PKP

DS15 Flow Indicator, Switch, Transmitter

F.S. Flow Ranges from 24 lph to 50,000 lph Water

DESCRIPTION

The model DS15 flow meters work according to the proven variable area principle. The float is moved upward in a tapered tube by the flowing medium and its upper edge indicates the flow rate by means of a scale affixed on to the measuring tube.

By using a float with an integrated magnet, optional alarm contacts or an analog output transducer may be added.

All flow meters have a male thread on the measuring tube and are supplied with two schedule 80 PVC-U pipe couplings. Please call for coupling materials other than PVC .

The variety of materials used and the simple to exchange measuring scales make these meters universally suitable for most liquid and gaseous media.

Applications are in the water treatment industry, wastewater, plating and surface finishing, chemical and food industries and many more.

DS15 Flow Indicator

DS15 Flow Indicator With Alarm Outputs

DS15 Flow Indicator with Analog Output

SPECIFICATIONS

Measuring Tube Material- PVC-U transparent, Polyamide, Polysulfone or PVDF (for use with alarm contacts or analog output transducer only)
Float Material-PVDF, optionally st. steel AISI 304 and PVDF with integrated magnet
O-Rings- EPDM, Viton optional
Pipe Connections- PVC, optionally PP, PVDF
Max Pressure- 10 bar @ 20°C
Max Temperature Flow Tube Only-
PVC: 60°C
Polyamide: 75°C
Polysulfone: 100°C
PVDF: 110°C
Max Temperature with connectors made of:
PVC: 60°C
PP: 80°C Max
PVDF:110°C
Mounting Position- vertically, flow from bottom to top
Mounting- with straight pipe, 5-7 x pipe dia. upstream and downstream of meter

Measuring Accuracy- ±4% F.S.
Scales-water scales (in LPH) and air scales (in m^3/h) referenced to 0, 1, 2, or 3 bar above atmosphere and 20 °C are standard. For other media, i.e. gases with higher pressures, HCL (30%), NaOH (30 %) as well as other units of measurement (m^3/h, l/sec, GPM) special scales can be supplied.

Accessories
Alarm Contacts- bistable, N/C or N/O contact function on rising flow
Mounting: adjustable on measuring tube
Contact Rating: Max 220 VAC, 0.5A Max 10A/10VA
Operating Temperature: 0...+55°C
Hysteresis: 3 mm of float height
Electrical Connection: Two wire, independent of polarity

SPECIFICATIONS CONT'D

Analog & RS-232 output-

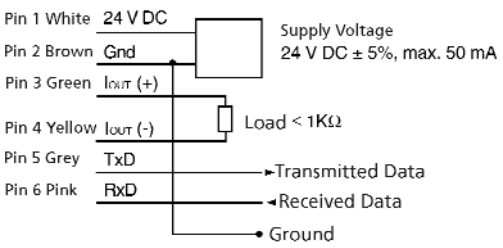
The optional analog output transducer is mounted onto the measuring tube of the DS15 flowmeter and registers the height of the float by means of an analog Hall sensor. The integrated electronics converts this signal to a 4-20 mA output. Additionally a digital value is available via an RS-232 interface.

To utilize the analog output transducer, the standard float must be exchanged for a float with an integral magnet.

The transducer is equipped with an EPROM which is programmed especially for the application. Therefore it is not possible to field adjust the transducers with out consulting the manufacturer.

Electrical connection: 6-pin plug per DIN 45322 (included)

Transmitter Wiring



Electrical Connection For RS-232

Interface- 9 Pin Sub-D-Connector

Transducer	Sub-D-Connector
Pin 2 (GND)	Pin 5 (GND)
Pin 5 (TxD)	Pin 2 (RxD)
Pin 6 (RxD)	Pin 3 (TxD)

Data Format- 9600 baud, 8 data bits, 1 stop bit, no parity

Table 1: Measuring Ranges

Tube	Range Number	Range l/h water	Range Air m^3/h Outlet Atmospheric	Range Air m^3/h Outlet 1bar	Range Air m^3/h Outlet 2 bar	Range Air m^3/h Outlet 3 bar
1	101	3-24	0.2-1	0.2-1.2	0.25-1.55	0.3-1.75
	102	5-60	0.2-2.5	0.4-3.2	0.2-3.8	0.3-4.4
	103	10-100	0.6-3.6	0.6-5.0	0.75-6.0	0.8-7.0
	104	25-250	0.5-9.0	1.0-13.0	1.0-16.0	1.5-19.5
2	201	5-50	0.4-2.8	0.2-3.2	0.4-3.6	0.3-4.0
	202	15-150	0.8-6.2	1.0-9.0	1.0-11.0	1.5-12.0
	203	5-250	0.9-9.5	1.0-13.0	1.0-16.0	2.0-20.0
	204	40-400	2.0-15.0	2.0-20.0	3.0-26.0	3.0-30.0
3	301	15-150	0.5-5.5	1.0-9.0	1.0-11.0	1.0-10.5
	302	40-400	2.0-14.0	2.0-20.0	3.0-26.0	3.0-30.0
	303	60-600	2.5-22.0	4.0-31.0	4.0-38.0	5.0-45.0
	304	100-1000	4.0-34.0	5.0-45.0	6.0-58.0	7.5-67.5
4	401	25-250	1.0-8.0	1.5-13.0	1.5-16.0	1.5-19.5
	402	40-400	2.0-14.0	2.0-20.0	3.0-26.0	3.0-30.0
	403	100-1000	4.0-34.0	5.0-45.0	5.0-55.0	6.0-66.0
	404	150-1500	5.0-50.0	6.0-70.0	7.5-86.0	7.5-98.0
6	601	15-150	0.7-5.5	1-7.5	1-9	1.6-10
	602	30-300	1-10	1.5-14	2-18	2.8-20
	603	60-600	2.5-20	3.5-28	4-35	5-40
	604	100-1000	4-34	5-50	8-60	8-70
	605	150-1500	5-50	7.5-67	9.5-83	11-96
	606	250-2500	8.5-76	10-115	14-131	17-152
	607	400-4000	14-125	10-170	24-210	28-245
	608	600-6000	22-190	30-260	40-380	40-400
	609	1000-10000	35-300	50-420	60-510	70-600
	610	1500-15000	50-500	80-700	85-760	102-880
	611	2500-25000	80-720	115-1050	140-1240	166-1400
	612	10000-50000	400-1500	500-2100	600-2500	700-2900

Note: Arbitrary scales and other units of measurement available on request

Conversion Factors

For GPH:
Multiply l/h by 0.264

For GPM:
Divide l/h by 227

For SCFH:
Multiply m^3/h by 35.315

For SCFM:
Multiply m^3/h by 0.5886

DIMENSIONS(MM)

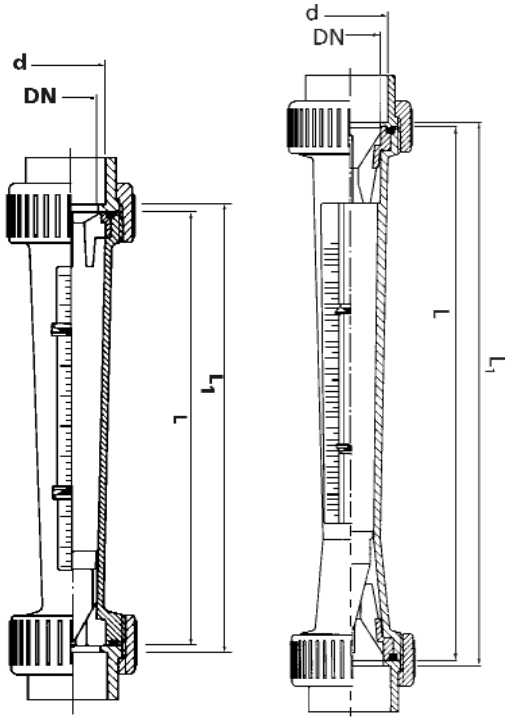
Table 2: Dimensions

Tube	Range Number	Flow Tube Male Thread (BSP)	*PVC Pipe Adapter	L	L_1	**d	**DN
1	101...104	3/4"	3/8"	165	171	16	10
2	201...204	1'	1/2"	170	176	20	15
3	301...304	1 1/4"	3/4"	185	191	25	20
4	401...404	1 1/2	1"	200	206	20	25
6	601...604	1 1/2"	1"	350	356	32	25
	605...606	2"	1 1/4"	350	356	40	32
	607...609	2 3/4"	2 "	350	356	63	50
	610...612	3 1/2"	2 1/2"	350	356	75	65

*Two schedule 80 PVC-U pipe adapters/couplings are included with each flow meter. As the thread on the flowmeter body is metric, care in fitting selection must be taken if connectors other than the PVC connectors supplied are to be used.

**Dimension of metric pipe coupling which can be supplied in materials other than PVC. Please consult factory.

MEASURING TUBE 1...4 ***MEASURING TUBE 5...6***



2 ea. Schedule 80 PVC -U pipe adapters/couplings are supplied with each flowmeter. The adapters are for pipe sizes according to table 2.

ORDERING INFORMATION

DS15-A-B-C-D-E-F

EXAMPLE: DS15-1-1-101-PVC-1-00

A= Flow Tube Material	B= Scale	C=Range Number	D=Process Connections	E=Float Material	F=Options
1=PVC-U **(standard)** 2= Polyamide 3=Polysulfone 4=PVDF	1= Water 2=Air @ Atmos 3=Air@1 bar 4= Air@2 bar 5= Air@3 bar 9= Special Scale	Select From Table 1	PVC= Schedule 80 PVC pipe termination per table 2 N= None S= Special	1= PVDF (standard) 2= 304 SS 3= PVDF with integrated magnet (for meters with alarm or analog outputs)	00= none 11= 1 alarm contact (N.C.) 21= 2 alarm contacts (N.C.) 12= 1 alarm contact (N.O.) 22= 2alarm contacts (N.O.) 50= analog , 4..20 mA & RS232 output