

# Standard Cylinder Series

SZ100, SZ160, SZ250

with position measuring system and valve plate connection



## General information on Transsonar displacement encoders

The Transsonar position encoder allows touch-free sensing, thus, wear-free sensing of the piston position of the hydraulic cylinder. Position sensing is absolute, no reference point needs to be used. The encoder is inverse-polarity protected and are protected against inductive voltage peaks.

Position encoders with analog or digital interfaces can be installed in the cylinder. If required we deliver cylinders prepared for installation of a position measuring system. When ordering please indicate what type of system will be installed. Upon dispatch the position encoder is installed. For installation of the position measuring system the cylinder needs to be fully retracted to avoid damage of the measuring stick.

## Specifications:

Series	BTL7-A,G,E,C	BTL7-P	BTL7-S	BTL5-T
Interface	analog	digital	SSI	PROFIBUS-DP
Stroke	25...7620mm	25...7500mm	25...7620mm	25...4000mm
Output signal	<b>A</b> 0...10 and 10...0V <b>G</b> -10...10 and 10...-10V <b>E</b> 4...20 or 20...4mA <b>C</b> 0...20 or 20...0mA	Impulse Start / Stop	synchronous- serial	PROFIBUS-DP
Operating voltage	24V oder 10-30V	10...30V	10...30V	20...28V
Current consumption 24V DC	≤ 15 mA	≤ 120mA	≤ 120mA	≤ 100mA
System resolution	≤ 0,33 mV / ≤ 0,66 μA	Depending on signal processing	1,2,5,10,20,40 or 100μm	Pos. step 5μm V step 0,1mm/S
Hysteresis	≤ 5 μm	≤ ±7 μm	≤ 7 μm	≤ 1 Digit
Repeat accuracy	System resolution min. 2 μm	typ. ±μm	≤ 11 μm	± 1 Digit
Operating temperature	-40°C...+85°C			
Degree of protection	IP 68 with cable output IP 67 with connector (when plugged in)			IP 67
Shock loading	150 g / 6 ms per IEC 60068-2-27			
Vibration	20 g, 10...2000 Hz per IEC 60068-2-6			
Pressure resistance	max. 600 bar			
Housing material	Anodized aluminum			
Flange / tube material	Stainless steel 1.3952 / 1.4571			
Housing dimensions Hex.wrench size 46mm	71mm long, plus cable or connector	57mm long plus cable or connector	57mm long plus cable or connector	incl. connector 182mm long
Connection with configuration: 111-2, 117, 118, 218, 119, 219, 125, 225	Permanently installed cable (5 m length by default)			With plug connector (connector to be ordered separately)
Connection all other configurations	With plug connector (connector to be ordered separately)			

Upon request additional interfaces are available such as CANopen (BTL5-T), Ethernet (BTL6-V) or with 4 programmable switching points (BTL5-F). Optional, some interfaces are available with a configurable double output function (position and speed) as well as parameterization and adjustment of start and end points via USB interface.

Please request separate catalogues for detailed information on the respective Transsonar position encoders, the required connectors and the evaluation units.