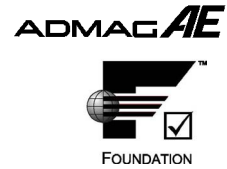


General Specifications

Model ADMAG AE Fieldbus Communication



GS 01E07F01-00E

Fieldbus is the digital communication line for the field instruments, whose signal is internationally standardized by Fieldbus FOUNDATION.

The Fieldbus bi-directional digital communication performance makes possible for the field instruments and the control devices to be a complete on-line system, superseding the existing analog transmission lines. Also, the precise transmission of various process data including the PV and MV of the field instruments is well established by the Fieldbus multi-sensing function. Thus, based on FOUNDATION Fieldbus specifications, ADMAG AE Fieldbus models offer more flexible instrumentation through a higher level of communication capability and propose the cost reduction by multi-drop wirings with less cables.



FEATURES

- Interoperability
FOUNDATION Fieldbus specifications grant the interoperability of the field instruments without preparing designated softwares for the instrument.
- Reduction of instrumentation cost
The multi-drop wiring on the Fieldbus communication line contributes to the reduction of wiring cost.
- Enhanced AI function block
ADMAG AE Fieldbus model, for example, has enhanced AI function block for monitoring the totalized value.
- Alarm function
ADMAG AE Fieldbus models securely support various alarm functions, such as high/low alarm, notice of block error, etc. based on FOUNDATION Fieldbus specifications.
- Self-diagnostic function
The reliable self-diagnostic function detects the measuring range failure, hardware failure, or parameters range violation.
- PID function block(option)
PID function block enables field devices to control processes.
The option includes the link master function.

FOUNDATION is a registered trademark of Fieldbus FOUNDATION.

STANDARD SPECIFICATIONS

For items other than those described below, refer to GS 01E07A00-01E.

Applicable Model:

ADMAG AE excluding explosion proof model except ATEX ex-proof type or 24V DC version.

Output Signal:

Digital communication signal based on FOUNDATION Fieldbus protocol.

Conditions of Communication Line:

Supply Voltage: 9 to 32 V DC

Supply Current: 0 mA (No need power supply from bus)

Power Supply Effect:

No effect (within the supply voltage of 9 to 32 V DC)

Functional Specifications:

Functional specifications for Fieldbus communication conform to the standard specifications (H1) of FOUNDATION Fieldbus.

Function Block: AI block (enhanced), PID block(option)

Link Master function(option)

STANDARD PERFORMANCE

Accuracy:

PFA, Ceramics

Size(mm)	Actual Flow Velocity(m/s)	Accuracy
2.5 to 15	less than 0.3	±1.5mm/s
	0.3 or more	±0.5% of rate
25 to 400	less than 0.15	±0.75mm/s
	0.15 or more	±0.5% of rate

Polyurethane rubber

Size(mm)	Actual Flow Velocity(m/s)	Accuracy
25 to 400	less than 0.3	±1.5mm/s
	0.3 or more	±0.5% of rate

MODEL AND SUFFIX CODES

Integral Type Flowmeter	G	AE□□□MH-□□□-□□□-A1□□/FB
	N*	
		* N : only for ATEX (/KF2) and FM (/FF1/FN1) ex-proof types
Remote Type Converter		AE14-□-A1□/FB
		/FB:Digital communication (FOUNDATION Fieldbus protocol)
		Ex-proof type AE14/FB; only for ATEX(/KF2) and FM(/FF1/FN1)

OPTIONAL SPECIFICATIONS

Items	Description	Code
PID/LM function	PID control function and Link Master function (Set as Link Master device when shipped.)	/LC1

<Setting When Shipped>

Tag Number(PD_TAG)*1	Default(FT1002)for PD_TAG, nothing for tag plate unless otherwise specified
Output Mode (L_TYPE)	'Direct' unless otherwise specified in order
Flow rate Range (XD_SCALE) Lower/Higher Range Value and Unit	'0 to 10m/s' unless otherwise specified in order
Output Range (OUT_SCALE) Lower/Higher Range Value and Unit	Same data as 'XD_SCALE' unless otherwise specified
Node Address	'0×F4(244)' unless otherwise specified

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- *1: Specified Tag Number is entered in the amplifier memory and also engraved on the stainless steel plate.
- For entry in the amplifier memory, Up to 32 letters using any of alphanumerics and symbols.
 - For engraving on the stainless steel plate, Up to 16 letters using any of alphanumerics and symbols.

Explanation of parameters listed above:

- (1) XD_SCALE : Set the input value from Transducer block (input range of sensor) which corresponds to 0% value and 100% value of the calculation in the AI function block. In the case of ADMAG AE, the value set as flow span should be entered to this parameter. When 'Direct' is set to 'L_TYPE', the data set to XD_SCALE is output.
- (2) OUT_SCALE : Output scaling parameter. Set the output value which corresponds to 0% value and 100% value of the calculation in the AI function block. When 'Indirect' is set to 'L_TYPE', the data set to OUT_SCALE is output.
- (3) L_TYPE: Determines if the values passed by the transducer block to the AI block may be used directly (Direct) or if the value is in different units and must be converted linearly (Indirect) using the input range defined by XD_SCALE and the associated output range (OUT_SCALE).

TERMINAL CONNECTION

Integral Type Flowmeter:

Terminal Symbols	Description																						
<table border="0"> <tr><td>[</td><td>P+</td></tr> <tr><td>]</td><td>P-</td></tr> <tr><td>[</td><td>I+</td></tr> <tr><td>]</td><td>I-</td></tr> <tr><td>[</td><td>L+</td></tr> <tr><td>]</td><td>N/-</td></tr> <tr><td>⊕</td><td></td></tr> </table>	[P+]	P-	[I+]	I-	[L+]	N/-	⊕		<table border="0"> <tr><td>]</td><td>Not used</td></tr> <tr><td>]</td><td>Fieldbus communication signal</td></tr> <tr><td>]</td><td>Power supply</td></tr> <tr><td></td><td>Protective grounding</td></tr> </table>]	Not used]	Fieldbus communication signal]	Power supply		Protective grounding
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⊕																							
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Remote Type Converter (AE14):

Terminal Symbols	Description																																														
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<Ordering Information>

1. Model, suffix codes, and optional codes
2. Flow rate range and unit(XD_SCALE)
'0 to 10m/s' unless otherwise specified in order
3. Output mode (L_TYPE)
Select 'Direct' or 'Indirect'; otherwise the mode is factory set to 'Direct.'
4. Output range and units (OUT_SCALE)
Same range and unit as 'XD_SCALE' are set to 'OUT_SCALE' unless otherwise specified in order.
5. Tag Number(PD_TAG)
6. Node Address
7. Fluid Name

<Related Instruments>

The customer should prepare instrument maintenance tool, terminator, fieldbus power supply etc.