# General Specifications

# AXFA11G Magnetic Flowmeter Remote Converter

ADMAG **AXF** 

# GS 01E20C01-01E

The AXFA11 magnetic flowmeter high grade remote converter is a sophisticated product with outstanding reliability and ease of operation, developed on the basis of decades of field-proven experience.

The AXFA11 employs an LCD indicator, infra-red switches, and "Easy Setup" parameters to ensure substantially improved ease of maintenance.

The combination of a replaceable electrode type flowtube and diagnostics to detect the adhesion level on the electrodes dramatically improves maintainability.

The AXFA11 also employs the fluid noise free "Dual Frequency Excitation Method" and the newly added "Enhanced Dual Frequency Excitation Method" as an option for more difficult applications to ensure greater stability and quicker response.

Note: The "Dual Frequency Excitation Method" is Yokogawa's unique technology.

Refer to GS 01E25D11-01EN for the item of AXW Remote Flowtube marked with " $\diamond$ ".

# **FEATURES**

#### User-oriented Functionality

#### Fluid Adhesion Level Diagnosis

By constantly monitoring the level of insulating substance on the electrodes, it is possible to determine when maintenance is required.

With the utilization of an optional replaceable electrode type flowtube, in cases of severe adhesion, the electrodes can be easily removed from the flowmeter and cleaned.

#### **Clear and Versatile Indications**

The LCD indicator employs a large, backlit full dotmatrix, that can facilitate various displays. One to three lines are available. When there is an alarm

condition, a full description of the countermeasure is indicated.

#### "Easy Setup" Parameters

The most frequently used parameters are arranged in a group at the top.

The infra-red switches enable the users to set parameters without opening the cover.

### **Operation Immediately after Installation**

The AXFA11 is shipped with the main parameters completely set. Therefore, the AXFA11 can be operated immediately after installation and wiring.

#### **Compact and Light-weight Converter**

The AXFA11 is equipped with a compact and lightweight amplifier.



# • Expansion of Product Lineup

#### Improve Accuracy Specification

The standard accuracy is 0.35% of reading. Also available is an optional high accuracy calibration rated at 0.2% of reading.

#### Enhanced Performance and Specifications

#### **Enhanced Dual Frequency Excitation Method**

The "Enhanced Dual Frequency Excitation Method" can be optionally selected. For difficult applications such as for high concentration

slurries or low conductivity fluid, extremely stable measurements can be realized.

#### Improved Minimum Conductivity

The newly designed AXF converter permits the measurement of fluids with conductivity as low as  $1\mu S/\text{cm}.$ 

#### **High-Speed Pulse Output**

The pulse rate now goes up to 10,000 pps (pulse/ second) for use with high speed applications such as in short time batch processes.

#### Versatile Input/ouput Function

The functions of one current output, one pulse output, one alarm output, two status inputs, and two status outputs are available.

#### CONTENTS

CONTENTS	
Features	P. 1
Standard Specifications	P. 2
Standard Performance	P. 4
Normal Operating Conditions	P. 5
Accessories	P. 5
Model and Suffix Code	P. 6
Optional Specifications for AXFA11 Remote Converter	P. 7
Terminal Configuration, Terminal Wiring	P. 7
External Dimensions	P. 8
Ordering Information	P.10



Yokogawa Electric Corporation 2-9-32 Nakacho, Musashino-shi, Tokyo 180, Japan Tel.: +81-422-52-4443 Fax.: +81-422-52-2018 GS 01E20C01-01E ©Copyright June 2003 11th Edition Sep. 2015

# STANDARD SPECIFICATIONS

#### **Excitation Method:**

- Standard dual frequency excitation: AXF: size 2.5 to 400 mm (0.1 to 16 in.)
- Enhanced dual frequency excitation: AXF: size 25 to 200 mm (1.0 to 8.0 in.) (Optional code HF1 or HF2)
- Pulsed DC excitation:

AXW: size 500 to 1800 mm (20 to 72 in.)

#### Input Signal:

Two Status Inputs: Dry contact Load resistance: 200  $\Omega$  or less (ON), 100 k $\Omega$  or more (OFF)

### **Output Signals:**

- One Current Output: 4 to 20 mA DC (load resistance:  $1k\Omega$  maximum, including cable resistance)
- One Pulse Output: Transistor contact output (open collector) Contact capacity: 30 V DC (OFF), 200 mA (ON) Output rate: 0.0001 to 10,000 pps (pulse/second)
- One Alarm Output: Transistor contact output (open collector) Contact capacity: 30 V DC (OFF), 200 mA (ON)
- Two Status Outputs: Transistor contact output (open collector) Contact capacity: 30 V DC (OFF), 200 mA (ON)

#### **Communication Signals:**

BRAIN or HART communication signal (Superimposed on the 4 to 20 mA DC signal) Distance from Power Line: 15 cm (6 in.) or more (Parallel wiring should be avoided.)

#### **BRAIN:**

#### **Communication Distance:**

Up to 1.5 km (0.93 miles), when polyethylene insulated PVC-sheathed cables (CEV cables) are used.

Communication distance varies depending on the type of cable and wiring used.

#### Load Resistance:

250 to 450  $\Omega$  (including cable resistance)

#### Load Capacitance: 0.22 $\mu\text{F}$ or less

Load Inductance: 3.3 mH or less

# Input Impedance of Communicating Device: 10 k $\Omega$ or more (at 2.4 kHz)

HART:

#### Load Resistance:

250 to 600  $\Omega$  (including cable resistance) Note: HART is a registered trademark of the HART Communication Foundation.

#### **Data Security During Power Failure:**

Data (parameters, totalizer value, etc.) storage by EEPROM. No back-up battery required.

#### Indicator:

Full dot-matrix LCD (32×132 pixels)

#### Lightning Protector:

The lightning protector is built into the excitation current output, the current output, the signal common, and the pulse/alarm/status input and output terminals. When optional code A is selected, the lightning protector is built into the power terminals.

#### Protection:

IP66, IP67

#### Coating:

Case and Cover: Corrosion-resistant coating Coating Color; Silver gray (Munsell 3.2PB 7.4/1.2 or its equivalent)

Cover Mounting Screws: Polyurethane corrosion-resistant Coating Color: Mint green (Munsell 5.6BG 3.3/2.9 or its equivalent)

#### its equivalent

Converter Material:

# Case and Cover: Aluminum alloy

# Mounting/Shapes:

- Mounting: 2-inch pipe, panel or surface mounting
- Electrical Connection: ANSI 1/2 NPT female ISO M20 ×1.5 female
  - JIS G1/2 female
- Terminal Connection: M4 size screw terminal

#### Grounding:

Grounding resistance 100  $\Omega$  or less When optional code A is selected, grounding resistance 10  $\Omega$  or less shall be applied.

#### **Combined Remote Flowtube:**

- AXFA11 Converter can be combined with size 2.5 to 400 mm (0.1 to 16 in.) of AXF Remote Flowtube. However, ATEX, IECEx or TIIS certified AXF Remote Flowtube cannot be combined with AXFA11 Converter (In this case, use AXFA14 converter).
- If a combined converter is changed from AXFA11 to AXFA14 or vice versa, a new meter factor must be adjusted by flow calibrations.



AXFA11 Converter can be also combined with size 500 to 1800 mm (20 to 72 in.) of AXW Remote Flowtube.

Refer to GS 01E25D11-01EN regarding the combination with AXW Remote Flowtube.

#### Functions

#### How to Set Parameters:

The indicator's LCD and three infra-red switches enable users to set parameters without opening the case cover. Parameters can also be set with the configuration tool (Such as HHT (handheld terminal) or FieldMate<sup>™</sup>, etc.). The language for the HHT is English only.

#### **Displayed Languages:**

Users can choose a language from among English, Japanese, German, French, Italian, Spanish.

# Instantaneous Flow Rate/Totalized Value Display Functions:

The full dot-matrix LCD enables user selections of displays from one line to three lines for:

- Instantaneous flow rate
- Instantaneous flow rate (%)
- Instantaneous flow rate (bar graph)
- Current output value (mA)
- Totalized forward-direction flow rate
- Totalized reverse-direction flow rate
- Totalized differential flow rate
- Tag No.
- · Results of electrode adhesion diagnostics
- Communication type

#### **Totalizer Display Function:**

The flow rate is counted one pulse at a time according to the setting of totalization pulse weights. For forward and reverse flow measurement functions, the totalized values of the flow direction (forward or reverse) and the flow direction are displayed on the indicator together with the units. The difference of totalized values between the forward and reverse flow rate can be displayed. Totalization for the reverse flow rate is carried out only when "Forward and reverse flow measurement functions" is selected.

#### **Damping Time Constant:**

Time constant can be set from 0.1 second to 200.0 seconds (63% response). The default is 3 seconds.

#### Span Setting Function:

Span flows can be set in units such as volume flow rate, mass flow rate, time, or flow rate value. The velocity unit can also be set.

Volume Flow Rate Unit: kcf, cf, mcf, Mgal (US), kgal (US), gal (US), mgal (US), kbbl (US)\*, bbl (US)\*, mbbl (US)\*, μbbl (US)\*, MI (megaliter), m³, kl (kiloliter), I (liter), cm³

Mass Flow Rate Unit (Density must be set.): klb (US), lb (US), t (ton), kg, g

Velocity Unit: ft, m (meter)

Time Unit: s (sec), min, h (hour), d (day) \* "US Oil" or "US Beer" can be selected.

#### **Pulse Output:**

Scaled pulse can be output by setting a pulse weight. Pulse Width: Duty 50% or fixed pulse width (0.05, 0.1,

0.5, 1, 20, 33, 50, 100 ms) can be selected. Output Rate: 0.0001 to 10,000 pps (pulse/second)

#### Multi-range Function:

- Range switching via status input Status input enables the switching of up to four ranges.
- Automatic range switching When the flow rate exceeds 100 % of the range, transition to the next range (up to four ranges) is carried out automatically. Range switching can be confirmed by status outputs and indicator.

#### Forward and Reverse Flow Measurement Functions:

Flows in both forward and reverse directions can be measured. The reverse flow measurement can be confirmed by status output and indicator.

#### **Totalization Switch:**

The status output is carried out when a totalized value becomes equal to or greater than the set value.

#### Preset Totalization:

The parameter setting or status input enables a totalized value to be preset to a setting value or zero.

#### 0% Signal Lock:

Status input forcibly fixes the instantaneous flow rate display, current output, pulse output, and flow rate totalization to 0%.

#### Alarm Selection Function:

Alarms are classified into System Alarms (hard failures), Process Alarms (such as 'Empty Pipe', 'Signal Overflow' and 'Adhesion Alarm'), Setting Alarms, and Warnings. Whether alarms should be generated or not can be selected for each item.

The current output generated for an alarm can be selected from among 2.4 mA or less, fixed to 4 mA, 21.6 mA or more, or HOLD.

#### Alarm Output:

Alarms are generated only for the items selected via the 'Alarm Selection Function' if relevant failures occur.

#### Self Diagnostics Functions:

If alarms are generated, details of the System Alarms, Process Alarms, Setting Alarms and Warnings are displayed together with concrete descriptions of countermeasures.

#### Flow Upper/Lower Limit Alarms:

If a flow rate becomes greater or smaller than the set value, this alarm is generated. In addition, two upper limits (H, HH) and two lower limits (L, LL) can be set. If a flow rate becomes greater or smaller than any of the set values, the status is output.

#### **Electrode Adhesion Diagnostics Function:**

This function enables monitoring of the adhesion level of insulating substances to the electrodes. Depending on the status of adhesion, users are notified by a warning or an alarm via status outputs. If replaceable electrodes are used, they can be removed and cleaned when adhesion occurs.

# ■ STANDARD PERFORMANCE (◇)

#### Accuracy (Combined with AXF Remote Flowtube)

Note: The accuracy of a product before shipment is defined as totalized value at the result of calibration test in our water actual flow test facility. Calibrated conditions in our water actual test facility are as follows: Fluid temperature;  $20 \pm 10^{\circ}$ C Ambient temperature;  $20 \pm 5^{\circ}$ C Length of straight runs; 10 D or more on the upstream side; 5 D or more on the downstream side Reference conditions; Similar to BS EN29104 (1993); ISO 9104 (1991)

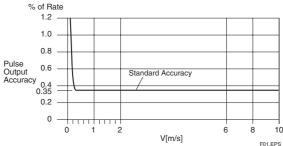
Pulse Output:

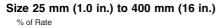
#### **PFA/Ceramics Lining:**

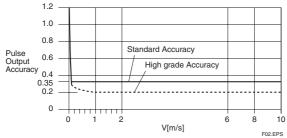
Size mm (in.)	Flow Velocity V m/s (ft/s)	Standard Accuracy <sup>(*)</sup> (Calibration code B)	Flow Velocity V m/s (ft/s)	High grade Accuracy (Calibration code C)
2.5 (0.1)	V < 0.3 (1)	±1.0 mm/s		
to 15 (0.5)	$\begin{array}{c} 0.3 \le V \le 10 \\ (1) & (33) \end{array}$	$\pm 0.35\%$ of Rate	-	_
	V < 0.15 (0.5)	±0.5 mm/s	V <0.15 (0.5)	$\pm$ 0.5 mm/s
$\begin{array}{c c} 25 (1.0) \\ to \\ 200 (8.0) \end{array} \begin{array}{c} 0.15 \leq V \leq 10 \\ (0.5) \end{array} \begin{array}{c} (33) \end{array}$		±0.35% of Rate	$\begin{array}{c} 0.15 \leq V < 1 \\ (0.5)  (3.3) \end{array}$	±0.18% of Rate ±0.2mm/s
	(0.5) (33)	Tidle	$1 \le V \le 10$ (3.3) (33)	$\pm$ 0.2% of Rate
		±0.5 mm/s		
		$\pm 0.35\%$ of Rate	-	_

\*: For enhanced dual frequency excitation (Option code HF2) add  $\pm$  1 mm/s to the standard accuracy.

#### Size 2.5 mm (0.1 in.) to 15 mm (0.5 in.)





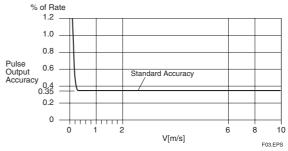


#### Polyurethane Rubber/Natural Soft Rubber/EPDM Rubber Lining

Size mm (in.)	Flow Velocity V m/s (ft/s)	Standard Accuracy <sup>(*)</sup> (Calibration code B)
25 (1.0)	V < 0.3 (1.0)	±1.0 mm/s
to 400 (16)	$\begin{array}{c} 0.3 \leq V \leq 10 \\ (1.0)  (33) \end{array}$	±0.35% of Rate
		TOO EDC

\*: For enhanced dual frequency excitation (Option code  $^{TO2.EPS}$  HF2) add  $\pm$  1 mm/s to the standard accuracy.

#### Size 25 mm (1.0 in.) to 400 mm (16 in.)



Current Output: Pulse output accuracy plus ±0.05% of Span

#### **Repeatability:**

 $\pm$ 0.1% of Rate (V  $\geq$  1 m/s (3.3 ft/s))

 $\pm 0.05\%$  of Rate  $\pm 0.5$  mm/s (V < 1 m/s (3.3 ft/s))

#### Maximum Power Consumption:

Combined with AXF Remote Flowtube: 20 W Note: The power consumption is the same as above regardless of the communication type.

#### Insulation Resistance(\*1) :

Between power supply terminals and ground terminal:  $100M\Omega$  at 500V DC Between power supply terminals and input/output/ excitation current terminals :  $100M\Omega$  at 500V DC Between ground terminal and input/output/excitation current terminals:  $20M\Omega$  at 100V DC Between input/output/excitation current terminal:  $20M\Omega$  at 100V DC

#### Withstand Voltage(\*1) :

Between power supply terminals and ground terminal: 1400V AC for 2 seconds Between power supply terminals and input/output terminals: 1400V AC for 2 seconds Between excitation current terminal and ground terminal: 160V AC for 2 seconds Between excitation current terminal and input /output terminals: 350V AC for 2 seconds

# 

- 1: When performing the Insulation Resistance Test or the Withstand Voltage Test, please obey the following caution.
  - Following the relevant test, wait for more than 10 minutes after the power supply has been turned off before removing the cover.
  - · Remove all wires from terminals before testing.
  - When the power terminal has a lightning protector (optional code A), remove the short bar at the ground terminal.
  - After testing, be sure to discharge by using a resistance and return all wires and the short bar to its correct position.
  - Screws must be tightened to a torque of 1.18 N-m or more.
  - After closing the cover, the power supply can be restored.

#### Safety Requirement Standards:

EN61010-1

EN61010-2-030

- Altitude at installation site: Max. 2000 m above sea level
- Installation category based on IEC1010: Overvoltage category II ("II" applies to electrical equipment which is supplied from a fixed installation-like distribution board.)
- Pollution degree based on IEC1010
   Pollution degree 2 ("Pollution degree" describes the degree to which a solid, liquid, or gas which deteriorates dielectric strength or surface resistivity is adhering. "2" applies to a normal indoor atmosphere.)

#### **EMC Conformity Standards:**

EN61326-1 Class A, Table 2 (For use in industrial locations) EN61326-2-3 EN61000-3-2 Class A EN61000-3-3

# ■ NORMAL OPERATING CONDITIONS

- Ambient Temperature: -40°C to +60°C (-40°F to +140°F) Indicator's operating range: -20°C to +60°C (-4°F to +140°F)
- Ambient Humidity: 0 to 100%

Lengthy continuous operation at 95% or more is not recommended.

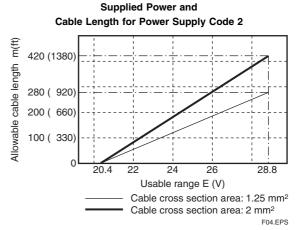
#### Power Supply:

#### Power supply code 1:

- AC specifications Rated power supply: 100 to 240 V AC, 50/60 Hz (Operating voltage range: 80 to 264 V AC)
  DC specifications
- Rated power supply: 100 to 120 V DC (Operating voltage range: 90 to 130 V DC)

# Power supply code 2:

- AC specifications Rated power supply: 24 V AC, 50/60 Hz (Operating voltage range: 20.4 to 28.8 V AC)
- DC specifications Rated power supply: 24 V DC (Operating voltage range: 20.4 to 28.8 V DC)



#### **Vibration Conditions:**

Level of vibration in conformity with IEC 60068-2-6 (SAMA31. 1-1980)

4.9 m/s<sup>2</sup> or less (frequency of 500 Hz or less)

Note: Avoid locations with much vibration (with a vibration frequency of 500 Hz or more), which may cause damage to the equipment.

# ACCESSORIES

Mounting bracket: 1 set

### MODEL AND SUFFIX CODE

#### Magnetic Flowmeter Remote Converter:

Model	Suffix Code		Description	
AXFA11			Magnetic Flowmeter Remote Convert	
Use G			General-Purpose Use For AXF Remote Flowtube of size 2.5 to 400 mm (0.1 to 16 in.) or AXW Remote Flowtube of size 500 to 1800 mm (20 to 72 in.)	
Output Signal and Communication	-D		4 to 20 mA DC, BRAIN Communication 4 to 20 mA DC, HART Communication	
Power Supply	1	 	100 V to 240 V AC or 100 to 120 V DC 24 V AC/DC <sup>(*1)</sup>	
Electrical Connections	-0 · · · · · · -2 · · · · · -4 · · · · ·		JIS G1/2 female ANSI 1/2 NPT female ISO M20 $\times$ 1.5 female	
Indicator 1 · · · ·		1 • • • •	With Indicator	
Option /□		/□	Optional code (See the Table of Optional Specifications)	

\*1: In case of power supply code 2 (24 V AC/DC), optional code A (lightning protector) is mandatory.

#### Signal Cable:

Model	Suffix Code		Description	
AXFC			Magnetic Flowmeter Dedicated Signal cable for the ADMAG AXF or AXW series	
Termination	-0 · · · · · · · · · · · · · · · · · · ·		No Termination. A set of termination parts for M4 screws is attached. Terminated for the AXFA11 or AXFA14 Converter.	
Cable Length	-L(		Designate the cable length, unit: m Following "L", specify the cable in three digits as multiple of 1 meter (e.g., 001, 002, or 005) for a length up to 5 m, or as a multiple of 5 meters (i.e., 005, 010, 015, or the like). The maximum cable length: 200 m for combined use with AXFA11 100 m for combined use with AXFA14	
Option	/C□		With termination parts sets. Following "C", specify the q'ty of sets of termination parts in one digits.	

T04.EPS

Note: • The cable is constructed with double shielding over the two conductors, and uses heat-resistant vinyl as the outer covering material. Finished diameter: 10.5 mm (0.413 in.)

Maximum temperature: +80°C (+176°F)

- · Unnecessary to order the above cable for submersible type flowtube or for the optional code DHC flowtube because the flowtube is wired with 30 m (98 ft) cable.
- · For excitation cable, prepare a two-core cable at the customer side.

### **Recommended Excitation, Power and Output Cable:**

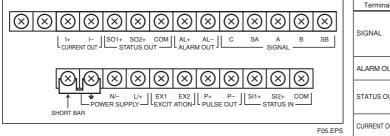
JIS C 3401 control cable equivalent JIS C 3312 power cable equivalent 14 AWG Belden 8720 equivalent Outer Diameter: With no gland option; 6.5 to 12 mm (0.26 to 0.47 in.) With gland options EG,EU and EW; · Excitiation cable; 10.5 or 11.5 mm (0.41 or 0.45 in.) · Power and output cable; 7.5 to 12 mm (0.3 to 0.47 in.) With gland options EP; 6 to 12 mm (0.24 to 0.47 in.) Nominal Cross Section: Single wire: 0.5 to 2.5 mm<sup>2</sup>

Stranded wire: 0.5 to 1.5 mm<sup>2</sup>

# ■ OPTIONAL SPECIFICATIONS FOR AXFA11 REMOTE CONVERTER

Item	Specification				
Lightning Protector	A lightning protector is built into the power terminals. In case of power supply code 2 (24 V AC/DC), this optional code is mandatory.				
DC Noise Cut Circuit	The DC Noise Cut Circuit is built in. Available for 15 mm (0.5 in.) and larger sizes, and for fluids with the conductivity of 50 $\mu$ S/cm or higher. Nullifies the empty check and electrode adhesion diagnostics function.				
Burn Out Down		is set to 0 mA during a CPU failure and is set 2.4 mA (-10%) or less during an alarm. Standard livered with a setting 25 mA during a CPU failure and 21.6 mA (110%) or more during an alarm.	C1		
NAMUR NE43 Compliance	Output signal limits: 3.8 to	Failure alarm down-scale: The output level is set to 0 mA during a CPU failure and is set 2.4 mA (-10%) or less during an alarm.			
	20.5 mA	Failure alarm up-scale. The output level is set to 25 mA during a CPU failure and is set 21.6 mA (110%) or more during an alarm.	СЗ		
Active Pulse Output	Active pulses are output in order to drive an external electromagnetic or electronic counter directly using the converter's internal power supply. (Nullfies the standard transistor contact pulse output.) Output voltage: 24 V DC ±20% Pulse specifications: • The drive current of 150 mA or less • Pulse rate: 0.0001 to 2 pps (pulse/second); Pulse width: 20, 33, 50, or 100 ms				
G3/4 Female Waterproof Glands		nds for G3/4 conduits or flexible tubes are attached to the electrical connections. for JIS G1/2 female electric connections.	EW		
Waterproof Glands		Waterproof glands are attached to the electrical connections. Available only for JIS G1/2 female electric connections.			
Waterproof Glands with Union Joints		Waterproof glands with union joints are attached to the electrical connections. Available only for JIS G1/2 female electric connections.			
Plastic Glands	Plastic glands are attached to the electrical connections. Available only for JIS G1/2 female electric connections.				
Air Purge Fitting	Provided with an air purge fitting (1.5 L/min air consumption) with purge air pressure at 0.14 MPa or less. 1/4 NPT female (when electrical conn. code is 2 or 4) or Rc1/4 female (when electrical conn. code is 0).				
Stainless Steel Mounting Bracket		Provided with a JIS SUS304 (AISI 304 SS/EN 1.4301 equivalent) stainless steel mounting bracket in lieu of the standard carbon steel bracket.			
AM11 Replacement Bracket	Provided with a special mounting bracket for replacing an AM11 converter with an AXFA11.				
Stainless Steel Tag Plate	Screwed JIS SUS304 (AISI 304 SS/EN 1.4301 equivalent) stainless steel tag plate. Choose this option when an SS tag plate is required in addition to the standard nameplate with the tag number inscribed on it. Dimension (Height $\times$ Width): Appr. 12.5 (4.92) $\times$ 40 (15.7) mm (inch)				
Painting Color Change	Coated in black (Munsell N1.5 or its equivalent.)				
	Coated in jade green (Munsell 7.5BG4/1.5 or its equivalent.)				
	Coated in metallic silver.				
Epoxy Resin Coating	Epoxy resin coating which has alkali-resistance instead of standard polyurethane resin coating. The color is same as standard type.				
High Anti-corrosion Coating	Three-layer coating (polyurethane coating on two-layer epoxy resin coating) in the same range as that for the standard coating. The color is same as standard type. Salt/alkali/acid/weather-resistance.				
Calibration Certificate	Level 2: The D	Peclaration and the Calibration Equipment List are issued.	L2		
	Level 3: The Declaration and the Primary Standard List are issued.				
	Level 4: The Declaration and the Yokogawa Measuring Instruments Control System are issued.				

# • Terminal Configuration



### • Terminal Wiring

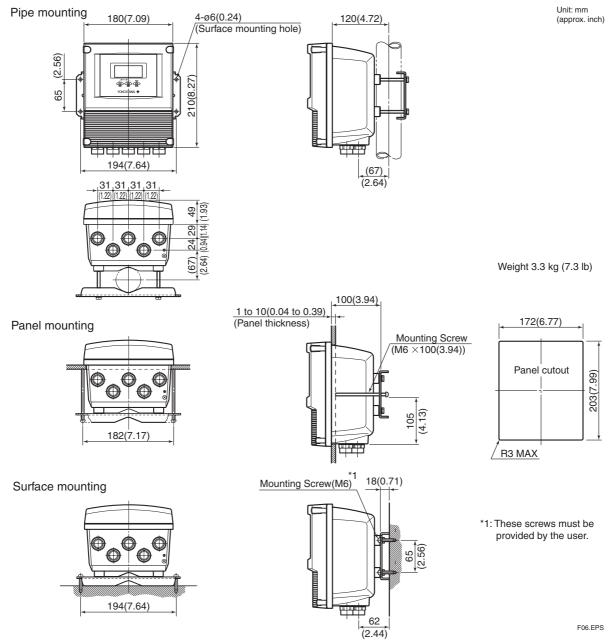
Terminal Symbols	Description	Terminal Symbols	Description
SIGNAL	Flow signal input	STATUS IN SI2+ COM	Status input (Two input)
L B SB		PULSE OUT	Pulse output
ALARM OUT	Alarm output	EXCITATION EX1 EX2	Excitation current output
STATUS OUT SO1+ Status output	POWER SUPPLY $\begin{bmatrix} L & /+ \\ N/- \end{bmatrix}$	Power supply	
	(Two output)	Ŧ	Functional grounding
CURRENT OUT $\begin{bmatrix} I_{+} \\ I_{-} \end{bmatrix}$	Current output 4 to 20mA DC		Protective grounding (Outside of the terminal)
			T06.EPS

All Rights Reserved. Copyright © 2003, Yokogawa Electric Corporation

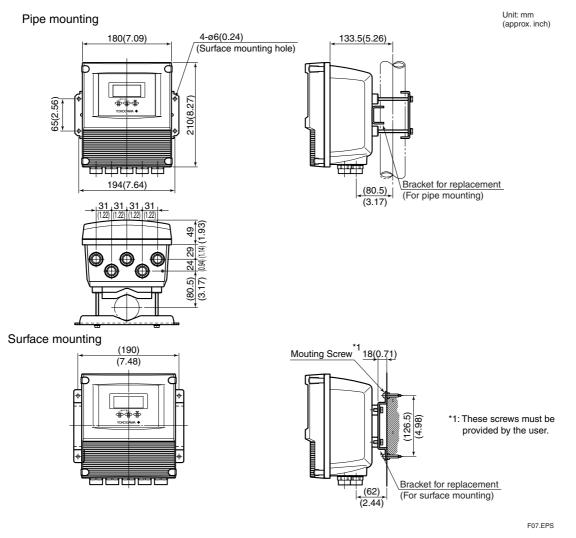
T05.EPS

# **EXTERNAL DIMENSIONS**

# • Remote Converter AXFA11G



### Remote Converter AXFA11G /RK (AM11 Replacement Bracket)

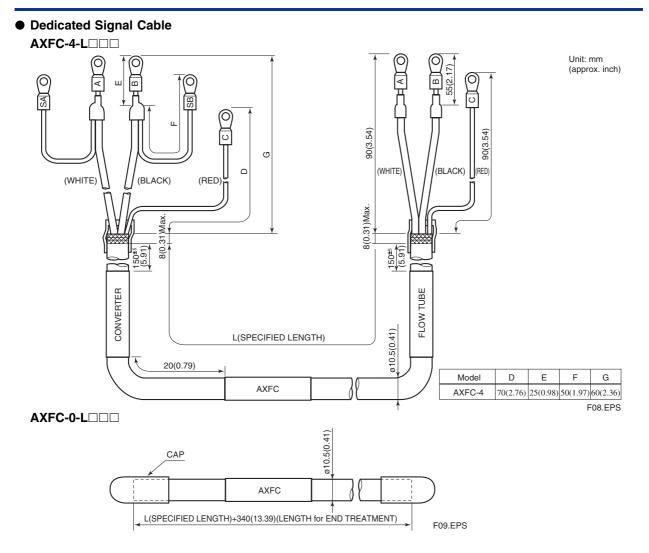


#### • Unless otherwise specified, difference in the dimensions are refer to the following table.

General tolerance in the dimensional outline drawing.

	Genera	al tolerance in the d	imensional outline c	lrawing.	Unit : mm (approx.inch)
Category of ba	asic dimension	Tolerance	Category of ba	asic dimension	Tolerance
Above	Equal or below	TOTELATICE	Above	Equal or below	Tolerance
	3 (0.12)	±0.7 (±0.03)	500 (19.69)	630 (24.80)	±5.5 (±0.22)
3 (0.12)	6 (0.24)	±0.9 (±0.04)	630 (24.80)	800 (31.50)	±6.25 (±0.25)
6 (0.24)	10 (0.39)	±1.1 (±0.04)	800 (31.50)	1000 (39.37)	±7.0 (±0.28)
10 (0.39)	18 (0.71)	±1.35 (±0.05)	1000 (39.37)	1250 (49.21)	±8.25 (±0.32)
18 (0.71)	30 (1.18)	±1.65 (±0.06)	1250 (49.21)	1600 (62.99)	±9.75 (±0.38)
30 (1.18)	50 (1.97)	±1.95 (±0.08)	1600 (62.99)	2000 (78.74)	±11.5 (±0.45)
50 (1.97)	80 (3.15)	±2.3 (±0.09)	2000 (78.74)	2500 (98.43)	±14.0 (±0.55)
80 (3.15)	120 (4.72)	±2.7 (±0.11)	2500 (98.43)	3150 (124.02)	±16.5 (±0.65)
120 (4.72)	180 (7.09)	±3.15 (±0.12)			
180 (7.09)	250 (9.84)	±3.6 (±0.14)			
250 (9.84)	315 (12.40)	±4.05 (±0.16)			
315 (12.40)	400 (15.75)	±4.45 (±0.18)			
400 (15.75)	500 (19.69)	±4.85 (±0.19)			
Remarks: The numer	Remarks: The numeric is based on criteria of tolerance class IT18 in JIS B 0401.				

Remarks: The numeric is based on criteria of tolerance class IT18 in JIS B 0401.



#### ORDERING INFORMATION

- Note 1: When ordering in combination a remote flowtube and a remote converter, specify the span flow rate, unit, pulse weight, and totalizer display pulse weight can be specified.
  - These parameters will then be set in the combined converter before shipment. When ordering of a converter alone, these parameters cannot specify. Please refer to GS 01E20D01-01E "ORDERING INFORMATION" or GS 01E25D11-01EN "ORDER-
- ING INFORMATION". Note 2: Some options, if ordered, require the relevant specifications to be input when ordering.
- 1. Model, specification and option codes.
- 2. Tag number

Each tag number can be specified in up to 16 characters in a combination of letters (capital or small letters), numbers, "-" and ".".

For HART protocol, up to 8 characters can be specified. If specified, the tag number is inscribed on the product's name plate and tag plate (if optional code SCT is selected). The tag number is also set into the memory of converter.

If the user wishes to change only the tag number to be

All Rights Reserved. Copyright  $\circledcirc$  2003, Yokogawa Electric Corporation Subject to change without notice.

set into a converter's memory, specify the software tag. If a tag number is not specified, the tag number is set as a blank.

### **RELATED INSTRUMENTS**

Calibrator for Magnetic Flowmeter (AM012):

Ũ	· · · ·
	GS 1E6K2-E
BT200 BRAIN TERMINAL:	GS 01C00A11-00EN
AXF Magnetic Flowmeter In	tegral Flowmeter/
Remote Flowtube:	GS 01E20D01-01E
AXW Magnetic Flowmeter F	Remote Flowtube:
	GS 01E25D11-01EN
AXFA14G/C Magnetic Flow	meter Remote Converter:
	GS 01E20C02-01E

FieldMate:

### REFERENCE

'ADMAG', 'AXF', 'ADMAG AXF', 'AXW' and 'FeildMate' are registered trademarks of Yokogawa Electric Corporation.

GS 01R01A01-01E

Company names and product names used in this material are registered trademarks or trademarks of their respective owners.