

LEVEL SENSORS AND SIGNAL CONDITIONER

PULSE TECHNOLOGY BASED **MICROCONTROLLER BASED**

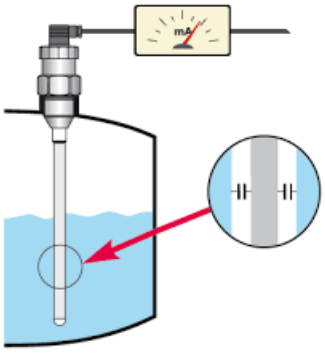
Introduction:

MLDT range of Pulse base level sensors conductive/non-conductive liquid [DC/AC] is available in 20 different regular models apart from tailor made solutions. Virtually covering all industrial and research applications requirement like electrical, thermal, mechanical, and environmental specifications. These Sensors/controllers are used in generation, transmission/distribution/heavy electrical engineering industries, defense, process control, sugar, milk, chemical, fuel, petrochemical industrial electronics, railway, river/sea depth measurement and avionics and many research and development activities. These capacitive/inductive/resistive type level sensors are compatible to any standard makes very high degree of accuracy (upto one micron meter)/repeatability/reliability. These indicators are available in different constructional material like ceramic-coated ms/poly carbonate/Al/SS...

Operating Principle: The Pulse capacitive/inductive/resistive type level sensors is based on Full/half/single ended Bridge Inductive/coactive/resistive measurement technique where change in level of conductive/non-conductive liquid changes either inductance/capacitance or resistance sensing element, which generates voltage (ac/dc) proportional to level of Conductive/non-conductive liquid(CORROSIVE/NON-CORROSIVE)

Pictorial view of inductive level sensor

Pictorial view of capacitive level sensor



Pictorial view DIGITAL LEVEL INSTALLATION

Models & Technical data of inductive type level sensor:

MLIS[A.C.] Stroke length<999.9 c.m. MLCIR[D.C.] Stroke length< 999.**9 c.m.**

Model	Stroke-length Full/Usable c.m.	Guided/ UnGuided/Weight(gms)	KHz	V/in/V 10^{-3}	O.D. /I.D. m.m.	Model	Stroke-length Full/Usable c.m.	Guided/ Un-ded/weight	KHz X10	V/in/V 10^{-3}	O.D. /I.D. m.m.
MLIS-01001	0001.0/0010.0	Option/060	1.0	2.60	Option	**MLIS-01002**	0001.0/0010.0	Option/068	13	2.60	option
MLIS-02001	0002.0/0016.5	Option/075	5.0	3.90	Option	**MLIS-02002**	0002.0/0016.5	Option/085	12	3.90	option
MLIS-02501	0002.5/0025.0	Option/100	2.40	1.60	Option	**MLIS-02502**	0002.5/0025.0	Option/120	8.0	1.60	option
MLIS-03001	0003.0/0036.0	Option/140	2.4	0.75	Option	**MLIS-03002**	0003.0/0036.0	Option/160	6.0	0.75	option
MLIS-05001	0005.0/0040.0	Option/155	2.0	0.61	Option	**MLIS-05002**	0005.0/0040.0	Option/180	5.0	0.61	option
MLIS-07501	0007.5/0050.0	Option/170	2.0	0.41	Option	**MLIS-07502**	0007.5/0050.0	Option/190	4.5	0.41	option
MLIS-10001	0010.0/0100.0	Option/170	2.0	0.23	Option	**MLIS-10002**	0010.0/0100.0	Option/210	3.0	0.23	option
MLIS-20001	0020.0/0150.0	Option/190	1.5	0.19	Option	**MLIS-20002**	0020.0/0150.0	Option/220	2.5	0.19	option
MLIS-30001	0030.0/0150.0	Option/210	1.5	0.12	Option	**MLIS-30002**	0030.0/0150.0	Option/245	2.0	0.12	option
MLIS-40001	0040.0/0200.0	Option/220	1.5	0.09	Option	**MLIS-40002**	0040.0/0200.0	Option/255	1.5	0.09	option
MLIS-50001	0050.0/0300.0	Option/260	1.0	0.02	Option	**MLIS-50002**	0050.0/0300.0	Option/265	1.0	0.02	option
MLIS-60001	0060.0/0300.0	Option/290	1.0	0.009	Option	**MLIS-60002**	0060.0/0300.0	Option/285	1.0	0.009	option
MLIS-99001	00100.0/300.0	Option/310	1.0	0.002	Option	**MLIS-99002**	00100.0/300.0	Option/340	1.0	0.002	option

General electrical/mechanical specifications:

Operating voltage: 12 volts D.C. /220 Volts A.C./option
Frequency: 50-20,000 Hz
Linearlity:0.1/0.2/0.3% of F.S.
Null voltage:0.5/1/1.5% of F.S.V.
Position offset/Gain: programmable
Operating Temperature range: 60/100/200 Degree cel
Temperature coefficients of measurement: $10x10^{-6}$ ppm/degree cel
Temperature range: 0-70 degree cel
Permissible harmonic: upto 3.0% of principle harmonic
Power consumption: 5.0 V.A [max]
Accuracy: 0.5/1.0/2.0 % reading
Repeatability: 100 of reading Size: 6x8x8
Resolution: 1/10 of least significant bit**(1/10 m.m.)**
Switching operation life: 10000
Control: control against three different set point
Interface: RS-232/0-5 volt D.C/ proportional to displacement
Additional: linearity control in six steps. /
Tip: gold/platinum plated/Al.N/Si.C

NOTES:

The Four numeral after product code indicates the (displacement in m.m.),and last digit corresponds AC/DC excitation(1-A.C.,2-D.C.,3-PULSE)

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LEVEL SENSOR AND SIGNAL CONDITIONER

PULSE TECHNOLOGY BASED **MICROCONTROLLER B**

Models & Technical data of capacitiver type level sensor:

MLCS [A.C.] Stroke length<999.9 c.m. **MLCS [D.C.] Stroke length< 999.9 cm**

Model	Stroke-length Full/Usable c.m.	Guided/ UnGuided/Weight(gms)	KHz	V/in/V 10^{-3}	O.D. /I.D. m.m.	Model	Stroke-length Full/Usable c.m.	Guided/ Un-ded/weight	KHz X10	V/in/V 10^{-3}	O.D. /I.D. m.m.
MLCS-01001	0001.0/0010.0	Option/060	1.0	2.60	Option	MLCS-01002	0001.0/0010.0	Option/068	13	2.60	option
MLCS-02001	0002.0/0016.5	Option/075	5.0	3.90	Option	MLCS-02002	0002.0/0016.5	Option/085	12	3.90	option
MLCS-02501	0002.5/0025.0	Option/100	2.40	1.60	Option	MLCS-02502	0002.5/0025.0	Option/120	8.0	1.60	option
MLCS-03001	0003.0/0036.0	Option/140	2.4	0.75	Option	MLCS-03002	0003.0/0036.0	Option/160	6.0	0.75	option
MLCS-05001	0005.0/0040.0	Option/155	2.0	0.61	Option	MLCS-05002	0005.0/0040.0	Option/180	5.0	0.61	option
MLCS-07501	0007.5/0050.0	Option/170	2.0	0.41	Option	MLCS-07502	0007.5/0050.0	Option/190	4.5	0.41	option
MLCS-10001	0010.0/0100.0	Option/170	2.0	0.23	Option	MLCS-10002	0010.0/0100.0	Option/210	3.0	0.23	option
MLCS-20001	0020.0/0150.0	Option/190	1.5	0.19	Option	MLCS-20002	0020.0/0150.0	Option/220	2.5	0.19	option
MLCS-30001	0030.0/0150.0	Option/210	1.5	0.12	option	MLCS-30002	0030.0/0150.0	Option/245	2.0	0.12	option
MLCS-40001	0040.0/0200.0	Option/220	1.5	0.09	option	MLCS-40002	0040.0/0200.0	Option/255	1.5	0.09	option
MLCS-50001	0050.0/0300.0	Option/260	1.0	0.02	Option	MLCS-50002	0050.0/0300.0	Option/265	1.0	0.02	option
MLCS-60001	0060.0/0300.0	Option/290	1.0	0.009	Option	MLCS-60002	0060.0/0300.0	Option/285	1.0	0.009	option
MLCS-99001	00100.0/300.0	Option/310	1.0	0.002	Option	MLCS-99002	00100.0/300.0	Option/340	1.0	0.002	option

NOTES:

The Four numeral after product code indicates the (displacement in m.m.),and last digit corresponds AC/DC excitation(1-A.C.,2-D.C.,3-PULSE)

Models & Technical data of resistive type level sensor:

MLRS [A.C.] Stroke length<999.9 c.m. **MLRS [D.C.] Stroke length< 999.9 c.m**

Model	Stroke-length Full/Usable c.m.	Guided/ UnGuided/Weight(gms)	KHz	V/in/V 10^{-3}	O.D. /I.D. m.m.	Model	Stroke-length Full/Usable c.m.	Guided/ Un-ded/weight	KHz X10	V/in/V 10^{-3}	O.D. /I.D. m.m.
MLRS-01001	0001.0/0010.0	Option/060	1.0	2.60	option	MLRS-01002	0001.0/0010.0	Option/068	13	2.60	option
MLRS-02001	0002.0/0016.5	Option/075	5.0	3.90	option	MLRS-02002	0002.0/0016.5	Option/085	12	3.90	option
MLRS-02501	0002.5/0025.0	Option/100	2.40	1.60	option	MLRS-02502	0002.5/0025.0	Option/120	8.0	1.60	option
MLRS-03001	0003.0/0036.0	Option/140	2.4	0.75	option	MLRS-03002	0003.0/0036.0	Option/160	6.0	0.75	option
MLRS-05001	0005.0/0040.0	Option/155	2.0	0.61	option	MLRS-05002	0005.0/0040.0	Option/180	5.0	0.61	option
MLRS-07501	0007.5/0050.0	Option/170	2.0	0.41	option	MLRS-07502	0007.5/0050.0	Option/190	4.5	0.41	option
MLRS-10001	0010.0/0100.0	Option/170	2.0	0.23	option	MLRS-10002	0010.0/0100.0	Option/210	3.0	0.23	option
MLRS-20001	0020.0/0150.0	Option/190	1.5	0.19	option	MLRS-20002	0020.0/0150.0	Option/220	2.5	0.19	option
MLRS-30001	0030.0/0150.0	Option/210	1.5	0.12	option	MLRS-30002	0030.0/0150.0	Option/245	2.0	0.12	option
MLRS-40001	0040.0/0200.0	Option/220	1.5	0.09	option	MLRS-40002	0040.0/0200.0	Option/255	1.5	0.09	option
MLRS-50001	0050.0/0300.0	Option/260	1.0	0.02	Option	MLRS-50002	0050.0/0300.0	Option/265	1.0	0.02	option
MLRS-60001	0060.0/0300.0	Option/290	1.0	0.009	Option	MLRS-60002	0060.0/0300.0	Option/285	1.0	0.009	option
MLRS-99001	00100.0/300.0	Option/310	1.0	0.002	Option	MLRS-99002	00100.0/300.0	Option/340	1.0	0.002	option

NOTES:

The Four numeral after product code indicates the (displacement in m.m.),and last digit corresponds AC/DC excitation(1-A.C.,2-D.C.,3-PULSE)

Benefits:

- High input impedence/Low input biased current /higher accuracy/.
- 5-1/2 & 6-1/2 digit display /consistent performance
- ce over large temperature/humidity range (70°C and 80 % RH)
- Scaled directly in mili/micro meter range with repeatable accuracy.
- Auto/manual zero offset without drift.
- Auto drift tracking
- RS-32 interface/high sample rate – 10,000 sample/second.
- Feed back current measurement technique.

MLRS-0009991

Three/four/five / Six digit after product code indicate count, next, two digit indicate voltage and last digit indicate 01- micro meter/02-nano meter.

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