

VALVE POSITION TRANSMITTER



- Position indication from valves
- Replaces position potentiometers
- Standard 0/4...20 mA output
- Automatic calibration
- No adjustment required
- 24 VDC supply



Applications:

Angle measurement on rotating units, e.g. position indication from valves. ● The limit switches on the valve carry out the automatic calibration. ● Each time the valve reaches one of the limit switches, the 0% and 100% input on the transmitter is activated and the output is calibrated. ● The valve position transmitter replaces potentiometers in general where access or operational conditions impede adjustment of measurement range.

Technical characteristics:

Input:

Input shaft (Ø 6.342 mm) is connected to the unit being measured. The resolution of the transmitter is max. 250 revolutions with 256 pulses per revolution. 2 galvanically isolated inputs for calibration of zero point and span:

Low-input voltage 12...48 VAC/DC with input resistance 15 kΩ.

High-input voltage 110...230 VAC/DC with input resistance 200 kΩ.

The transmitter detects whether a shift on the 0% and 100% calibration input is a make or a break function.

The valve position transmitter is available with an external encoder for external mounting. However, special mounting is required for fulfilling the EMC standards.

By supply drop-out the transmitter remembers the valve position. As the encoder has a ball bearing, a gear can be mounted.

Output:

0/4...20 mA with max. load 600 Ω (12 VDC).

By means of an internal jumper it is possible to adjust the analogue output.

Installation and programming:

Please see the reverse.

Electrical specifications:

Specifications range:

(@ -20°C to +60°C)

Common specifications:

Supply voltage.....	24 VDC ±20%
Internal consumption.....	1.5 W
Isolation, test / operation.....	2.3 kVAC / 250 VAC
Response time (0...90%, 100...10%) ..	< 120 ms
Signal dynamics, output.....	11 bit
Calibration temperature.....	20...28°C
Temperature coefficient.....	< ±0.01% of span/°C
Linearity error	< 0.2% of span
EMC immunity influence	< ±0.5%
Humidity	< 95% RH (non-cond.)
Dimensions (HxWxD)	
(excl. encoder shaft)	70 x 61 x 33 mm
Tightness	IP50
Weight	150 g

Electrical specifications INPUT:

Angle input:

Max. resolution.....	250 revolutions
Resolution / rotation	256 pulses
Max. velocity	2.5 rev. per s (640 Hz)
Min. life time	200 mill. revolutions

Calibration inputs:

Low input voltage	12...48 VAC/DC
Input resistance	15 kΩ
High input voltage	110...230 VAC/DC
Input resistance	200 kΩ

Electrical specifications OUTPUT:

Signal range	0...20 mA
Min. signal range	16 mA
Max. offset.....	20% of selected max. value
Load (max.)	20 mA / 600 Ω / 12 VDC
Current limit.....	26 mA ±2 mA
Load stability	< ±0.01% of span / 100 Ω

Observed authority requirements: Standard:

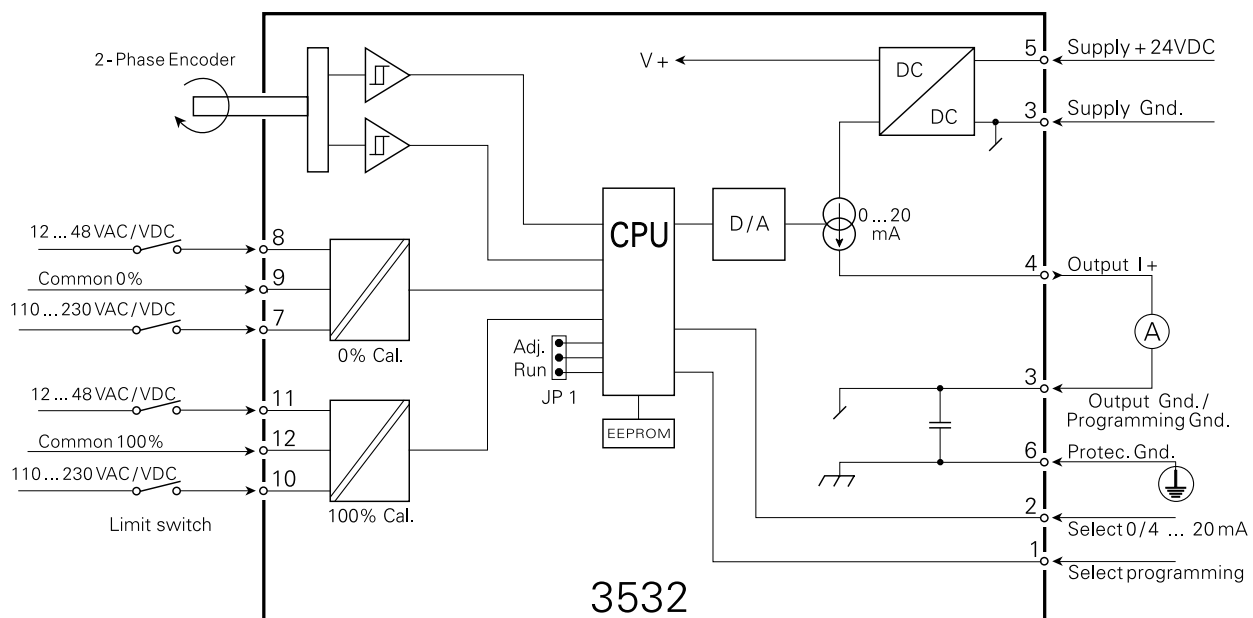
EMC 89/336/EEC, Emission	EN 50 081-1, EN 50 081-2
Immunity	EN 50 082-2, EN 50 082-1
Emission and immunity	EN 61 326
LVD 73/23/EEC.....	EN 61 010-1

Of span = Of the presently selected range

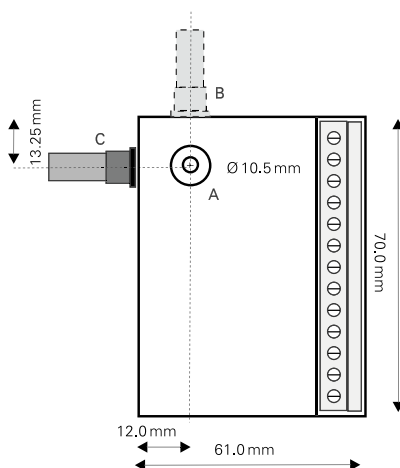
Year	Number of people (millions)
1970	80
1975	100
1980	95
1985	110
1990	125
1995	135
2000	140
2005	135
2010	145

Year	Total Workforce (Millions)	Private Sector (Millions)	Public Sector (Millions)
1970	90	75	15
1975	100	85	15
1980	110	95	15
1985	120	105	15
1990	130	115	15
1995	140	125	15
2000	145	130	15
2005	148	132	16
2010	150	135	15

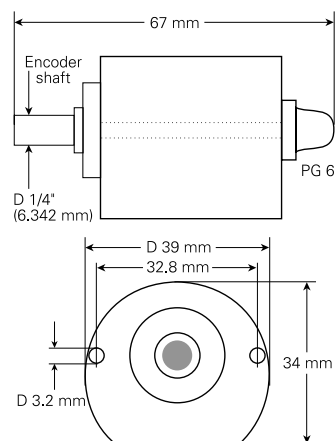
Block diagram:



Mechanical specifications:



External encoder:



Application:

