

GENERAL

MAGMAX EGM1010C has achieved "Economical" and "Ecological" for electromagnetic flowmeters.

EGM1010C covers almost all specifications which are required for present industries by very competitive price.

Easy installation thanks to small, light and compact design.

FEATURES

- ❑ Low cost-High performance
- ❑ Punched plate reinforced PFA liner with Hastelloy C electrodes guarantee high durability and high anti corrosive capability
- ❑ Low power consumption of approx. 5 VA.
- ❑ Separate output terminals for current, pulse and status outputs.
- ❑ High speed response
- ❑ High accuracy of $\pm 0.5\%$ of reading
- ❑ Bi-directional flow measurement possible
- ❑ All CE marked.

STANDARD SPECIFICATION

- Excitation : Square wave
- Nominal size : 10, 15, 25, 40, 50, 80, 100 and 150mm
- Measuring range : Flow velocity Min. 0 to 0.3m/s
Max. 0 to 12m/s
- Protection class : IP67 (equivalent to NEMA6)
- Housing material
 - Primary head : Size 10 to 40 mm ; Cast iron *
 - Size 50 to 150 mm ; Carbon steel *
 - Converter : Aluminum alloy *
 - (Cover; Polyamide resin)
 - * Anti-corrosive painting
- Wetted part material
 - Liner : PFA
 - Electrode : Hastelloy C
 - Earth ring : Stainless steel/SS316
 - Earth ring seal : Supplied for size 10 and 15mm only;
Viton
- Painting : Polyurethane resin painting
- Color : Silver (Primary head)
Jade green (Converter; Cover excluded)
- Cable entry : 2 × G1/2 female thread
2 × 1/2 NPT female thread
2 × M20 with water tight glands
(Option : Water tight glands for G1/2)
- Supply voltage : 100V AC (85 to 110V)
115V AC (100 to 130V)
200V AC (170 to 220V)
230V AC (200 to 260V)
24V DC (18 to 32V)
* () indicates voltage range.
- Supply frequency : 48 to 63Hz
- Power consumption : AC; approx. 5VA
DC; approx. 4.5W
- Ambient temp. : -25 to +40°C (For operation)
-50 to +70°C (For storage)
- Process connection : Wafer type
- Matching flanges : JIS10K/20K, ANSI class 150/300,
DIN PN16/40
* Max. Op. Press is 1.6MPa irrespective of
flange rating.
- Grounding : Grounding resistance must be less than
100Ω.
- Fluid specification
 - Conductivity : To be more than 5μS/cm
(20μS/cm for water flow measurement)
 - Temperature : -25 to 120°C
 - Pressure : 0Pa (abs) to 1.6MPa
- Indicator : LCD 2 lines with illumination
 - Line 1; 8 digit numerical figures
 - Line 2; Alphabet for unit indication
 - Flow rate or total flow volume indication
selectable. Or alternative indication of
these two items with approx. 10 sec, inter-
vals.
 - Flow rate indication : By flow unit (m³/h, L/s, or others) or % of
full scale (Bar graph available)
 - Total flow volume : Forward total, reverse total or difference
total of forward and reverse. (m³, L, others)
 - * Factory setting: Continuous indication of
flow rate

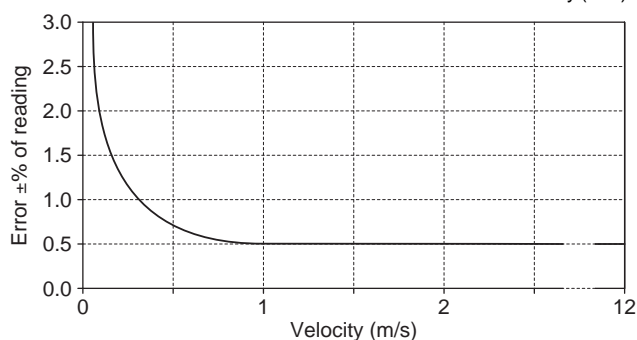


Output Signal

- Current output : 4 to 20mA DC, 0 to 20mA DC
Load : Max. 500Ω
Time constant : 0.2 to 99.9 s adjustable
(0.1s step)
- Pulse output
Open collector output
Rating : 5 to 30V DC, 150mA Max.
Pulse rate (Output pulse at full scale)
20 to 36,000,000 Pulse/h
0.0056Hz to 10kHz (full scale)
Pulse width One of the following selectable:
1) Automatic: Pulse width shall be duty 50% in full scale frequency
2) Duty factor 1:1 (Constant)
3) Setup of arbitrary value
- Status output
Open collector output
Rating : 5 to 30V DC, 150mA Max.
Contents of output
One of the following selectable:
1) No status output (Factory setting)
2) Flow direction identification
3) Error
4) Flow alarm (1 point)
- Low flow cut off : Effective for current output and pulse output
0 to 19% of full scale adjustable
(1% step, factory set 1%)

Accuracy

- Pulse output : For velocity $\geq 1.0\text{m/s}$; $\pm 0.5\%$ of reading
For velocity $< 1.0\text{m/s}$;
 $\pm (0.3\% \text{ of reading} + 0.2\% \times \frac{1}{\text{Velocity (m/s)}})$



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

Standard Functions

- Customer's free measuring unit : Volume (or mass) unit in 5 characters and time unit in 3 characters can be created.
- Automatic zero adjustment : Zero adjustment is automatically conducted at "ZERO ADJUST MODE" (Subject to zero flow)
- Self diagnosis function : The following ERROR MESSAGE is indicated when applicable;
Internal error
A/D converter error
Wrong setting
Power fail detection
Output overranged
Total counter overflow
- Memory save for power fail : Operation parameters and totalization figures are stored by EEPROM (Non-volatile memory) for more than 10 years.
- Testing function : Current and pulse dummy output function provided, loop check can be conducted without calibrator.
* Current and pulse output correspond to 0, ± 10 , ± 50 , ± 100 , and $\pm 110\%$ of full scale.

FLOW RANGE

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

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

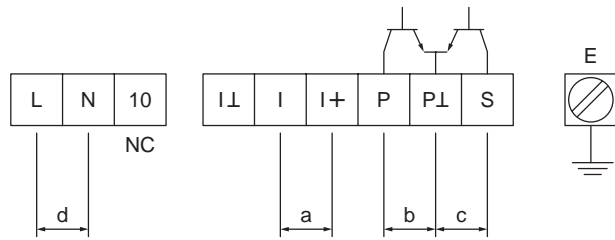
STANDARD ACCESSORIES

- Parameter sheet : 1
- Instruction manual : 1

OPTION

- Bolt and nut for installation : 1 set [Symbol : BN]
Material : Stainless steel SS304 for JIS10K flange
- 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]
- No converter data (parameter) setting [Symbol : NS]
We will supply by standard data setting in case you have no request.
Please set the data flow range, pulse rate and flow direction etc. that required to operate.

ELECTRICAL CONNECTION

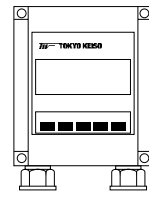


Mark	Terminal symbol	Polarity	Description
a	I+	+	Current output (4 to 20mA DC)
	I-	-	
b	P	+	Pulse output (Open collector)
	P-	-	
c	S	+	Status output (Open collector)
	S-	-	
d	L (L+)	AC	Power supply () indicates DC type
	N (L-)		
E	-	-	Grounding

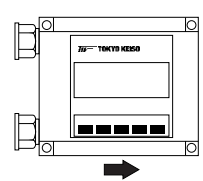
- Terminal type: Plug-in type screw terminal
- Connection capacity: 0.5 to 2.5mm²

Mounting position of LCD display

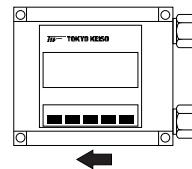
Version 1 (standard)



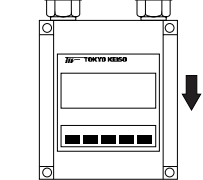
Version 2



Version 3



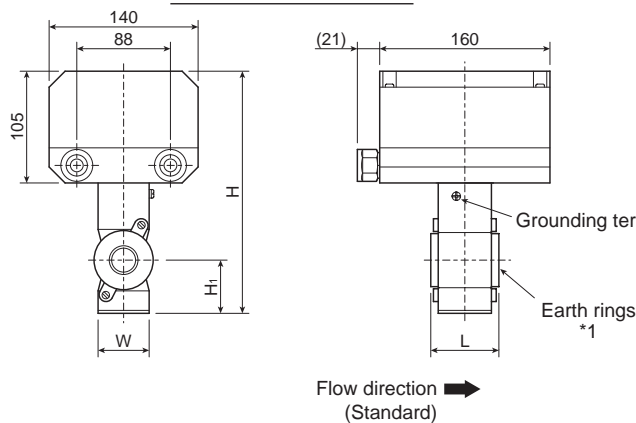
Version 4



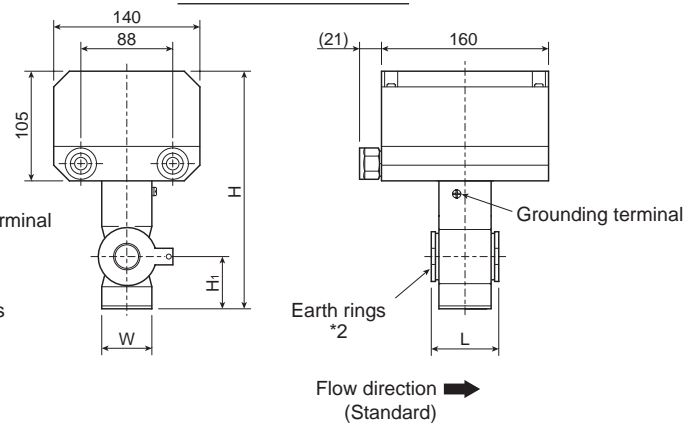
- * The arrow indicates standard flow direction.
Flow direction can be changed by data setting.

DIMENSIONS

Nominal size: 10/15mm



Nominal size: 25/40mm



Nominal size (mm)	Dimensions (mm)				Mass (kg)
	L	H	H ₁	W	
10	68	242	67	47	3.3
15	68	242	67	47	3.3
25	60	252	62	66	3.5
40	84	267	70	82	4.4
50	106	245	51	102	6.1
80	156	285	65	130	7.8
100	206	312	78	156	12.7
150	206	376	110	220	17.4

*1 : Dimension L for nominal size 10 and 15 mm includes earth rings thickness.

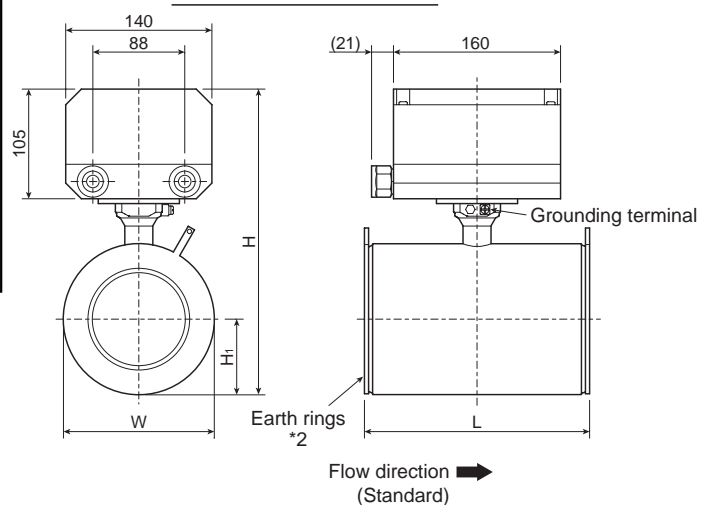
The earth rings are fixed onto the primary head.

*2 : Dimension L for nominal size 25 to 150 mm 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 mm × 2)

Nominal size: 50 to 150mm



MODEL AND SPECIFICATION CODE

Model:EGM1010C

Primary head spec. code	V	N	1	7	4		N	0	1	1	0		0	0	0	0	0	0	2	0	0	0	0		Description			Standard							
Primary head code	V	N	1	7																					Wafer type, PFA liner, Hastelloy C electrodes			○							
(Fixed code)					4																				always 4	Connection flange size		○							
Nominal size					5																				10mm	10 or 15A	1/2"	○							
					6																						15mm	15A	1/2"	○					
					8																							25mm	25A	1"	○				
					B																								40mm	40A	1-1/2"	○			
					C																									50mm	50A	2"	○		
					E																										80mm	80A	3"	○	
					F																											100mm	100A	4"	○
					H																												150mm	150A	6"
Process connection						N																		Wafer type			○								
(Fixed code)						0																		always 0			○								
Type									1	1														Compact version (EGC010 Converter)			○								
(Fixed code)										0														always 0			○								
Earth ring (Seal for earth ring)											1														Stainless steel SS316 (Viton sealing)		For size 10 and 15mm	○							
											K																Stainless steel SS316		For size 25 and 150mm	○					
											9																Others			○					
(Fixed code)												0	0	0	0	0								always 0000			○								
Calibration															0										Standard calibration			○							
(Fixed code)																	0	2	0	0	0	0	0	0	always 0200000			○							
Special feature																		(Blank)	None		○														
																		/Z	Involve *1																

Converter spec. code	V	3	1	1	4	4				0	6		2	0	0	0		Description	Standard	
Converter code	V	3	1	1														Converter model: EGC010 (Square housing)	○	
(Fixed code)					4													always 4	○	
Type					4													LCD indication / Power supply and Pulse output	○	
Power supply						2											100V AC (85 to 110V)	○		
						4												24V DC (18 to 32V)		
						8												115V AC (100 to 130V)		
						B												200V AC (170 to 220V)		
						C												230V AC (200 to 260V)		
Cable entry						3											1/2 NPT female thread			
						4												G1/2 female thread	○	
						5												M20 with water tight glands		
Additional function						0											None	○		
(Fixed code)							6											always 6	○	
Mounting position of LCD display						1											Version 1	Refer to drawing Mounting position of LCD display on page 3.	○	
						2													Version 2	
						3													Version 3	
						4													Version 4	
(Fixed code)										2	0	0	0				always 2000	○		
Special feature												(Blank)	None							○
												/Z	Involve *1							

*1 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 :

1. Model and spec. code

Example : Model : EGM1010C

Primary head spec. code : VN1740N0110K000000200000

Converter spec. code : V31144240612000

2. Flow range (full scale), Pulse rate

3. Option

4. Fluid name

* Specification subject to change without notice


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