

General Specifications

ADMAG TI Series AXG Electromagnetic Flowmeter Marine Approval Type



GS 01E22A21-04EN

■ OUTLINE

This General Specifications describes ADMAG TI Series AXG Electromagnetic Flowmeter for Marine Approval Types. For standard specifications, functions, other optional specifications, limitation and separate table, please refer to the General Specifications as below.

Document Name	Document No.
ADMAG TI Series AXG Electromagnetic Flowmeter	GS 01E22A01-01EN

■ CONFORMITY STANDARDS

In addition to CONFORMITY STANDARDS described in the general specifications of ADMAG TI Series AXG Electromagnetic Flowmeter, following marine approval have been approved.

Please refer to GS 01E22A01-01EN for other specifications.

Marine Approval:

Det Norske Veritas Type Approval

Approval/Cert.no: TAA00002H4

Location classes:

Temperature D

Humidity B

Vibration A

EMC A

Enclosure C (IP66/IP67)

URL:

<https://approvalfinder.dnvgl.com/#approval/TAA00002H4>

■ MODEL AND SUFFIX CODE

The model name and basic specification code of the classification type product of ADMAG TI Series AXG Electromagnetic Flowmeter are described. Please refer to GS 01E22A01-01EN for the ADMAG TI Series AXG Electromagnetic Flowmeter for optional codes.

Note:

- 1: There are some limitations on the combination of specifications. Read specification code table when selecting specification code.
- 2: For both wafer and flange type of 2.5 to 10 mm (0.1 to 0.4 in.), prepare 15 mm (0.5 in.) diameter nominal flanges on the process pipe side. However, for the flanges EN PN40, JIS 10K, JIS 20K, types for the nominal diameter 10 mm (0.4 in.) flange can also be selected (Process Connection Code DE4, DJ1, and DJ2).
- 3: For EN standard wafer and flange type of sizes 2.5 to 50 mm (0.1 to 2 in.), select PN40 even for lower pressure rating because the dimensions of mating faces for PN10, 16, and 40 are the same. For EN standard wafer and flange type of sizes 65 to 150 mm (2.5 to 6 in.), select PN16 even for lower pressure rating because the dimensions of mating faces for PN10 and 16 are the same.



Integral Flowmeter



Remote Transmitter

- 4: The dimensions of mating faces are based on the following flange standards. The usable range is also limited by fluid temperature and pressure conditions. JIS F12: JIS G 3443-2, JIS 10K, 20K: JIS B 2220 and JIS G 3443-2, ASME: ASME B 16.5, EN: EN 1092-1, JPI: JPI-7S-15, AS: AS2129
- 5: The grounding device is selectable from none, grounding ring, or built-in grounding electrode. When selecting the grounding ring or the built-in grounding electrode, it is also necessary to select its type (material etc.) from the optional codes.
- 6: The lay length (face to face) of the flange type of PFA lining sizes 15 to 400 mm (0.5 to 16 in.) conforms to ISO standard (ISO 20456) except for ASME Class 600 flange high pressure type. The lay length depends on the presence or absence of the optional grounding rings or gaskets, so see the Dimensional Drawings.
- 7: ⚠️ Lining, electrode and grounding device (grounding ring plate, grounding ring electrode, built-in grounding electrode) are wetted parts. Users must consider the characteristics of selected wetted parts material and influence of process fluids. The use of inappropriate materials can result in the leakage of corrosive process fluids and cause injury to personnel and/or damage to plant facilities. It is also possible that the instrument itself can be damaged and that fragments from the instrument can contaminate the user's process fluids. Be very careful with highly corrosive process fluids such as hydrochloric acid, sulfuric acid, hydrogen sulfide, sodium hypochlorite, and high-temperature steam (150°C [302°F] or above). Contact Yokogawa for detailed information of the wetted parts material.
- 8: In the case of remote sensor, select "None (or Without)" for each specification code of "Power Supply", "Communication and I/O", "Transmitter Wiring Terminal" and "Display".
- 9: In the case that final destination is Taiwan and explosion type is required, select IECEx flameproof type.
- 10: When combining IECEx Flameproof and CE marking, it is limited to applications mounted on seagoing vessels.
- 11: ⚠️ For Power Cord -1, TDK ferrite core ZCAT3035-1330 is attached to the product. Be sure to attach the ferrite core to the wiring port side of the cable connected to the I/O terminal.
- 12: ⚠️ Specify the cable length for remote type up to 5 m (16feet).

●General-purpose, Submersible, Explosionprotection, Wafer, Flange, PFA Lining (2.5 to 400 mm/0.1 to 16 in.)

Model	Suffix Code	Description	Limitation	
AXG002		Electromagnetic Flowmeter (2.5 mm/0.1 in)		
AXG005		Electromagnetic Flowmeter (5 mm/0.2 in)		
AXG010		Electromagnetic Flowmeter (10 mm/0.4 in)		
AXG015		Electromagnetic Flowmeter (15 mm/0.5 in)		
AXG025		Electromagnetic Flowmeter (25 mm/1 in)		
AXG032		Electromagnetic Flowmeter (32 mm/1.25 in)		
AXG040		Electromagnetic Flowmeter (40 mm/1.5 in)		
AXG050		Electromagnetic Flowmeter (50 mm/2 in)		
AXG065		Electromagnetic Flowmeter (65 mm/2.5 in)		
AXG080		Electromagnetic Flowmeter (80 mm/3 in)		
AXG100		Electromagnetic Flowmeter (100 mm/4 in)		
AXG125		Electromagnetic Flowmeter (125 mm/5 in)		
AXG150		Electromagnetic Flowmeter (150 mm/6 in)		
AXG200		Electromagnetic Flowmeter (200 mm/8 in)		
AXG250		Electromagnetic Flowmeter (250 mm/10 in)		
AXG300		Electromagnetic Flowmeter (300 mm/12 in)		
AXG350		Electromagnetic Flowmeter (350 mm/14 in)		
AXG400		Electromagnetic Flowmeter (400 mm/16 in)		
Use	-G	General-purpose		
	-C	Explosion protection		
	-W	Submersible	15 to 400 mm (0.5 to 16 in.), only for Remote sensor	
Construction	A	Integral Flowmeter		
	G	Remote Sensor (for AXG4A)		
Explosion Protection	000	Non Explosion Protection Approval		
	KF2	ATEX Flameproof	See Restriction for Explosion Protection type in GS 01E22A01-01EN	
	SF2	IECEx Flameproof	See Note 9, 10 and Restriction for Explosion protection type in GS 01E22A01-01EN	
Process Connection	Wafer	AA1	ASME Class 150 Wafer	2.5 to 200 mm (0.1 to 8 in.)
		AA2	ASME Class 300 Wafer	2.5 to 200 mm (0.1 to 8 in.)
		AE1	EN PN10 Wafer	200 mm (8 in.)
		AE2	EN PN16 Wafer	65 to 200 mm (2.5 to 8 in.)
		AE4	EN PN40 Wafer	2.5 to 50 mm (0.1 to 2 in.)
		AG1	JIS F12 Wafer	80 to 200 mm (3 to 8 in.)
		AJ1	JIS 10K Wafer	2.5 to 200 mm (0.1 to 8 in.)
		AJ2	JIS 20K Wafer	2.5 to 200 mm (0.1 to 8 in.)
	AP1	JPI Class 150 Wafer	2.5 to 200 mm (0.1 to 8 in.) (32, 65, and 125 mm (1.25, 2.5, and 5 in.) are not available.)	
	Stainless Steel Flange (F304)	BA1	ASME Class 150 Flange	
		BA2	ASME Class 300 Flange	2.5 to 300 mm (0.1 to 12 in.)
		BE1	EN PN10 Flange	200 to 400 mm (8 to 16 in.)
		BE2	EN PN16 Flange	65 to 300 mm (2.5 to 12 in.)
		BE3	EN PN25 Flange	80 to 400 mm (3 to 16 in.)
		BE4	EN PN40 Flange	2.5 to 50 mm (0.1 to 2 in.)
		BG1	JIS F12 Flange	80 to 400 mm (3 to 16 in.)
		BJ1	JIS 10K Flange	
		BJ2	JIS 20K Flange	2.5 to 300 mm (0.1 to 12 in.)
		BP1	JPI Class 150 Flange	32, 65, and 125 mm (1.25, 2.5, and 5 in.) are not available.
		DE4	EN PN40 Flange (Nominal Diameter 10 mm)	2.5 to 10 mm (0.1 to 0.4 in.)
DJ1		JIS 10K Flange (Nominal Diameter 10 mm)	2.5 to 10 mm (0.1 to 0.4 in.)	
DJ2	JIS 20K Flange (Nominal Diameter 10 mm)	2.5 to 10 mm (0.1 to 0.4 in.)		

(Continued)

Process Connection	Stainless Steel Flange (F316)	PA1	ASME Class 150 Flange	32, 65, and 125 mm (1.25, 2.5, and 5 in.) are not available.
		PA2	ASME Class 300 Flange	2.5 to 300 mm (0.1 to 12 in.) (32, 65, and 125 mm (1.25, 2.5, and 5 in.) are not available.)
		PE1	EN PN10 Flange	200 to 400 mm (8 to 16 in.)
		PE2	EN PN16 Flange	80 to 300 mm (3 to 12 in.) (125 mm (5 in.) is not available.)
		PE3	EN PN25 Flange	80 to 400 mm (3 to 16 in.)
		PE4	EN PN40 Flange	2.5 to 50 mm (0.1 to 2 in.) (32 mm (1.25 in.) is not available.)
		PJ1	JIS 10K Flange	32, 65, and 125 mm (1.25, 2.5, and 5 in.) are not available.
	Carbon Steel Flange	CA1	ASME Class 150 Flange	50 to 400 mm (2 to 16 in.)
		CA2	ASME Class 300 Flange	50 to 300 mm (2 to 12 in.)
		CE1	EN PN10 Flange	200 to 400 mm (8 to 16 in.)
		CE2	EN PN16 Flange	65 to 300 mm (2.5 to 12 in.)
		CE4	EN PN40 Flange	50 mm (2 in.)
		CG1	JIS F12 Flange	80 to 400 mm (3 to 16 in.)
		CJ1	JIS 10K Flange	50 to 400 mm (2 to 16 in.)
		CJ2	JIS 20K Flange	50 to 300 mm (2 to 12 in.)
CS1	AS Table D Flange	50 to 400 mm (2 to 16 in.) (65, and 125 mm (2.5, and 5 in.) are not available.)		
CS2	AS Table E Flange	50 to 300 mm (2 to 12 in.) (65, and 125 mm (2.5, and 5 in.) are not available.)		
Lining	A	PFA Lining		
Electrode	L	Stainless Steel 316L		
	P	Platinum-Iridium		
	H	Nickel Alloy		
	T	Tantalum		
	V	Titanium		
	W	Tungsten Carbide	2.5 mm, 5 mm, 10 mm (0.1, 0.2, 0.4 in.) are not available	
Grounding Device	1	None		
	2	Grounding Rings	Select an optional code	
	3	Built-in Grounding Electrodes	Select an optional code	
Housing and Coating	1	Standard Material with Standard Coating		
	2	Standard Material with Rugged Coating	Not applicable for Submersible	
Cable Entry	0	JIS G1/2 Female	See Restriction for Explosion Protection type	
	2	ASME 1/2 NPT Female	Not applicable for Submersible, See Restriction for Explosion Protection type	
	4	ISO M20×1.5 Female	Not applicable for Submersible, See Restriction for Explosion Protection type	
Accuracy	B	Standard		
Power Supply	-1	100-240 V AC / 100-120 V DC	Only for Integral Flowmeter	
	-2	24 V AC / DC	Only for Integral Flowmeter	
	-N	None (Remote Sensor)	Only for Remote Sensor	
Communication and I/O	J#	#: A, B, C, D, E, F, G, H, J, K, HART 7 and I/O (Type A to K, See separate table)	Only for Integral Flowmeter	
	M#	#: 0, 2, 6 Modbus and I/O (Type 0, 2, 6, See separate table)	Only for Integral Flowmeter	
	NN	None (Remote Sensor)	Only for Remote Sensor	

(Continued)

Transmitter Wiring Terminal	1	M4 Screw-type	
	2	Clamp Type	
	N	None (Remote Sensor)	Only for Remote Sensor
Display	1	With Display (English, Multi-language)	Only for Integral Flowmeter
	2	With Display (English, Chinese)	Only for Integral Flowmeter
	N	Without Display/Remote Sensor	
Optional Specification		/# Refer to optional specification table of GS 01E22A01-01EN.	

●General-purpose, Submersible, Explosionprotection, Flange, PFA Lining (High Pressure Type, ASME Class 600)

Model	Suffix Code	Description	Limitation
AXG025		Electromagnetic Flowmeter (25 mm/1 in)	
AXG040		Electromagnetic Flowmeter (40 mm/1.5 in)	
AXG050		Electromagnetic Flowmeter (50 mm/2 in)	
AXG080		Electromagnetic Flowmeter (80 mm/3 in)	
AXG100		Electromagnetic Flowmeter (100 mm/4 in)	
Use	-G	General-purpose	
	-C	Explosion protection	
	-W	Submersible	
Construction	A	Integral Flowmeter	
	G	Remote Sensor (for AXG4A)	
Explosion Protection	000	Non Explosion Protection Approval	
	SF2	IECEx Flameproof	See Note 9, 10 and Restriction for Explosion protection type in GS 01E22A01-01EN
Process Connection	Stainless Steel Flange (F304) EA4	ASME Class 600 Flange (High Pressure)	
Lining	A	PFA Lining	
Electrode	L	Stainless Steel 316L	
Grounding device	2	Grounding Rings	Select an optional code
Housing and Coating	1	Standard Material with Standard Coating	
	2	Standard Material with Rugged Coating	Not applicable for Submersible
Cable Entry	0	JIS G1/2 Female	See Restriction for Explosion Protection type
	2	ASME 1/2 NPT Female	Not applicable for Submersible, See Restriction for Explosion Protection type
	4	ISO M20×1.5 Female	Not applicable for Submersible, See Restriction for Explosion Protection type
Accuracy	B	Standard	
Power Supply	-1	100-240 V AC / 100-120 V DC	Only for Integral Flowmeter
	-2	24 V AC / DC	Only for Integral Flowmeter
	-N	None (Remote Sensor)	Only for Remote Sensor
Communication and I/O	J#	#: A, B, C, D, E, F, G, H, J, K, HART 7 and I/O (Type A to K, See separate table)	Only for Integral Flowmeter
	M#	#: 0, 2, 6 Modbus and I/O (Type 0, 2, 6, See separate table)	Only for Integral Flowmeter
	NN	None (Remote Sensor)	Only for Remote Sensor
Transmitter Wiring Terminal	1	M4 Screw-type	
	2	Clamp Type	
	N	None (Remote Sensor)	Only for Remote Sensor
Display	1	With Display (English, Multi-language)	Only for Integral Flowmeter
	2	With Display (English, Chinese)	Only for Integral Flowmeter
	N	Without Display/Remote Sensor	

●General-purpose, Explosion protection. Remote Transmitter

Model	Suffix Code	Description	Limitation
AXG4A		Electromagnetic Flowmeter Remote Transmitter	
Use	-G	General-purpose	
	-C	Explosion Protection	
Explosion Protection	000	Non Explosion Protection Approval	
	KF2	ATEX Flameproof	See Restriction for Explosion Protection type in GS 01E22A01-01EN
	SF2	IECEx Flameproof	See Note 9, 10 and Restriction for Explosion protection type in GS 01E22A01-01EN
Housing and Coating	1	Standard Material with Standard Coating	
	2	Standard Material with Rugged Coating	
Cable Entry	0	JIS G1/2 Female	See Restriction for Explosion Protection type
	2	ASME 1/2 NPT Female	See Restriction for Explosion Protection type
	4	ISO M20×1.5 Female	See Restriction for Explosion Protection type
Power Supply	1	100-240 V AC / 100-120 V DC	
	2	24 V AC / DC	
Communication and I/O	J#	#: A, B, C, D, E, F, G, H, J, K, HART 7 and I/O (Type A to K, See separate table)	
	M#	#: 0, 2, 6 Modbus and I/O (Type 0, 2, 6, See separate table)	
Transmitter Wiring Terminal	1	M4 Screw-type	
	2	Clamp Type	
Display	1	With Display (English, Multi-language)	
	2	With Display (English, Chinese)	
	N	Without Display	

●Signal Cable

Model	Suffix Code	Optional Code	Description
AX01C			Electromagnetic Flowmeter Signal Cable
Cable Finish and Length	-A### (*1)		Unfinished, Cable length ### m, Set of Finishing Parts for M4 Screws
	-C### (*1)		Finished for AXG4A, Cable Length ### m
Finishing Parts		/C# (*2)	Finishing Parts (# sets)

*1: Specify the cable length in the "###" with the numerical value three digits (001 to 200) as multiple of 1 meter (e.g. 001, 002, or 005) for a length up to 5 m, as multiple of 5 meters up to 100 m (e.g. 010, 020, or 100), or as multiple of 10 meters up to 200 m (e.g. 110, 120, or 200).
The maximum cable length: -A###: 200 m, -C###: 5 m

*2: Specify the finishing parts quantity in the "#" with the numerical value one digit (1 to 9).

■ OPTIONAL CODE

Item	Specification and Applicable Condition	Code
Marine Approval	Det Norske Veritas Type Approval Approval/Cert.no: TAA00002H4	WCD

For other optional codes, refer to the general specifications (GS 01E22A01-01EN).

Be sure to add / WCD to applications that require Marine approval.

■ ACCESSORIES

- Centering Device (wafer type only): 1 set
- Blanking Plug: 1 to 2 pcs.
- Gasket (sensor side): 2 sheets
- Mounting (transmitter only): 1 set
- Ferrite Core (Power Cord -1): 2pcs.

Note: Accessories differ depending on specifications to be selected.

For TERMINAL CONFIGURATION and ORDERING INFORMATION, refer to GS 01E22A01-01EN.

■ TRADEMARKS

Det Norske Veritas is a registered trademark of Det Norske Veritas Group.

HART is a registered trademark of FieldComm Group.

Modbus is a registered trademark of AEDG Schneider.

ADMAG, AXG, AXW, BRAIN TERMINAL, and FieldMate are registered trademarks of Yokogawa Electric Corporation.

All other company and product names mentioned in this document are trade names, trademarks or registered trademarks of their respective companies.

In this document, trademarks or registered trademarks are not marked with ™ or ®.

<Information on EU WEEE Directive>

EU WEEE (Waste Electrical and Electronic Equipment) Directive is only valid in the EU.

This instrument is intended to be sold and used only as a part of equipment which is excluded from WEEE Directive, such as large-scale stationary industrial tools, a large-scale fixed installation and so on, and, therefore, subjected to the exclusion from the scope of the WEEE Directive. The instrument should be disposed of in accordance with local and national legislation/regulations.