

# General Specifications

## Models ADMAG AXF and ADMAG CA Sanitary 3A Compliant Integral and Remote Magnetic Flowmeters



ADMAG AXF and ADMAG CA 3A & FDA compliant magnetic flowmeters are dependable and reliable instruments designed to meet strict sanitary requirements. The entire ADMAG family of flowmeters is capable of measuring a wide range of fluids. All meters provide a 4-20 mA DC signal and a pulse or alarm output. 3A & FDA compliance is available in both PFA and ceramic lined meters, making the meters applicable for numerous applications. Yokogawa Corporation of America offers 3A compliant meters with butt weld and Tri-clamp connections. Additional features and detailed specifications of each individual model can be found in the General Specification sheets referred to below.



### FEATURES

- Available with BRAIN or HART communication function.
- Available for use with AC or DC power supply.
- Multifunctional microprocessor-based electronics.
- Available with accuracy to 0.35% of reading.

#### ADMAG AXF

- 3A & FDA compliant ceramic flowmeters with Tri-clamp fittings.
- 3A & FDA compliant PFA flowmeters with Tri-clamp or butt weld process connections.
- Ceramic liners finished to a 20  $\mu$  inch Ra or better polish.
- Dual frequency excitation.
- Available with integral or remote-mounted electronics.
- Multiple outputs: 4-20 mA, pulse, alarm or status control.

#### ADMAG CA

- 3A & FDA compliant ceramic flowmeter with Tri-clamp fittings.
- 99.9% Alumina Ceramic liners manufactured to a finish of less than 20  $\mu$  inch Ra.
- Ultra-low conductivity measurement to 0.01  $\mu$ S/cm
- Non-wetted electrodes eliminate electrode leakage and electrode fouling: i.e. slurry noise
- Multiple outputs: 4-20 mA, pulse, or alarm

### ADMAG AXF & ADMAG CA SELECTION GUIDE

A: AVAILABLE  
N: NOT AVAILABLE

Features and Functions	ADMAG	ADMAG
	AXF	CA
Integral Electronics	A	A
Remote Electronics	A	N
PFA liner w/Tri-Clamp connections	A	N
Ceramic liner with Tri-Clamp Connections	A	A
Explosionproof	N	A
Status Contact Input	A	N
Status and Alarm Contacts	A	N
Empty Pipe Detection	A	N
Electrodeless Design	N	A
HART Communication	A	N
BRAIN communication	A	A
Fluid conductivity < 1 $\mu$ S/cm	N	A

## STANDARD SPECIFICATIONS ADMAG AXF FLOW TUBE

### • PFA lined with Tri-clamp or butt weld end connections (Sizes 1" - 4")

#### Non-wetted parts material

Flow tube housing: 304 stainless steel  
Terminal box/converter housing: Aluminum alloy

#### Wetted parts material

Liner: PFA Teflon  
Electrodes: 316L stainless steel\*  
Gasket: EPDM rubber  
Adapter (Tri-clamp/butt weld): 316L stainless steel\*

\* Polished to a finish of 20 µinch Ra or better

### • Ceramic-lined with Tri-clamp connections (Sizes 0.2" - 4")

#### Non-wetted parts material

Flow tube housing: SUS329 stainless steel  
Terminal box/converter housing: Aluminum alloy

#### Wetted parts material

Liner: Polished alumina ceramic (99.9%)\*  
Electrode: Platinum-alumina cermet  
Gasket: FDA compliant PTFE  
Adapter (Tri-clamp): 316 stainless steel\*

\* Polished to a finish of 20 µinch Ra or better

Refer to document **GS 01E20D01-01E-A** for detailed product specifications

## ADMAG AXF MAGNETIC FLOW CONVERTERS

- Model AXFA14 (integral or remote)
- Model AXFA11 (remote only)

#### Output Signal

Current output: 4-20 mADC (load resistance 0-750 ohms)  
Pulse/Alarm or status: Transistor contact output rated 30 VDC, 200 mA)

#### Status Contact Output Functions (software selectable)

Multi-ranging  
Forward and reverse flow measurement  
Totalization switch  
0% signal lock  
Flow upper/lower limit alarms

### Instantaneous Flow Rate/Totalizer Display

Three line LCD indicator with backlit, full dot matrix display  
Infrared switches permit programming through the glass

### Communication

BRAIN or HART communication signal superimposed on the 4-20 mADC signal

### Electrical Connection

ANSI 1/2 NPT female

### Protection

IP67, NEMA 4X

### Mounting

AXFA14: 2" pipe  
AXFA11: 2" pipe, panel or surface mounting

Size	Adjustable Range in GPM		Adjustable Range in m <sup>3</sup> /h	
	Min	Max	Min	Max
0.2 (5)	0 to 0.03	0 to 3	0 to 0.007	0 to 0.7
0.4 (10)	0 to 0.13	0 to 12	0 to 0.03	0 to 3
0.5 (15)	0 to 0.20	0 to 28	0 to 0.06	0 to 6
1.0 (25)	0 to 0.80	0 to 77	0 to 0.18	0 to 18
1.5 (40)	0 to 1.8	0 to 198	0 to 0.45	0 to 45
2.0 (50)	0 to 3.21	0 to 311	0 to 0.71	0 to 71
3.0 (80)	0 to 7.23	0 to 796	0 to 1.81	0 to 181
4.0 (100)	0 to 12.85	0 to 1244	0 to 2.83	0 to 283

Refer to documents **GS 01E20C02-01E-A (AXFA14)** and **GS 01E20C01-01E-A (AXFA11)** for detailed product specifications

## ADMAG CA FLOW TUBE

### • Ceramic lined with Tri-clamp connections (Sizes 0.5" - 4")

#### Non-wetted parts material

Flow tube housing: 304 stainless steel  
Terminal box/converter housing: Aluminum alloy

#### Wetted parts material

Liner: Polished alumina ceramic (99.9%)\*  
Gasket: FDA compliant PTFE  
Adapter (Tri-clamp): 316 stainless steel\*

#### Electrode construction

Electrode plates mounted outside the ceramic metering tube (non-wetted)

\* Polished to a finish of 20 minch Ra or better

## ADMAG CA MAGNETIC FLOW CONVERTER (integral mount only)

### Output Signal

Current output: 4-20 mA DC (load resistance 0 to 750 ohms)

Pulse/Alarm: Transistor contact output (contact rating 30 VDC, 200mA)

### Instantaneous Flow Rate Display Functions

Seven-digit backlit LCD displays flow rate in engineering units or percent of span

### Totalizer Display Functions

Totalized volume in any engineering unit can be displayed by setting a totalizing factor

### Wiring Connection

ANSI 1/2" – 14 NPT female

### Construction

General purpose and FM/CSA approved types: NEMA 4X, watertight and corrosion resistant

Refer to document GS 01E08B01-00E for detailed product specifications

Size inch (mm)	Adjustable Range in GPM		Adjustable Range in m <sup>3</sup> /h	
	Min	Max	Min	Max
0.5 (15)	0 to 1	0 to 28	0 to 0.3	0 to 6
1.0 (25)	0 to 4	0 to 77	0 to 0.9	0 to 18
1.5 (40)	0 to 9	0 to 198	0 to 2.3	0 to 45
2.0 (50)	0 to 16	0 to 311	0 to 3.5	0 to 71
3.0 (80)	0 to 36	0 to 796	0 to 9.1	0 to 181
4.0 (100)	0 to 64	0 to 1244	0 to 14.1	0 to 283

## HOW TO ORDER

1. Refer to the selection guide above and select the desired model (ADMAG AXF or ADMAG CA) that meets your application requirements.
2. Refer to the appropriate general specification sheet for your model (see "STANDARD SPECIFICATIONS" section above) and build the base model number.
3. Complete the model number by adding the correct suffix code, when applicable, as shown below.

### ADMAG AXF

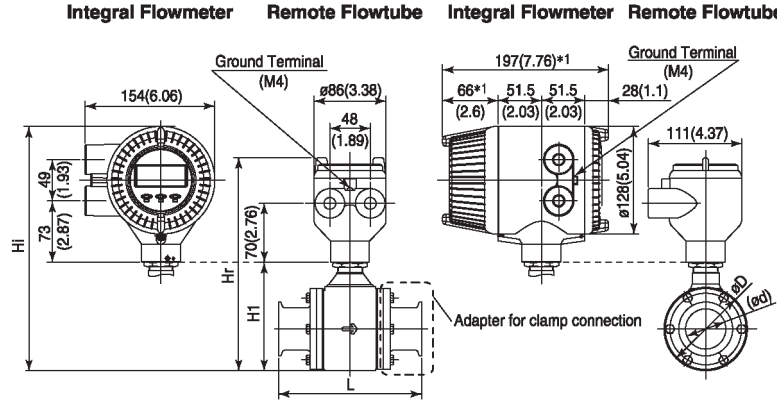
Ceramic lined flowtube with Tri-clamp connection:  
Suffix Code: /YF268

### ADMAG CA

Ceramic lined with Tri-clamp connection:  
Suffix Code: /YF268

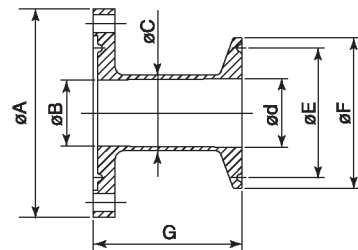
## ADMAG AXF PFA lined with Tri-clamp connection (1.0"-4") Integral and remote style

Unit : mm (approx. inch)



Model	Process Connection		HAB (Tri-Clamp)				
	Size code		025	040	050	080	100
	Size		25 (1)	40 (1.5)	50 (2)	80 (3)	100 (4)
	Lining code		A	A	A	A	A
Remote flowtube	Face-to-face length	L <sub>3</sub>	166 (6.55)	166 (6.55)	176 (6.94)	216 (8.52)	246 (9.70)
	Outside dia.	øD	73 (2.87)	86 (3.39)	99 (3.90)	129 (5.08)	155 (6.10)
Integral flowmeter	Inner dia.	ød HAB	22.1 (0.87)	34.8 (1.37)	47.5 (1.87)	72.9 (2.87)	97.4 (3.83)
	Height	H1	97 (3.82)	111 (4.37)	129 (5.08)	157 (6.18)	183 (7.20)
Remote flowtube	Max. Height	Hr	221 (8.70)	235 (9.25)	253 (9.96)	281 (11.06)	307 (12.09)
	Weight kg (lb)		2.5 (5.5)	2.9 (6.4)	3.6 (7.9)	5.7 (12.6)	8.1 (17.9)
Integral flowmeter	Max. Height	Hi	259 (10.18)	273 (10.73)	291 (11.44)	319 (12.54)	345 (13.56)
	Weight kg (lb)		4.2 (9.3)	4.6 (10.1)	5.3 (11.7)	7.4 (16.3)	9.8 (21.6)

\*1: When indicator code N is selected, subtract 12 mm (0.47 inch) from the value in the figure.



**Adapter for clamp connection**

Process Connection	HAB (Tri-Clamp)				
Nominal Size	25	40	50	80	100
øA	70 (2.76)	83 (3.27)	96 (3.78)	126 (4.96)	152 (5.98)
øB	22.2 (0.87)	34.6 (1.36)	47.6 (1.87)	72.3 (2.85)	97 (3.82)
øC	25.4 (1.00)	38.1 (1.50)	50.8 (2.00)	76.2 (3.00)	101.6 (4.00)
ød	22.1 (0.87)	34.8 (1.37)	47.5 (1.87)	72.9 (2.87)	97.4 (3.83)
øE	43.6 (1.72)	43.6 (1.72)	56.3 (2.22)	83.3 (3.28)	110.3 (4.34)
øF	50.4 (1.98)	50.4 (1.98)	64 (2.52)	91 (3.58)	118.9 (4.68)
G	50 (1.97)	50 (1.97)	50 (1.97)	50 (1.97)	50 (1.97)
Parts No.	F9811 HV	F9811 HX	F9811 HY	F9811 JA	F9811 JB

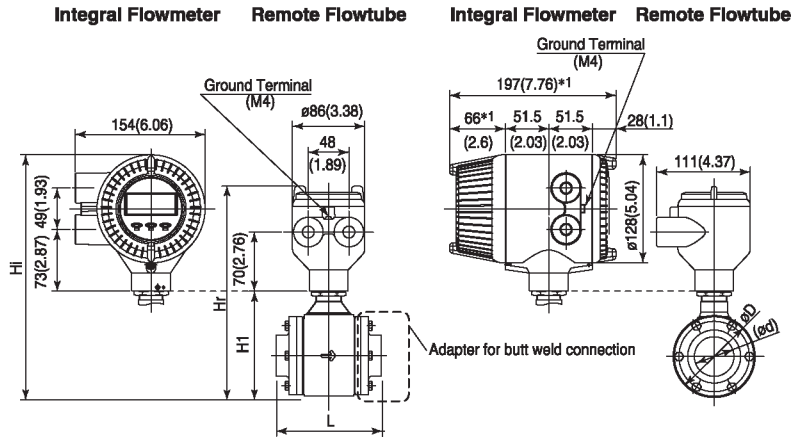
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# ADMAG AXF

## PFA lined with butt weld connection (1.0"-4")

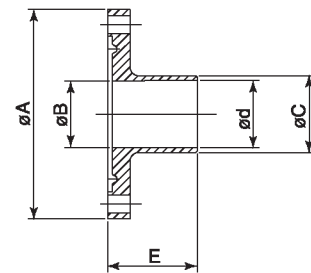
### Integral and remote style

Unit : mm (approx. inch)



Model	Process Connection		KKB (ISO2037 Butt Weld)				
	Size code		025	040	050	080	100
	Size		25 (1)	40 (1.5)	50 (2)	80 (3)	100 (4)
	Lining code		A	A	A	A	A
Remote flowtube	Face-to-face length	L <sub>3</sub>	126 (4.98)	126 (4.98)	136 (5.37)	176 (6.94)	206 (8.13)
	Outside dia.	øD	73 (2.87)	86 (3.39)	99 (3.90)	129 (5.08)	155 (6.10)
	Inner dia.	ød KKB	22.6 (0.89)	35.6 (1.40)	48.6 (1.91)	72.9 (2.87)	97.6 (3.84)
Integral flowmeter	Height	H1	97 (3.82)	111 (4.37)	129 (5.08)	157 (6.18)	183 (7.20)
	Max. Height	Hr	221 (8.70)	235 (9.25)	253 (9.96)	281 (11.06)	307 (12.09)
Remote flowtube	Weight kg (lb)		2.3 (5.1)	2.8 (6.2)	3.4 (7.5)	5.3 (11.7)	7.1 (15.7)
	Max. Height	Hi	259 (10.18)	273 (10.73)	291 (11.44)	319 (12.54)	345 (13.56)
Integral flowmeter	Weight kg (lb)		4 (8.8)	4.5 (9.9)	5.1 (11.2)	7 (15.4)	8.8 (19.4)

\*1: When indicator code N is selected, subtract 12 mm (0.47 inch) from the value in the figure.



**Adapter for butt weld connection**

Process Connection	KKB (ISO2037 Butt Weld)				
Nominal Size	25	40	50	80	100
øA	70 (2.76)	83 (3.27)	96 (3.78)	126 (4.96)	152 (5.98)
øB	22.2 (0.87)	34.6 (1.36)	47.6 (1.87)	72.3 (2.85)	97 (3.82)
øC	25.6 (1.01)	38.6 (1.52)	51.6 (2.03)	76.7 (3.02)	102.5 (4.04)
ød	22.6 (0.89)	35.6 (1.40)	48.6 (1.91)	72.9 (2.87)	97.6 (3.84)
E	30 (1.18)	30 (1.18)	30 (1.18)	30 (1.18)	30 (1.18)
Parts No.	F9811 NP	F9811 NR	F9811 NS	F9811 NU	F9811 NV

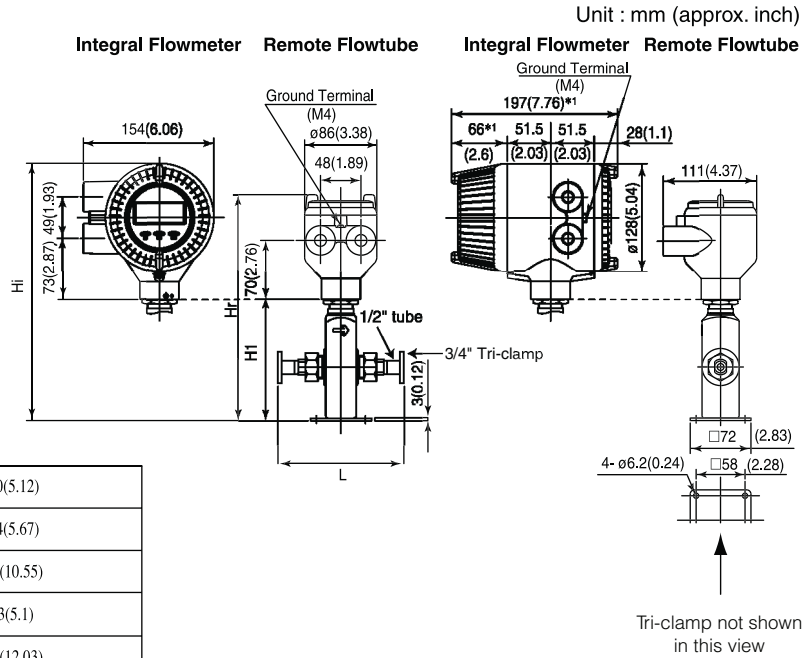
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## ADMAG AXF

### Ceramic lined with Tri-clamp connection (0.2" and 0.4")

#### Integral and remote style

#### Suffix code: /YF268



Remote flowtube	Face-to-face length	$L_{-3}^0$	130(5.12)
Integral flowmeter	Height	H1	144(5.67)
Remote flowtube	Max. Height	Hr	268(10.55)
	Weight kg (lb)		2.3(5.1)
Integral flowmeter	Max. Height	Hi	306(12.03)
	Weight kg (lb)		4(8.8)

\*1: When indicator code N is selected, subtract 12 mm (0.47 inch) from the value in the figure.

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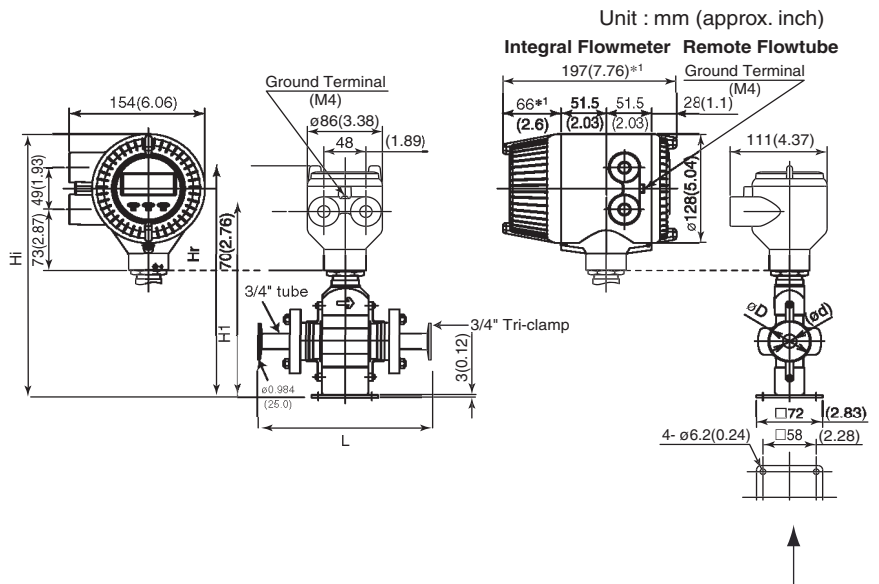
## ADMAG AXF

### Ceramic lined with Tri-clamp connection (0.5")

#### Integral and remote style

#### Suffix code: /YF268

Model	Size code	015	
	Size	15(0.5)	
	Lining code	C	
Remote flowtube	Face-to-face length	$L_{-3}^{0*2}$	193.3(7.6)
Integral flowmeter	Outside dia.	$\phi D$	44(1.73)
	Height	H1	144(5.67)
Remote flowtube	Max. Height	Hr	268(10.55)
Integral flowmeter	Max. Height	Hi	306(12.03)



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\*1: When indicator code N is selected, subtract 12 mm (0.47 inch) from the value in the figure.

Tri-clamp not shown in this view

## ADMAG AXF

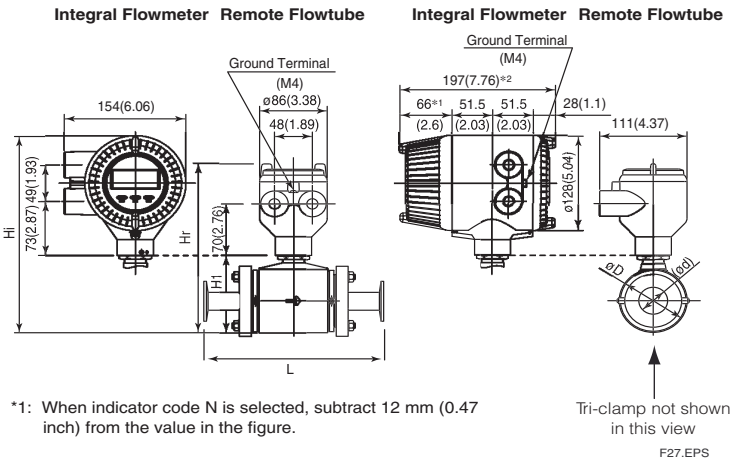
### Ceramic lined with Tri-clamp connection (1"- 4")

#### Integral and remote style

#### Suffix Code: /YF268

Unit : mm (approx. inch)

Model	Size code	025	040	050	080	100	
	Size	25(1)	40(1.5)	50(2)	80(3)	100(4)	
	Lining code	C	C	C	C	C	
Remote flowtube	Face-to-face length	$L_{-3}^{0+2}$	201(7.9)	214(8.4)	241(9.5)	281(11.1)	301(11.9)
Integral flowmeter	Outside dia.	$\phi D$	67.5(2.66)	86(3.39)	99(3.90)	129(5.08)	155(6.10)
	Height	H1	92(3.62)	111(4.37)	129(5.08)	157(6.18)	183(7.20)
Remote flowtube	Max. Height	Hr	216(8.50)	235(9.25)	253(9.96)	281(11.06)	307(12.09)
Integral flowmeter	Max. Height	Hi	254(9.98)	273(10.73)	291(11.44)	319(12.54)	345(13.56)

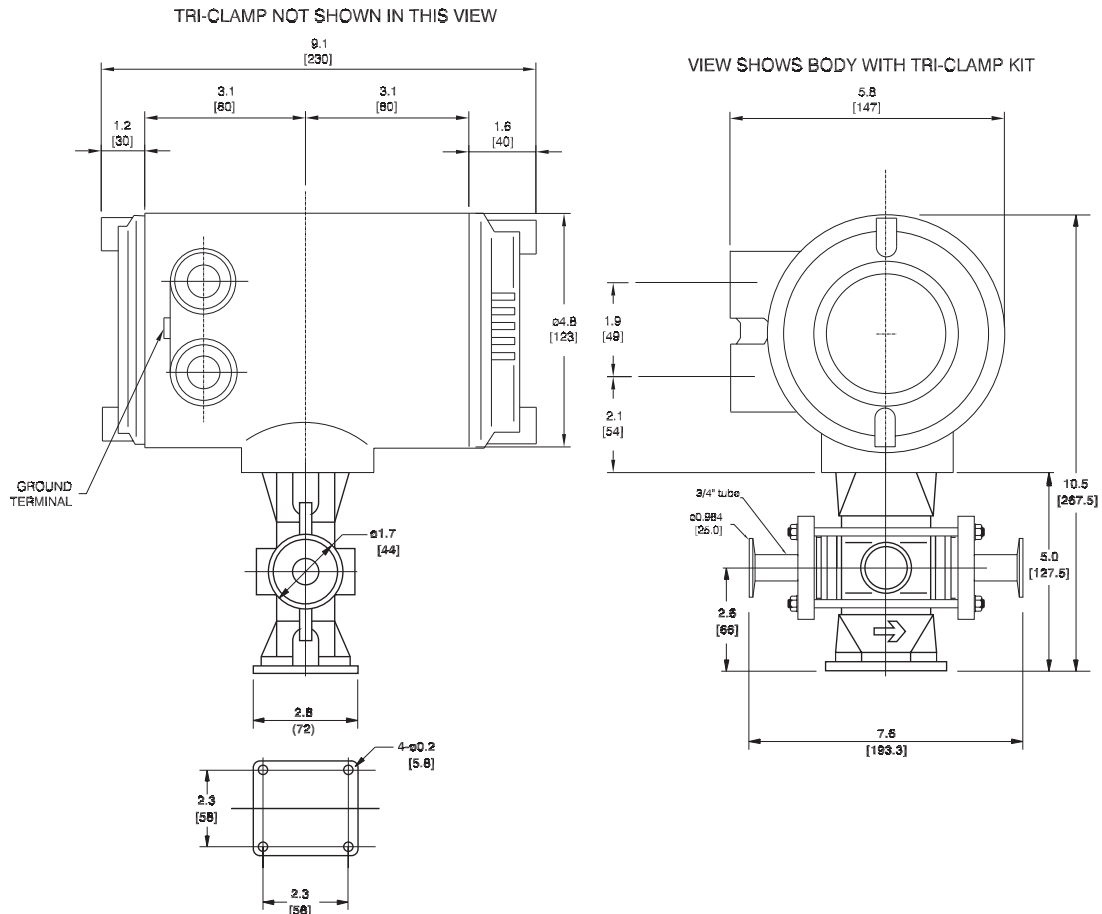


## ADMAG CA

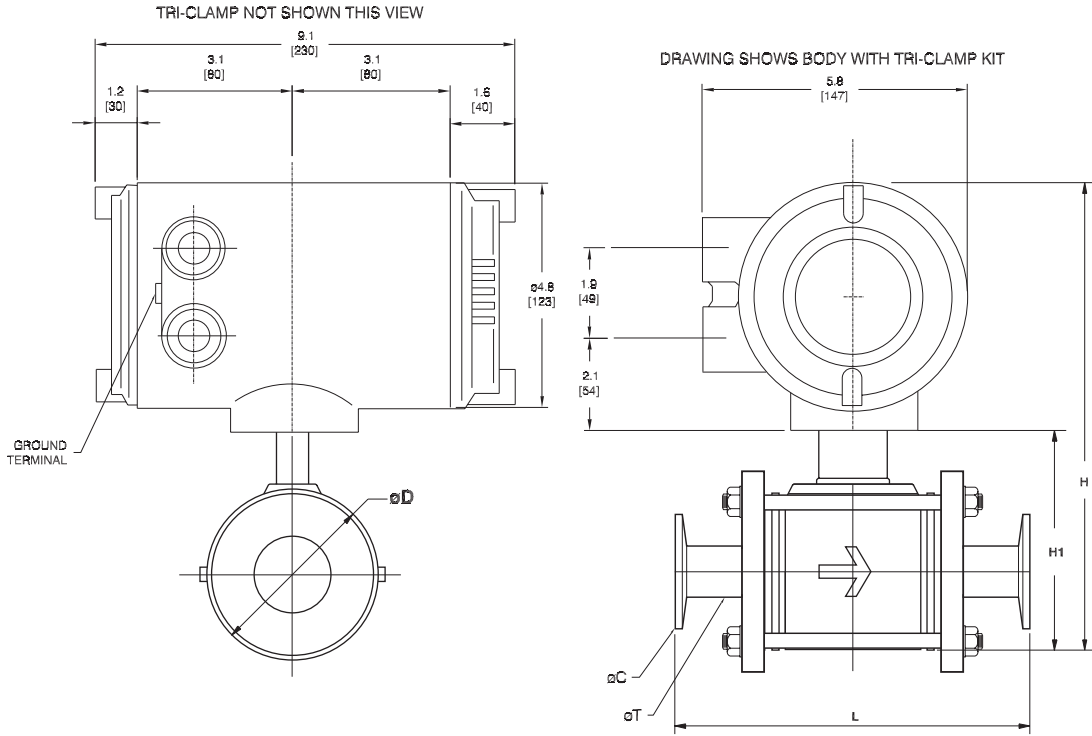
### Ceramic lined with Tri-clamp connection (1/2")

#### Integral version only

#### Suffix Code: /YF268



**ADMAG CA**  
**Ceramic lined with Tri-clamp (1"- 4")**  
**Integral version only**  
**Suffix Code: /YF268**



TYPE	INTEGRAL AE CERAMIC 3A SANITARY					
SIZE CODE	202	204	205	208	210	
SIZE	1.0 [25]	1.5 [40]	2.0 [50]	3.0 [80]	4.0 [100]	
LINING	C (CERAMIC)					
FACE-TO-FACE DISTANCE	L	7.9 [201]	8.4 [214]	9.5 [241]	11.1 [281]	11.9 [301]
OUTER DIAMETER	$\phi D$	2.6 [67.5]	3.4 [86]	3.9 [99]	5.1 [129]	6.1 [155]
HEIGHT	H	9.9 [251]	10.6 [270]	11.2 [284]	12.4 [314]	13.7 [349]
HEIGHT	H1	4.4 [111]	5.2 [131]	5.7 [144]	6.9 [174]	8.3 [210]
FERRULE DIAMETER O.D.	$\phi C$	1.984 [50.39]	1.984 [50.39]	2.516 [63.91]	3.579 [90.91]	4.682 [118.92]
TUBE O.D.	$\phi T$	1.00 [25.4]	1.50 [38.1]	2.00 [50.8]	3.00 [76.3]	4.00 [101.6]