



# FFM05

## | Introduction |

Liquid flows through the turbine housing causing an internal rotor to spin. As the rotor spins, an electrical signal is generated in the pickup coil. This signal is converted into engineering units(Liters, cubic meters, gallons etc.)on the local display where is applicable. Optional accessory modules can be used to export the signal to other equipment.



### Applications:

Petroleum / Chemical engineering /  
Electric power and machinery fields



## | Specification |

Measured value	Flow rate, Volume flow
Medium	Liquid: Water; Diesel, etc. (without impurity, low viscosity, flow conditions similar to EN 29104)
Temperature	+10 ... +30°C / +50 ... +86°F
Output	Pulse, 4 ... 20 mA (Option: Local display+4 ... 20 mA)
Accuracy	0.5% of rate (Optional: 0.2%)
Diameter	DN4 ... DN200
Measuring ratio	Standard-10:1; Optional-20:1
Inlet section	≥ 10 DN
Operating pressure	1 bar
Installation conditions	Inlet run ≥ 10 DN; Outlet run ≥ 5 DN Take care that flow sensor is always fully filled
Flow direction	Forward Arrow on flow sensor indicates flow direction

Connection	Thread	DN4 ... DN50 (External); DN15 ... DN50 (Internal)
	Flange (Optional)	ANSI / JIS

Operating conditions	Process temperature	-20 ... +80°C / -20 ... +150°C	
	Ambient temperature (All versions)	Standard (with aluminum converter housing): 20 ... +55°C	
	Storage temperature	-20 ... +70°C	
	Pressure	Thread	63 bar (DN4 ... DN15) / 25 bar (DN20 ... DN50)
		Flange	16 bar
ANSI		150 lb RF	
JIS		10K	

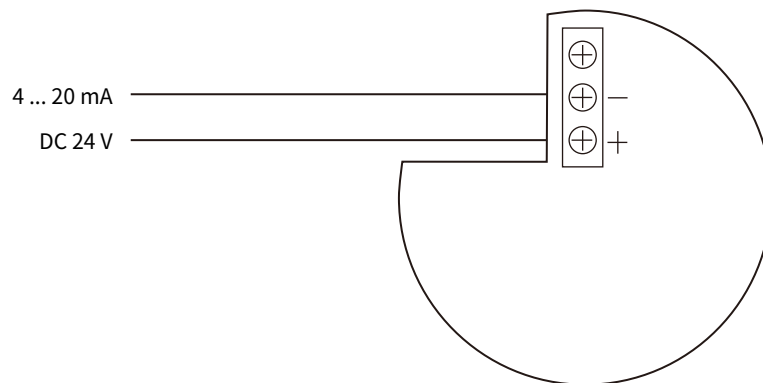
Material	Housing	SS304 (Optional: SS316)
	Flanges	SS304
	Rotor	2Cr13 (Optional: Duplex impeller)
	Bearings and shafts	Tungsten carbide
	Display meter	Standard: Polyurethane coated die-cast aluminum

## | Measurable Flow Rate Range |

Note: The flow range as blow is for reference only. Consult the factory if you have special requirement.

Nominal diameter		Standard flow range	Extended flow range	External thread
(mm)	(in.)	(m <sup>3</sup> /h)	(m <sup>3</sup> /h)	
4	0.15	0.04... 0.25	0.04... 0.4	G 1/2
6	0.25	0.1... 0.6	0.06... 0.6	G 1/2
10	0.4	0.2... 1.2	0.15... 1.5	G 1/2
15	0.5	0.6... 6	0.4... 8	G 1
20	0.75	0.8... 8	0.45... 9	G 1
25	1	1 ... 10	0.5... 10	G 1 1/4
32	1.25	1.5... 15	0.8... 15	G 1 1/2
40	1.5	2 ... 20	1 ... 30	G 2
50	2	4 ... 40	2 ... 40	G 2 1/2
65	2.5	7 ... 70	4 ... 70	—
80	3	10 ... 100	5 ... 100	
100	4	20 ... 200	10 ... 200	
125	5	25 ... 250	13 ... 250	
150	6	30 ... 300	15 ... 300	
200	8	80 ... 800	40 ... 800	

## | Diagram |



## | Ordering Guide |

FFM05 - **50** **N** **05** **S** **S** **GM** - **H**

Diameter: 50  
 Output: N  
 Accuracy: 05  
 Range: S  
 Materials: S  
 Connection: GM  
 Optional: H

H: -20 ... +150°C (High Temp.)  
 K: Impeller (Duplex)  
 W: Customized

GM: External thread: DN4 ... DN50 (G1/2" ... G2 1/2")  
 FJ: Flange JIS 10K (S.S.304)  
 FA: Flange ANSI 150# (S.S.304)

S: S.S.304  
 L: S.S.316  
 S: Standard flow range  
 W: Extended flow range

05: 0.5% of reading  
 02: 0.2% of reading

N: Pulse  
 A: 4 ... 20 mA  
 B: Display+4 ... 20 mA

04: DN4  
 06: DN6  
 10: DN10  
 15: DN15  
 20: DN20  
 25: DN25  
 32: DN32  
 40: DN40  
 50: DN50  
 65: DN65 (Flange only)  
 80: DN80 (Flange only)  
 100: DN100 (Flange only)  
 125: DN125 (Flange only)  
 150: DN150 (Flange only)  
 200: DN200 (Flange only)

## | Additional Option (ILAC / TAF) Test Report |



Additional option: (ILAC / TAF) Test report - Standard calibration laboratory (TAF accreditation: 3032, complying with ISO / IEC 17025)  
 TAF has mutual recognition arrangement with ILAC MRA

Project	Measurand level or range
Flow meters	Flow rate: 2.4 ... 30 m <sup>3</sup> /h (40.0 ... 500.0 L/min)
	Flow velocity: 0.2 ... 3 m/s
	8 basic points (8 basic points on average or specified by customer)