

# 09

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## Golden Rules Co.,Ltd

Liquid, Oil

### KC-7750 Series **TURBINE FLOWMETER**



The nation's development item, 100% domestic goods, Patent **NO.** 10-1660226



## 9. TURBINE FLOWMETER

### 9-1. 터빈유량계 KC-7750 Series

#### Inline type Turbine Flowmeter

##### 제품특징



integral type  
KC-7753-J



integral type  
KC-7751-J

- Enclosure : NEMA 4X  
Accuracy :  $\pm 0.5\%$  or  $\pm 0.2\%$  R.D (Option)  
 $\pm 0.5\%$  or  $\pm 1.0\%$  %F.S  
Turndown Ratio : Standard 10:1, (Option 20:1)  
Measure : Flow, Volume  
Diameter : DN4 ~ DN200
- Output : 4~20 mA DC, or (1~5) V  
Open Collector Pulse
- Linearity :  $\pm 0.5\%$  of Flow rate
- Repeatability :  $\pm 1.0\%$
- Power : 2wire or 4-wire Loof Type, AC 110/220V, 60 Hz
- Display : Total – 9 Digit LCD & Rate – 9 Digit
- Connection : NPT, PT & Flange (ANSI, JIS, DIN etc.)
- Flow direction : Forward, -> arrow direction indication
- Staright pipe length : Upstream – 10 D / Downstream – 5D  
Caution when installation : The flow sensor must be completely closed.  
Screw type : Outdia DN4 ~ DN50 / india DN15 ~ DN50

#### Product Matl (std.)

Part No.	Part List	Material
1	Transmitter	Cast Aluminium
2	Pick-Up Coil	SUS 304
3	Body	SUS 304, 316
4	Flange	SUS 304, 316

\* Except for standard specifications, please consult with the head office

**제품성능**

◆ **Accuracy**

±0.5 % R.D or R.D의 ±0.2% (Option)  
±0.5% or ±1.0 % F.S (General type)

◆ **Repeatability**

±0.5 % of Full Scale

◆ **Response Time**

0.8 ~ 1 Sec

◆ **Measuring Range**

0 ~ max. 800 m3/h (200A Standardt)

◆ **Function**

Flow & Total

**Flow Rates**

Flow Ranges							
Line Size (mm)		STD. Flow Range (m3/h)		Extended Flow Range (m3/h)		External Thread	
A	B	Min.	Max.	Min.	Max.	Ex.ternal thread	kg
4	0.15"	0.04	0.25	0.04	0.4	G1/2	3
6	0.25"	0.1	0.6	0.06	0.6	G1/2	3
10	0.4"	0.2	1.2	0.15	1.5	G1/2	3
15	0.5"	0.6	6	0.4	8	G1	4
20	0.75"	0.8	8	0.45	9	G1	5.2
25	1"	1	10	0.5	10	G11/4	6.6
32	1.25"	1.5	15	0.8	15	G11/2	9
40	1.5"	2	20	1	30	G2	14.2
50	2"	4	40	2	40	G21/2	
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		

Note. : Refer to the chart and look for the meter for a range of 6.62 to the Specified full scale (upper limit range). Select a full scale speed of 1 to 3 m/s.  
Ensure that the overall flow rate used during the final design phase is maintained.  
Within a 6.62 radius of the current flow

**운전사양**

◆ **Fluid**

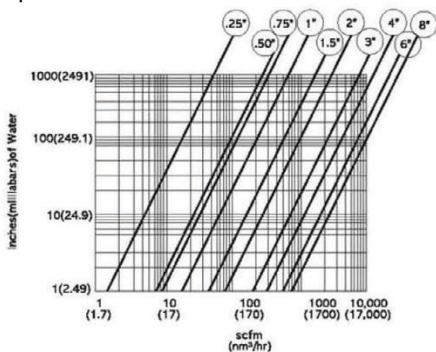
Liquid (Water, Diesel, Others : Clean water, low Viscosity)

◆ **Pressure Limit**

Thread: 63 bar(DN4... DN25) / 25 Bar(DN20... DN50)

◆ **Pressure Loss**

0.15 Kpa



**◆ Fluid & Ambient Temp'**

Liquid : -4 ~ 176 °F , -20 ~ 80 °C  
Option : -4 ~ 302 °F , -20 ~ +150 °C  
Ambient : -4 ~ 185 °F , -20 ~ 85 °C

**◆ Power Supply**

DC24 V ±10 %

**◆ Output (STD.)**

Linear DC 4 ~ 20mA, Pulse (Option: RS-485)

**◆ Displays**

Alphanumeric 2 X 16 backlight LCD  
Adjustable variables via remote control switch or Smart interface software  
Adjustable : Full scale : (0 ~100) %  
Flow: m<sup>3</sup>/h(m<sup>3</sup>), L/h(L), mL/h(mL), kg/h(kg)  
Time response 1 ~ 7 sec / Correction factor setting 0.5 ~ 5 /  
Zero & Span

**Physical Spec'****◆ Wetted Materials**

Bearings & shafts – Tungsten carbide  
Rotor – 2Cr13 (Optional: Duplex impeller)  
Flange – 304SS (Optional : 316SS, 316LSS)  
Housing – 304SS (Optional : 316SS)

**◆ Enclosure**

General-Area IP65

**◆ Electrical Connection**

½" PF

**◆ Mounting (Selection)**

ANSI 150lb Flange  
JIS 10k RF Flange

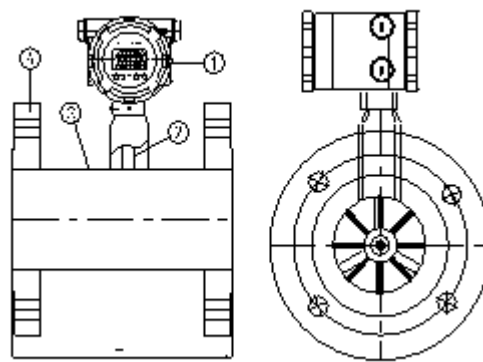
**◆ Certification**

CE (CASE) Certificate

## Dimension Spec' KC-7750 I

[Unit : mm]

Nominal Diameter	C to C (L)	Nominal Diameter	C to C (L)
4	120	1S	90
6	120	1.5S	115
10	120	2S	160
15	150		
25	100		
40	140		
50	150		
80	200		
100	220		
125	220		
150	300		
200	360		



※ The shape of the sensor can be changed depending on the circumstances of the manufacturer.

## Installation Spec' II

Before installing the KC-7750 series turbine flowmeter, make sure that there are no foreign substances inside the pipe and that the rotor is free to rotate. When installing the flowmeter, the flow direction of the fluid and the direction of the arrow on the body of the flowmeter must be installed, and it is highly recommended to install a strainer in front of the flowmeter.

Standar Strainer		
Turbine Size	Strainer Mesh	Clearance
3/8	60 x 60	0.0092
1/2	60 x 60	0.0092
3/4	60 x 60	0.0092
7/8	60 x 60	0.0092
1	60 x 60	0.0092
1-1/2	20 x 20	0.0340
2	10 x 10	0.0652
3	8 x 8	0.0900
4	10 x 10	0.6500
6	4 x 4	0.1875
8	8 x 8	0.0900
10	4 x 4	0.1875

Caution: When the fluid flows after the initial installation, it must be changed at a high speed after a certain period of operation at low speed. In addition, severe vibration or shock may shorten the performance or life of the instrument.

## Order Code KC-7750 Series (Turbine Flowmeter)

Type      Conn. Mode      Flange spec'      Power      Output      Display      Direction      Mat'l      Pressure      Option  
 KC-77 5 -  -  - P - V -  -  -  -  -   
 1                      2                      3 4 5                      6                      7                      8                      9                      10                      11                      12

Structure type	Code 1
Integral	1
Remote	2
High Accuracy	3
Agency approved, customer specified	W

Connection Mode	Code 2
DIN Flange	D
ANSI Flange	A
JIS Flange	J
Screw	N
Sanitary	S
Agency approved, customer specified	W

Flange spec'	Code 3,4,5		
	Size	DIN	150 lb JIS 10k
1/2" (DN15)	D2	F2	J2
3/4" (DN20)	D3	F3	J3
1" (DN25)	D4	F4	J4
1-1/4" (DN32)	D5	F5	J5
1-1/2" (DN40)	D6	F6	J6
2" (DN50)	D7	F7	J7
2-1/2" (DN65)	D8	F8	J8
3" (DN80)	D9	F9	J9
4" (DN100)	D11	F11	J11
5" (DN150)	D12	F12	J12
6" (DN150)	D13	F13	J13
8" (DN200)	D15	F15	J15
10" (DN250)	D16	F16	J16
12" (DN300)	D17	F17	J17
Agency approved, customer specified	W		

Input power	Code 6
DC 24V ±10%, 100 mA	2
Agency approved, customer specified	W

Output	Code 7
Pulse, 4-20mA DC	1
Local display + 4-20 mA DC	2
Agency approved, customer specified	W

Display	Code 8
No Readout	NR
Digital Display (Flow & Total)	DD
Agency approved, customer specified	W

Direction	Code 9
Horizontal Left to Right or Vertical UP	1
Horizontal Right to Left or Vertical Down	2
Agency approved, customer specified	W

Material	Code 10
304SS (STD.)	1
316SS or 316LSS	2
PVC	3
PTFE	4
Others	5

Pressure Limit	Code 11
6.3 Mpa (6A~25A)	1
2.5 Mpa (40A~80A)	2
1.6/2.5 Mpa (100A~200A)	3
1.6 Mpa (250A~300A)	4
Agency approved, customer specified	W

Option	Code 12
RS-485	RS
Flow Controller (Remote)	FC
Batch Controller (Remote)	BC
Counter (General, Ex)	C

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)



**Golden Rules**

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Gas & Liquid & Steam  
**Mass & Total Flow meter**  
Specialty Manufacture

전국 대리점

Certified in accordance with

KC Q ISO 9001 : 2015

KC Q ISO 14001 : 2015

 (주)골든룰