



LK Series Liquid Flow Monitor with Electronic Transmitter

Features

Simple to Install

All transmitters are factory calibrated and shipped fully assembled. Simply install the transmitter into your system and apply power.

Industry Standard Outputs

Transmitters provide proportional analog outputs of 4 - 20 mA, 0 - 5 VDC and 1 - 5 VDC.* These outputs will drive popular data acquisition devices, digital display meters and analog input cards.

Direct Reading Analog Scale or Optional Digital Display

All transmitters provide a visual indicator of flow rate proportional to the transmitted output.

Weather-Tight Construction

The rugged cast aluminum NEMA type 4X enclosure allows installation in outdoor applications and in environments where liquid tight seals are required.

Rugged and Reliable

Without delicate internal components to break, wear or corrode, this flow transmitter will provide many years of low maintenance service.

Compatible with LK Series R/T100 and R100

This flow rate transmitter combines with these digital display modules to make a powerful flow instrument capable of remote monitoring of flow rate and flow total.

* The 1 - 5 VDC output requires an external 250 ohm resistor (not included with transmitter) to be wired at the receiving device.

Flow Monitor Performance

Measuring Accuracy:	+/- 2.5% of full scale in the centre third of the measuring range +/- 4% of full scale over the entire scale range
Repeatability:	+/- 1% of full scale
Flow Measuring Range:	0.05 - 150 GPM (0.2 - 560 LPM) See flow ranges on page 3
Maximum Operating Pressure:	Aluminum and Brass monitors: 3500 PSIG (240 Barg) Stainless Steel monitors: 6000 PSIG (410 Barg)
Maximum Operating Temperature:	Media: 240°F (116°C), ambient: 180°F (82 °C)
Pressure Differential:	See graphs on page 2
Standard Calibration Media:	Oil monitors: DTE 25® at 110°F (43°C), 0.873 s.g. Water monitors: tap water at 70°F (21°C), 1.0 s.g.

Electronic Transmitter Performance

Power Requirements:	12 - 30 VDC
Load Driving Capacity:	4 - 20 mA; Load resistance is dependent on power supply voltage. Use the following equation to calculate maximum load resistance: Max loop load (Ω) = 50 x (power supply volts - 12) 0 - 5 VDC: minimum load resistance 1000 Ω 1 - 5 VDC: minimum load resistance 25 KΩ Square Wave Pulse: minimum load resistance 1000 Ω
Transmission Distance:	4 - 20 mA and 1 - 5 VDC are limited only by wire resistance and power supply voltage. < 200 feet recommended for 0 - 5 VDC and square wave pulse
Over-Current Protection:	Self limiting at 35 mA
Resolution:	10 bit (0.1%)
Isolation:	Inherently isolated from the process
Response Time:	< 100 milliseconds

Typical Engineering Specifications

The in-line flow rate monitor with transmitter shall:

- be factory calibrated for 4-20 mA, 0 - 5 VDC, 1 - 5 VDC, and square wave pulse outputs
- use the variable annular orifice technique with compression spring recovery
- not require inlet or outlet straight plumbing, or require vertical pipe mounting
- have a measuring accuracy of +/- 2.5% of full scale in the centre third of the measuring range, and +/-4% of full scale accuracy over the entire flow measuring range
- have a stainless steel sharp-edged orifice
- have a working pressure rating of 3500 or 6000 PSIG for liquids
- have a weather-tight external construction
- be LK Series No. R__ - ___ - ___

**See Page 3
for
Model Number Matrix
and
Available
Flow Ranges**

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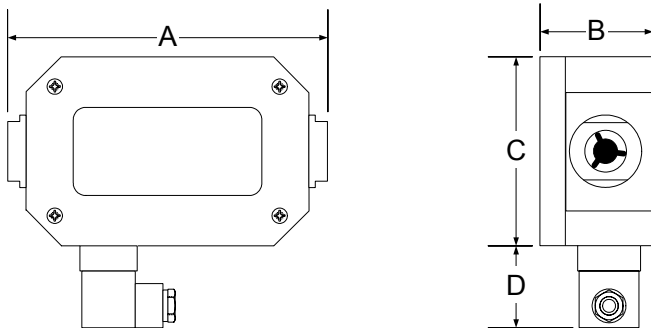
www.muiscontrols.com info@muiscontrols.com

Standard Materials of Construction (Wetted Components)

Basic Body Material	Aluminum	Brass	Stainless Steel
High-pressure casing, end ports and tapered shaft	Aluminum	Brass	304 St. St.
Seals	Buna-N (STD), EPR, Viton, Aflas or Kalrez	Buna-N (STD), EPR, Viton, Aflas or Kalrez	Viton with Teflon backup (STD), Buna-N, EPR, Aflas or Kalrez
Transfer Magnet	Teflon coated Alnico		
Floating Orifice Disk	Stainless Steel		
All other internal parts	Stainless Steel		

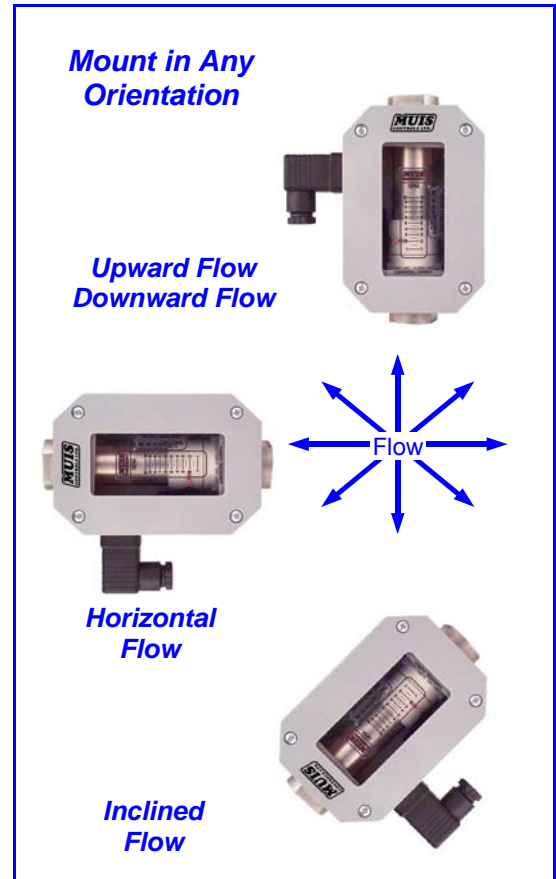
Standard Materials of Construction (Non-Wetted Components)

Basic Body Material	Aluminum	Brass	Stainless Steel
Enclosure and Cover	Aluminum		
Seals	Buna-N		
Window	Pyrex		
Din Connector	Polyamide		



Dimensions

Code	Series 3	Series 4	Series 5	Series 5
A	6 ⁹ / ₁₆ " (167 mm)	7 ⁵ / ₃₂ " (182 mm)	10 ¹ / ₈ " (258 mm)	12 ⁵ / ₈ " (322 mm)
B	2 ³ / ₁₆ " (56 mm)	2 ¹⁵ / ₁₆ " (75 mm)	3 ¹³ / ₁₆ " (97 mm)	3 ¹³ / ₁₆ " (97 mm)
C	4" (101 mm)	4 ¹ / ₂ " (114 mm)	5 ⁵ / ₁₆ " (135 mm)	5 ⁵ / ₁₆ " (135 mm)
D	1 ⁷ / ₈ " (47 mm)	1 ⁷ / ₈ " (47 mm)	1 ⁷ / ₈ " (47 mm)	1 ⁷ / ₈ " (47 mm)
Port Sizes	NPTF: 1/4", 3/8", 1/2"	NPTF: 3/4", 1"	NPTF: 1 1/4", 1 1/2"	NPTF: 2"



Model Number Chart

See Example Below



**LK Series
Liquid Flow Monitor
with Electronic
Transmitter**

Code	Style
R	In-Line Flow Monitor with Electronic Transmitter
Code	Size Code (Match Flow Range to Size Code from Tables Below)
2	1/8 to 1/4 inch
3	1/4 to 1/2 inch
4	3/4 to 1 inch
5	1 1/4 to 2 inch
Code	Material (Flow Tube and Connections)
A	Aluminum
B	Brass
S	Stainless Steel
Code	Pressure Rating
6	3500 PSIG Maximum (Aluminum and Brass only)
7	6000 PSIG Maximum (Stainless Steel only)
Code	Fluid Media
H	Hydraulic Oil (0.873 Specific Gravity)
W	Water (1.0 Specific Gravity)
Code	Connection Size - Code from Table Below
Code	Flow Range - Code from Table Below

R 4 S - 7 W D - 30 ◀ Typical Model Number

Flow Ranges for Liquid

Size Code	Oil or Water	Range Code
2 & 3	0.05 - 1 USGPM	01
3 only	0.1 - 1 USGPM water	
2 & 3	0.2 - 2 USGPM	02
4 only	0.2 - 2.6 USGPM	
3 only	0.5 - 5 USGPM	05
4 only	0.5 - 5 USGPM	
3 & 4	1 - 10 USGPM	10
3 & 4	1 - 15 USGPM	15
4 only	2 - 20 USGPM	20
4 & 5	2 - 25 USGPM	25
4 only	3 - 30 USGPM	30
4 only	4 - 40 USGPM	40
4 only	5 - 50 USGPM	50
5 only	5 - 50 USGPM	
5 only	8 - 75 USGPM	75
5 only	10 - 100 USGPM	88
5 only	15 - 90 USGPM water	
5 only	20 - 150 USGPM	99

Connection Size

Code	Port	Size Code
I	1/8" NPTF	2 only
S	1/4" NPTF	2 & 3
A	3/8" NPTF	3 only
B	1/2" NPTF	3 only
C	3/4" NPTF	4 only
D	1" NPTF	4 only
K	1 1/4" NPTF	5 only
L	1 1/2" NPTF	5 only
M	2" NPTF	5 only

Other LK Series Flow Monitors



**High Pressure
Gas
Flow Monitor**



**High Pressure
Liquid Flow
Monitors**



**High Pressure
Flow Monitor
with Alarm
Switches**

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