

DAE

Installation Manual

Features

DAE sensors have an integral conditioning electronics. Supplied at +24 VDC, they deliver a position-proportional 0...10 VDC output signal. A common return line allows a 3-wire interface.

Housing

DAE sensor case is made of stainless steel. The integral electronics is potted for high robustness. The G-version has ball-eyes on both ends. Non-contact position detection through axial displacement of the linear-bearing-guided core.

Electrical system

Position sensing is based on the LVDT technique. A moving core rod changes induction in a primary / secondary configuration, generating a position-proportional signal. The integral electronics converts the signal into a 0 ... 10 VDC output (0 V = core fully inserted, 10 V = core fully retracted). The output requires a load of > 10 kOhm. The sensor requires a stabilized and filtered +22 ... +26 VDC supply voltage with reverse-polarity protection. Avoid supply overvoltage and applying a voltage to the output.

The sensor is designed for minimal non-linearity and low temperature coefficient.

Scope of delivery

The sensor is supplied ready-to-use with a mating connector.

Safety

Take all safety measures to avoid damage to personnel or equipment, especially in case of unexpected functional results.

Installation and operation requires trained personnel.

Check the installed sensor for potential collision with machine parts.

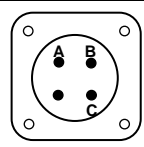
Carefully study this manual carefully.

Installation

Connect the sensor according to the table on the right using a shielded cable. Connect shielding to control electronics, not to the sensor.

The sensor is factory-adjusted for optimal linearity over nominal stroke (at nominal +24 VDC supply voltage and +20 ... +25°C). Without re-adjustment, install core according to dimension A given in the sensor test record (if available, otherwise see DAE data sheet).

Conduct adjustment / measurements with electronics upon warm-up.

	Connection
A	Supply +22...26 VDC
B	Common (0 VDC)
C	Signal output 0...10 VDC

Adjustment

Remove connector for adjustment.

Remove core rod (or place core at dimension A) and trim zero-poti "O" for 5 VDC output. Insert (re-position) core back to obtain the same output signal. Small deviations can be re-adjusted on zero-poti.

Retract / insert core at full stroke. Trim gain-poti "E" for required output span (0 V = core fully inserted, 10 V = core fully retracted).

Precise values are obtained for an ideal sensor (without any non-linearity). Take account of actual sensor linearity profile for optimal electronics zero / gain settings, under consideration of application specific needs.

