EO System

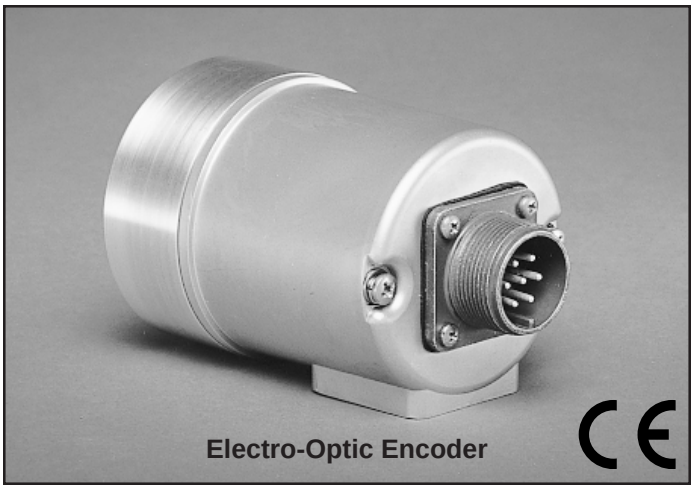
Electro-Optic System:
Electro-Optic Encoder and Cable

Description

The EO System delivers a high resolution output when used with Flowdata flowmeters. Resolutions as high as 630,000 pulses per gallon (166.45 pulses/cc) may be obtained with the EO system when used with a Flowdata flowmeter equipped with the Optical Interface option. The modular design of the system makes it easy to install and maintain. The high resolution enables Flowdata flowmeters to be used on closed loop control systems that must react quickly to small changes in flow rate. The EO System also provides accurate monitoring of high viscosity fluid dispensing, where the fluid is traveling at low flow rates or is being batched in very small quantities. Some of the flow measurement applications for the EO System include hydraulics, polymers, polyurethanes, plastics, adhesives, additives, and coatings. Industries served include chemical, automotive, food, pharmaceutical, and many others.

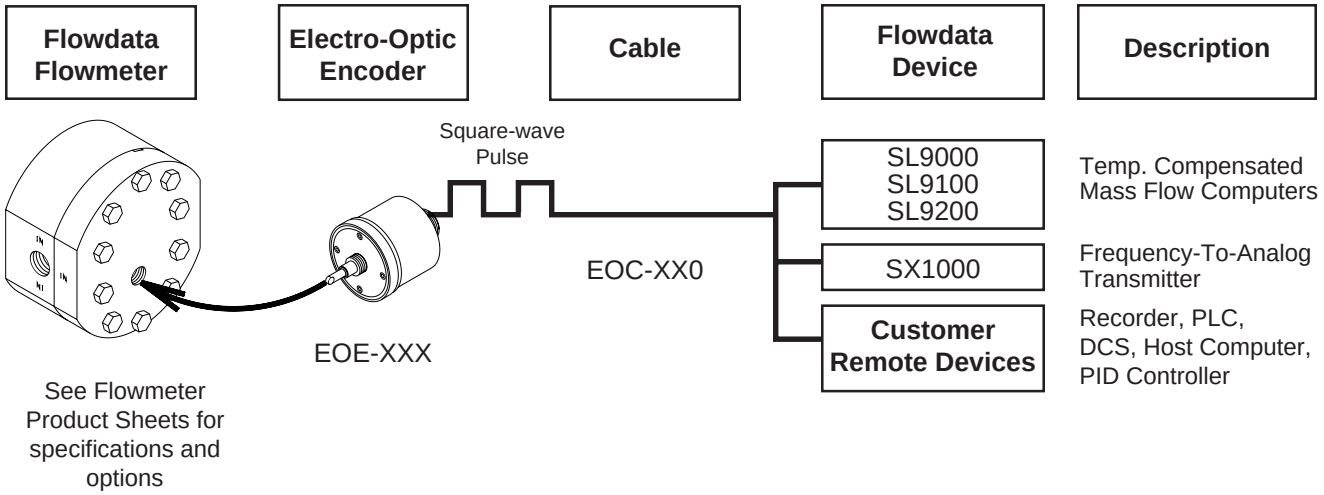
Features

- High Resolution and Accuracy
- Modular Design
- Patented Interface with Flowmeter
- TTL Compatible
- Single Channel or Quadrature Output Options



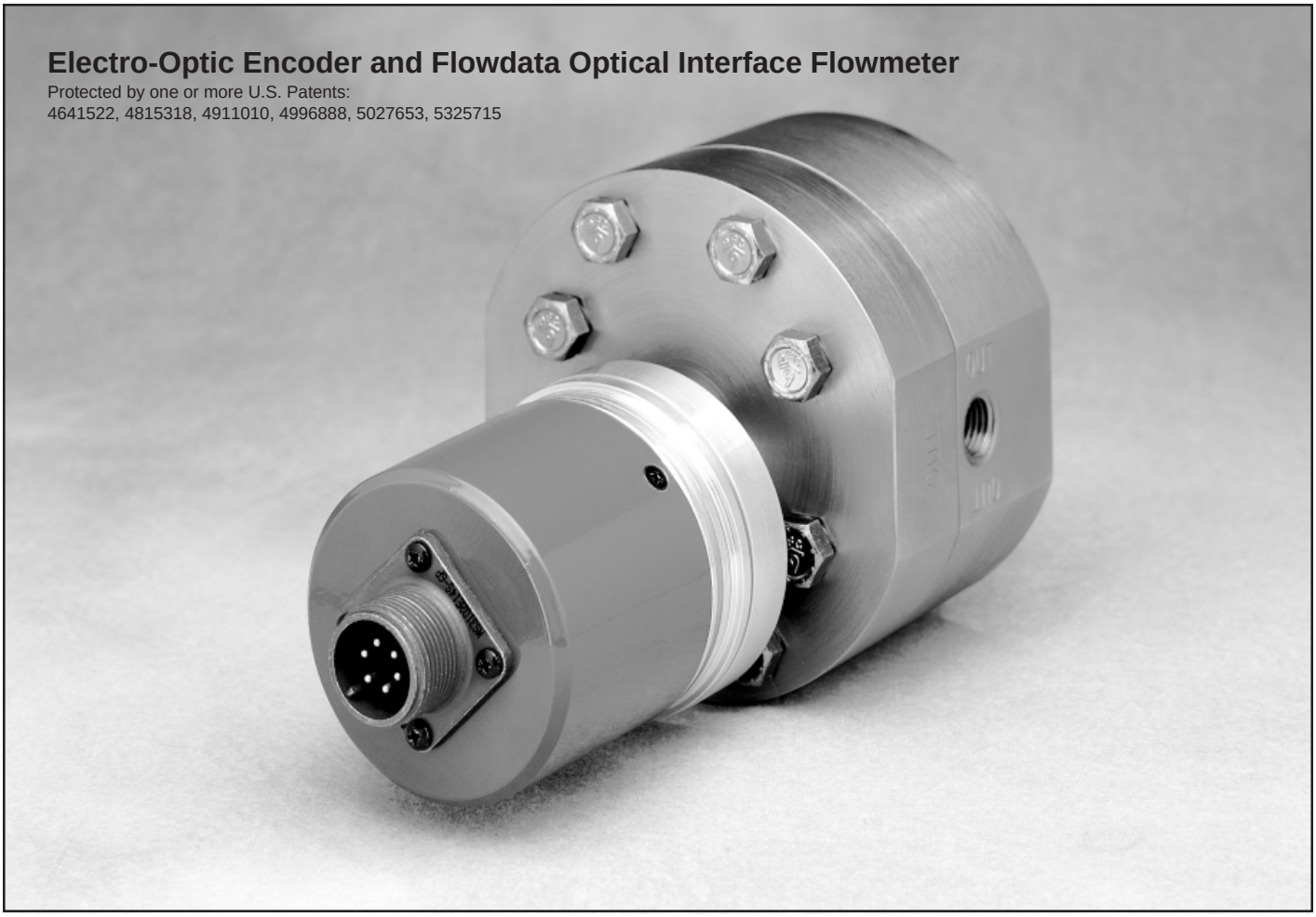
Electro-Optic Encoder

Application



Electro-Optic Encoder and Flowdata Optical Interface Flowmeter

Protected by one or more U.S. Patents:
4641522, 4815318, 4911010, 4996888, 5027653, 5325715



Ordering

See Flowmeter Product Sheets for flowmeter part number information

Encoder — EOE-XXX

Pulses Per Revolution (PPR)

- *** 2** 250 PPR
- **3** 500 PPR
- **4** 1000 PPR

Supply and Output Type

- **1** 5VDC, Single & Dual Channel (Quadrature)
- *** 3** 7.5 to 24VDC, Single & Dual Channel (Quadrature)

Adapter Size

For Flowmeters:

- **1** DC01 - DC20 HP01, HP02
- **2** DC30 - DC40 HP05 - HP15
- **3** HP20
- **0** No Adapter; Replacement for Electro-Optic Encoder Assembly only

Cable — EOC-XX0

Length

- *** 1** 10 Ft.
- **2** 50 Ft.
- **3** 100 Ft.

Jacket Material

- *** 1** PVC
- **0** Specify

Key

*	Standard Configuration
PVC	Polyvinylchloride

Specifications subject to change without notice

EO System Specifications

Flowmeter Requirements: Flowdata DC-I, DC-F, or HP-I Series flowmeter equipped with the Optical Interface Option (Flowmeter Special Designator -015)
Process Temperature: 32°F to 200°F, Standard
Other temperatures available upon request
Environment:
Non-hazardous
Humidity - 98% RH without condensation
Certifications: CE Approved

Basic Applicatons:
Precise Flow Control - The Electro-Optic Encoder allows a control system to react quickly to small changes in flow rate.
High Viscosity, Low Flow Dispensing - High resolution accurately measures viscous fluids traveling at low flow rates.
Bi-Directional Flow Control - quadrature output monitors rate **and** direction of flow.

Electro-Optic Encoder Specifications

Resolution: 250 Pulses per revolution, Standard
Connector: MS3102R14S-6P
Supply Voltage: 7.5 to 24VDC, Standard
+5 VDC ±5%, Optional
Input Current:
TTL: 150 mA typ., 200 mA max.,
CMOS: 125 mA typ., 150 mA max.
Output: 7.5 to 24VDC Square-wave pulse, Std.
+5 VDC Square-wave pulse, Optional

Output IC's: 7406 with 2.2 K ohm pull-up resistor
Operating Temperature:
+32°F to +158°F (0°C to +70°C)
Storage Temperature:
-13°F to +194°F (-25°C to +90°C)
Materials:
Housing and Adapter: Aluminum
O-ring: Teflon
Weight: 1.3 lb.

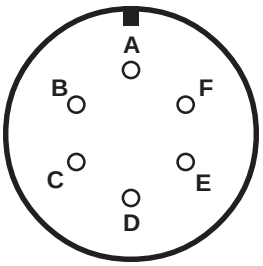
Cable Specifications

Connector: MS3102R14S-6S
Wire: 20 AWG, 4 Conductor, Shielded
Maximum Operating Temperature:
+176°F (+80°C)

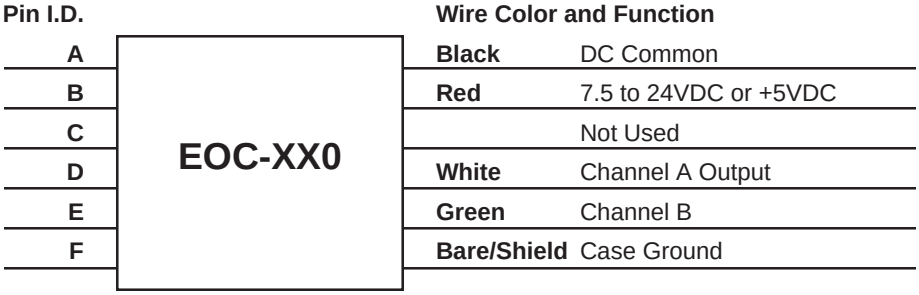
Cable Jacket Material:
Polyvinylchloride (PVC)
Cable Jacket Color: Grey
Insulation Material: Polyethylene

Cable Wiring Schematic

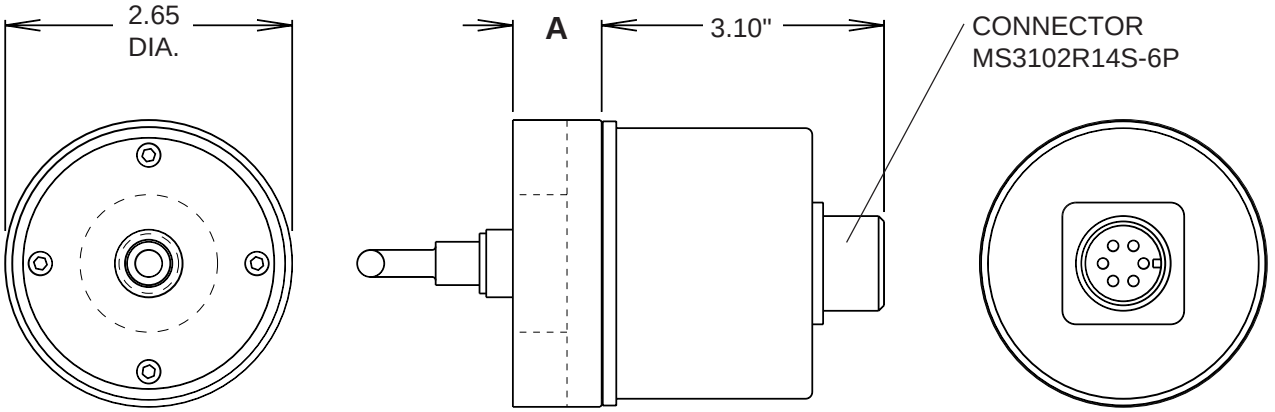
Connector
MS3102R14S-6S



FRONT



Electro-Optic Encoder Dimensions



BOTTOM VIEW *SIDE VIEW* *TOP VIEW*

FLOWMETER MODEL	ADAPTER THICKNESS "A"
DC01, DC02, DC05, DC10, DC15 HP01, HP02	0.82
DC20, DC30, DC40 HP05, HP10, HP15	0.38

Notes:

All dimensions in inches.

Specifications subject to change without notice.

Flowdata Product Families

Exact Series: Patented dual rotor turbine flowmeters provide diagnostics, turbulence insensitivity and the widest turndown in the industry for liquid & gas applications in the aerospace, automotive, industrial and petrochemical industries.

TrickleMeter™ Series: Low flow, precision gear meters for pressures from 5 psi to 6000 psi on applications such as chemical injection, resins, adhesives, lubricants and greases.

Decathlon Series

- **DC-I Industrial Series:** Industrial, in-line flowmeters for liquid flows with working pressures of up to 1000 psig.
- **DC-F Sanitary Series:** Sanitary, in-line flowmeters for "clean industry" applications such as food, beverage, dairy, and pharmaceutical.
- **DC-E Economical Series:** Economical, in-line flowmeters designed to handle basic industrial flow applications.

AP-I Flowmeters: Engineered thermoplastic, in-line flowmeters for “ultra-pure” or aggressive chemical applications such as acids, caustics, and DI water.

HP-I Flowmeters: High pressure, in-line flowmeters for operating pressures up to 10,000 psig.

Flow Controls: Rate/Totalizers, Batch Controllers, Mass Flow Computers, Sensors, Transmitters, Signal Conditioners, HART® protocol and More.

Local Representative:

Flowdata®

1817 Firman Drive
Richardson, TX 75081

Phone: (972) 907-2787
Fax: (972) 907-8016
Toll Free: (800) 833-2448

See Our Business Center On The

WORLD WIDE WEB
http://www.flowdata.com