TrigasDM

Durchflussmesser-Manufaktur

TriLIN

LNA Series

Intelligent Flow Electronics

for Linearization and
Temperature Compensation

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TriLIN Measuring principle

The TriLIN LNA Series Linearizer/Flow Computer amplifies, linearizes, and scales the frequency signals of Turbine flow meters. In the versions with Temperature Compensation capability, correction for the effects of temperature and viscosity is performed in real time using proprietary methods, resulting in accurate flow measurement under all conditions.

The user-friendly FlowHow+ programming software allows easy programming of flow calibration and fluid properties data as well as linearization and scaling of Flow and Temperature outputs.

Technical data

Power Supply: 6-36 VDC (no Display)
9-36 VDC (with Display)
Power Consumption: < 0,5 W
about 35 mA @ 12 V
Weight: 350g
depending on configuration
Dimensions: 112 x 108 x 43 mm
IP Rating: IP50
Operating temperature: -40 to +85°C
Storage temperature: -55 to +125°C
Humidity, Relative: 0 to 85 %
non-condensing
Update Rate: 1 ms

Inputs:
Modulated Carrier Frequency, 0-4 kHz
- Coil Inductance: 1mH
- Coil resistance: 10.5Ω
- Carrier Frequency: 47.5 kHz

Pulse input, 0-10 kHz
- U_{LOW} < 1 V
- U_{HIGH} > 3-30 V
- Input impedance > 10 kΩ

Temperature input - PT100, 4 wire

Output:
Frequency, Flow
Linearized, Scaled TTL frequency signal
- Scalable end value up to 10 kHz
- Accuracy = 25 ns

Analog, Flow
0-10V linearized and scalable
4-20mA optional
No zero-point offset
Accuracy: 0,0015 % of full scale
Resolution: 16-bit (0.15 mV)

Analog, Temperature
0-10V linearized and scalable
4-20mA optional
No zero-point offset
Accuracy: 0,0015% full scale
Resolution: 16-bit (0.15 mV)

Data Storage
Up to five selectable Flowmeter Calibration Curves and up to five Fluid Properties Tables can be stored in memory in the TriLIN, making it a versatile flow measuring instrument.
Flowmeters: up to 64 points per calibration in one of the following forms
- K factor [pul/l] vs Frequency [Hz] (No Temperature Compensation)
- K factor [pul/l] vs frequency/viscosity [Hz/mm²/s] (with Temperature Compensation)

Fluids: Up to 20 points per table for:
- Density vs Temperature
- Viscosity vs Temperature

Data Interpolation
Sophisticated proprietary methods are used for interpolating between calibration points.
- Cubic Spline is used for Flow, Temperature and Density
- A specialized linearization method is used for Viscosity.

No customer lockout

The TriLIN electronics are supplied with open software architecture which allows user defined and controlled password protection. All scaling and programming functions are open and are accessible by the user.

List of available models:

LNA-RF-11-V1-01-01-00	Without temperature compensation, Output signal: TTL pulse + 0-10 V flow rate
LNA-RF-12-V1-01-01-00	Without temperature compensation Output signal: TTL pulse + 4-20 mA flow rate
LNA-RT-11-V1-01-01-00	With temperature compensation Output signal: TTL pulse + 0-10 V flow rate
LNA-RT-12-V1-01-01-00	With temperature compensation Output signal: TTL pulse + 4-20 mA flow rate
LNA-AT-11-V1-01-02-AC	With temperature compensation and TTL input Output signal: TTL pulse + 0-10 V flow rate
LNA-AT-12-V1-01-02-AC	With temperature compensation and TTL input Output signal: TTL pulse + 4-20 mA flow rate
LNA-RT-11-V2-06-04-00	With temperature compensation and display Output signal: TTL pulse + 0-10 V flow rate
LNA-RT-12-V2-06-04-00	With temperature compensation and display Output signal: TTL pulse + 4-20 mA flow rate
LNA-RT-11-V1-01-04-00	With temperature compensation and connectors on one side Output: TTL pulse + 0-10 V flow rate
LNA-RT-12-V1-01-04-00	With temperature compensation and connectors on one side Output: TTL pulse + 4-20 mA flow rate

FlowHow

A specialist with more than 35 years of experience in Flow Measurement and Calibration technology, TrigasDM supplies high-quality flow measuring instruments, electronics and calibrators for liquids and gases.

Made in Germany

Our products are entirely developed and manufactured in Neufahrn, 20 km north of Munich, ensuring world-class technical knowhow for our customers.

Contact

We are proud of our high-quality products and friendly customer Service. You can benefit from our long-standing experience and our comprehensive technical support.

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