

FM150

Transducer

Datasheet



Benefits

- No energy loss, thanks to a continuous measuring tube without flow restrictions.
- flexible process connection, liner and tube diameter DN25 ... DN3000
- reliable and stable flow measurement over time

PN10 up to PN100

Measuring Range: - 20°C up to 110°C (-4°F up to 230°F) compact version,
up to 150°C (302°F) remote version

Accuracy: +/-0.5% depends from selected sensor

Typical Applications

- Water / Waste water
- Filtration
- Cleaning
- HVAC
- Data center
- Pump station

Technical Features

General Features	
Nominal Diameters	DN 25 (1") ÷ DN 2000 (80")
Minimal Fluid Conductivity	5 µS/cm
Humidity	0÷100% (IP 67)
Precision	Consult data sheet transmitter
CE Certificaton	Yes
PED Certification	Yes
Standard Configurations	
Body Material	Painted carbon steel
Pressure Rating	16 bar (232 psi), 40 bar (580 psi) up to DN 50
Process Connection	Standard flanges EN1092-1, ASME
Version - Protection Class	Compact IP67 (IP68 on request)
Flange Material	Carbon steel
Coating Material	<ul style="list-style-type: none"> • Polypropylene - max. PN 16 (232 psi) • Ebonite • PTFE - max PN 40 (580 psi)
Gasket Material (ONLY for polypropylene coating)	FPM
Liquid Temperature	<ul style="list-style-type: none"> • Ebonite • 0°C ÷ 60°C (32° F ÷ 140° F) with PP coating • -5°C ÷ 80°C (23° F ÷ 176° F) with ebonite coating • -20°C ÷ 130°C (4° F ÷ 266° F) (100°C for PTFE liner compact version)
Vacuum Resistance	0.2 bar abs (2.9 psi abs) at 100°C (212°F), PP 60°C (140°F), Ebonite 80°C (176°F)
Electrode Material	<ul style="list-style-type: none"> • AISI 304 or 316 stainless steel (1.4404) • Hastelloy C276 • Platinum-Rhodium • Titanium • Tantalum
Flow Sensitivity Profile	U0D0 in accordance with ISO 4064 - OIMLR49 - MID
Optional Configurations (For more details, see 'How to Order' on last page)	
Body Material	AISI 304 or 316 stainless steel
Gasket Material (ONLY for polypropylene coating)	EPDM
Pressure Rating	Higher operating pressures are available upon request
Process Connections	Others on request
Flange Material	AISI 304-AISI316 stainless steel
Liquid Temperature	-20°C ÷ 180°C (4° F ÷ 356° F) with PTFE liner in separate version* * Contact the manufacturer for temperatures > 130 °C (366° F) * Sensors with operating temperatures greater than 110°C (230° F) are classified according to the PED directive (specific details in the table on the following page)
Coating Material	On request
Electrode Material	On request
Version - Protection Class	<ul style="list-style-type: none"> • Separate version (max 20m) – IP 68 • Separate version (max. 500 m), with preamplifier – IP 67 • Separate version (max. 500 m), with preamplifier – IP 68

How to Order

Code Sample	Code/Description	
	Nominal diameter / coating / liquid temperature / measuring range	
T100	P25	DN25 (1"), PP coating, max. liquid temp. 60 °C measuring range 0 ... 0.72/0 ... 18 m3/h
	T25	DN25 (1"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 0.72/0 ... 18 m3/h
	T25HT	DN25 (1"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 0.72/0 ... 18 m3/h
	P32	DN32 (1 1/4"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 0.72/0 ... 29 m3 / h
	T32	DN32 (1 1/4"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 1.16 / 0 ... 29 m3 / h
	T32HT	DN32 (1 1/4"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 1.16 / 0 ... 29 m3 / h
	P40	DN40 (1 1/2"), P.P. rev., max. liquid temp. 60 °C measuring range 0 ... 1.8 / 0 ... 45 m3 / h
	T40	DN40 (1 1/2"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 1.8 / 0 ... 45 m3 / h
	T40HT	DN40 (1 1/2"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 1.8 / 0 ... 45 m3 / h
	P50	DN50 (2"), PP coating, max. liquid temp. 60 °C measuring range 0 ... 2.88 / 0 ... 72 m3 / h
	T50	DN50 (2"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 2.88 / 0 ... 72 m3 / h
	T50HT	DN50 (2"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 2.88 / 0 ... 72 m3 / h
	P65	DN65 (2 1/2"), PP coating, max. liquid temp. 60 °C measuring range 0 ... 4.8 / 0 ... 120 m3 / h
	T65	DN65 (2 1/2"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 4.8 / 0 ... 120 m3 / h
	T65HT	DN65 (2 1/2"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 4.8 / 0 ... 120 m3 / h
	P80	DN80 (3"), PP coating, max. liquid temp. 60 °C measuring range 0 ... 7.2 / 0 ... 180 m3 / h
	T80	DN80 (3"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 7.2 / 0 ... 180 m3 / h
	T80HT	DN80 (3"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 7.2 / 0 ... 180 m3 / h
	P100	DN100 (4"), PP coating, max. liquid temp. 60 °C measuring range 0 ... 11.2 / 0 ... 280 m3 / h
	T100	DN100 (4"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 11.2 / 0 ... 280 m3 / h
	T100HT	DN100 (4"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 11.2 / 0 ... 280 m3 / h
	P125	DN125 (5"), PP coating, max. liquid temp. 60 °C measuring range 0 ... 18/0 ... 450 m3 / h
	T125	DN125 (5"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 18/0 ... 450 m3 / h
	T125HT	DN125 (5"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 18/0 ... 450 m3 / h
	P150	DN150 (6"), PP coating, max. liquid temp. 60 °C measuring range 0 ... 25.6 / 0 ... 640 m3 / h
	T150	DN150 (6"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 25.6 / 0 ... 640 m3 / h
	T150HT	DN150 (6"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 25.6 / 0 ... 640 m3 / h
	E200	DN200 (8"), ebonite coating, max. liquid temp. 80 °C measuring range 0 ... 45.2 / 0 ... 1130 m3 / h
	T200	DN200 (8"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 45.2 / 0 ... 1130 m3 / h
	T200HT	DN200 (8"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 45.2 / 0 ... 1130 m3 / h
E250	DN250 (10"), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 70.8 / 0 ... 1770 m3 / h	
T250	DN250 (10"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 70.8 / 0 ... 1770 m3 / h	
T250HT	DN250 (10"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 70.8 / 0 ... 1770 m3 / h	
E300	DN300 (12"), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 100.8 / 0 ... 2520 m3 / h	

	T300	DN300 (12"), rev. PTFE, liquid temp. max 110 °C measuring range 0 ... 100,8 / 0 ... 2520 m3/h
	T300HT	DN300 (12"), rev. PFA, liquid temp. max 180 °C measuring range 0 ... 100,8 / 0 ... 2520 m3/h
	E350	DN350 (14"), rev. made of ebonite, liquid temp. max 80 °C measuring range 0 ... 138/0 ... 3450 m3/h
	T350	DN350 (14"), rev. PTFE, liquid temp. max 110 °C measuring range 0 ... 138/0 ... 3450 m3/h DN350 (14")
	E400	DN400 (16 "), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 180/0 ... 4500 m3 / h
	T400	DN400 (16 "), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 180/0 ... 4500 m3 / h
	E450	DN450 (18 "), ebonite coating, max. liquid temp. 80 °C measuring range 0 ... 228.8 / 0 ... 5720 m3 / h
	T450	DN450 (18 "), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 228.8 / 0 ... 5720 m3 / h
	E500	DN500 (20 "), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 284/0 ... 7100 m3 / h
	T500	DN500 (20 "), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 284/0 ... 7100 m3 / h
	E550	(22 "), ebonite coating, max. liquid temp. 80 °C measuring range 0... 348/0... 8712m3 / h
	E600	DN600 (24 "), ebonite coating, max. liquid temp. 80 °C measuring range 0 ... 408/0 ... 10200 m3 / h
	T600	DN600 (24 "), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 408/0 ... 10200 m3 / h
	E650	(26 "), ebonite coating, max. liquid temp. 80 °C measuring range 0... 480/0 ... 12000 m3 / h
	T650	(26 "), PTFE coated, max. liquid temp. 110 °C measuring range 0... 480/0 ... 12000 m3 / h
	E700	DN700, ebonite coating, max. liquid temp. 80 °C measuring range 0 ... 560/0 ... 14000 m3 / h
	T700	DN700, PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 560/0 ... 14000 m3 / h
	E750	(30 "), ebonite coating, max. liquid temp. 80 °C measuring range 0... 640/0 ... 16000 m3 / h
	T750	(30 "), PTFE coated, max. liquid temp. 110 °C measuring range 0... 640/0 ... 16000 m3 / h
	E800	DN800, ebonite coating, max. liquid temp. 80 °C measuring range 0 ... 720/0 ... 18000 m3 / h
	T800	DN800, PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 720/0 ... 18000 m3 / h
	E850	(34 "), ebonite coating, max. liquid temp. 80 °C measuring range 0... 820/0... 20500 m3 / h
	T850	(34 "), ebonite coating, max. liquid temp. 80 °C measuring range 0... 820/0... 20500 m3 / h
	E900	DN900 (36 "), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 920/0 ... 23000 m3 / h
	T900	DN900 (36 "), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 920/0 ... 23000 m3/h
	E1000	DN1000 (40 "), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 1140/0 ... 28500 m3 / h
	T1000	DN1000 (40 "), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 1140/0 ... 28500 m3/h
	E1050	DN1050 (42 "), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 1270/0 ... 31752 m3/h
	E1200	DN1200 Ebonite coating, max. liquid temp. 80 °C Measuring range -1,600 - 40,000 m3 / h
	E1400	DN 1400 Ebonite coating, max. liquid temp. 80 ° C Measuring range -2,200 - 55,000 m3 / h
	E1600	DN 1600 Ebonite coating, max. liquid temp. 80 ° C Measuring range - 2,880 - 72,000 m3 / h
	E1800	DN1800 Ebonite casing, max. liquid temp. 80°C Measuring range - 3,640 - 91,000 m3/h
	E2000	DN2000 Ebonite cover, max. liquid temp. 80 °C Measuring range - 4,608 - 115,200 m3 / h
	E2200	DN2200 Ebonite cover, max. liquid temp. 80°C Measuring range - 5.575 - 139.392 m3/h
	E2400	DN2400 Ebonite cover, max. liquid temp. 80°C Measuring range - 6.635 - 165.888 m3/h
Gasket material (internal seal - PP coating only)		
A	A	Without O-Ring (ONLY FOR PTFE / EBONITE / RILSAN COATING)
	B	O-Ring : FKM
	C	O-Ring : EPDM
	Z	O-Ring: to be specified

Flange Type		
1	1	Flange EN1092 PN16 (standard for polypropylene lining)
	2	Flange EN1092 PN10
	3	Flange EN1092 PN25
	4	Flange EN1092 PN40 (standard with PTFE coating up to DN50)
	5	Flange EN1092 PN64
	6	Flange ANSI 150RF
	7	Flange ANSI 300RF
	8	Flange EN1092 PN6
	9	Flange JIS 10K
	0	Flanges: to be specified
Body and flange material		
A	A	Painted carbon steel body and flange
	B	Body and flange in stainless steel (AISI304)
	C	Body and flange in stainless steel (AISI316)
	D	Carbon Steel body and flange painted according to UNI / EN / ISO 12944-2-C4
	E	Carbon Steel body and flange painted according to UNI/EN/ISO 12944-2-C5
	F	Body and flange in painted Carbon Steel CARBOZINC 11 - INORGANIC ZINC
	Z	Body and flange material: other
Number and electrodes matter		
2	2	n. 3 (2 measurement + 1 for mass) electrodes in AISI316L (1.4404)
	4	n. 3 (2 sizes + 1 for mass) electrodes in Hastelloy C276
	5	n. 3 (2 sizes + 1 for mass) Titanium electrodes
	6	n. 3 (2 sizes + 1 for mass) Tantalum electrodes; not available with Polypropylene
	7	n. 3 (2 sizes + 1 for mass) Platinum electrodes; not available with Polypropylene (MAX DN = 50)
	0	Electrode material: to be specified
Sensor version / protection class		
A	A	Compact version, IP rating: IP67
	B	Separate version - JB material: Aluminum - IP68 - for C014 + C015/16 cable
	F	Separate version - JB material: Aluminum - IP68 - n.2 MIL connectors for C015/016-CC/CS + CB cables
	N	Separate version - JB material: Aluminum - IP67 - with Preamp for C014 + C015/16 cables
	L	Separate version - JB material: Aluminum - IP68 - with Preamp - n.2 MIL connectors for C015/016-CC/CS + CB cables
	U	Separate version - JB material: 304 RAW - IP68 for C014 + C015/16 cable
	T	Separate version - JB material: 304 RAW - IP68 - n.2 MIL connectors for C015/016-CC/CS + CB cables
	P	Separate version - JB material: 304 RAW - IP67 - with Preamp for C014 + C015/16 cables
	M	Separate version - JB material: 304 RAW - IP68 - with Preamp - n.2 MIL connectors for C015/016-CC/CS + CB cables
	K	Separate version - JB material: 304 polished - IP68 for C014 + C015/16 cable
	W	Separate version - JB material: 304 polished - IP68 - n.2 MIL connectors for Cable C015/016-CC/CS + CB
	V	Separate version - JB material: 304 polished - IP67 - with Preamp for C014 + C015/16 cables
	J	Separate version - JB material: 304 polished - IP68 - with Preamp - n.2 MIL connectors for cables C015/016-CC/CS + CB

ATTENTION! The choice of preamplifier excludes the use of the Empty Pipe and BIV functions.

Complete code
sample for ordering



FM150 -T100-A1A2A