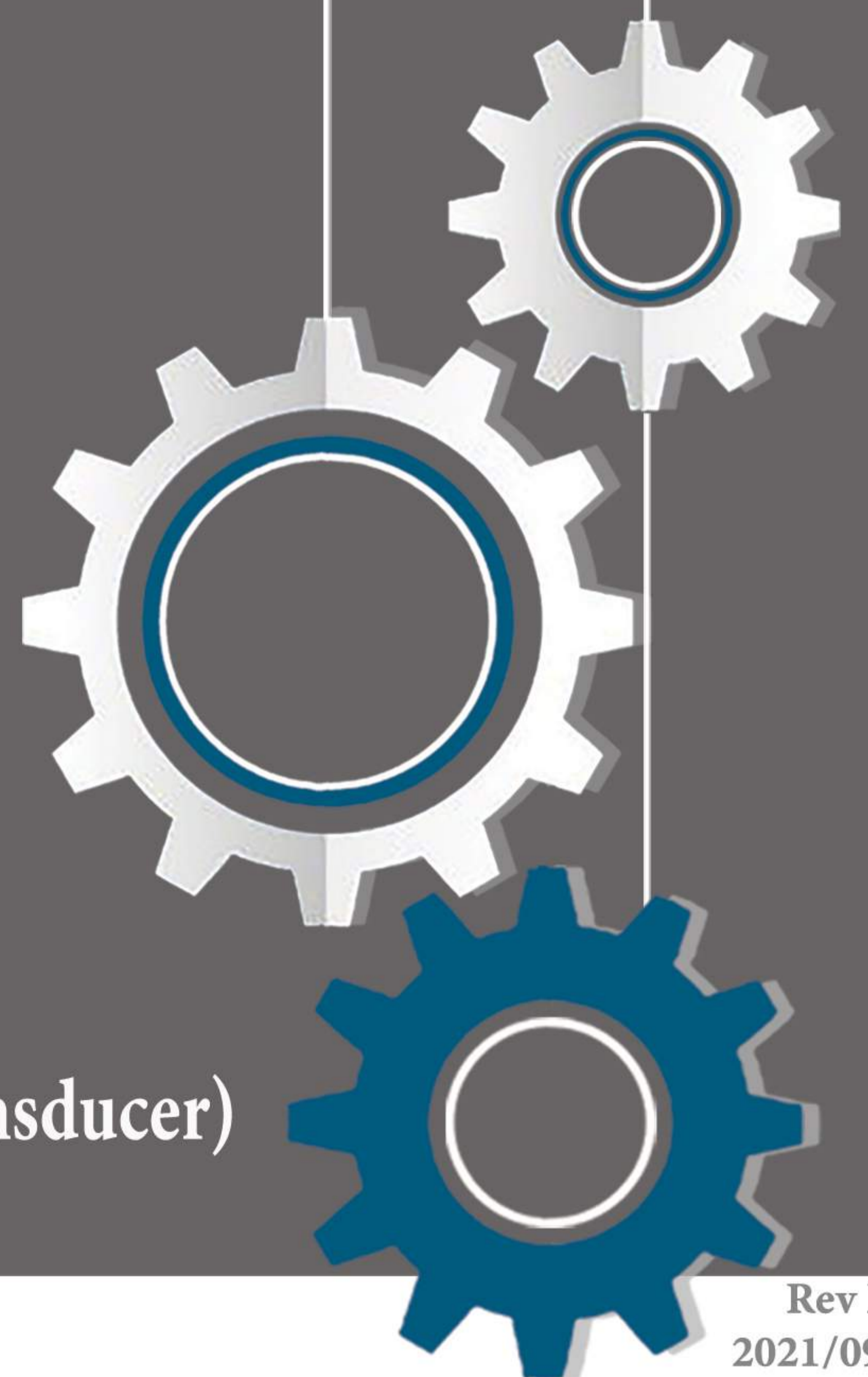
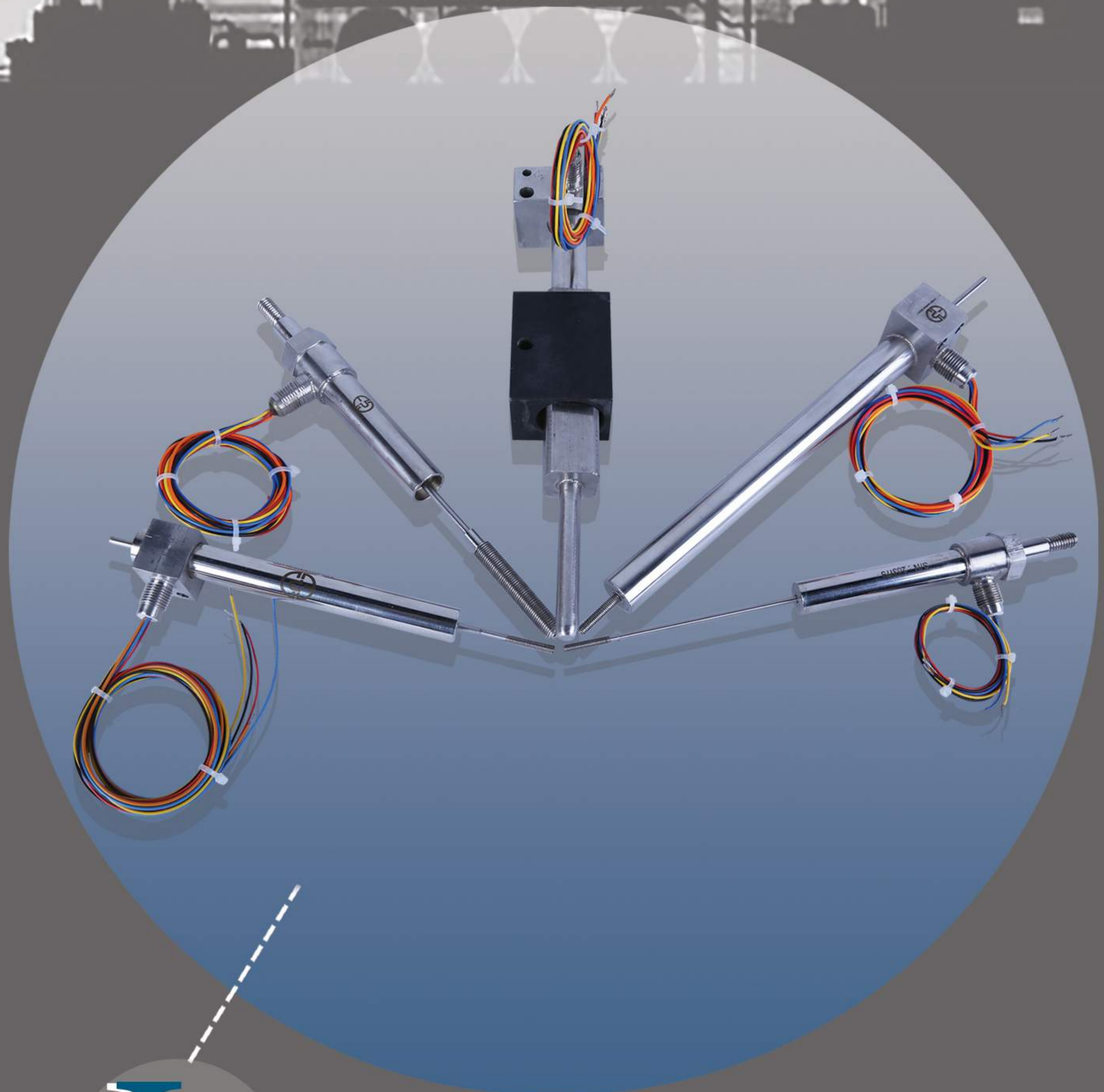




ETRO DAVVAR ENERGY



LVDT (Linear Variable Differential Transducer)

Rev E
2021/09/05



If there is a will, there is a way...

Linear Variable Differential Transducer

Introduction To LVDT

LVDT is an acronym for Linear Variable Differential Transformer. It is an electromechanical transducer that converts the linear movement of an object into a corresponding electrical signal. LVDT linear position sensors are available that can measure movements as small as a few millionths of an inch up to several inches. Figure 1 shows the components of a typical LVDT. The transformer's internal structure consists of a primary winding centered between a pair of identically wound secondary windings, symmetrically spaced about the primary.

The moving element of an LVDT is a separate tubular armature of magnetically permeable material. This is called the core, which is free to move axially within the coil's bore, and mechanically coupled to the object whose position is being measured. The bore and core should have enough clearance. In operation, the LVDT's primary is energized by AC voltage and appropriate frequency, known as the primary excitation. The LVDT's output signal is the differential AC voltage between the two secondary windings, which changes with the movement of the core in the LVDT coil.

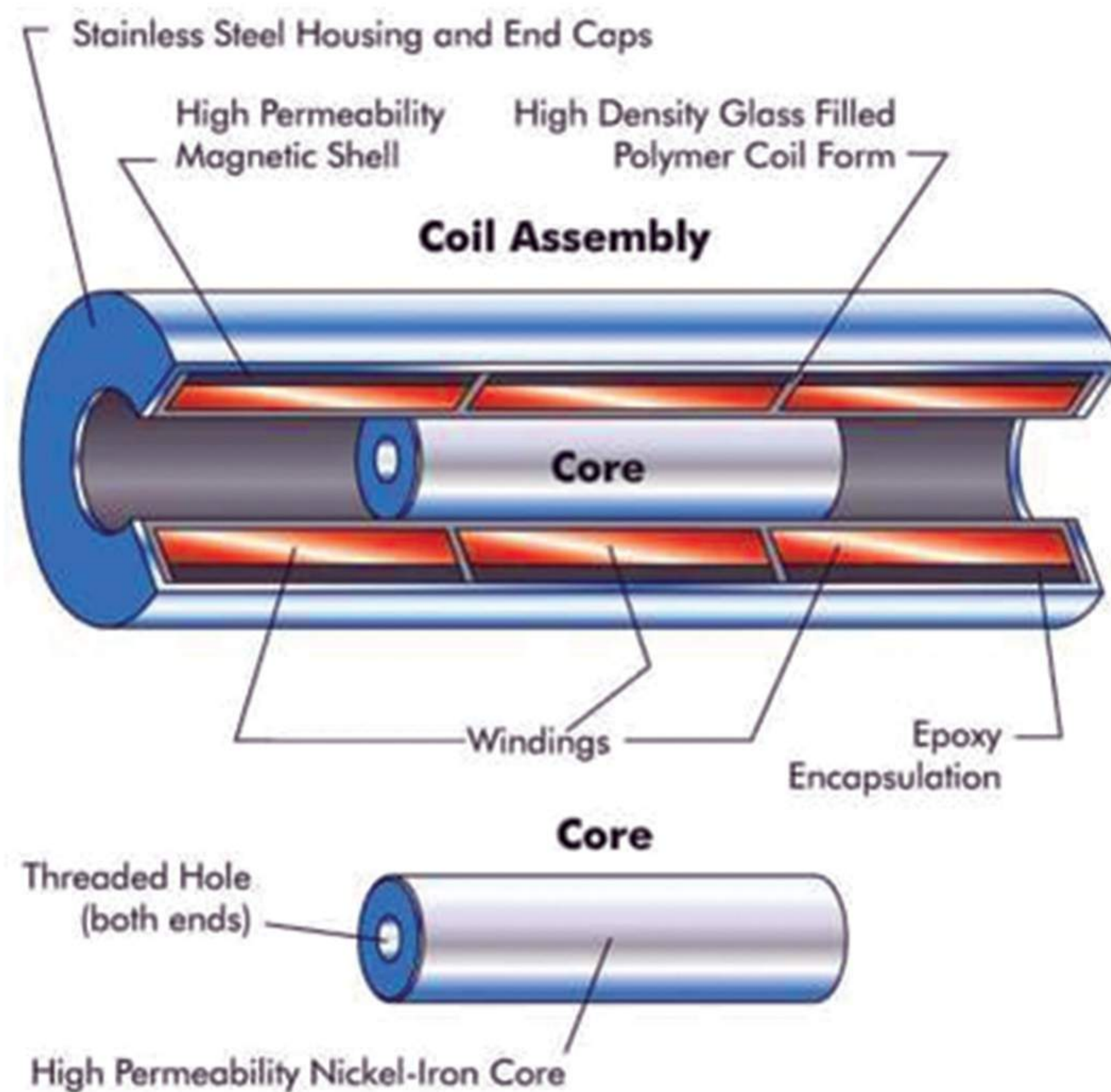


Figure1

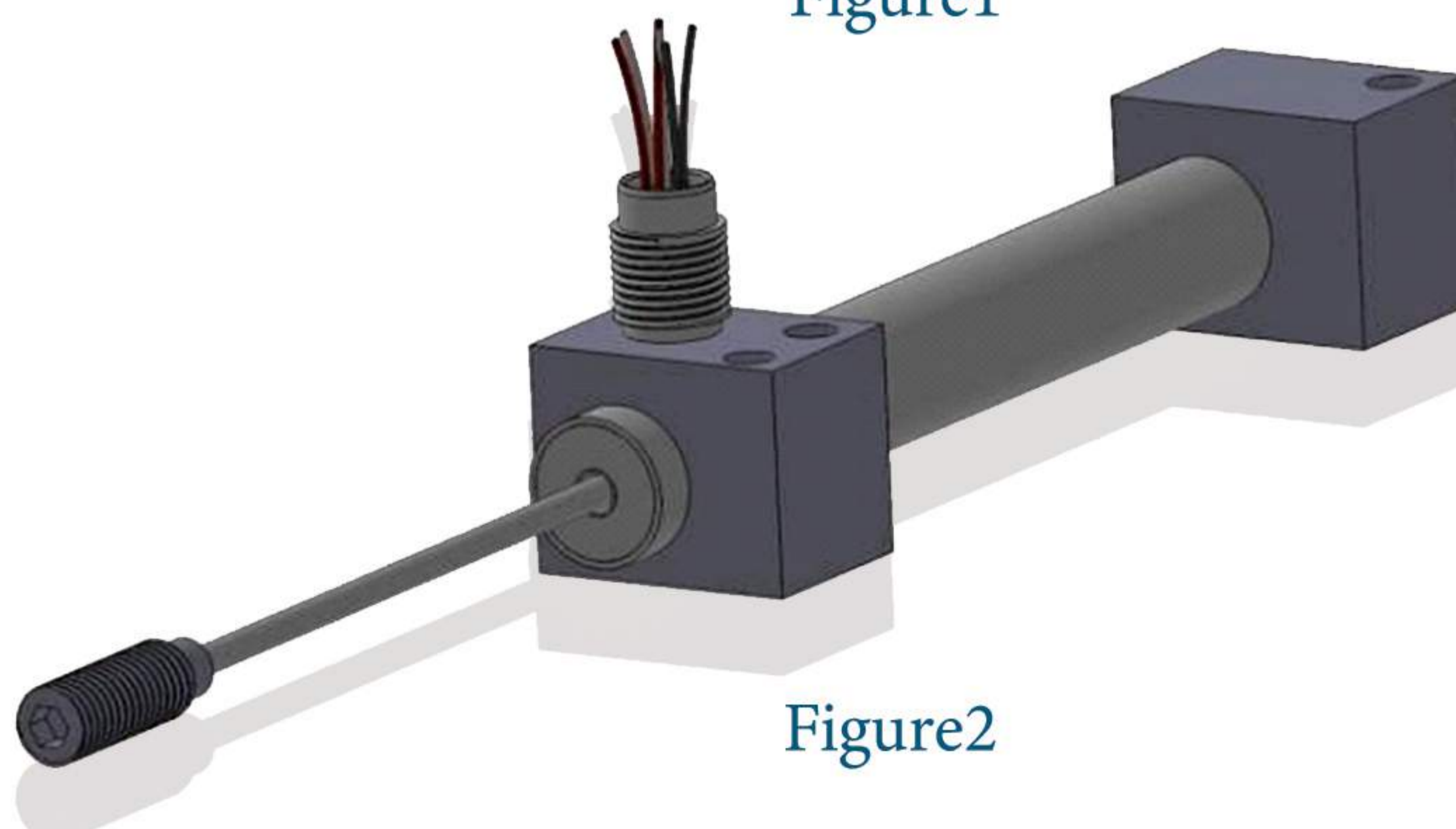
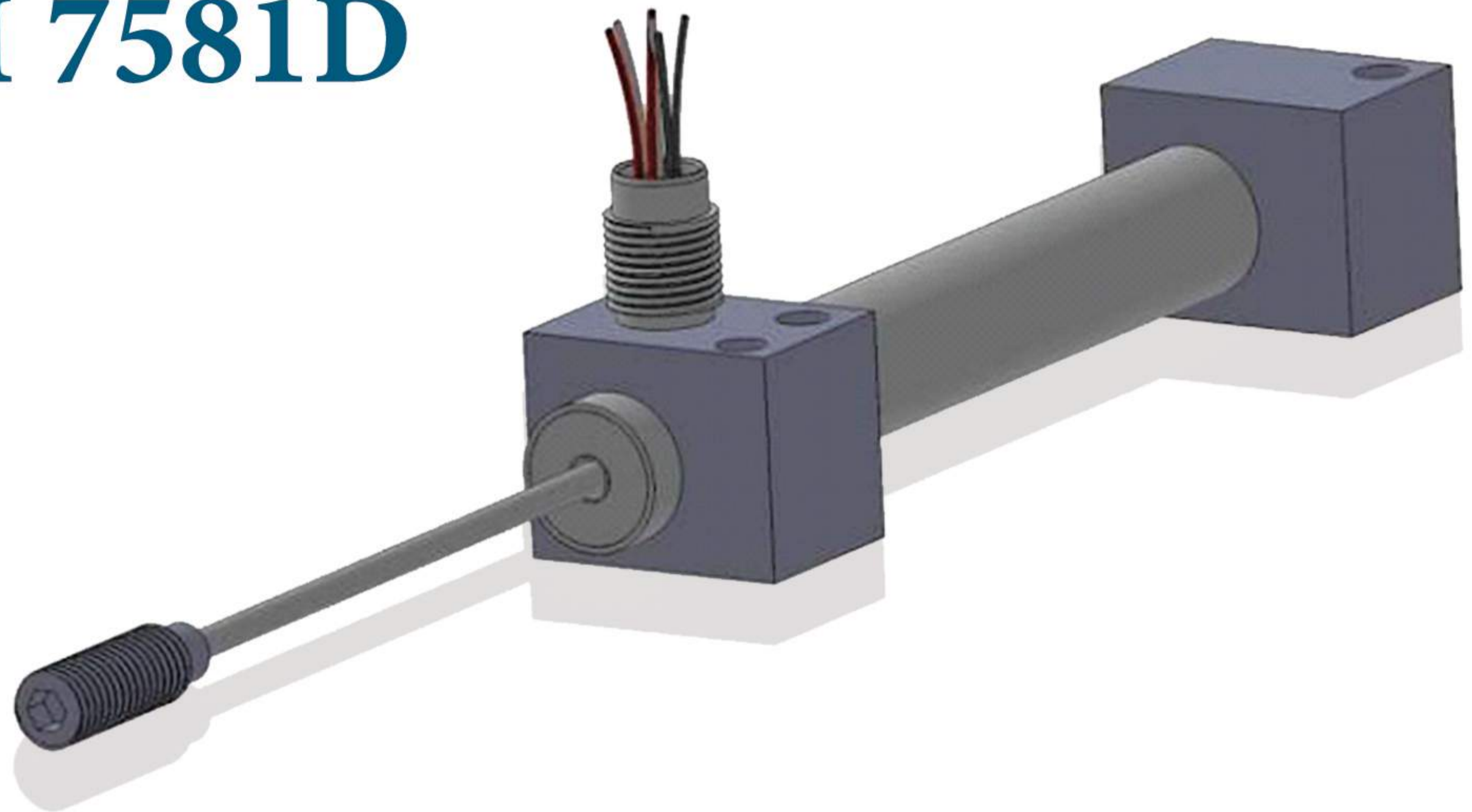


Figure2

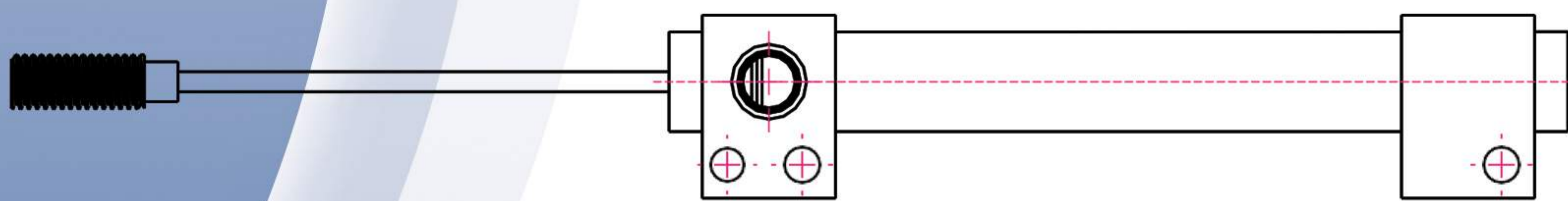
Type: GM 7581D

GE P/N: 311A5178PT19
 Our P/N: PD-LVDT-60303

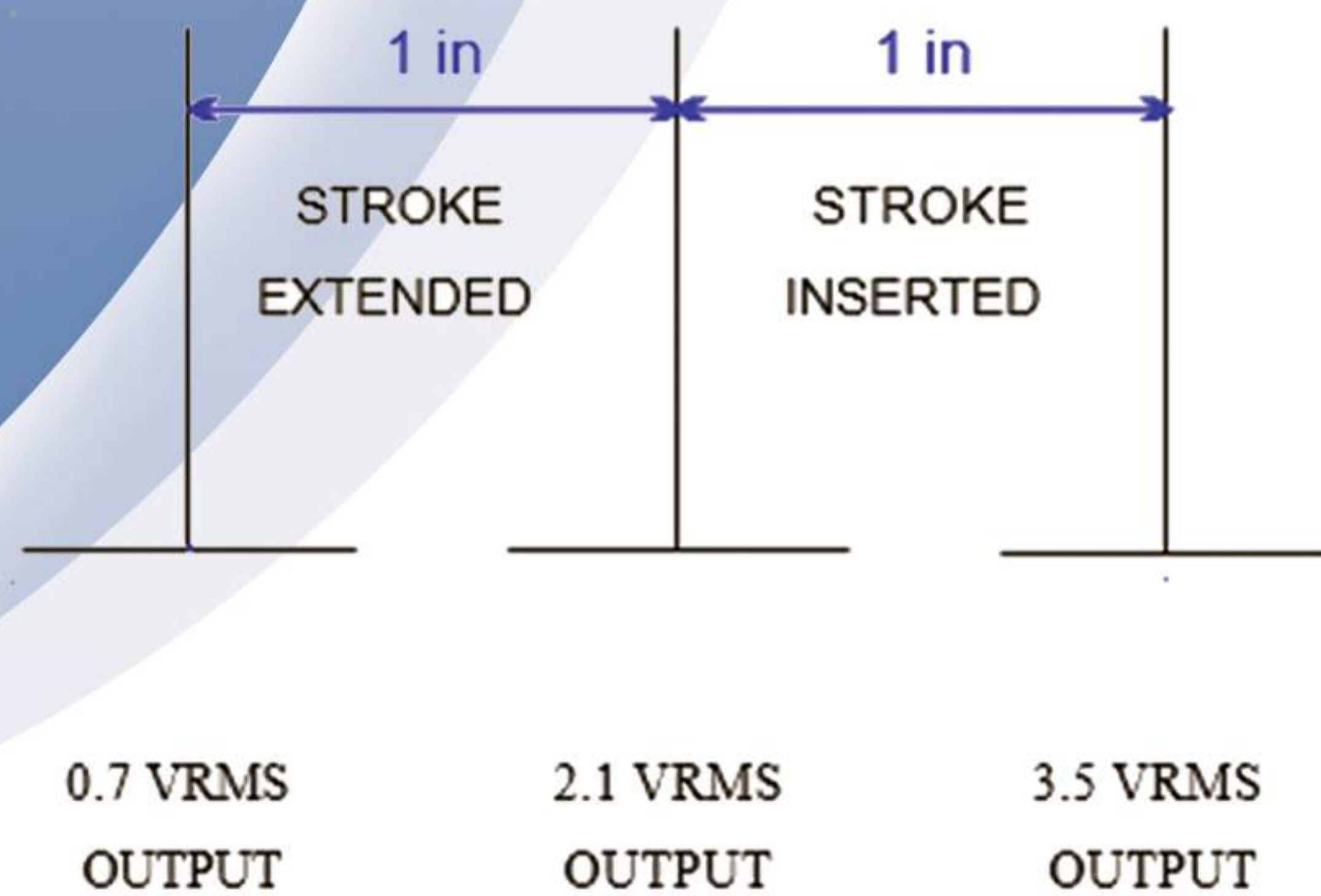


Electrical Specification

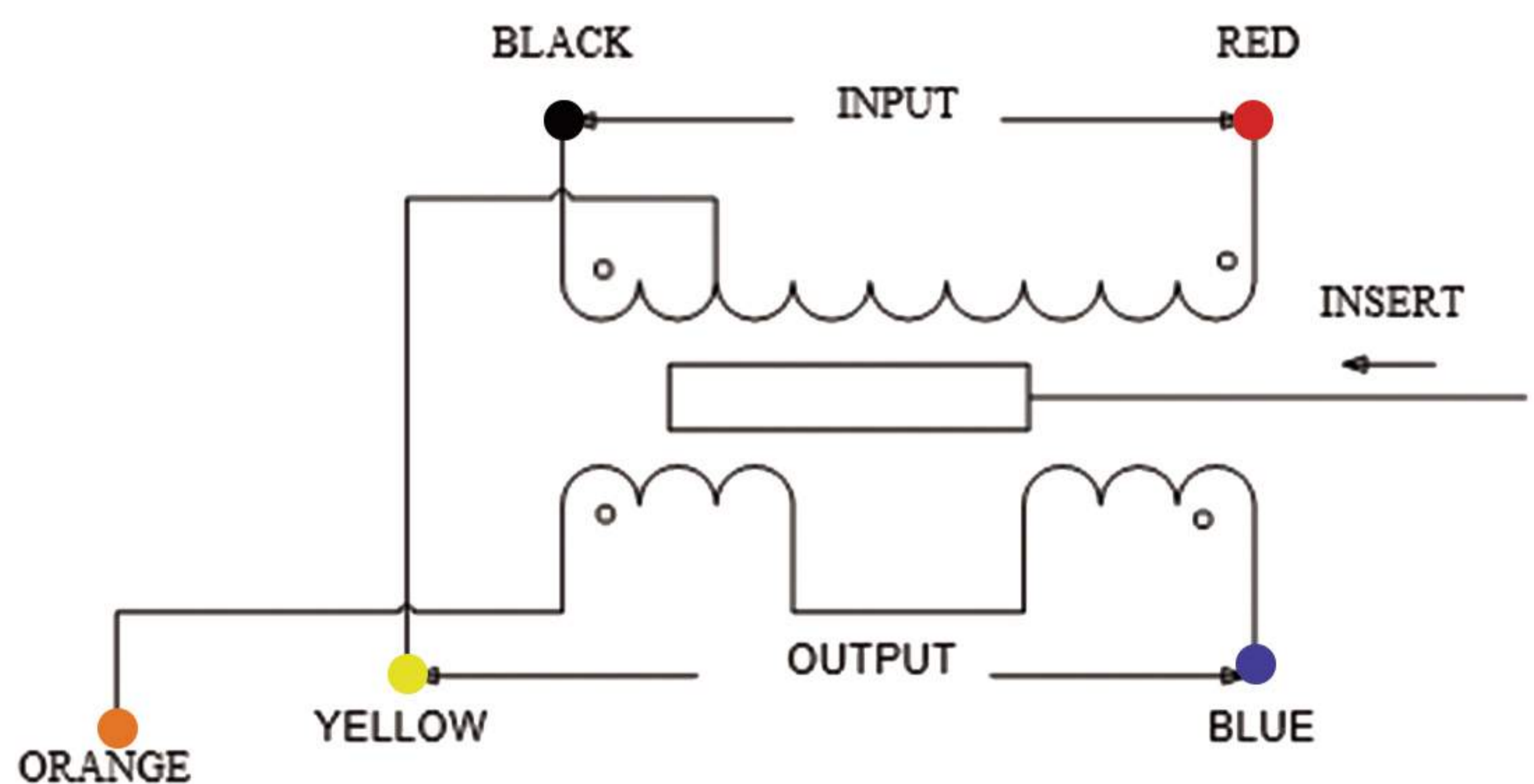
Stroke Range	1 inch
Input Voltage	7.0 Vrms (nominal)
Input Frequency	2.5 to 3.0 kHz
Linearity Error	$\leq \pm 0.25\%$
Repeatability Error	$< \pm 0.01\%$
Operating Temperature	-65°F to +220°F (-55°C to +105°C)
Thermal Coefficient of Sensitivity	-0.01% / °F (nominal) (-0.02%/°C nominal)



At Null



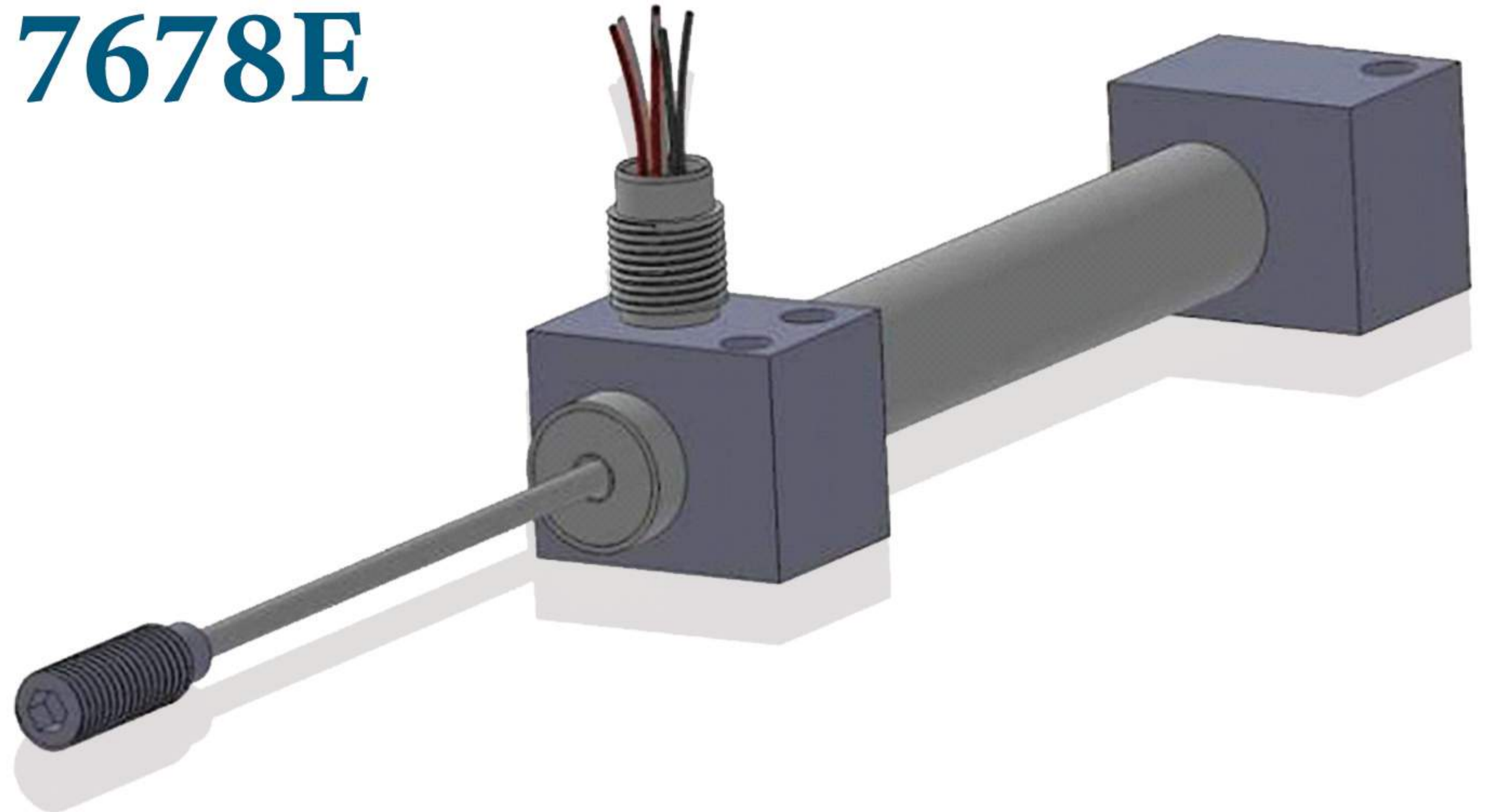
Null Position



Wiring Diagram

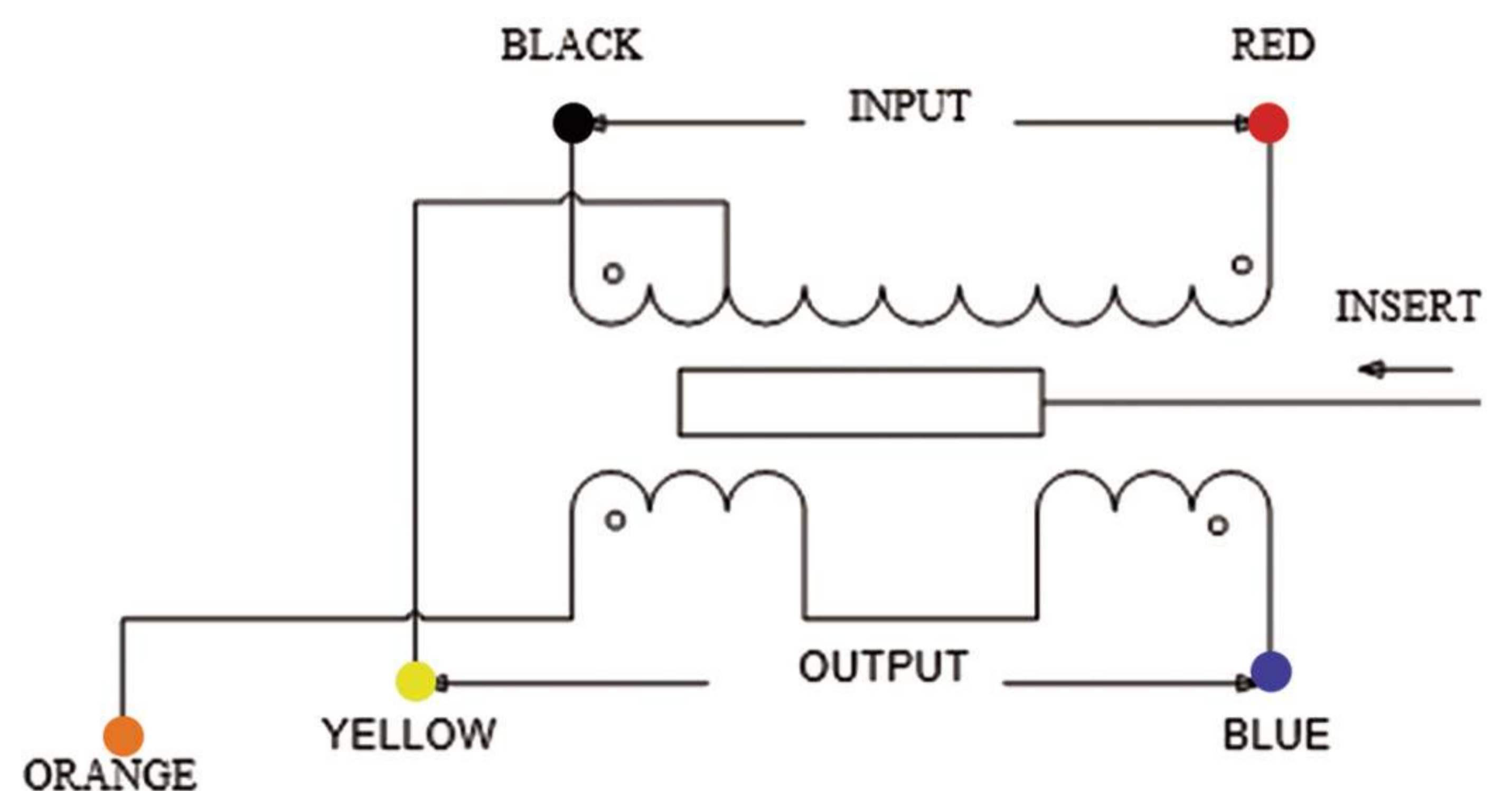
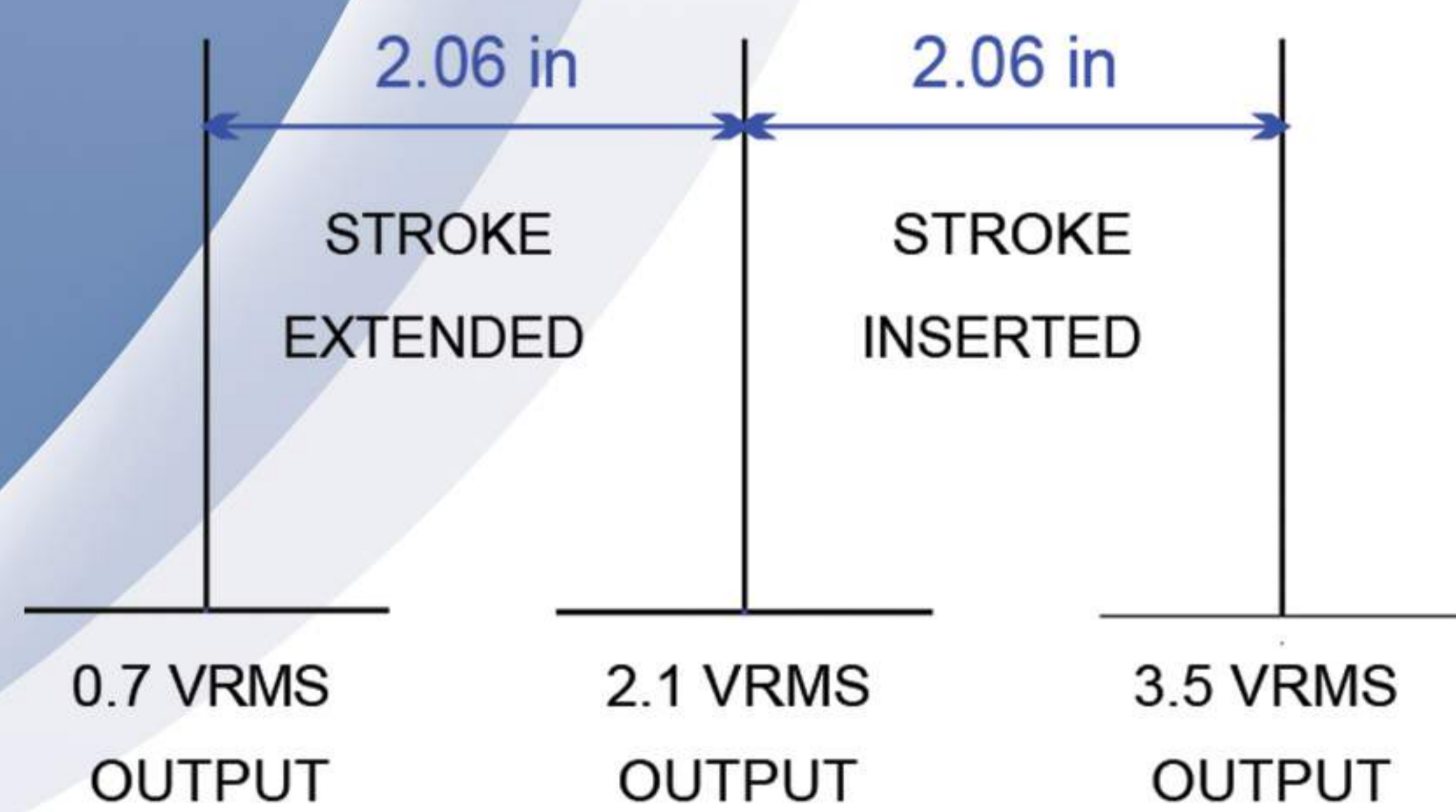
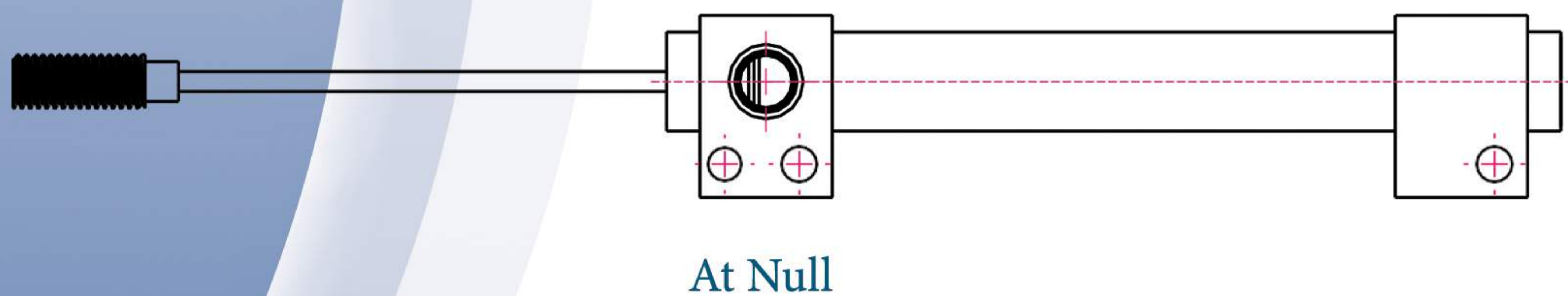
Type: GM 7678E

GE P/N: 311A5178PT21J
Our P/N: PD-LVDT-60404



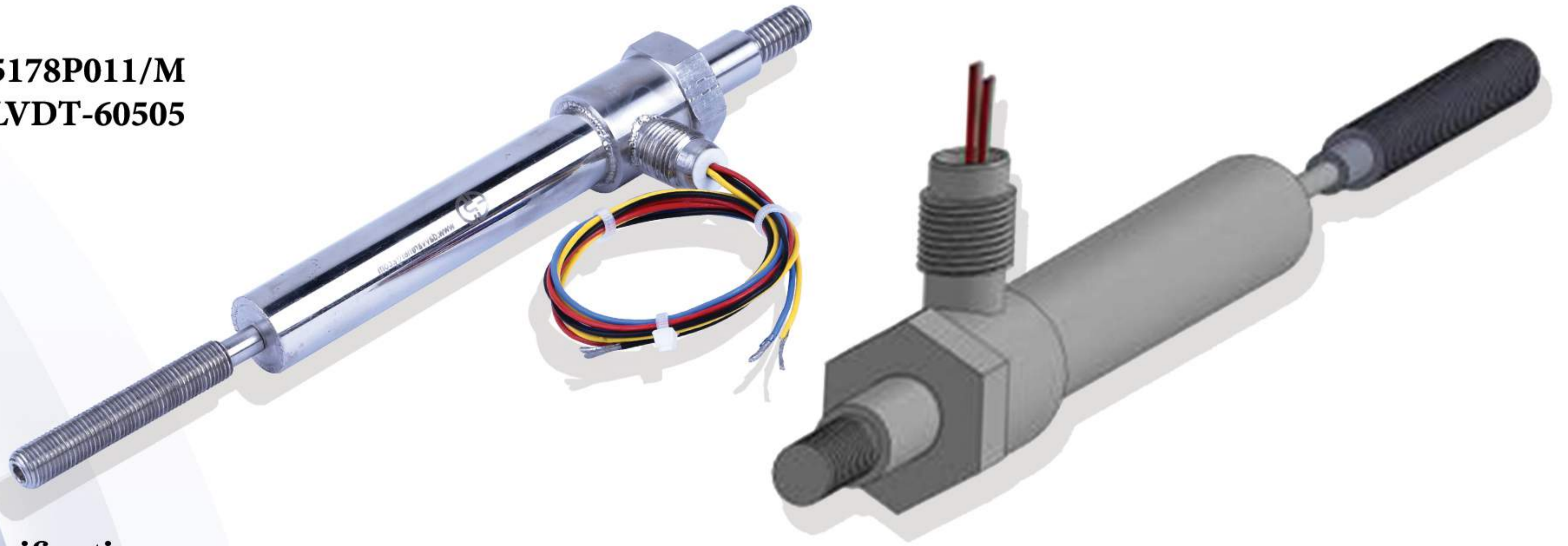
Electrical Specification

Stroke Range	2.06 inch
Input Voltage	7.0 Vrms (nominal)
Input Frequency	2.5 to 3.0 kHz
Linearity Error	$\leq \pm 0.25\%$
Repeatability Error	$< \pm 0.01\%$
Operating Temperature	-65°F to +220°F (-55°C to +105°C)
Thermal Coefficient of Sensitivity	-0.01% / °F (nominal) (-0.02%/°C nominal)



Type: 690-110298

GE P/N: 311A5178P011/M
Our P/N: PD-LVDT-60505

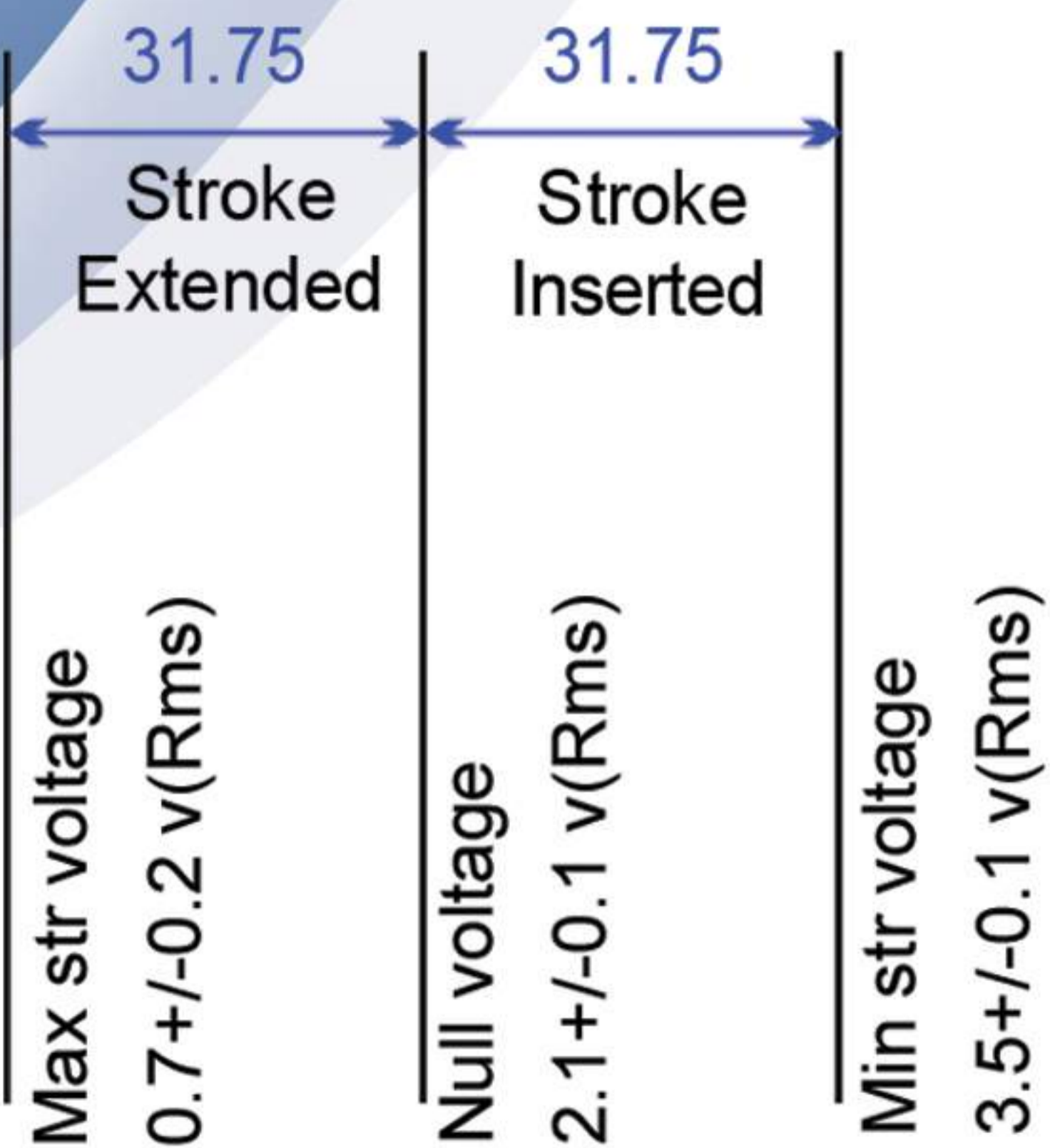


Electrical Specification

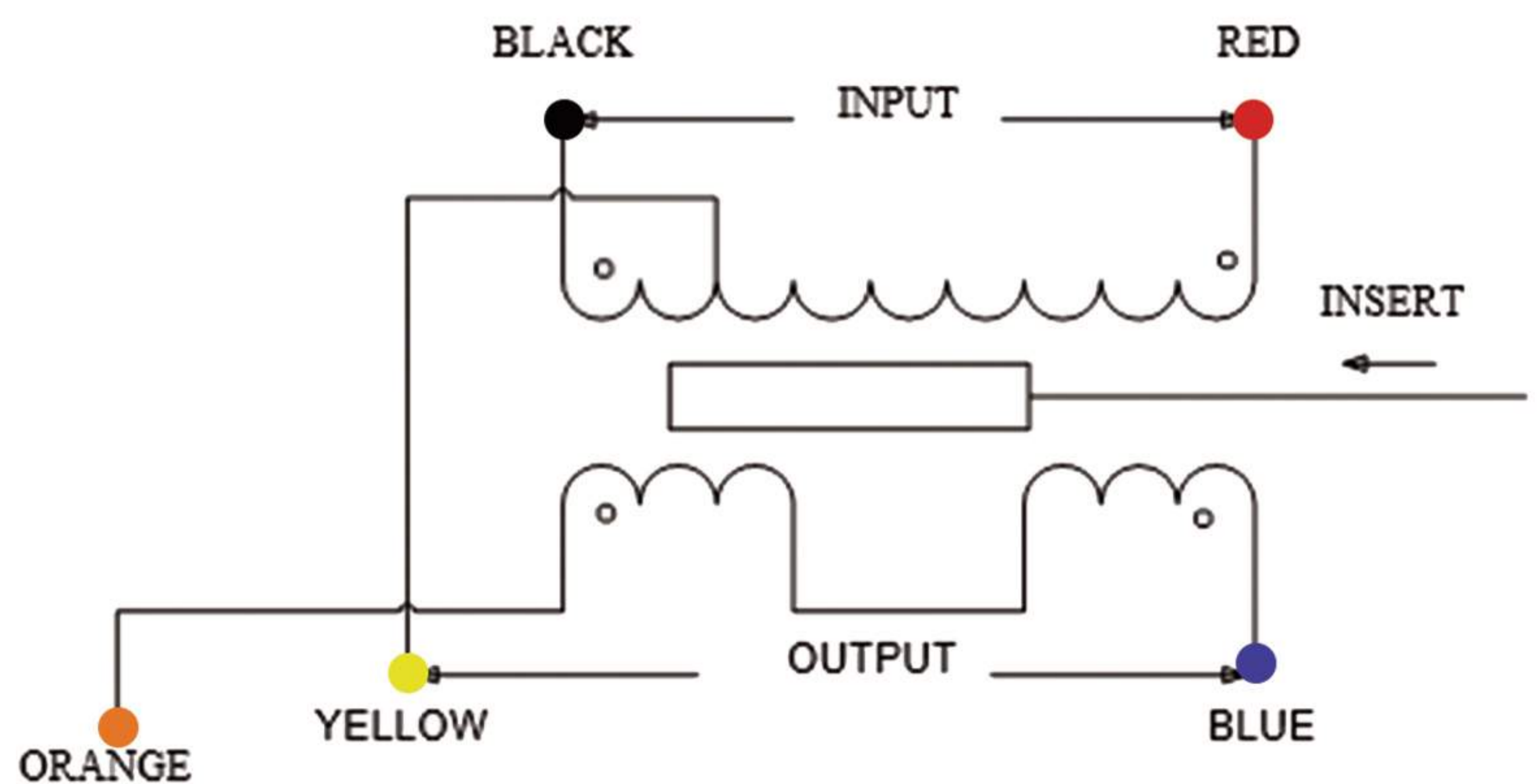
Stroke Range	31.75 mm
Input Voltage	7.0 Vrms (nominal)
Input Frequency	2.5 to 3.0 kHz
Linearity Error	$\leq \pm 0.25\%$
Repeatability Error	$< \pm 0.01\%$
Operating Temperature	-65°F to +220°F (-55°C to +105°C)
Thermal Coefficient of Sensitivity	-0.01% / °F (nominal) (-0.02%/°C nominal)



At Null



Null Position



Wiring Diagram

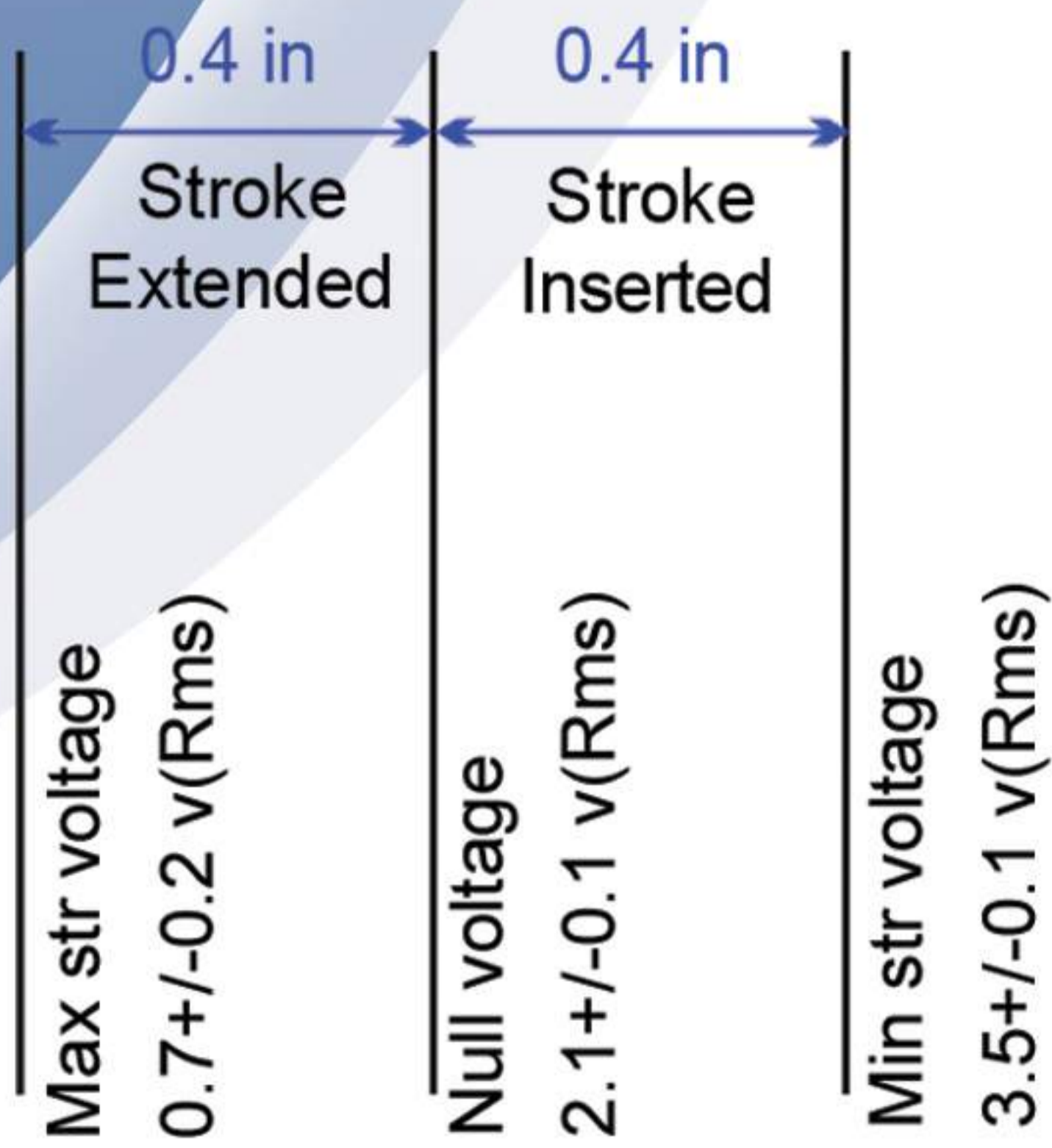
Type: GM 6403B

P/N: RTO 74273
Our P/N: PD-LVDT-650101

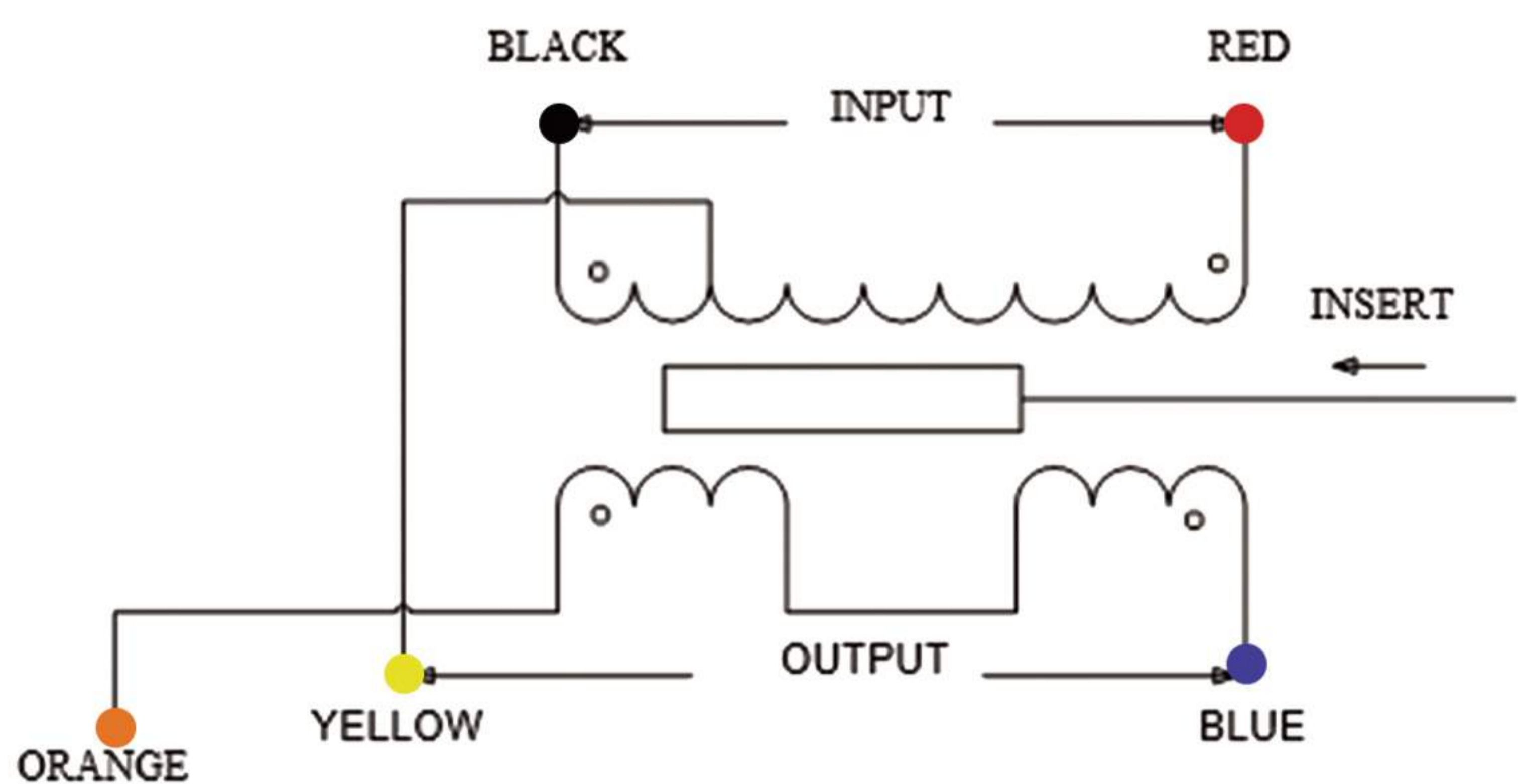


Electrical Specification

Stroke Range	0.4 inch
Input Voltage	7.0 Vrms (nominal)
Input Frequency	2.5 to 3.0 kHz
Linearity Error	$\leq \pm 0.25\%$
Repeatability Error	$< \pm 0.01\%$
Operating Temperature	-65°F to +220°F (-55°C to +105°C)
Thermal Coefficient of Sensitivity	-0.01% / °F (nominal) (-0.02%/°C nominal)



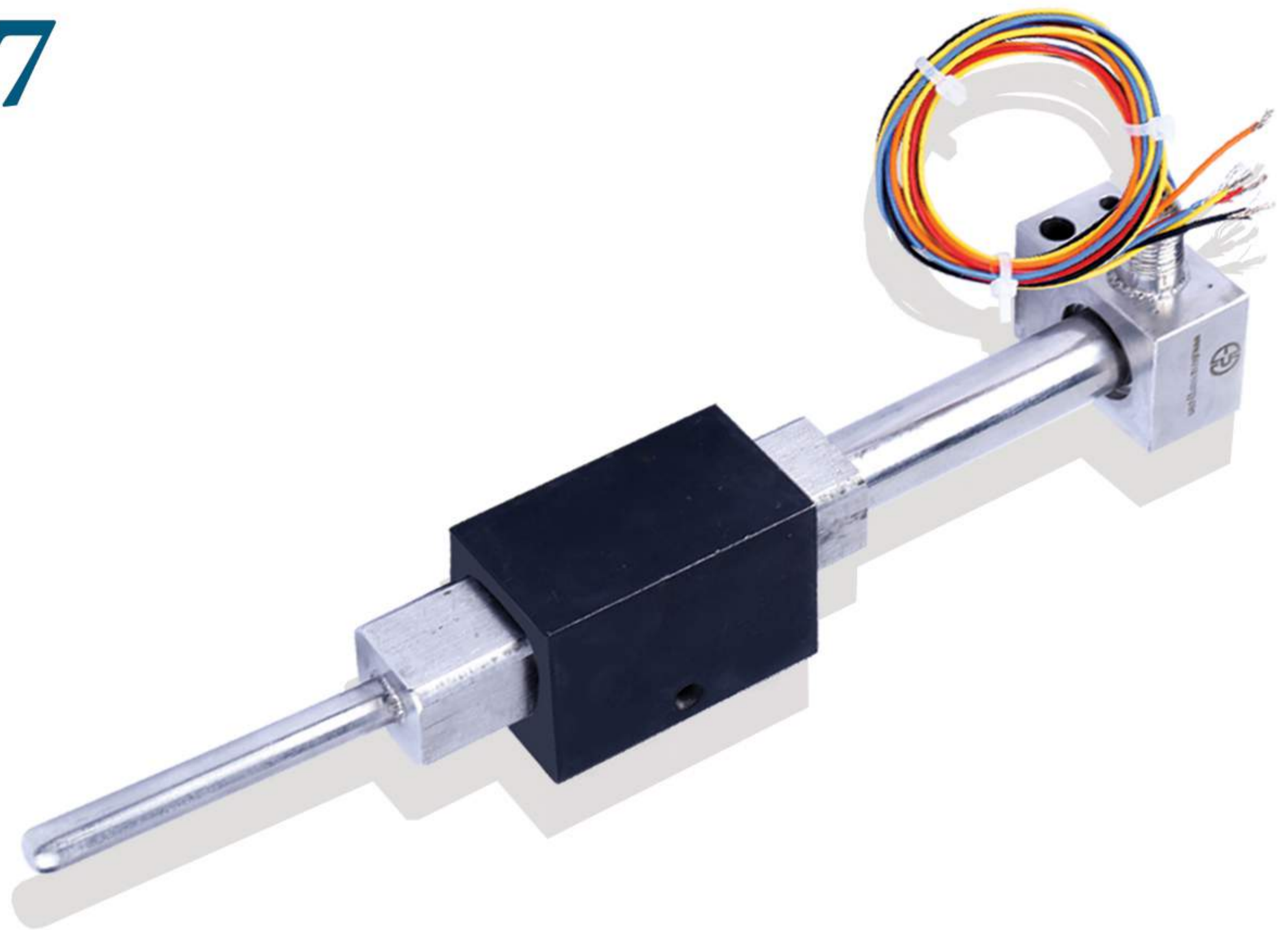
Null Position



Wiring Diagram

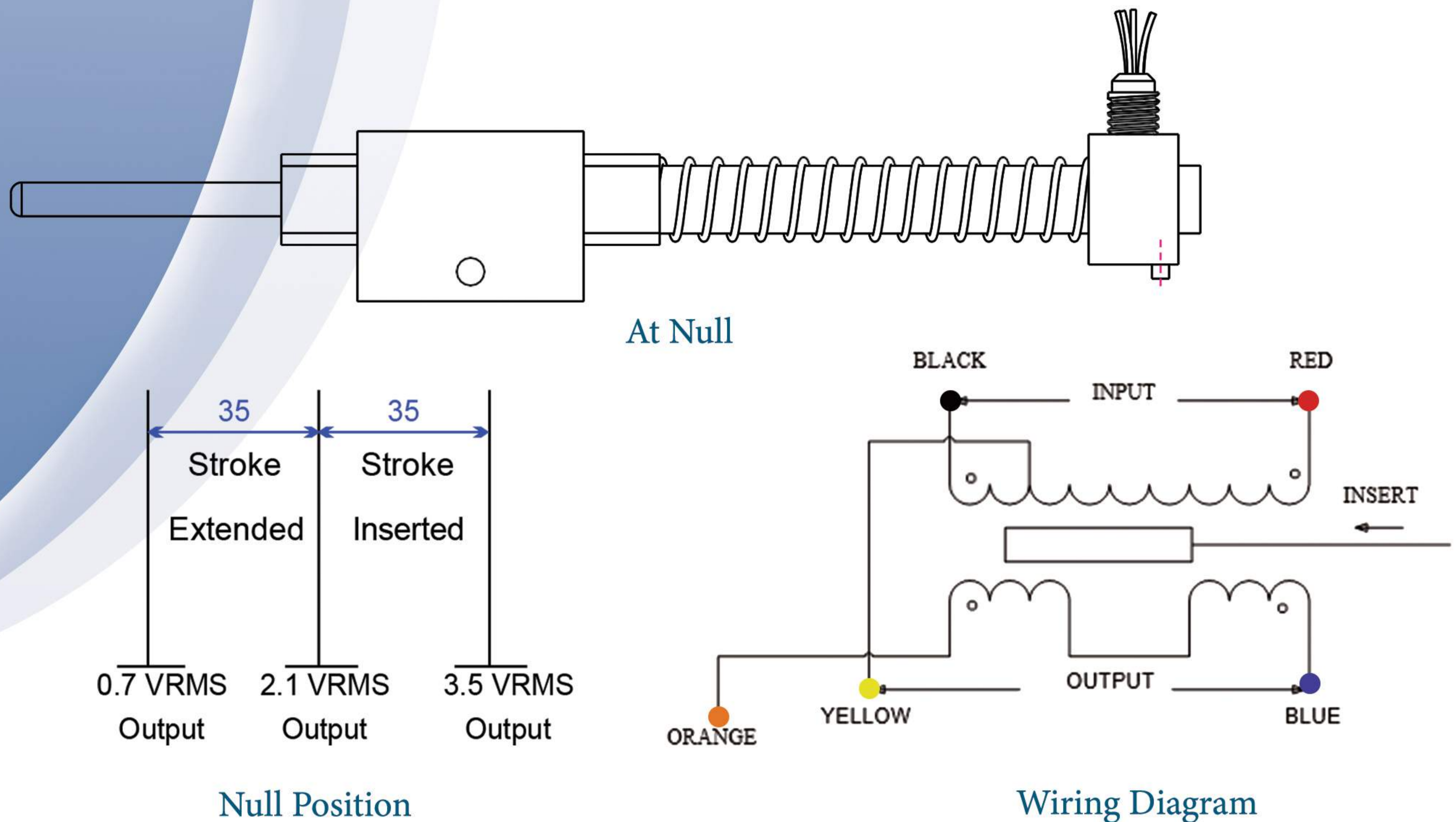
Type: GM 5637

P/N: RTO74259
Our P/N: PD-LVDT-50202



Electrical Specification

Stroke Range	35 mm
Input Voltage	7.0 Vrms (nominal)
Input Frequency	2.5 to 3.0 kHz
Linearity Error	$\leq \pm 0.25\%$ of FRO
Repeatability Error	$< \pm 0.01\%$ FRO
Operating Temperature	-65°F to +220°F (-55°C to +105°C)
Thermal Coefficient of Sensitivity	-0.01% / °F (nominal) (-0.02%/°C nominal)





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