TEK-LCD 7802A

NEMA 4X Loop-Powered Flow Rate/Totalizer Indicator
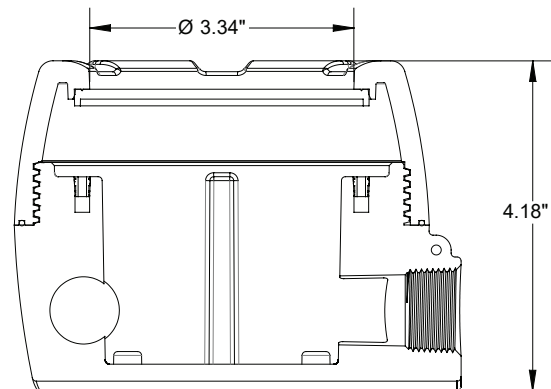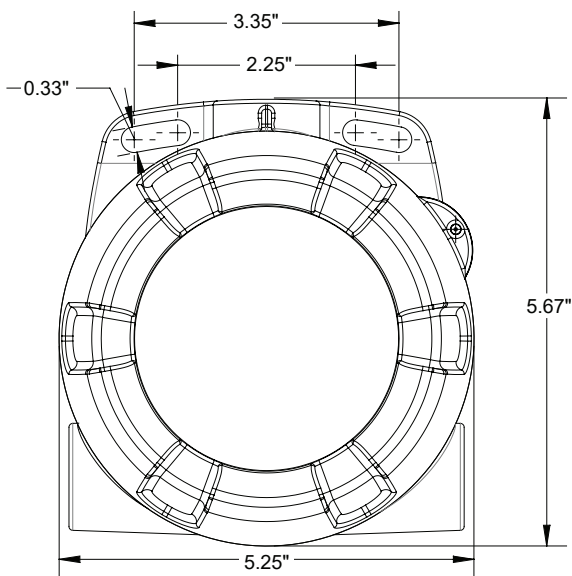
**INDICATOR/
CONTROLLER**

Introduction

The Tek-LCD 7802A NEMA 4X Loop-Powered Flow Rate/Totalizer

The Vantageview Tek-LCD 7802A is a plastic, field-mounted, loop-powered flow rate/totalizer that can display flow rate and total from an analog output (4-20 mA) flowmeter. The fact that this meter is loop-powered means that there is no need to run additional, costly power lines. The display has a five digit upper display for rate, a seven alpha-numeric character lower display for total, and comes standard with a backlight. The Tek-LCD 7802A is built in a NEMA 4X and IP65 rated plastic enclosure which can stand up to even the harshest environmental conditions. Two features that really make it stand out are a wide viewing angle display and SafeTouch® through-window buttons. These buttons allow the Tek-LCD 7802A to be programmed and operated through the cover window, thus eliminating the need to remove the cover in dirty or wet environments.

Features

- 4-20 mA Input Loop-Powered
- 5-Digit, 0.7" (0.05 ft) Upper Display
- 7 Alphanumeric Character, 0.4" (0.03 ft) Lower Display
- Loop or External DC-Powered Backlight Standard
- SafeTouch Through-Window Button Programming
- Password Protection
- 3.0 V Drop without Backlight
- Plastic NEMA 4X, IP65 Enclosure
- Flanges for Wall or Pipe Mounting
- Linear, Square Root, or Programmable Exponent
- Operates from -40 °C to 75 °C
- Rate in Second, Minute, Hour, or Day
- Open Collector Pulse or Alarm Output

Dimensional Drawings

Specifications

General

Display	Upper: Five digits (-9,999 to 99,999) 0.70" (0.05 ft) high, 7-segment, automatic lead zero blanking. Lower: Seven characters 0.4" (0.03 ft) high, 14 segment alphanumeric. Symbols: for high & low alarm, password lock. Backlight: white
Display Update Rate	Ambient > -25°C: 2 Updates/Second. Ambient < -25°C: 1 Update/5 Seconds
Display Orientation	Display may be mounted at 90° increments up to 270° from default orientation.
Overrange	Display flashes 99,999
Underrange	Display flashes -9,999
Programming Method	Four SafeTouch® through-window buttons when cover is installed. Four internal pushbuttons when cover is removed.
Noise Filter	Programmable Lo, Med, Hi, or Off
Recalibration	Recalibration is recommended at least every 12 months.
Max/Min Display	Max/Min readings reached by the process are stored until reset by the user or until power to the meter is turned off.
Password	Programmable password restricts modification of programmed settings.
Advanced Functions	Live input calibration, linearization, square root, or programmable exponent
Non-Volatile Memory	All programmed settings are stored in non-volatile memory for a minimum of ten years if power is lost.
Normal Mode Rejection	64 dB at 50/60 Hz
Operating Temperature Range	-40 to 75°C.
Storage Temperature Range	-40 to 75°C.
Relative Humidity	0 to 90% non-condensing
Connections	Screw terminals accept 12 to 22 AWG wire
Enclosure	NEMA 4X, IP65 plastic field enclosure. Color: grey. Material: Polycarbonate with UV Stabilizer. Three ¾" NPT threaded conduit openings. Two ¾" NPT plastic conduit plugs, with 1.29" wrenching flats and a screwdriver slot, are included.
Mounting	May be mounted directly to conduit. Two slotted flanges for wall mounting or NPS 1½" to 2½" or DN 40 to 0.21 ft pipe mounting.
Overall Dimensions	5.67" x 5.25" x 4.18" (W x H x D) (0.47 ft x 0.43 ft x 0.34 ft)
Weight	1.65 lbs (26.4 oz, 0.75 kg)
Warranty	3 years parts and labor

Input

Input range	4-20 mA
Accuracy	±0.03% of calibrated span ±1 count, square root & programmable exponent accuracy range: 10-100% of calibrated span.
Temperature Drift	50 PPM/°C
Decimal Point	User selectable decimal point
Calibration Range	An error message will appear if input 1 and input 2 signals are too close together. Input Range: 4-20 mA. Minimum Span Input 1 & Input 2: 0.10 mA
Maximum Voltage Drop	3.0 VDC @ 20 mA without loop-powered backlight. 6.0 VDC @ 20 mA with loop-powered backlight
Equivalent Resistance	150 Ω @ 20 mA without loop-powered backlight. 300 Ω @ 20 mA with loop-powered backlight
Input Overload	Over current protection to 2 A max.
HART Transparency	Analog input will not interfere with existing HART communications on the wired 4-20 mA signal
Externally Powered Backlight:	Voltage Range 9-30 VDC

Open Collector Output

Rating	Isolated open collector, 30 VDC @ 150 mA max.
Alarm Output	Assign as rate alarm or total alarm trip point.
Deadband	0-100% FS, user selectable
Acknowledge	Front panel ENTER button resets output and screen indication.
Pulse Output K-Factor	Pulse Output K-Factor
Pulse Output Frequency	2, 4, 8, 16, 32, 64, 128 Hz. Minimum pulse width: 3.9 ms @ 128 Hz. Maximum pulse width: 250 ms @ 2 Hz. Factory default pulse width: 31 ms @ 16 Hz

Rate/Totalizer

Rate Display	0 to 99,999 leading zero blanking
Total Display	0 to 9,999,999 leading zero blanking
Total Decimal Point	Up to six decimal places or none: d.dddddd, d.ddddd, d.dddd d.ddd, d.dd, d.d, or ddddddd
Lower Display Configuration	Can be programmed to display total, tag name/engineering units, or to alternate between them.
Totalizer	Calculates total based on rate, time base of second, minute, hour, or day, and field programmable multiplier; stored in non-volatile memory upon power loss.
Totalizer Reset	Via front panel SafeTouch® button, time delay, external contact closure, or protected
Total Conversion Factor	0.000001 to 9,999,999
Totalizer Rollover	Display rolls over when display exceeds 9,999,999. Relay status reflects the displayed value.
Total Reset Delay	Programmable from 0 to 99,999 seconds

Popular Models

Model Number	Description
7802A-0K1	NEMA 4X Loop-Powered Flow Rate/Totalizer

Accessories

Model Number	Description
7800A-6846	Steel Pipe Mounting Kit
7800A-6846SS	Stainless Steel Pipe Mounting Kit
7800A-PLUG75P	¾" NPT Plastic Conduit Plug

Customer Service and Support

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Tek-Trol LLC

796 Tek Drive Crystal Lake, IL 60014 USA
Tel: +1 847 857 6076 Fax: +1 847 655 6147
Email: tektrol@tek-trol.com
www.tek-trol.com

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