



Introducing Glorinda MAGSTREAM AD



Electromagnetic Flow Meter

www.glorinda.com



About

MAGSTREAM AD

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MAGSTREAM AD:

Glorinda Electromagnetic Flow Meter

Glorinda MAGSTREAM AD is a micro-controller based full bore type electromagnetic flow meter specifically designed for various industrial applications. These flow meters accurately measure the flow rate of conductive liquids and slurries in closed pipes. With its simple and robust design, the flow meter is obstruction-less and maintenance-free, serving as an efficient alternative to conventional mechanical flow measuring devices. The use of 'Pulsed DC' technology ensures the highest stability and improved measuring accuracy, presenting an electrical signal in the form of 4-20 mA DC linearly proportional to volumetric flow. The instrument operates based on Faraday's law of electromagnetic induction, generating a magnetic field in the flow tube. The fluid passing through this magnetic field generates a voltage, directly proportional to the flow velocity, providing corresponding electrical output within the measuring flow range.

Features:

Universal Power Supply: Operates seamlessly on 90 to 250V AC or 24V DC

Solar Powered Ability: Energy-efficient and environmentally friendly

Suitable for Conductive Liquids: Good functionality across various liquid types

Full Bore Type: Ensures unimpeded flow for optimal performance

Empty Pipe Indication: Provides clear indication in case of an empty pipe

Material of Construction: Adheres to process parameters for durability

Local Indication through LCD Display: Convenient on-site monitoring

Built-in Relay Status Output: Offers High/Low/Batch status outputs

HART Compatible: Enables communication with modern control systems

Optional Pressure Measurement: Along with flow, providing additional insights

Applications:



**Food
Industry**



**Automation
Industry**



**Chemical
Industry**



**Thermal Power
Energy**



**Atomic
Energy**



**Process
Industry**



**Manufacturing
Industry**



**Water Treatment
Industry**

Technical Specifications:

Media	Liquid (Conductive)	
Conductivity	> 5 μ S/cm	
Viscosity	200 cp max	
Line Size	15 NB to 3000 NB	
Excitation	Pulsed DC	
Type of Output	Output: 1 (Any one)	1) 4 to 20mA DC 2) 4 to 20mA DC with HART (Generic)
	Output: 2	Pulse (Open Collector Type)
	Output: 3	2 Relay outputs
Communication Output	Output: 1 (Any one)	RS485/GSM/GPRS/Ethernet
Display	LCD Display - 6 Digit for Flow Rate & 8 Digit for Totalizer Flow	
Engineering Unit	User Programmable (m ³ /hr by default)	
Calibration Range	Wet Calibrated at IEC/ISO/EN17025 Accredited Calibration Laboratory.	
Accuracy	< \pm 0.5% of M.V. \pm (\pm 5mm/sec) for Velocity Range 0.3 m/s or 6 m/s or 12 m/s	
Linearity	+/- 0.5% of M.V.	
Repeatability	+/- 0.2% of M.V.	
Temperature Coefficient	+/- 0.05% per $^{\circ}$ C	
Process Temperature	-20 to 85 $^{\circ}$ C max for Rubber Lining & -20 to 220 $^{\circ}$ C for PTFE Lining	
Process Pressure	16 kg/cm ² max (Higher on request)	
Material of construction	1) Lining - Neoprene / Ebonite Rubber, PFA, PTFE, PU, CERAMIC	
	2) Flange - MS, CS, SS316, SS 304	
	3) Electrode - SS316L, Hastelloy C, Platinum, Tantalum, Titanium	
	4) Coil Housing - SS304	
Power Supply	Option 1 : 90 - 250 V AC, 50 Hz	
	Option 2 : 24 V DC (+/- 10%)	
	Option 3 : Solar Powered 24V DC	
	Option 4 : 12 V DC (+/- 10%)	
Power Consumption	< 10 VA	
Inline Pressure Sensor	Pressure Sensor 20 Kg	
Isolation	1.4 KV between Input, Output & Power Supply	
Response Time	Less than 5 Sec.	
Electronics	Integral (Local) / Remote	
Electronic Protection Class	Field Mount Weather Proof IP-67, Field Mount Weather Proof IP-68, DIN Standard (IP 54), Flameproof (CMRI IIA IIB Certified), ATEX Exd	
Sensor/ Flow Tube Protection class	Weather Proof IP-67, IP-68	
Process Connections	ANSI150 flanged, as per table B 16.5 (Other on Requirement)	
Mounting	In-Line Horizontal / Vertical	
Ambient Conditions	Temperature -20 to 75 $^{\circ}$ C / Humidity 5 to 95% non-condensing	
Certification	CE	

Assembly Overview

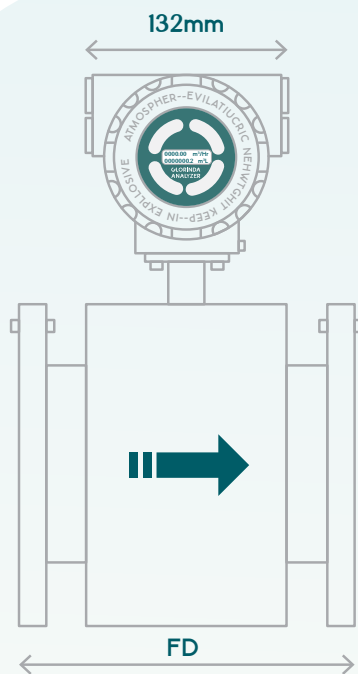


Fig. 1 Front View

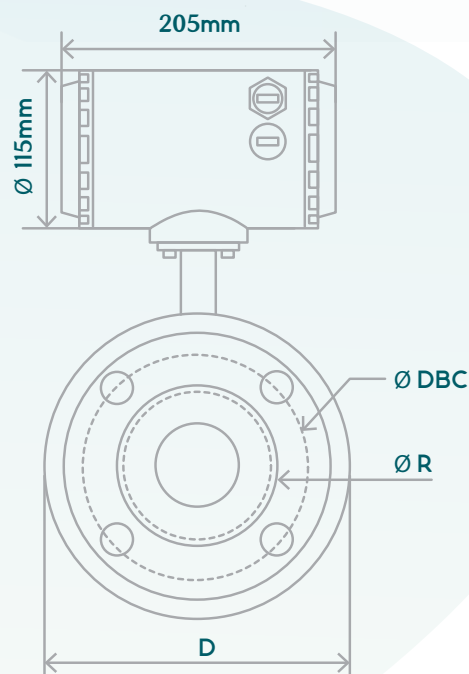


Fig. 2 Side View

TABLE : Dimensional Details (Flow Meter with ANSI 150 Flange)

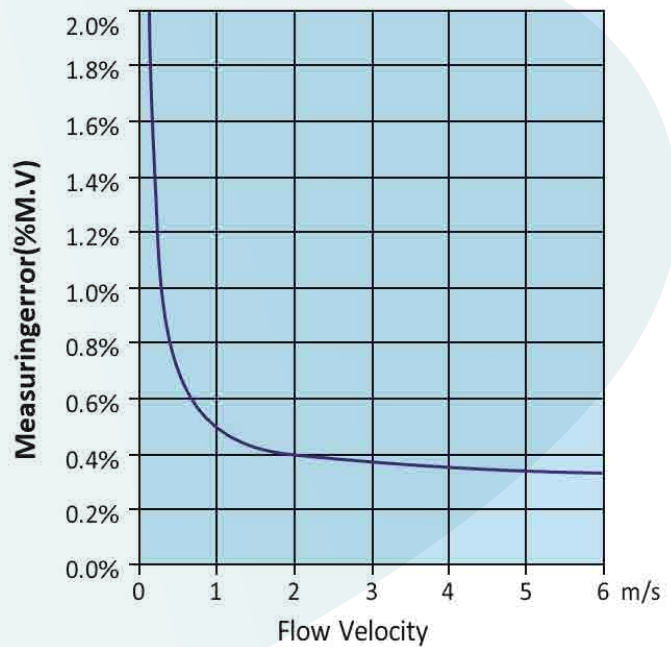
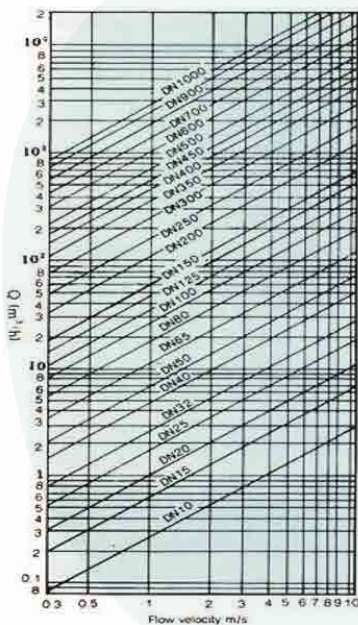
Line Size		Flange Diameter D (mm)	Diameter of Raised Face R (mm)	Diameter of Bolt Hole Circle DBC (mm)	Diameter of Bolt Hole (mm)	No. of Holes	Thickness of Flange	Housing OD (mm)	Flange to Flange Distance (FD) (mm)	Flow Range (m ³ /hr) for Velocity 0.3m/s to 6m/s	
Inch	NB									Min.	Max.
½"	15	88.9	34.9	60.3	15.9	4	11.1	125	200	0.19	3.817
¾"	20	98.4	42.9	69.8	15.9	4	12.7	125	200	0.33	6.785
1"	25	107.9	50.8	79.4	15.9	4	14.3	145	200	0.53	10.602
1¼"	32	117.5	63.5	88.9	15.9	4	15.9	155	200	0.86	17.371
1½"	40	127.0	73.0	98.4	15.9	4	17.5	155	200	1.35	27.143
2"	50	152.4	92.1	120.6	19.0	4	19.0	165	200	2.12	42.4115
2½"	65	177.8	104.8	139.7	19.0	4	22.2	185	200	3.58	71.675
3"	80	190.5	127.0	152.4	19.0	4	23.8	205	200	5.42	108.573
4"	100	228.5	157.2	190.5	19.0	8	23.8	245	260	8.48	169.646
5"	125	254.0	185.7	215.9	22.2	8	23.8	265	260	13.25	265.071
6"	150	279.4	215.9	241.3	22.2	8	25.4	285	310	19.085	381.703
8"	200	342.9	269.9	298.4	22.2	8	28.6	355	360	33.929	678.584
10"	250	406.4	323.8	361.9	25.4	12	30.2	405	460	53.014	1060.28
12"	300	482.6	381.0	431.8	25.4	12	31.8	485	510	76.340	1526.81
14"	350	533.4	412.7	476.7	28.6	12	34.9	555	562	103.908	2078.16
16"	400	596.9	469.9	539.7	28.6	16	36.5	605	612	135.716	2714.33
18"	450	635.0	533.4	577.8	31.7	16	39.7	605	612	171.766	3435.33
20"	500	698.5	584.2	635.0	31.7	20	42.9	630	612	212.057	4241.15
24"	600	812.8	692.1	749.3	34.9	20	47.6	755	612	305.362	6107.25

**Note: Flange to flange distance (FD) Tolerance: 1) 1/2"(15NB) to 6"(150NB): +/-3mm
 2) 8"(200NB) to 24"(600NB): +/-5mm**

- All dimensions are in 'mm'
- For dimensions of line size above 600NB, please consult factory.
- Typical mounting dimensions are for reference only.

- Wet Calibrated at IEC/ISO/EN17025 Accredited Calibration Laboratory.
- Flow meter should be selected with the help of Nomograph (recommended full scale velocity).
- Flow indication of 6-digit max. up to 999999.

Flow Nomograph



Product

Ordering Information:

Order Code for Flow Transmitter														
Sample Order Code: ET1 P2 EE2 EC1 O12 O2X AR2 CO1X PP2														
Parameter	Code	Description	Parameter	Code	Description	Parameter	Code	Description	Parameter	Code	Description			
ET	Electronics Transmitter	ET1	Field Mount Weather Proof IP67	AR	Alarm Relay Output	P	Power Supply	P1	90 to 250 VAC	CO1	Communication Output1 (Any One)	AR1	1 Relay Output	
		ET2	Field Mount Weather Proof IP68					AR2	2 Relay Outputs			CO11	RS485(MODBUS RTU)/GSM/GPRS/Ethernet MODBUS TCP	
		ET3	DIN Standard (IP 54)					AR3	NA	CO1X	NA			
		ET4	Flameproof (CMRI IIA IIB Certified)	(maximum two alarms or two Relays)					PP	Process Pressure Calibration Range	PP1	10 Kg		
		ET5	ATEX Exd	EE	MOC Electronics Enclosure			EE1			Aluminium Die Cast	PP2	20 Kg	
EC	Electrical Connection	EC1	M20 ·1.5 F			EE2	SS316	PPX			NA			
		EC2	1/2 Inch NPT F	O1	Output 1 (Any One)	O11	4 to 20 mA	O2	Output 2 (Any One)	O21	Pulse (Open Collector Type)			
		ECY	Other			O12	4 to 20 mA HART (Generic)			O2X	NA			
O1	Output 1 (Any One)	O1X	NA	Note:										
		O2	Output 2 (Any One)	O21	Pulse (Open Collector Type)	•In case of flameproof version only electronics enclosure is flameproof certified.								
O2X	NA			•Accuracy defined at Lab Conditions.										
•Relay & Alarms are programable. Relay 1 is programmable for High / Low / Batch.														

Order Code for Flow Tube

Sample Order Code :

FT1	EL2	RCL1	L1	PC2	CMF1	CMC1	MF2	FCX	CMT1	CME1	IP1
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Parameter		Code	Description	Code	Description
FT	Flow Tube	FT 15	15 NB	FT 600	600 NB
		FT 20	20 NB	FT 700	700 NB
		FT 25	25 NB	FT 800	800 NB
		FT 32	32 NB	FT 900	900 NB
		FT 40	40 NB	FT 1000	1000 NB
		FT 50	50 NB	FT 1100	1100 NB
		FT 65	65 NB	FT 1200	1200 NB
		FT 80	80 NB	FT 1400	1400 NB
		FT100	100 NB	FT 1500	1500 NB
		FT125	125 NB	FT 1600	1600 NB
		FT150	150 NB	FT 1800	1800 NB
		FT200	200 NB	FT 2000	2000 NB
		FT250	250 NB	FT 2200	2200 NB
		FT300	300 NB	FT 2400	2400 NB
		FT350	350 NB	FT 2600	2600 NB
		FT400	400 NB	FT 2800	2800 NB
		FT450	450 NB	FT 3000	3000 NB
		FT500	500 NB		
EL	Electronics Location	EL1	Integral (Local)		
		EL2	Remote		
RCL	Remote Cable Length	RCL1	5 Meter		
		RCL2	10 Meter		
		RCL3	15 Meter		
		RCL4	25 Meter		
		RCLX	NA		
L	Flow Tube Protection Class	L1	IP-67 (In case of Integral)		
		L2	IP-68 (In case of Remote)		
PC	Process Connection	PC1	Threaded (15 to 50 NB)		
		PC2	Flanged (15 To 3000 NB)		
		PC3	Triclover (15 to 100 NB)		
		PC4	SMS Union (25 to 100 NB)		
		PC5	Compact (Wafer)- 50 to 200 NB Maximum		
CMF	Material of construction - Flange	CMF1	MS		
		CMF2	CS		
		CMF3	SS 304		
		CMF4	SS 316		
		CMFX	NA		
CMC	Material of construction - Coil Housing	CMC1	SS 304		
MF	Flow Tube Lining Material	MF1	Neoprene Rubber (Above 40 NB)		
		MF2	Ebonite Rubber (Above 40 NB)		
		MF3	PFA (15 to 300 NB)		
		MF4	PTFE (15 to 600 NB)		
		MF5	PU (15 to 400 NB)		
		MF6	Ceramic (15 to 600 NB)		
		MFY	Other		
FC	Flange Standard and Rating	FC1	ANSI 150 B16.5		
		FC2	ANSI 300 B16.5		
		FC3	ANSI 600 B 16.5		
		FC4	DIN PN 10 EN 1092-1		
		FC5	DIN PN 16 EN 1092-1		
		FC6	DIN PN 25 EN 1092-1		
		FC7	DIN PN 40 EN 1092-1		
		FC8	IS 1538		
		FC9	AWWA Table D		
		FC10	AWWA Table F		
FCY		FCY	Other		
		FCX	NA		
CMT	Material of construction - Flow Tube	CMT1	SS 304		
		CMT2	SS 316		
		CMT3	Other		
CME	Material of construction - Electrode	CME1	SS 316L		
		CME2	Hastelloy C		
		CME3	Platinum		
		CME4	Tantalum		
		CME5	Titanium		
IP	Inline Pressure Sensor	IP1	20 Kg		
		IPX	NA		

Note:

- Due to our continuous product revisions, design specification and model numbers are subject to change without notice.
- To be used for industrial applications.
- For other requirement please consult factory.



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