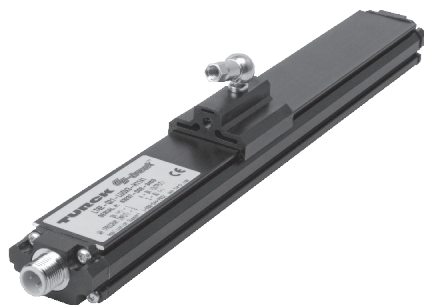


Digital Profile Series



The Q21D is a non-contact LDT with a digital output. This transducer utilizes magnetostrictive technology to give absolute position that is repeatable to .006% of the active sensing distance. It also has the same auto-tuning capability that the other profile series transducers offer, so that it can adjust its signal strength to various magnets.

There is a diagnostic LED that is located at the connector end of the probe and provides visual status information regarding the operation of the Q21D. The indications are specified in the table below. The Q21D digital transducer provides either a Start/Stop or a Variable Pulse signal interface that is proportional to the position of the slide magnet assembly along the length of the probe.

Digital Profile Series (Q21D/Q35D) Specifications:

Output:	Start/Stop Pulse: External interrogation; Variable Pulse: Internal or External interrogation
Number of recirculation:	Variable Pulse: 001 (standard) to 127
Span:	5 to 180 in (Q35 maximum span is 36 in)
Repeatability:	+/-0.006% of full span
Hysteresis:	+/-0.02% of full span
Operating temperature:	-4 to +158 °F (-20 to +70 °C)
Null Zone:	3.00 in
Dead Zone:	2.00 in
Operating voltage:	13.5-30 VDC
Current consumption:	120 mA at 15 VDC, 2.5 watts maximum
Shock:	Tested to 40 g
Vibration:	MIL-STD810E, 10G rms random, 20 Hz - 2 kHz
LED:	Green = power is applied and magnet is present Red = fault, magnet is in the null zone, dead zone or lost Yellow = no interrogation signal detected
Protection rating:	Electronics: IP67, IP68 optional Rod housing: IP65
Agency approval:	CE

Start/Stop (RS):

The Start/Stop signal interface of the Q21D digital output series is a differential RS-422 output. To initiate a start pulse, an external device must be used, and should be a minimum of 1 ms in duration. A stop pulse of 1 ms in duration will follow. The time delay from the leading edge of the start pulse to the leading edge of the stop pulse is proportional to the distance from the Null Zone to the Magnet.

Variable Pulse (VP):

The Variable Pulse signal interface digital output is a pulse width modulated signal (RS-422). The Q21D LDT can be ordered with either an external (VPE) or internal (VPI) interrogation.

External interrogation occurs when an external device connected to the Q21D-VPE generates a start pulse. This start pulse should be a minimum of 1 ms in duration. Within 50 nanoseconds after the leading edge of the start pulse has been received, the LDT will generate an output pulse. The duration of the output pulse is proportional to the distance from the Null Zone to the Magnet.

The Q21D-VPI generates an internal interrogation, and will continually output pulse width modulated signals. The duration of this output pulse is also proportional to the distance from the Null Zone to the Magnet.

Digital Profile Series

Part Number Key: Digital Profile Series

A	B	C		D		E		F		G		H		I
LT	40	E	-	Q21D	-	VPI	-	001	-	X3	-	H1161	/	S1661

A	Type
LT	Linear Transducer

B	Measuring Span
*	Length of Measuring Span

C	Units of Measurement
E	Inches

D	Housing Height
Q21D	21 mm
Q35D	35 mm

E	Output Mode
CP	RS422, Control Pulse
RS	RS422, Start/Stop Pulse
VPE	Variable Pulse External Interrogations
VPI	Variable Pulse Internal Interrogations

F	Number of Recirculations ¹⁾
*	001 (Standard) to 127

¹⁾ Only Available with Output Mode 'VPI' or 'VPE'. Otherwise (Blank)

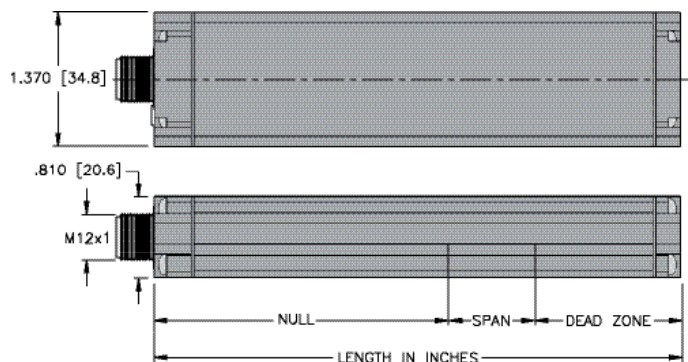
G	Number of LEDs
X3	3 Diagnostic LED's

H	Type of Connection
H1161	6-pin M12 Eurofast Connector

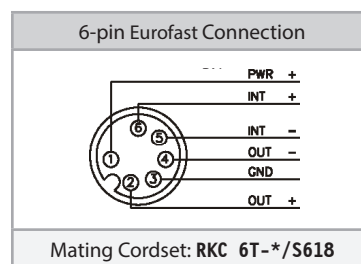
I	Specials
(Blank)	IP67
S1661	IP68

Note: In addition to the LDT, a typical system includes a magnet, mounting feet and cable (all sold separately).

Dimensions: Q21D Digital Profile Series

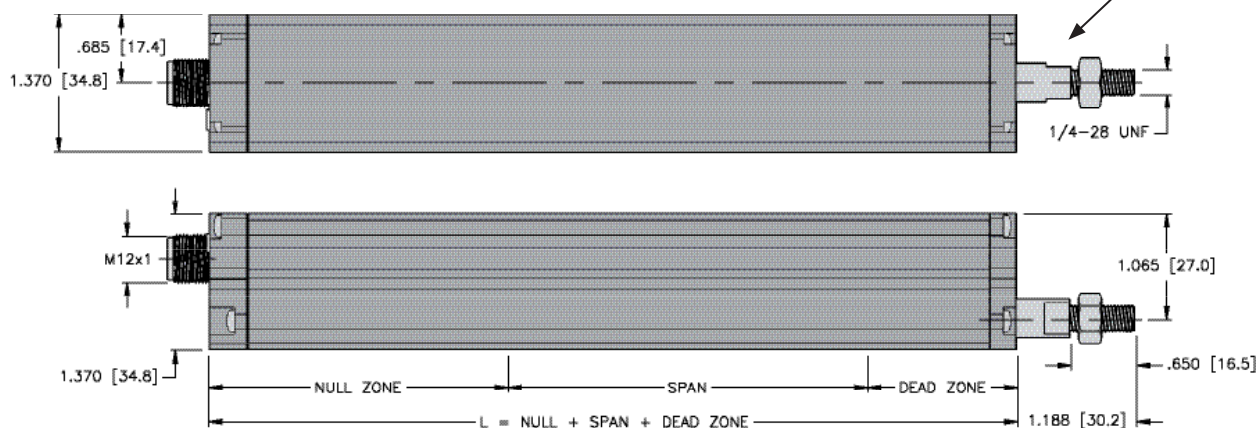


Wiring Diagram: Q21D/Q35D



* Length in meters.

Dimensions: Q35D Digital Profile Series



Note: Self contained piston with magnet permanently attached