

# Diesel Flow Meter

## SPECIFICATION AND INSTALLATION DETAILS



## SmartFlex™ System

### New Exclusive Diesel Flow Meters Available for SmartFlex™ Integration

Designed specifically to operate with SmartBoat Modules, each model outputs NMEA 2000® data and can be configured via AIRMAR's SmartFlex View browser-based software. Available for both Single and Dual chamber (differential) functionality as well as a flanged housing model for instances where that is required.

### Part Numbers and Specifications

Part Number	Variations	Chambers	Working Range	Weight	Mounting L x W
DFM-50-SA	-L	Single	1 – 10 LPH ±1% (.2 – 2 GPH ±1%)	0.96 kg (2.11 lbs)	90 x 70 mm (3.54" X 2.75")
DFM-100-SA	-L	Single	2 – 100 LPH ±1% (.5 – 26 GPH ±1%)	0.96 kg (2.11 lbs)	90 x 70 mm (3.54" X 2.75")
DFM-250-SA	-L	Single	5 – 250 LPH ±1% (1 – 66 GPH ±1%)	1.30 kg (2.86 lbs)	90 x 70 mm (3.54" X 2.75")
DFM-500-SA <sup>(Note 3)</sup>		Single	10 – 500 LPH ±1% (2 – 132 GPH ±1%)	1.29 kg (2.84 lbs)	90 x 70 mm (3.54" X 2.75")
DFM-1000-SA-L	F, -SB	Single	20 – 1000 LPH ±1% (5 – 264 GPH ±1%)	2.90 kg (6.39 lbs)	42 x 32 mm (1.65" X 1.25")
DFM-2000-SA-L	F, -SB	Single	40 – 2000 LPH ±1% (10 – 528 GPH ±1%)	3.12 kg (6.87 lbs)	42 x 16 mm (1.65" X .62")
DFM-4000-SA-L	F, -SB	Single	80 – 4000 LPH ±1% (21 – 1056 GPH ±1%)	5.64 kg (12.43 lbs)	52 x 20 mm (2.04" X .78")
DFM-100-DA		Dual	2 – 100 LPH ±1..3% <sup>(Note 4)</sup> (.5 – 26 GPH ±1%)	1.50 kg (3.30 lbs)	135.8 x 45 mm (5.34" X 1.77")
DFM-300-DA		Dual	50 – 300 LPH ±1..3% <sup>(Note 4)</sup> (13 – 79 GPH ±1%)	2.16 kg (4.76 lbs)	152.8 x 45 mm (6.01" X 1.77")
DFM-600-DA <sup>(Note 3)</sup>		Dual	100 – 600 LPH ±1..3% <sup>(Note 4)</sup> (26 – 158 GPH ±1%)	2.07 kg (4.56 lbs)	155.8 x 45 mm (6.13" X 1.77")

(1) Variations available by special order: F (Flange mount) / -L (LCD display) / -SB (Brass housing)

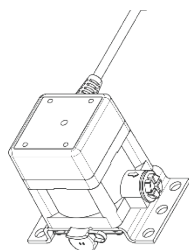
(2) Specifications in this table are for versions with threaded connection versions with alloy housings

(3) Connection thread is M16 x 1.5

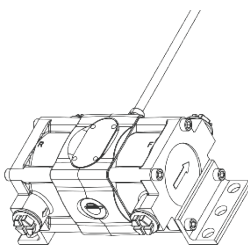
(4) Accuracy can vary according to ratio of feed chamber and reverse chamber flow rate

### Common Specifications

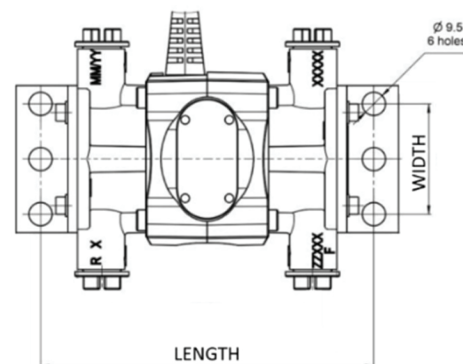
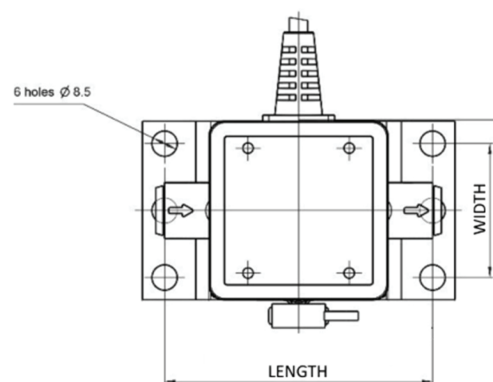
Parameter	Value
Maximum Pressure	25 bar
Kinematic Viscosity	1.5 – 6.0 mm <sup>2</sup> /s (cSt) (.059" – .23" <sup>2</sup> /s (cSt))
Threaded connections	M14 x 1.5 unless noted
Maximum size of inclusions	0.08 mm (.003")
Max Pressure drop at max flow	0.2 bar
Supply voltage range	10 – 16 VDC
Operating ambient temperature	-40 – 85 °C (-40 – 185 °F)
Water ingress protection	IP54



Single-Chamber DFM



Dual-Chamber DFM



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SmartFlex™ System

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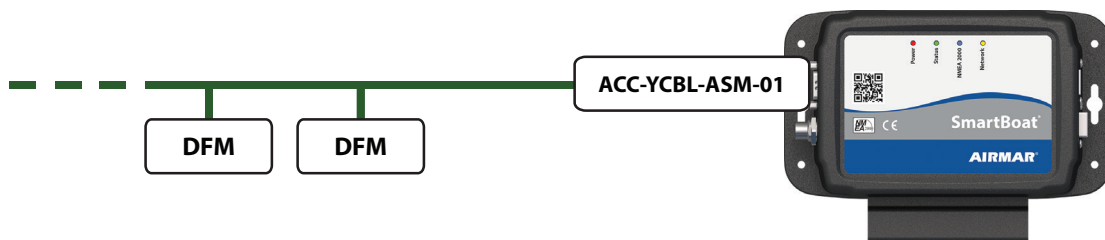
### Installation Guide

AIRMAR Diesel Flow Meters are intended for use only with SmartFlex System devices. Please refer to the AIRMAR SmartBoat® Module User's Manual for configuration instructions.

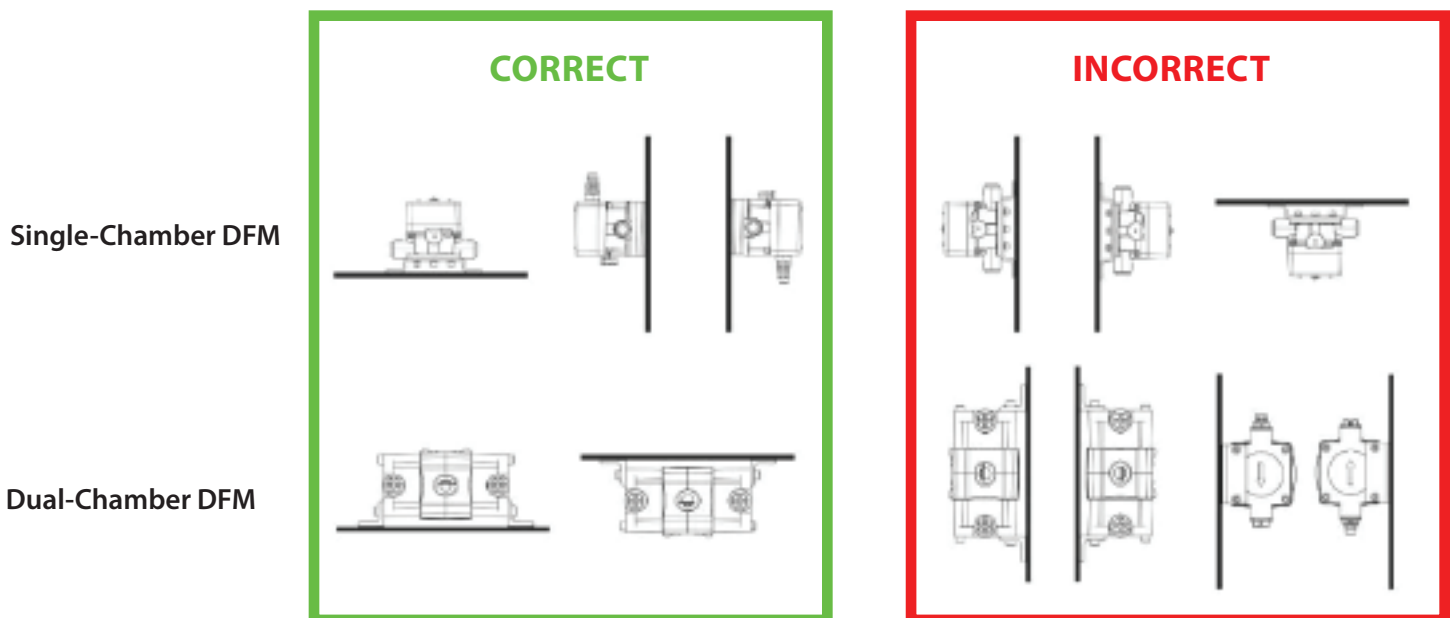
### Installation Requirements

1. DFM devices are compatible with diesel fuel and similar within the specified viscosity range.
2. Appropriate filtering must be provided to prevent damage from foreign material.
3. Ensure that the flow direction matches the arrows shown on the device.
4. Mount the DFM device according to the operating position diagrams below.
5. NMEA 2000® cabling is used to provide a separate powered bus for DFM devices.
6. AIRMAR accessory cable ACC-YCBL-ASM-01 is used to connect to an advanced ASM module.
7. Appropriate bus termination must be provided; or the ASM module internal termination may be used.

**Note:** DFM devices cannot be directly connected to a NMEA 2000 backbone or display.



### Mounting Orientation



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