

SYS-MMF

Specification

Multivariable transmitter

SYS-MMF



measuring principle

SYS-MMF is a multivariable mass flow transducer, which has a measuring cell for differential pressure and a measuring cell for absolute pressure as well as a PT100 3-wire input. The three measured values are calculated, displayed and output in the transmitter for a mass flow (steam/liquids/gases) or a standard volume flow (gases).

SYS-MMF can be used with all common primary elements such as orifices, venturis, nozzles, pitot tubes, etc.

Technical specifications

	description
measuring principle	Flow transmitter based on the differential pressure principle
Measured sizes	dp, pabs (via p1 connection), T via external PT100 3-wire
Calculated Sizes	Mass flow, standard volume or volume flow and totalizer from it
media	Gases, steam, liquids
Combinable primary elements	All standardized primary elements in acc. with ISO 5167 such as orifices, venturis, nozzles. pitot tubes. General primary elements with quadratic characteristic.

measuring cells	description
Type BB*	dp 0..10mbar, pabs 0..20bara, PN40, wetted material 316L, silicone oil filling
Type BD*	dp 0..60mbar, pabs 0..20bar, PN40, wetted material 316L, silicone oil filling
Type DE*	dp 0..400mbar, pabs 0..100bar, PN160, wetted material 316L, silicone oil filling
Type EDN	dp 0..2500mbar, pabs 0..250bar, PN250, wetted material 316L, silicone oil filling
Type BBG	dp 0..10mbar, pabs 0.. 20bar, PN40, gold-coated measuring cell, silicone oil filling
Type BDG	dp 0..60mbar, pabs 0.. 20bar, PN40, gold-coated measuring cell, silicone oil filling
Type DEG	dp 0..400mbar, pabs 0.. 100bar, PN160, gold-coated measuring cell, silicone oil filling
Type EDNG	dp 0..2500mbar, pabs 0.. 250bar, PN250, gold-coated measuring cell, silicone oil filling

Technical specifications	description
Pneumatic connection	Flange connection according to DIN EN 61518 with ¼" NPT internal thread Mounting screws 7/16 UNF
Electrical connection	Type HT: 2-wire 4..20mA, 11-30VDC, PT100-3-wire (see figure 1) Type RS: 4..20mA output, Modbus RT, PT100-3-wire, 11-20VDC, approx. 45mA (see figure 2)
Dimensions (approx)	185x90x137mm (without cable glands and locking bolts), 2.7 kg

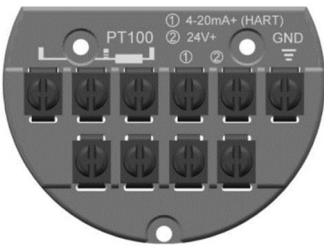


Figure 1: Connection type HT

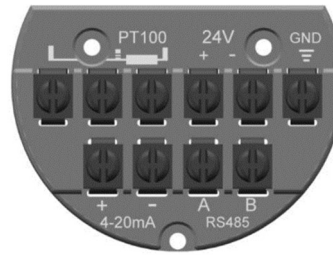
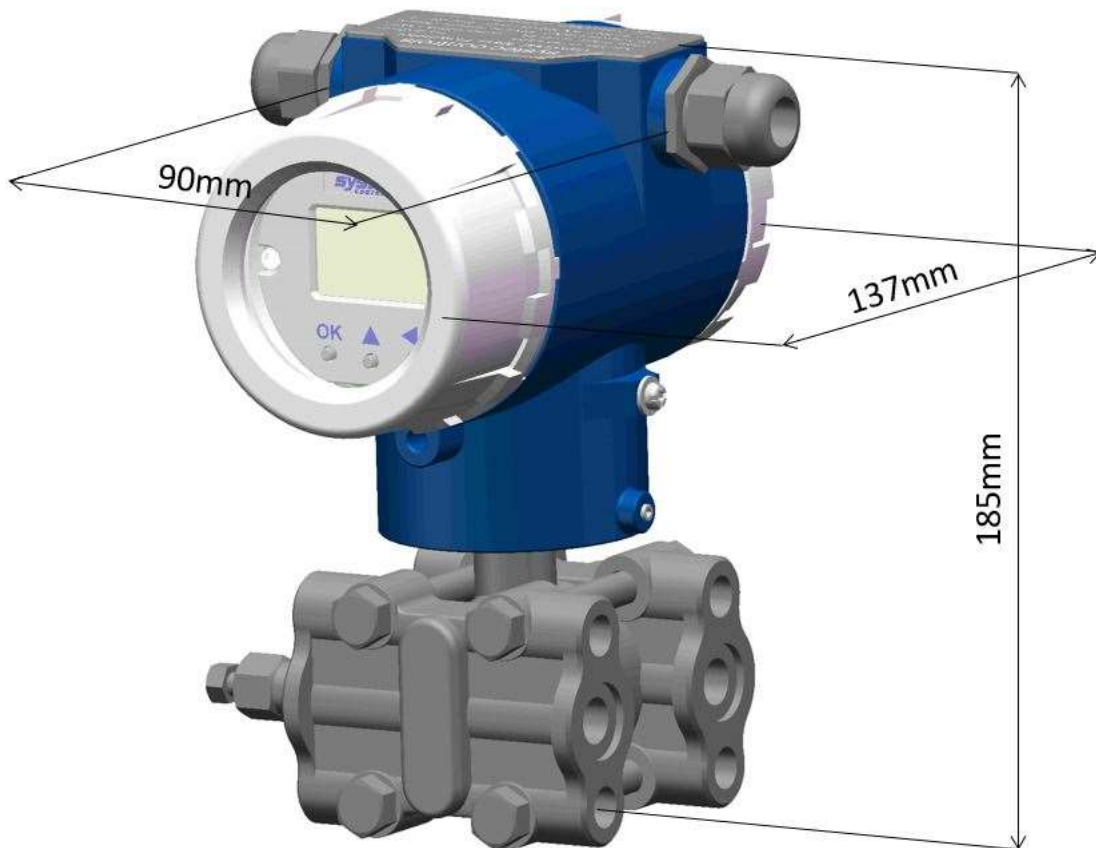


Figure 2: Connection type RS



accuracies	description
dp measuring cell	Type BB/BBG: 0.2% vM + 0.03mbar Type BD/BDG: 0.15% vM + 0.05mbar Type DE/DEG: 0.1% vM + 0.2 mbar Type EDN/EDNG: 0.1% of mass: + 0.5 mbar
pabs measuring cell*	0.2% vM + 0.1% FS
PT100 measurement	+/- 0.5K plus class of the PT100
Mass Flow Calculation	Standard: Typically 1% FS plus class of the primary element

	Precision converter with calibration: Typically 0.5% FS plus class of the primary element
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Order Codes

SYS_MMF Multivariable Transmitter					
	Range	Language	Front	Options	Notes
SYS-MMF	-	-	-	-	Multivariable Mass Flow Transmitter, dp, pabs and T
SYS-MTF					Multivariable Mass Flow Transmitter, dp and T (no pabs)
	BB				dp span 10mbar, pabs span 20bar, PT100 3ltr, PN160
	BD				dp span 60mbar, pabs span 20bar, PT100 3ltr, PN160
	DE				dp span 400mbar, pabs span 100bar, PT100 3ltr, PN160
	EDN				dp span 2500mbar, pabs span 250bar, PT100 3ltr, PN250
	BBG				dp span 10mbar, pabs span 20bar, PT100 3ltr, goldplated
	BDG				dp span 60mbar, pabs span 20bar, PT100 3ltr, goldplated
	DEG				dp span 400mbar, pabs span 100bar, PT100 3ltr, goldplated
	EDNG				dp span 2500mbar, pabs span 250bar, PT100 3ltr, goldplated
		02			Deutsch / English / Chinesisch
			0		system Front
				HT	4..20mA / Hart
				RS	Modbus (additional)
				10P	10 point calibration
					Standard types, 1-5 Weeks
					Other types 4-8 Weeks

Approvals:

CE
(EexiA in preparation)