 24 Volt DC input is provided.

All terminations are via two-part connectors allowing easy installation and minimum downtime in the unlikely event of a board replacement.



Typical Pump Control Application



CONFIGURATIONS

The display can be configured to read any units ranging from centimetres to cubic metres or gallons to percentage.

Each relay can be individually set-up as energised or de-energised with fully adjustable set point and hysteresis, and the analogue output arranged to go full scale anywhere within the operational span.

With a four-digit display, five relays and an analogue output, it is difficult to envisage any application that couldn't be satisfied using Liquiflex.

VOLUME CONVERSION

Linearisation for 7 different vessel shapes held in memory.
16 point linearisation facility for non standard shapes.

PUMP CONTROL

DUTY / STANDBY OR DUTY / ASSIST

Eliminating the need for additional pump controls.

ALTERNATING DUTY CYCLES

To even out or determine the pump wear.

PUMP EXERCISER

Standby / Assist pumps are periodically tested ensuring satisfactory operation when actually required.

PUMP TOLERANCING

Reduces grease build-up on vessel walls.

PUMP RUN-ON

De-sludging the bottom of a tank or well.

PUMP MAINTENANCE DROP-OUT

Avoids the need for reprogramming during maintenance.

PUMP MONITORING

Liquiflex maintains a record of all pump starts and running times which are instantly displayed with a single key stroke.

ALARM MONITORING

Liquiflex can also monitor and record the number of times that any programmed alarms have been initiated and how long they were active.

FLOW MONITORING TO BS3680

With data on 5 BS flumes and weirs and 10 Parshall flumes already in its memory, Liquiflex can easily give single button instantaneous readout of flow, head or total flow. If the characteristics of your flow channel do not follow any standard flow law then the 16 point linearisation facility will enable you to put your requirements into memory.

DIFFERENTIAL CONTROL

By using one Liquiflex and two transducers the instrument will monitor differential level allowing relays to be set for upstream and downstream alarm purposes as well as differential control for rakes etc, on inlet screens to treatment works.



Open Channel Flow.

INTEGRAL KEYPAD

No additional computers or programmers are required in the field.



USER FRIENDLY

Single button recall of distance, confidence, analogue output, temperature, relays, history, flow-instant and total.

SECURITY CODE PROTECTED

Peace of mind that no unauthorised person can change the settings.

4 DIGIT LCD

Level, contents, distance, differential or flow measurements.

RELAY OUTPUTS

5 relays allow alarms and controls to be set anywhere throughout the instruments span.

EASE OF INSTALLATION

Wiring with two part connectors. 115/230V AC auto-select supply, and 24V DC available on the same transceiver.

LEVEL TRACKING

Powerful Echo Processing routines and windowing techniques ensure the instrument identifies and tracks the correct level.

FAULT ALARMS

Loss of echo signal is programmable for 1 or more relays to indicate a fault with the cable or transducer.

LIQUIFLEX

ULTRASONIC TRANSDUCERS

The Liquiflex electronics have been matched to the performance of the new small RZ range of ultrasonic transducers.

These transducers with polyurethane or flanged PTFE faces are suitable for use with most process liquids or slurries.

CENELEC approved for use in Zone 1 & 2 areas and submersible to IP68, the RZ range is safe to mount almost anywhere. Integral temperature compensation avoids the need for separate temperature probes.

300 metre separation is possible between transducer and the Liquiflex when wired in accordance with the instruction manual.

TRANSDUCER TECHNICAL DATA:

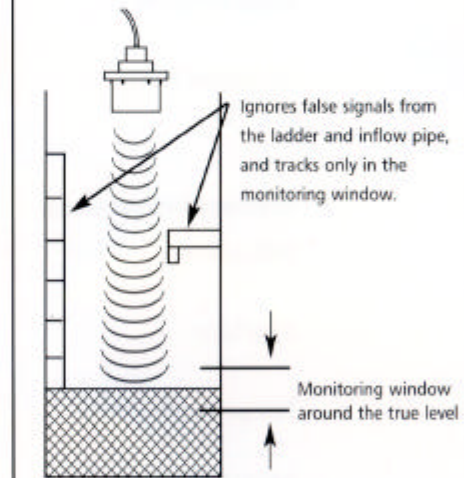
STANDARD MOUNTING

Model:	RZV15
Frequency:	41.5 kHz
Beam Angle:	10° at 3dB
Body Material:	Xenoy thermoplastic alloy
Face Material:	Polyurethane or PTFE (Add T at end of part number for PTFE)
Temperature Compensation:	Integral in RZT15 series
Operating Temperature:	-40°C to +90°C (-20 to +60°C for Cenelec)
Protection:	IP68
Hazardous Area:	CENELEC EExmIIT6 for zone 1 & 2
Mounting:	M20 x 1.5mm

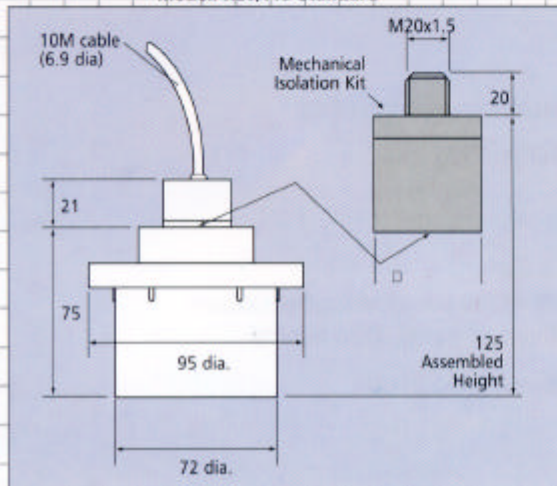
FLANGE MOUNTING

Model:	RZT15T/RZV15T* (* = Nominal flange size).																				
	<table border="1"> <thead> <tr> <th>MODEL</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>RZV15T3</td> <td>190</td> <td>152</td> <td>19</td> <td>4</td> </tr> <tr> <td>RZV15T4</td> <td>229</td> <td>190</td> <td>19</td> <td>8</td> </tr> <tr> <td>RZV15T80</td> <td>200</td> <td>160</td> <td>18</td> <td>8</td> </tr> </tbody> </table>	MODEL	A	B	C	D	RZV15T3	190	152	19	4	RZV15T4	229	190	19	8	RZV15T80	200	160	18	8
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	Other sizes available on request.																				
Face Material:	PTFE																				
Temperature Compensation:	Integral in RZT15 series																				

System utilises **PULSE** window technology (*Proven Ultrasonic Level Signal Extraction*) eliminating the false echoes other manufacturers systems fail on!

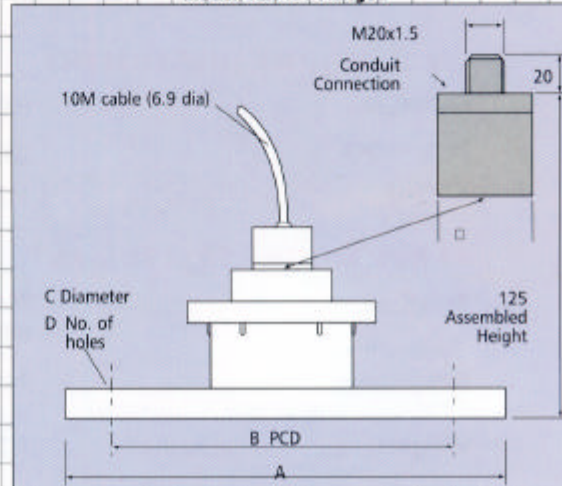


Model: RZV/T15 Standard



All dimensions in mm unless stated.

Model: RZV15T Flanged



All dimensions in mm unless stated.

PERFORMANCE SPECIFICATION

Measuring Range:	0.3 - 10m on liquids, slurries and pastes
Measuring Modes:	Level, space, differential level, open channel flow
Accuracy of change in level:	+/- 0.25% of measured distance at constant temperature
Resolution:	2mm or 0.1% of empty distance whichever is the greater
Failsafe:	High, low, hold
Damping:	Fully adjustable
Blanking:	Fully adjustable
Functions:	7 standard tank shapes for volume conversion 10 Parshall flume curves 2 Flow laws + penstock control 16 point linearisation 9 separate pump control functions

HARDWARE SPECIFICATION

Power Supply:	110 / 230V a.c. $\pm 10\%$ selected automatically. 50 / 60Hz 12VA, 24V d.c. +20%, -10%, 9W separate terminals
Relay Outputs:	5 SPDT relays rated 8A / 250 V a.c./30V d.c. resistive. Gold contacts for low power switching
Analogue Output:	4-20mA / 20-4mA into 750 ohms 12 bit, Short circuit protected Opto-isolated on a.c. powered units
Ambient Temperature:	-40°C to +70°C
Indication:	4 digit 12mm LCD, 5 red LED's for relay status
Interface:	5 x 4 keypad, integral membrane 4 digit security coded
Temperature Probe:	Optional thermistor network integral in transducer
Approvals:	CE Compliant to EN 50081 EN 50082 Approved for driving RZ series transducers certified EExmIT6 for zones 1 & 2

WALL MOUNT INSTRUMENT

Enclosure:	IP65 Polycarbonate, hinged lid
Dimensions:	240h x 160w x 90d (mm)
Weight:	1.75kg

PANEL MOUNT INSTRUMENT

Enclosure:	Noryl DIN 43700 panel mount enclosure. IP55 to front of panel, IP20 behind
Dimensions:	144h x 96w x 140d (mm)
Weight:	1.75kg.