GUEMISA
Sensores e instrumentación

SCHREIBER
MESSTECHNIK

BX70 / BX150 / BX240 Position Transmitter

Models SM41 / SM43

The BX70, BX150 and BX240 are scaleable inductive displacement sensors manufactured by Schreiber Messtechnik and designed for position feedback in control valves, steam turbines and other industrial applications.

These sensors are widely used as OEM replacements for Bopp & Reuther and IMI Critical Engineering (CCI) valves, where they are known under the references BX70 (2-08-04011-032), BX150 (2-08-04020-032) and BX240 (2-08-04018-032).

The sensors feature integrated electronics and are available with standard industrial outputs such as 4-20 mA, 0-20 mA, 0-5 V or 0-10 V, providing reliable and accurate position feedback in demanding industrial environments.

The measuring stroke can be configured according to the application requirements, allowing flexible adaptation to different valve travels and industrial applications.

OEM Reference	Schreiber Model	Measuring Stroke
BX70	SM413.70.1.X33	70 mm
BX150	SM413.150.1.X33	150 mm
BX240	SM433.240.1.X33	240 mm

Typical applications: HP/LP bypass valves, turbine control valves (TCV), main steam valves (MSV), feedwater control valves and steam conditioning systems.

Standard measuring stroke:

Type	Measuring stroke mm (Default setting)	Central position L1 mm	Housing length L2 mm	Scaleable measuring stroke	
				Max. ca. mm	Min. mm ≤
SM41x.20	20	40	110	30	5
SM41x.40	40	50	140	50	8
SM41x.70	70	65	200	80	13
SM41x.100	100	80	250	110	18
SM41x.150	150	105	350	160	26
SM41x.200	200	120	500	210	34
SM43x.80	80	70	140	90	15
SM43x.170	170	115	250	180	29
SM43x.240	240	150	350	250	40
SM43x.360	360	210	500	370	60

Standard versions:

Type	Output	Supply voltage U_B (Reverse battery protected)	Signal ** (scaleable decreasing)	Central position
SM4x1	0 .. 20 mA *	10 .. 32 V	increasing	10 mA
SM4x3	4 .. 20 mA *	10 .. 32 V	increasing	12 mA
SM4x7	0..10 V	15 .. 32 V	increasing	5 V
SM4x9	0..5 V	10 .. 32 V	increasing	2,5 V

* working resistance $R_L \leq (U_B - 7\ V) / 0{,}02\ A$

** increasing signal by moving the plunger in the direction towards the plug (default setting)

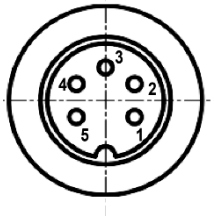
Technical data:

Accuracy (at 20°C)	0,25% optional 0,1% (referring to measuring stroke of the default setting)
Resolution	16 Bit
Dependence on U_B	$\Delta I_A / \Delta U_B$ < 0,02% / V $\Delta U_A / \Delta U_B$ < 0,02% / V

Further data according to data sheet SM40 (for SM41) and SM42 (for SM43)

Electrical connections on plug:

(View to the plug at transducer)

5-pol. connector Binder Bl723	**PUR-cable** (Option .KPx) **5 x 0,34² screened** (x = cable-length in metres)
1: +U_B 2: -U_B 3: I_A / U_A (Output) 4: ANF 5: END 	Brown +U_B White -U_B Green I_A / U_A Yellow ANF Grey END

Order code

SM413.70.1.X33

Version (X=OEM)
Accuracy 1: 0.25%, 0: 0.1%
Measuring stroke (default setting)
Current or voltage output
Series

Order codes for customer specified versions will be named at plant.

e.g. SM413.70.1.X33

Displacement sensor Serie 41, output 4-20 mA , 70mm measuring stroke , accuracy 0,25%, Custom.

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