

SB SERIES LVDT AC DISPLACEMENT TRANSDUCER



- SHORT BODY TO STROKE RATIO
- INDUSTRIAL FORMAT
- AC INPUT, AC OUTPUT
- PTFE BUSHES
- PLUG, CABLE OR FLEXIBLE CONDUIT OUTLETS
- 150°C OPERATION
180°C OPERATION (CABLE OUTLETS)
- SPRING LOADED OR ROD END BEARINGS
- WEATHERPROOF

The SB series LVDT displacement transducer features a large displacement range in a comparatively short and rugged stainless steel body. The robust construction makes the SB series ideal for applications where a short bodied, accurate, durable position feedback transducer is required. Electrical connections are made via a 2m length of integral cable or 4 pin connector.

The rugged stainless steel body consists of a magnetically shielded linear variable differential transformer. These are designed for operation from low voltage AC supplies at frequencies between 50Hz and 5KHz.

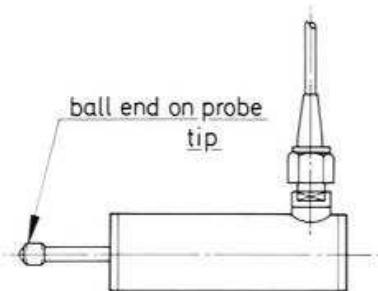
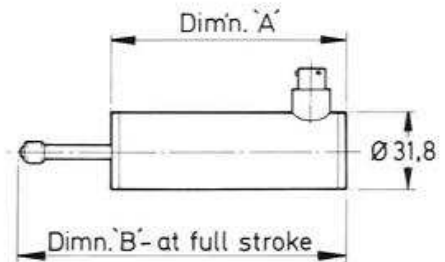
The transducer housing consists of a non-magnetic stainless steel body of 31.75mm diameter and in lengths according to the stroke length. An inner housing of magnetically permeable material shields the transformer from the effects of external fields. The 6.35mm diameter core extension shaft is guided by means of a PTFE bearing bush. On spring loaded versions the force required for full compression of the extension shaft varies from approximately 280 grms for the 25mm range to approximately 790 grms for the 150mm range.

Various configurations are available to accommodate most industrial applications. The SB series can be supplied with a spring loaded core or captive core with rod end bearings.

SPRING LOADED VERSIONS

VERSION 1 (SBXXX/1)

Spring loaded, captive core and extension rod. Ball end on extension rod. Side exit with 4 pin connector. Weatherproof (IP55).

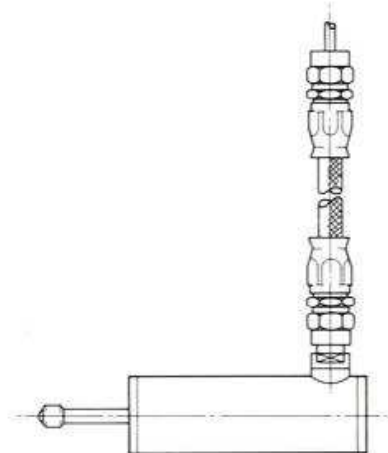


VERSION 2 (SBXXX/2)

Spring loaded, captive core and extension rod. Ball end on extension rod. Side exit via 4 core PTFE cable, 2m in length. Other lengths optional. Weatherproof (IP55).

VERSION 3 (SBXXX/3)

Spring loaded, captive core and extension rod. Ball end on extension rod. Side exit via 4 core PTFE cable in stainless steel flexible conduit, ending in ¼ BSP re-usable coupling, 2m in length. Other lengths optional. Weatherproof (IP55).

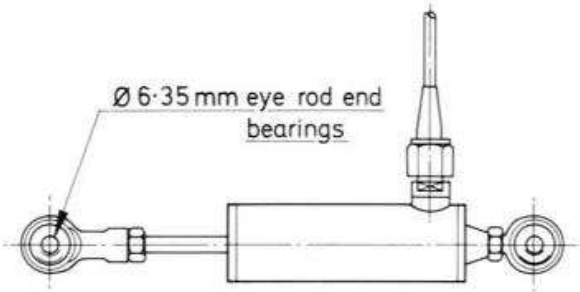
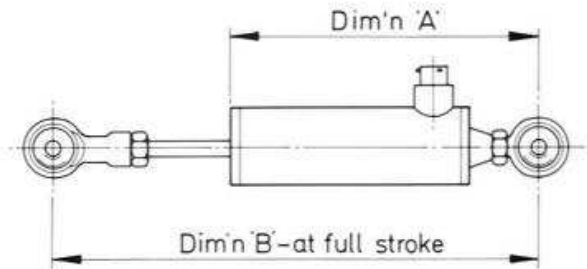


TRANSDUCER TYPE ± (SPRING LOADED VERSIONS)	SB25	SB50	SB75	SB100
TOTAL DISPLACEMENT RANGE (mm)	25	50	75	100
DIMENSION 'A' (mm)	84	126	168	212
DIMENSION 'B' (mm)	117	185	253	322
OVERTRAVEL AT EACH END AT LEAST 5% OF TOTAL RANGE				

NON SPRING LOADED VERSIONS

VERSION 4 (SBXXX/4)

Captive core and extension rod. Rod end bearings on body and extension rod. Side exit with 4 pin connector. Weatherproof (IP55).

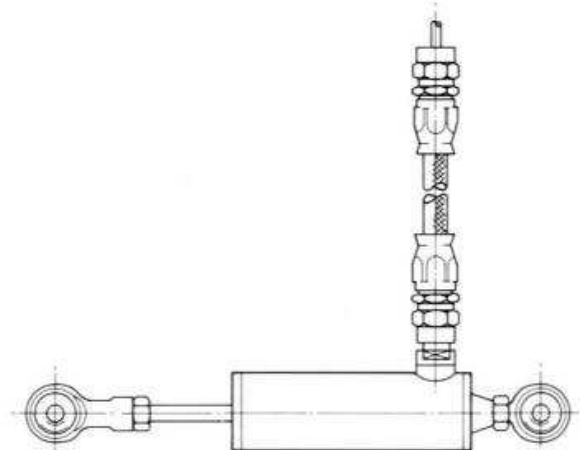


VERSION 5 (SBXXX/5)

Captive core and extension rod. Rod end bearings on body and extension rod. Side exit via 4 core PTFE cable, 2m in length, other lengths optional. Weatherproof (IP55).

VERSION 6 (SBXXX/6)

Captive core and extension rod. Rod end bearings on body and extension rod. Side exit via 4 core PTFE cable in stainless steel braided flexible conduit, ending in ¼ BSP re-usable coupling, 2m in length. Other lengths optional. Weatherproof (IP55).

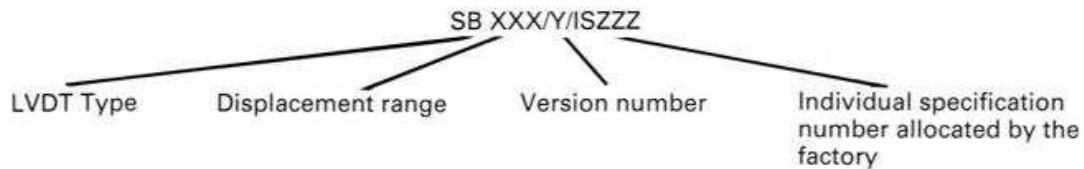


TRANSDUCER TYPE-(NON SPRING LOADED VERSIONS)	SB 25	SB 50	SB 75	SB 100	SB 150
TOTAL DISPLACEMENT RANGE (mm)	25	50	75	100	150
DIMENSION 'A' (mm)	105	148	190	234	277
DIMENSION 'B' (mm)	174	242	308	377	470
OVERTRAVEL AT EACH END AT LEAST 5% OF TOTAL RANGE					

SPECIFICATION

Input voltage	From less than 1V to 10V RMS
Input frequency	50Hz to 5KHz
Max. recommended primary current	20mA
Working temperature range	- 40°C to + 150°C (180°C integral cable)
Survival temperature range	- 50°C to + 150°C (180°C integral cable)
Linearity	Better than 0.5% of reading
Body material	EN 58 (Non-magnetic stainless steel)
Core material	EN 56 (Magnetic stainless steel)
Calibration I/P signal	5V RMS @ 3KHz

ORDERING INFORMATION



TRANSDUCER TYPE >	SB25	SB50	SB75	SB100	SB150
TOTAL DISPLACEMENT RANGE (mm)	25	50	75	100	150
OUTPUT AT FULL RANGE (mv/v at 3 KHz)	350	460	430	720	780
NULL VOLTAGE (% F.R.O.)	0.6	0.4	1.0	1.2	1.6
PRIMARY IMPEDANCE (Ω at 3KHz)	540	200	490	550	550
PRIMARY RESISTANCE (Ω)	120	120	130	180	260
SECONDARY IMPEDANCE (Ω)	240	200	210	350	560
SECONDARY RESISTANCE TOTAL (Ω)	160	190	205	340	470
ZERO PHASE FREQUENCY (KHz)	2.4	3.8	3.0	3.75	4.0
WEIGHT EXC. CABLE (GRMS.)	400	510	600	650	750

We reserve the right to alter the specification without notification.

SENSONICS LIMITED



Sensonics Ltd
 Northbridge Road
 Berkhamsted
 Herts, HP4 1EF
 United Kingdom
 Tel: +44 (0)1442 876833
 Fax: +44 (0)1442 876477
www.sensonics.co.uk