



956LC BLOK

Gemco 956LC BLOK

The 956LC BLOK is an accurate, non-contact, linear position sensor in an economical package. The sensor utilizes our field proven magnetostrictive technology to give absolute position, repeatable to .01% of the sensing distance. The 956LC BLOK is a cost effective linear sensing solution.

The streamlined anodized aluminum extrusion houses the sensing element and electronics. The piston assembly moves over the sensing element that determines the position and converts it to a readable output.

The 956LC BLOK is a self-contained unit and does not have a can or head assembly. All of the electronics are incorporated in the transducer which is less than 1.5 inches square. Units can be ordered in span lengths up to 36 inches long in 0.1 inch increments. The piston is designed to move effortlessly along the transducer. A variety of hardware is available for attaching the LDT to the moving portion of the process.

The transducer can be mounted vertically or horizontally using mounting feet or optional rod ends. The mounting feet slide on the extrusion and clamp down when tightened. This package style provides a compact and easy method of mounting for machine builders.

The transducer can be ordered with 0-10 VDC or 4-20 mA output. All units are provided with a standard quick disconnect connector.

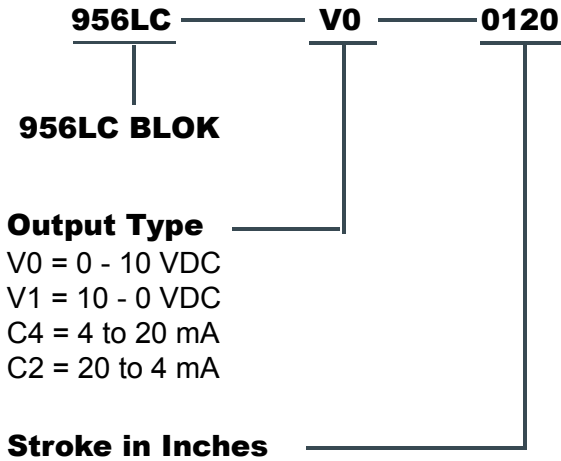
The 956LC BLOK is designed for applications where economical continuous feedback is necessary. The sensor can be a cost effective replacement to limit and proximity sensors and linear potentiometers. Applications include presses, blow molding, injection molding, extrusion, roll positioning, wicket gates and many more.



Specifications	
Input Voltage	24 VDC +/- 20%
Current Draw	100 mA Max.
Output	0 to 10 VDC 10 to 0 VDC 4 to 20 mA 20 to 4 mA
Linearity	+/- 0.05% of stroke or +/- 0.028", whichever is greater
Accuracy	0.1% of full stroke
Repeatability	+/- 0.01% of full stroke or +/- 0.014", whichever is greater
Operating Temperature	-20° to 70° C
Span Length	6" to 36" Consult factory for vertical applications over 36" long
Null Zone	3.00"
Dead Zone	1.50"
Connector	Standard 4 pin micro 12mm Euro connector
Agency Approvals	CE Approved
Enclosure	IP67
Specification may change without notice.	

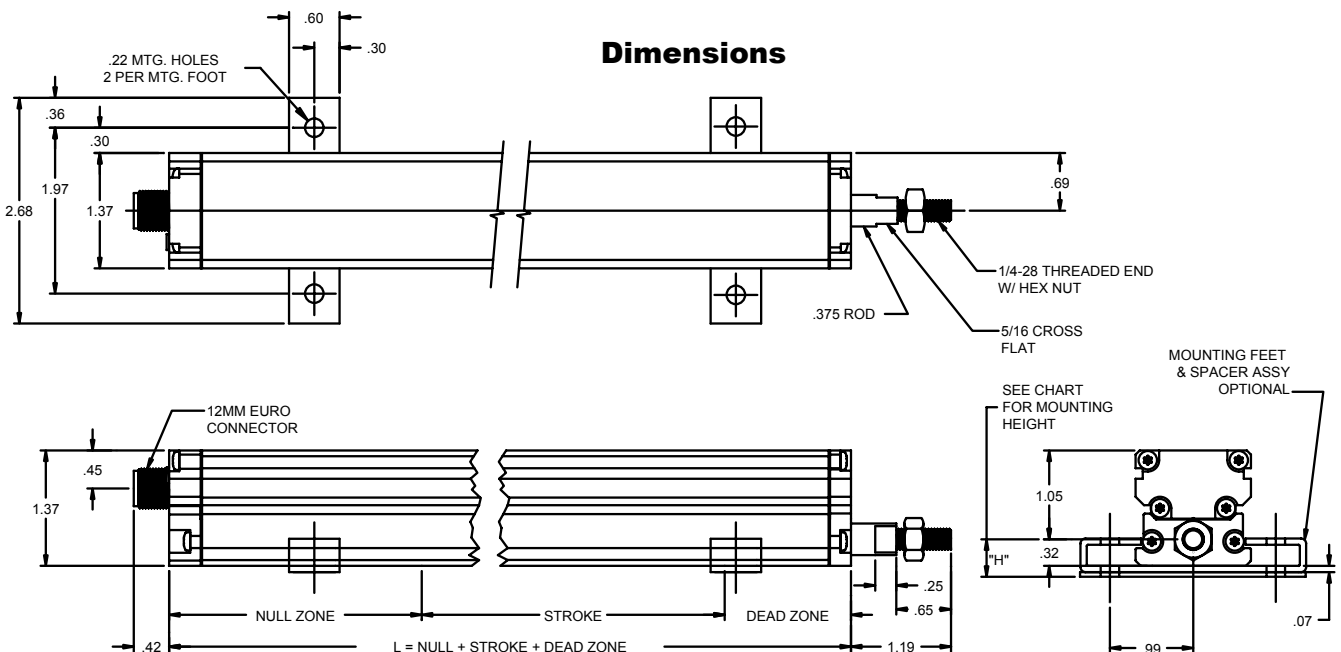
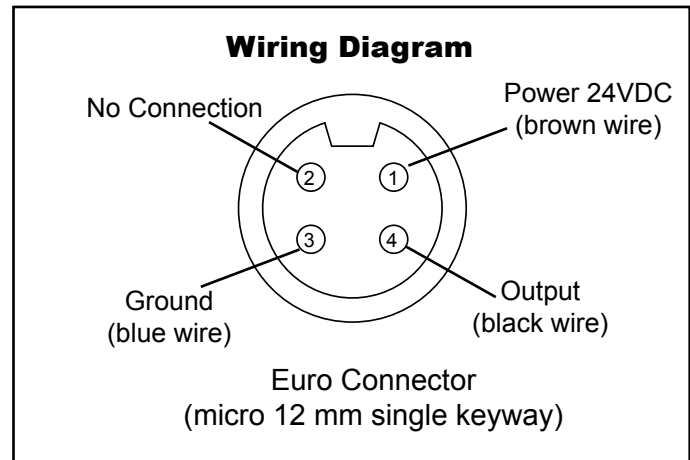
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Part Numbering



Accessories	
Item	Part Number
Rod End (Shaft)	04-570256
Mounting Foot	SD0522000
Spacer Kit Mount feet for .45" or .75" mounting Includes two mounting feet & spacers	SD0545100
6 Ft. Cable	949001L6
12 Ft. Cable	949001L12
6 Ft. Cable; Right Angle Connector	949002L6
12 Ft. Cable; Right Angle Connector	949002L12

Insert stroke in inches to 0.1 inch. Enter as a four-place number. **Example:** 12.0 in stroke entered as 0120. To convert a metric stroke to inches, multiply millimeter value by 0.03937.



Magnetostrictive LDT In A Piston Style Package

The 956S BLOK is an accurate, programmable zero and span, non-contact linear position sensor in an economical package. The sensor utilizes our field proven magnetostrictive technology to give absolute position, repeatable to .01% of the sensing distance. The 956S BLOK is a cost effective linear sensing solution.

The streamlined anodized aluminum extrusion houses the sensing element and electronics. The piston assembly moves over the sensing element that determines the position and converts it to a readable output. The 956S BLOK is a self-contained unit and does not have a can or head assembly. All of the electronics are incorporated in the transducer which is less than 1.5 inches square. Units can be ordered in span lengths up to 36 inches long in 0.1 inch increments. The piston is designed to move effortlessly along the transducer. A variety of hardware is available for attaching the LDT to the moving portion of the process.

The transducer can be mounted vertically or horizontally using our mounting feet or optional rod ends. The mounting feet slide on the extrusion and clamp down when tightened. This package style provides a compact and easy method of mounting for machine builders.

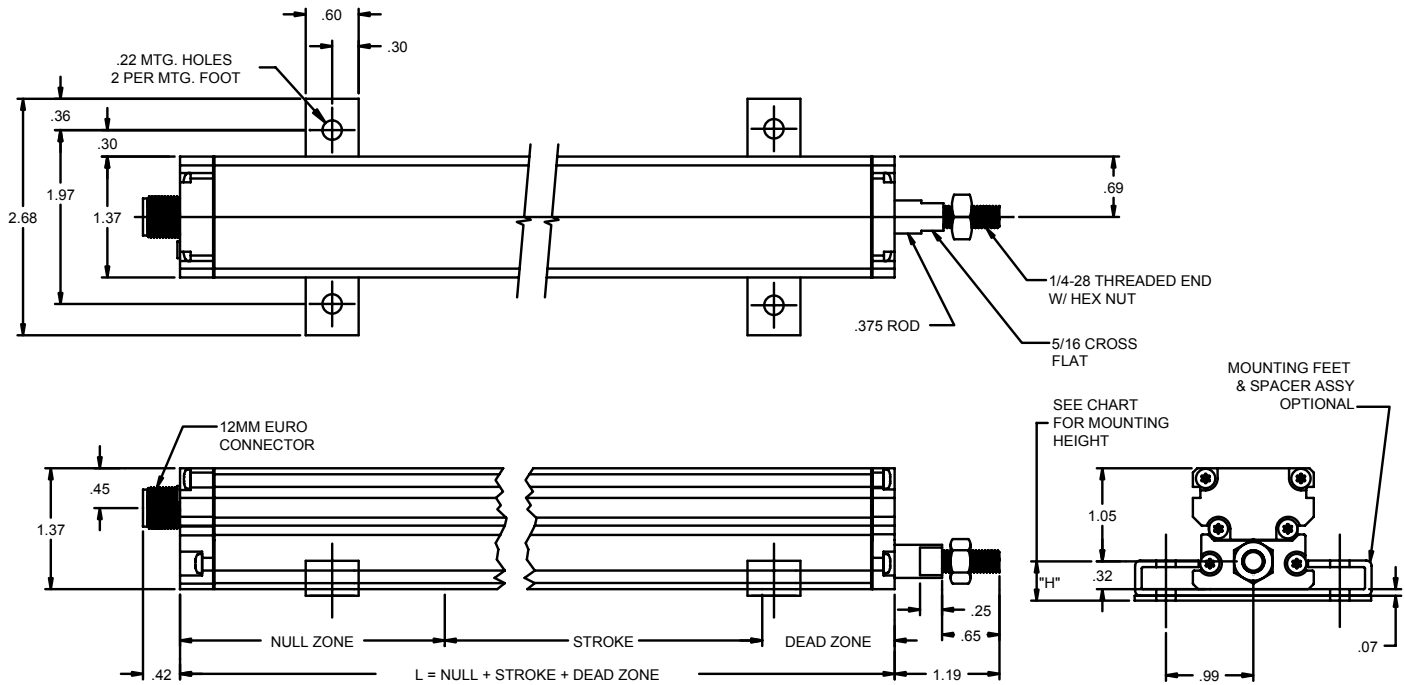
The transducer can be ordered with 0-10 VDC, 0-5 VDC, 4-20 mA, -10 to 10 VDC or -5 to 5 VDC. All units are provided with a standard quick disconnect connector. A unique feature is the diagnostic LED that remains green when the unit is operational and in the active programmed area. The LED turns red if there is an internal sensor failure. The LED turns yellow when the magnet is out of the programmed active range.

The 956S BLOK is designed for applications where economical continuous feedback is necessary. The sensor can be a cost effective replacement to limit and proximity sensors and linear potentiometers. Applications include presses, blow molding, injection molding, extrusion, roll positioning, wicket gates and many more.



Specifications	
Input Voltage	10 - 30 VDC
Current Draw	100 mA Max.
Output	V0 = 0 - 10 VDC V1 = 10 - 0 VDC V2 = -10 to 10 VDC V3 = 10 to -10 VDC V4 = 0 to 5 VDC V5 = 5 to 0 VDC V6 = -5 to 5 VDC V7 = 5 to -5 VDC C4 = 4 to 20 mA C2 = 20 to 4 mA
Linearity	+/- 0.05% of Full Stroke
Accuracy	+/- 0.1% of Full Stroke
Repeatability	+/- 0.01% of Full Stroke
Operating Temperature	-40° to 158° F (-40° to 70° C)
Span Length	4" - 36" Consult factory for vertical applications over 36" long
Null Zone	3"
Dead Zone	1.5"
Connectors	12mm Micro 4 Pin
Enclosure	IP67
Approvals	CE
Specifications are subject to change without notice.	

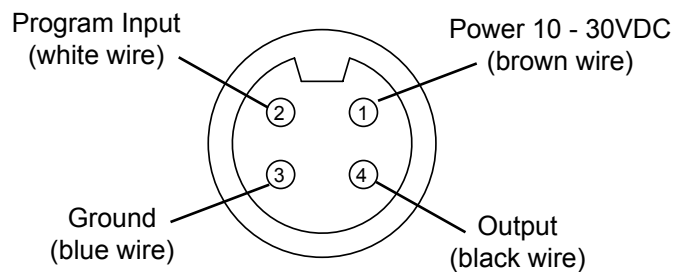
Dimension Drawing



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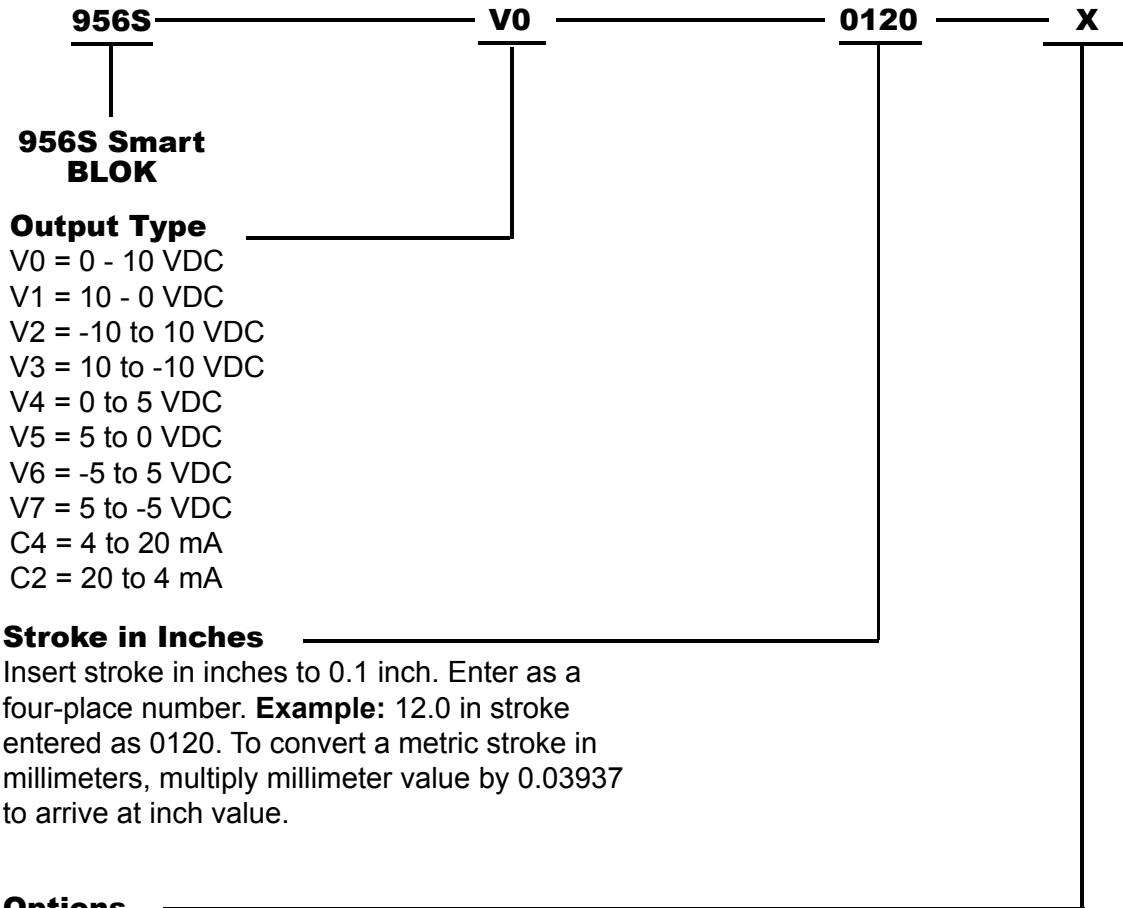
Wiring Diagram

Use Euro Connector (micro 12 mm single keyway) cordsets, available from most connector manufacturers or purchased from Ametek. Install according to the following diagram:



LDT Connector View

Part Numbering



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Accessories	
Item	Part Number
Spacer Kit Mount feet for .45" or .75" mounting Includes two mounting feet & spacers	SD0545100
Rod End (Shaft)	04-570256
Mounting Foot	SD0522000
6 Ft. Cable	949001L6
12 Ft. Cable	949001L12
6 Ft. Cable; Right Angle Connector	949002L6
12 Ft. Cable; Right Angle Connector	949002L12



Magnetostrictive LDT In A Piston Style Package

The 956A BLOK is an accurate, programmable zero and span, non-contact linear position sensor in an economical package. The sensor utilizes our field proven magnetostrictive technology to give absolute position, repeatable to .006% of the sensing distance. The 956A BLOK is a cost effective linear sensing solution.

The streamlined anodized aluminum extrusion houses the sensing element and electronics. The piston assembly moves over the sensing element that determines the position and converts it to a readable output. The 956A BLOK is a self-contained unit and does not have a can or head assembly. All of the electronics are incorporated in the transducer which is less than 1.5 inches square. Units can be ordered in span lengths up to 36 inches long in 0.1 inch increments. The piston is designed to move effortlessly along the transducer. A variety of hardware is available for attaching the LDT to the moving portion of the process.

The transducer can be mounted vertically or horizontally using our mounting feet or optional rod ends. The mounting feet slide on the extrusion and clamp down when tightened. This package style provides a compact and easy method of mounting for machine builders.

The transducer can be ordered with 0-10 VDC or 4-20 mA output. All units are provided with a standard quick disconnect connector. A unique feature is the diagnostic LED that remains green when the unit is operational and in the active programmed area. The LED turns red if there is an internal sensor failure. The LED turns yellow when the magnet is out of the programmed active range.

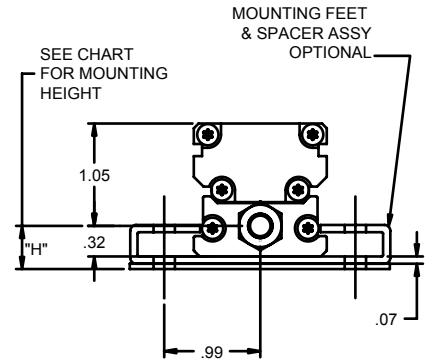
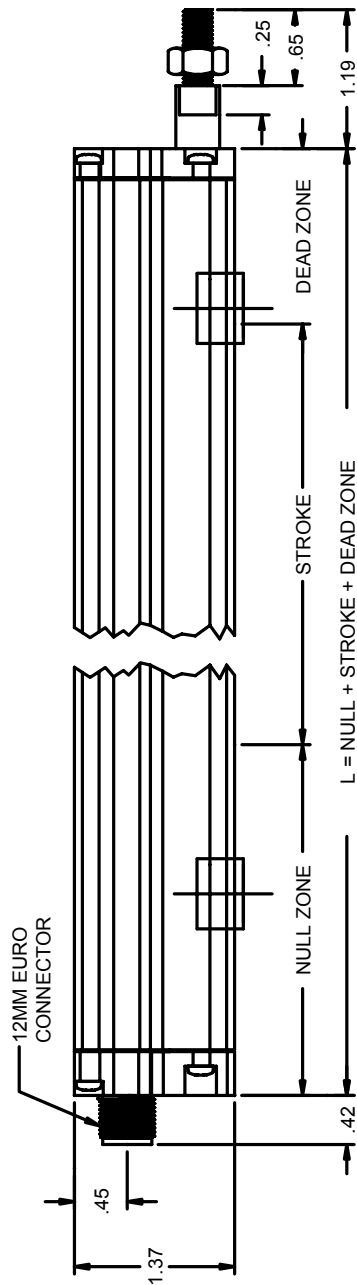
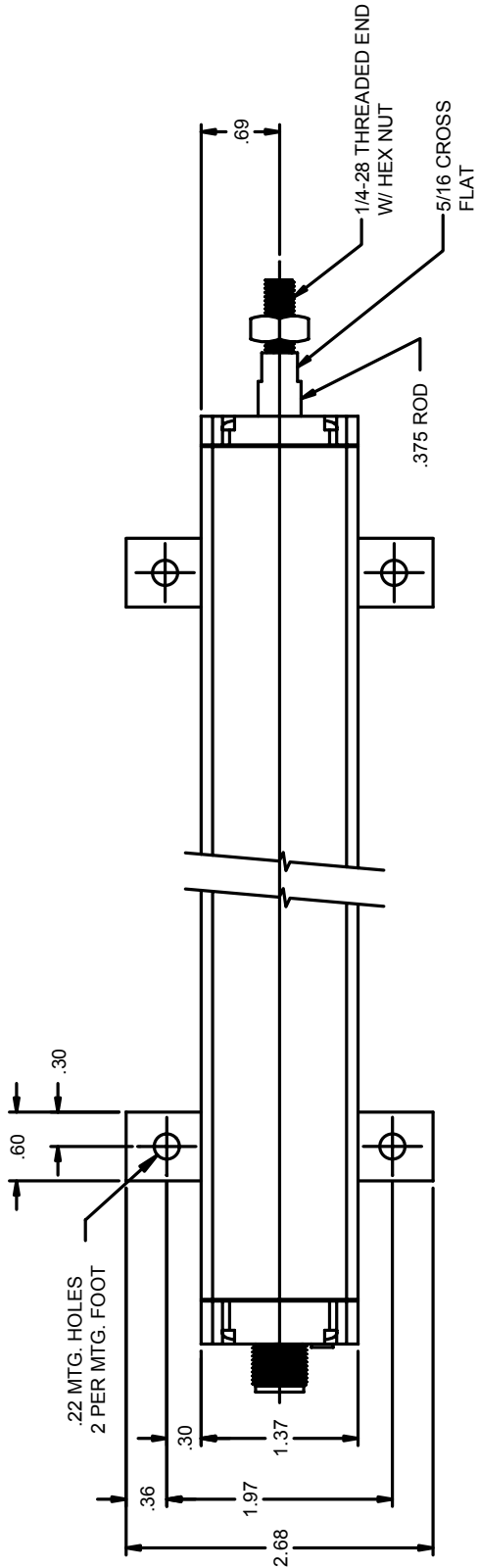
The 956A BLOK is designed for applications where economical continuous feedback is necessary. The sensor can be a cost effective replacement to limit and proximity sensors and linear potentiometers. Applications include presses, blow molding, injection molding, extrusion, roll positioning, wicket gates and many more.



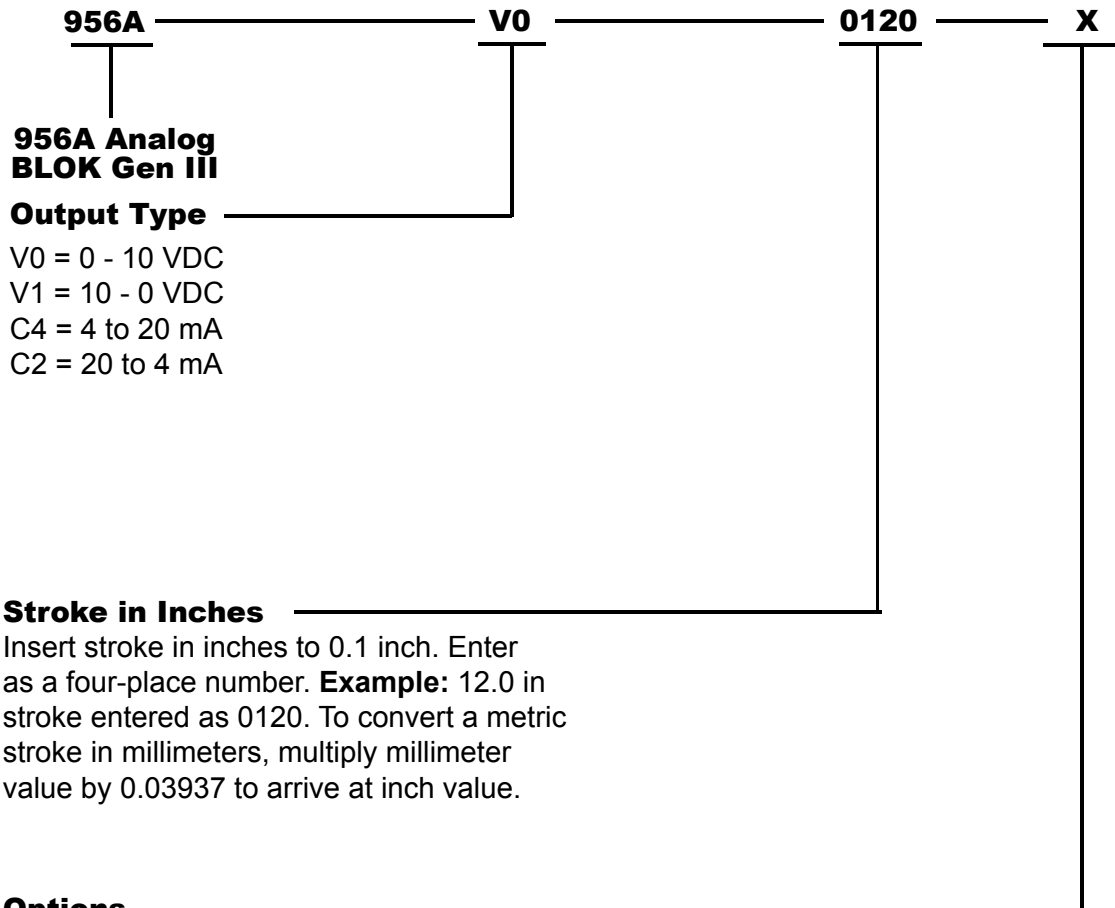
Specifications

Input Voltage	13.5 to 30 VDC
Current Draw	2.5 Watts Maximum, 120 mA @ 15 VDC Typical
Output	0 to 10 VDC, 10 to 0 VDC, 4 to 20 mA, 20 to 4 mA
Resolution 1) Internal 2) Analog Output	0.001" 16 Bit (1 part in 65,535)
Non-Linearity	+/- 0.05% of Stroke
Repeatability	+/- 0.006% of Full Stroke
Hysteresis	+/- 0.02% of Full Scale
Update 36" or less	1mS (Stroke Lengths 5 - 36")
Operating Temperature	-20° to 70° C
Span Length	5" to 36" Consult factory for vertical applications over 36" long
Null Zone	3.00"
Dead Zone	2.00"
LED	Green = Power is applied and magnet is present Red = Fault, magnet is in the Dead Zone or lost Yellow = Out of the active programmed range
Connector	Standard 5 Pin Micro 12mm Euro Connector
Approvals	CE
Enclosure	IP67
Specifications are subject to change without notice. Specifications are based on a typical 36" LDT.	

Dimension Drawing



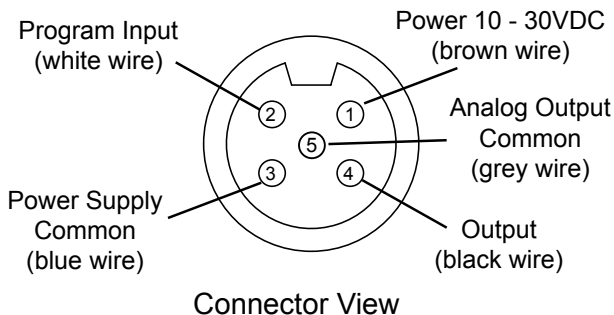
Part Numbering



X = No options
 E = Wet environment. Electronics sealed to IP68 Rating.

Wiring Diagram

Use Euro Connector (micro 12 mm single keyway) cordsets, available from most connector manufacturers or purchased from Ametek. Install according to the following diagram:



Accessories

Item	Part Number
Spacer Kit Mount feet for .45" or .75" mounting Includes two mounting feet & spacers	SD0545100
Rod End (Shaft)	04-570256
Mounting Foot	SD0522000
6 Ft. Cable	949019L6
12 Ft. Cable	949019L12
6 Ft. Cable; Right Angle Connector	949020L6
12 Ft. Cable; Right Angle Connector	949020L12

Magnetostrictive LDT In A Piston Style Package

The 956D BLOK is an accurate, digital, non-contact linear position sensor in an economical package. The sensor utilizes our field proven magnetostrictive technology to give absolute position, repeatable to .006% of the sensing distance. The 956D BLOK is a cost effective linear sensing solution.

The streamlined anodized aluminum extrusion houses the sensing element and electronics. The piston assembly moves over the sensing element that determines the position and converts it to a readable output. The 956D BLOK is a self-contained unit and does not have a can or head assembly. All of the electronics are incorporated in the transducer which is less than 1.5 inches square. Units can be ordered in span lengths up to 36 inches long in 0.1 inch increments. The piston is designed to move effortlessly along the transducer. A variety of hardware is available for attaching the LDT to the moving portion of the process.

The transducer can be mounted vertically or horizontally using our mounting feet or optional rod ends. The mounting feet slide on the extrusion and clamp down when tightened. This package style provides a compact and easy method of mounting for machine builders.

The 956D BLOK is available with Control Pulse, Variable Pulse or RS422 Start/Stop versions. The 956D is compatible with PLC interface cards or our series 1746 LDT or 2120L1 modules. All units are provided with a standard quick disconnect connector. A unique feature is the diagnostic LED that remains green when the unit is operational and in the active programmed area. The LED turns red if there is an internal sensor failure. The LED turns yellow when an external interrogation is not detected.

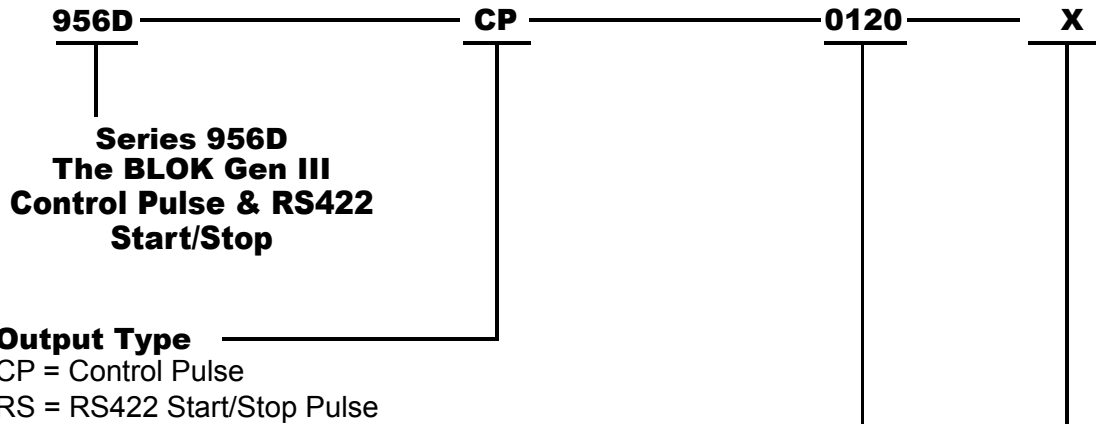
The 956D BLOK is designed for applications where economical continuous feedback is necessary. The sensor can be a cost effective replacement to limit and proximity sensors and linear potentiometers. Applications include presses, blow molding, injection molding, extrusion, roll positioning, wicket gates and many more.



Specifications	
Input Voltage	13.5 to 30 VDC
Current Draw	2.5 Watts Maximum, 120 mA @ 15 VDC Typical
Output	Control Pulse, Variable Pulse, Start/Stop
Resolution	Controller Dependent
Non-Linearity	+/- 0.05% of Stroke
Repeatability	+/- 0.006% of Full Stroke
Hysteresis	+/- 0.02% of Full Scale
Update	Controller Dependent
Operating Temperature	-20° to 70° C
Span Length	5" to 36" Consult factory for vertical applications over 36" long
Null Zone	3.00"
Dead Zone	2.00"
LED	Green = Power is applied and magnet is present Red = Fault, magnet is in the Dead Zone or lost Yellow = No Interrogation Pulse
Connector	Standard 6 Pin Micro 12mm Euro Connector
Approvals	CE
Enclosure	IP67

Specifications are subject to change without notice.
Specifications are based on a typical 36" LDT.

Part Numbering



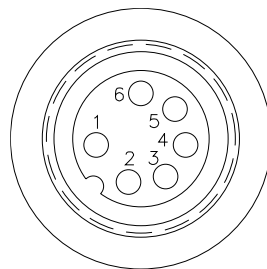
Stroke in Inches

Insert stroke in inches to 0.1 inch. Enter as a four-place number. **Example:** 12.0 in stroke entered as 0120. To convert a metric stroke in millimeters, multiply millimeter value by 0.03937 to arrive at inch value.

Options

X = No options
 E = Wet environment. Electronics sealed to IP68 Rating.

Wiring Diagram

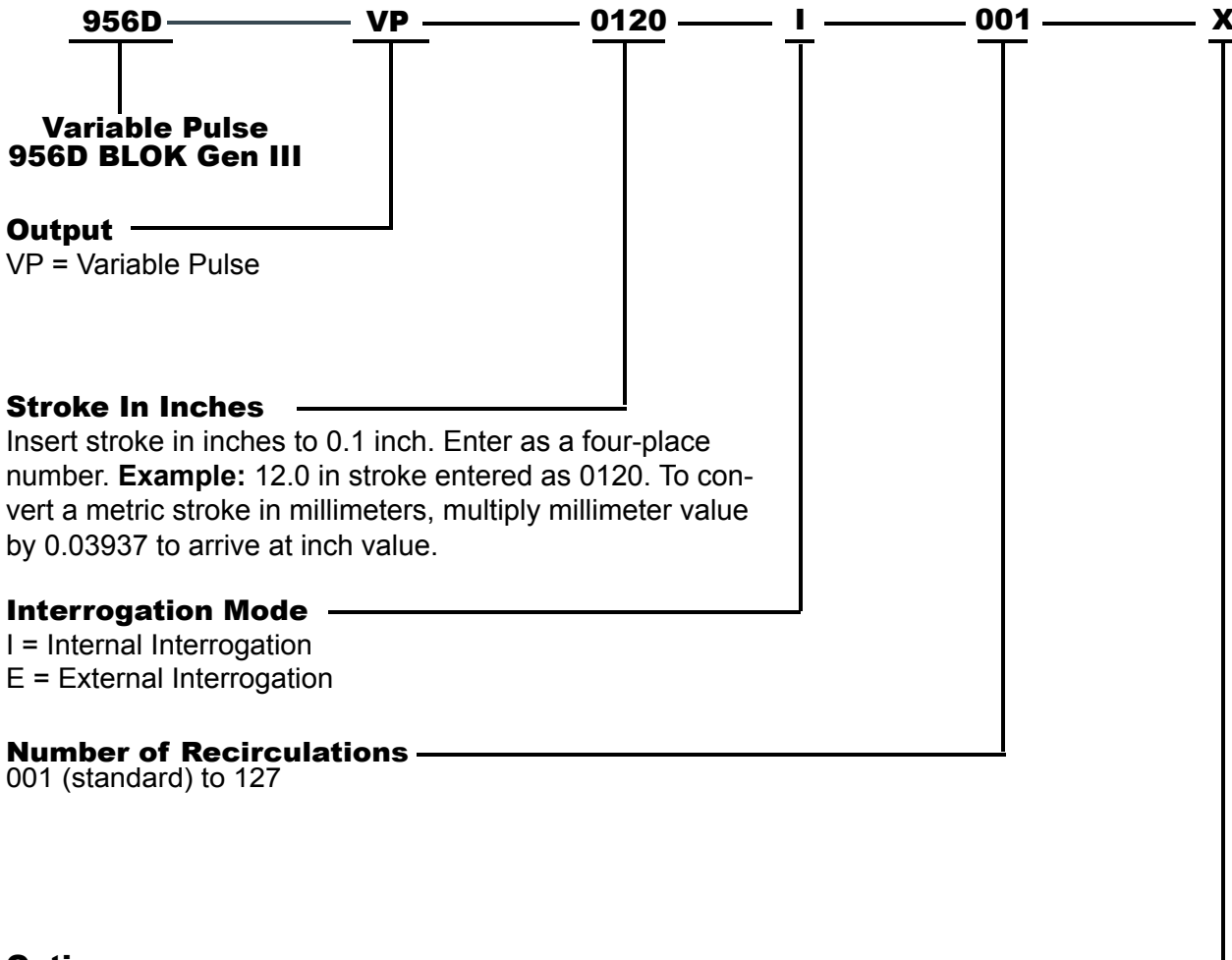


6 PIN CONNECTOR

Connector View

WIRE COLOR	6 PIN EURO CONN. DESIG.	PIN OUT
BROWN	1	PWR+
WHITE	2	OUT+
BLUE	3	GND
BLACK	4	OUT-
GRAY	5	INT-
PINK	6	INT+

Part Numbering



Variable Pulse
956D BLOK Gen III

Output
VP = Variable Pulse

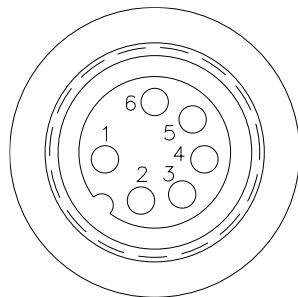
Stroke In Inches
Insert stroke in inches to 0.1 inch. Enter as a four-place number. **Example:** 12.0 in stroke entered as 0120. To convert a metric stroke in millimeters, multiply millimeter value by 0.03937 to arrive at inch value.

Interrogation Mode
I = Internal Interrogation
E = External Interrogation

Number of Recirculations
001 (standard) to 127

Options
X = No options
E = Wet environment. Electronics sealed to IP68 Rating.

Wiring Diagram



6 PIN CONNECTOR
Connector View

WIRE COLOR	6 PIN EURO CONN. DESIG.	PIN OUT
BROWN	1	PWR+
WHITE	2	OUT+
BLUE	3	GND
BLACK	4	OUT-
GRAY	5	INT-
PINK	6	INT+

Magnetostrictive LDT In A Piston Style

Package with Quadrature Output

The 956DQ BLOK is an accurate, quadrature, non-contact linear position sensor in an economical package. The sensor utilizes our field proven magnetostrictive technology to give absolute position, repeatable to .006% of the sensing distance. The 956DQ BLOK is a cost effective linear sensing solution.

The streamlined anodized aluminum extrusion houses the sensing element and electronics. The piston assembly moves over the sensing element that determines the position and converts it to a quadrature output. The 956DQ BLOK is a self-contained unit and does not have a can or head assembly. All of the electronics are incorporated in the transducer which is less than 1.5 inches square. Units can be ordered in span lengths up to 36 inches long in 0.1 inch increments. The piston is designed to move effortlessly along the transducer. A variety of hardware is available for attaching the LDT to the moving portion of the process.



The transducer can be mounted vertically or horizontally using our mounting feet or optional rod ends. The mounting feet slide on the extrusion and clamp down when tightened. This package style provides a compact and easy method of mounting for machine builders.

The 956DQ LDT can be ordered with 1-9999 cycles per inch of output resolution in lengths of 5 to 36 inches. The transducer features an input to re-zero the probe "on-the-fly". Another unique feature is the "burst" mode. An input on the transducer triggers a data transfer of all the incremental position data relative to the customers set zero position. This can be used to achieve absolute position updates when power is restored to the system, eliminating the the time consuming need to "re-home" the machine.

Specifications	
Input Voltage	13.5 to 30 VDC
Current Draw	2.5 Watts Maximum, 120 mA @ 15 VDC Typical
Output	Quadrature Output A+, A-, B+, B-, Z+, Z- Line Drivers: 5V or Input Power
Resolution	0.001"
Non-Linearity	+/- 0.05% of Stroke
Repeatibility	+/- 0.006% of Full Stroke
Hysteresis	+/- 0.02% of Full Scale
Update	1mS (Stroke Length 5-36")
Operating Temperature	-20° to 70° C
Span Length	5" to 36" Consult factory for vertical applications over 36" long
Null Zone	3.00"
Dead Zone	2.00"
LED	Green = Power is applied and magnet is present Red = Fault, magnet is in the Dead Zone or lost
Connector	Standard 12 Pin Micro (Option E) 12mm Euro Connector or 10 Pin HRS (Option H)
Approvals	CE
Enclosure	IP67
Specifications are subject to change without notice. Specifications are based on a typical 36" LDT.	

Part Numbering

956DQ — **0120** — **E** — **1000** — **E** — **F7** — **X1** — **N** — **D** — **X**

956DQ BRIK Gen III
Quadrature Output
Stroke In Inches

Insert stroke in inches to 0.1 inch. Enter as a four-place number.
Example: 12.0 in stroke entered as 0120. To convert a metric stroke in millimeters, multiply millimeter value by 0.03937 to arrive at inch value.

Connector Style

H = HRS Environmental Connector.
 E = Euro 12 Pin, 12mm Connector. Consult factory for others.

Output Resolution

Cycles per inch, maximum internal resolution is .001 inches. 1000 standard (Available range is 0001 through 9999). Consult factory for for ranges above 9999.

Input Type

E = Sinking (Typically used with sourcing output type)
 C = Sourcing (Typically used with sinking output type)
 T = TTL Level

Quadrature Cycle Output Frequency Range

F1 = 10 KHz F4 = 75 KHz F7 = 250 KHz
 F2 = 25 KHz F5 = 100 KHz F8 = 500 KHz
 F3 = 50 KHz F6 = 150 KHz F9 = 1.0 MHz

Output Mode

X1 = X1 Quadrature
 D1 = Dual Magnet, Difference between magnets.

Zero Offset Storage

V = Volatile (nonretentive).
 N = Nonvolatile (retentive, 100,000 storage cycles maximum).

Output Drivers

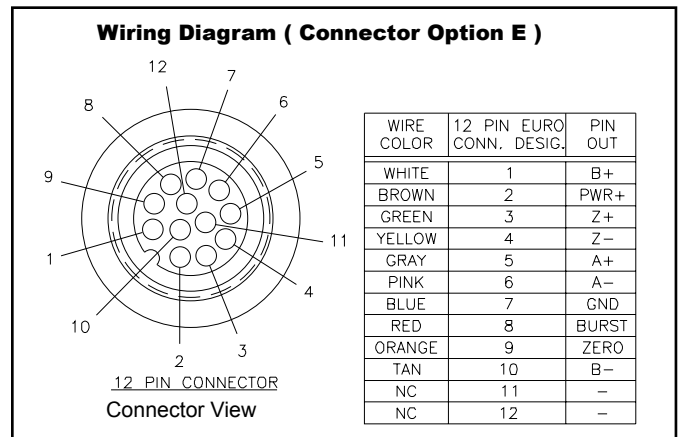
D = Differential RS422 line driver, TTL compatible.
 L = Differential line driver 10-30 VDC, V out = V in (LDT Power) - 1 Volt.

Options

X = None.
 E = Wet environment. Electronics sealed to IP 68 Rating.
 Connector Option E only.

Accessories	
Item	Part Number
Slide Magnet	SD0521800
Float Magnet	SD0522100
Mounting Foot	SD0522000
6 Ft. Cable (Option H)	SD0527700L6
12 Ft. Cable (Option H)	SD0527700L12
25 Ft. Cable (Option H)	SD0527700L25
6 Ft. 12 Pin (Option E Connector)	949023L6
12 Ft. 12 Pin (Option E Connector)	949023L12
Control Arm	955ARMXX (X = Length in Inches)
Rod End	04-570252

For non-standard lengths, consult factory.



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