

# **MAGMAX**

# **EGS1000F**

Electromagnetic Flowmeter

#### **GENERAL**

**MAGMAX** EGS1000F is a separate type primary head of electromagnetic flowmeters, which aims "Low cost-High performance". High quality, virgin, clear PFA liner with Hastelloy C electrodes covers almost all applications from water lines to chemical process. 8 sizes of 10 to 150mm are available.

#### **FEATURES**

- Punched plate reinforced high quality clear PFA is adopted for high anti-corrosive, anti-erosion and anti-penetration capability.
- ☐ High accuracy of ±0.5% of reading.
- ☐ Light and compact design.

#### STANDARD SPECIFICATION

• Excitation : Square wave

Nominal size
 10, 15, 25, 40, 50, 80, 100, 150 mm
 How velocity Min. 0 to 0.3m/s Max. 0 to 12m/s

• Protection class : IP67 (equivalent to NEMA6)

Meter body material

Measuring tube: Stainless steel (equivalent to SS304)

Housing: Size 10 to 40mm: Cast iron \*1

Size 50 to 150mm: Carbon steel \*1

Terminal box: Aluminum alloy \*1

• Wetted part material

Liner : PFA Electrode : Hastelloy C

Earth ring: Stainless steel/SS316

Earth ring seal: Viton

(Supplied for size 10 and 15mm only) \*2

• Painting : Polyurethane resin painting

• Color : Silver (Body)

Jade green (Terminal box cover)

● Cable entry : 2 × G1/2 female thread

 $2 \times 1/2$  NPT female thread  $2 \times M20$  (with water tight glands) (Option : Water tight glands for G1/2)

Power supply : Supplied from converter
 Ambient temperature : -25 to +60°C (For operation)
 -50 to +70°C (For storage)

• Process connection : Wafer type

• Flanges : JIS10K/20K, ANSI class 150/300,

**DIN PN16/40** 

\* Max. operating pressure is 1.6 MPa irre-

spective of flange rating.

• Grounding : Grounding resistance must be less than

100Ω



Cable

Exclusive cable for electrode signal: DS or BTS cable Excitation current cable: 2 core, 0.75 to 2mm<sup>2</sup>
\*Refer to Technical Guidance for Converter

 Fluid specification Conductivity \*3

Converter	Cable *4	Nominal size 10 and 15mm	Nominal size 25 to 150mm		
EGC010W	А	≥ 50µS/cm	≥ 10µS/cm *5		
EGC300F	А	≥ 10µS	/cm *5		
EGC300F	В	≥ 5µS/o	cm *5		

Temperature : -25 to +120°C Pressure : 0 Pa (abs) to 1.6 MPa

<sup>\*3</sup> Refer to Technical Guidance for Converter as details.

<sup>\*4</sup> Electrode signal cable A : DS cable B : BTS cable

<sup>\*5</sup> To be more than  $20\mu S/cm$  for water flow measurement.

<sup>\*1</sup> Anti-corrosive painting

<sup>\*2</sup> Not required earth ring seals or gaskets for size 25 to 150mm

# **Accuracy**

#### • Pulse output

Converter	For flow velocity <1m/s	For flow velocity ≥1m/s
EGC010W	± (0.3+0.2%/velocity(m/s)) of reading	± 0.5% of reading

#### Current output

Additional error of  $\pm 0.05\%$  of full scale to be added onto above pulse output accuracy.

# Cable length between Primary head and Converter

Maximum cable length for electrode signal cable \*1

Converter	Cable *2	Nominal size 10 and 15mm	Nominal size 25 to 150mm				
EGC010W	Α	10m	30m				
EGC300F	А	600m					
EGC300F	В	600m					

\*1 Refer to Technical Guidance for Converter as details.

\*2 Electrode signal cable A : DS cable

B: BTS cable

### **FLOW RANGE**

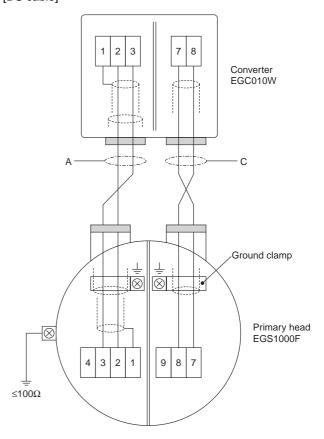
2

Nominal size	Possible setting range (m³/h)										
(mm)	Min.	Max.									
10	0 ~ 0.0849	0 ~ 3.39									
15	0 ~ 0.191	0 ~ 7.63									
25	0 ~ 0.531	0 ~ 21.2									
40	0 ~ 1.36	0 ~ 54.2									
50	0 ~ 2.13	0 ~ 84.8									
80	0 ~ 5.43	0 ~ 217									
100	0 ~ 8.49	0 ~ 339									
150	0 ~ 19.1	0 ~ 763									

(Flow velocity span: 0.3 to 12m/s)

# **ELECTRICAL CONNECTION**

# [DS cable]



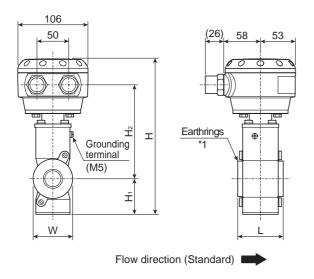
Terminal symbol	Description
1	
2	Electode signal
3	output
7	Excitation current
8	input
<u></u>	Grounding

- Cable
  - A: Exclusive cable for electrode signal: DS cable
  - C: Excitation current cable: 2 core, 0.75 to 2mm<sup>2</sup> (Supplied by customer)
- Terminal structure = Spring clamp type terminal
- Applicable electric wire = 0.5 to 2.0mm<sup>2</sup>

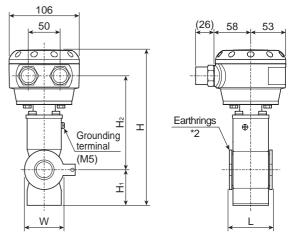
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# **DIMENSIONS**

Nominal size: 10, 15mm

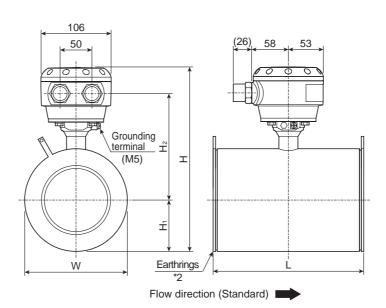


#### Nominal size: 25, 40mm



Flow direction (Standard)

Nominal size: 50 to 150mm



Nominal size		Mass					
(mm)	L *	Н	H <sub>1</sub>	H <sub>2</sub>	W	(kg)	
10	68	214	67	111	52	2.2	
15	68	214	67	111	52	2.2	
25	60	224	62	126	66	2.4	
40	84	239	70	133	82	3.3	
50	106	228	51	141	102	5.0	
80	156	257	65	156	130	6.7	
100	206	284	78	170	156	11.6	
150	206	348	110	202	220	16.3	

- \*1 Dimension L for nominal size 10 and 15mm includes earth rings thickness.
  - The earth rings are fixed onto the primary head.
- \*2 Dimension L for nominal size 25 to 150mm includes earth rings thickness.

The earth rings are not fixed onto the primary head. They are to be installed between the primary head and connection flanges on installation. (Earth ring thickness =  $3 \text{mm} \times 2$ )

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# **MODEL AND SPECIFICATION CODE**

Model: EGS1000F

Spec. code V N 1 7	4 N	0 0	0 0	(	0 0 0	0	0	2	0 (	0 0	0	0		Description			Standard
Primary head code V N 1 7						Т								Wafer type, PFA liner, Hastelloy C electrodes			0
(Fixed code)	4													always 4 Connection flange size			0
5											10mm	10 or 15A	1/2"	0			
	6													15mm	15A	1/2"	0
	8					П								25mm	25A	1"	0
Nominal size	В													40mm	40A	1-1/2"	0
Norminal Size	С					П								50mm	50A	2"	0
	E													80mm	80A	3"	0
	F					П								100mm	100A	4"	0
	Н													150mm	150A	6"	0
Process connection	N													Wafer type			0
(Fixed code)		0												always 0			0
4									Aluminum alloy / 1/	Aluminum alloy / 1/2 NPT female thread							
Terminal box / Cable entry										Aluminum alloy / 1/	Aluminum alloy / 1/2 G female thread						
Terrilliai box / Cable eritiy		6												Aluminum alloy / M	ght glands		
		9												Others			
Туре		0												Separate type	0		
(Fixed code)			0											always 0			0
Earth ring				1										Stainless steel SS316	(Viton sealing)	For size 10 and 15mm	0
(Seal for earth ring)			I	K										Stainless steel SS3	316	For size 25 and 150mm	0
(Sear for earth fing)			9	9										Others			
(Fixed code) 0 0 0 0									always 0000			0					
Calibration 0										Standard calibration			0				
(Fixed code)			0	2	0 (	0 0	0	0		always 0200000			0				
Special feature					(E	Blank)	None		·								
Opecial leature	Opecial leature											/Z	Involve *1				

<sup>\*1</sup> In case that special feature are involved, put [/z] at the end of spec. code and specify the details. It is recommended to consult TOKYO KEISO for such availability before ordering.

#### **ORDERING INSTRUCTIONS**

Specify the following when ordering:

Model and spec. code
 Example : Model : EGS1000F

Spec. code: VN174CN0500K000000200000

2. Option

4

3. Fluid name

#### STANDARD ACCESSORIES

• Instruction manual : 1

#### **OPTION**

• Teflon gasket for installation : 1 set [Symbol : FG] VALQUA No. N7030, for JIS10K flange

\*In case matching flange is not JIS10K, please consult TOKYO KEISO.

• G1/2 water tight glands for cable entry : 1 set [Symbol : WG]

\* Specification subject to change without notice



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