

Diesel Flow Meter

SPECIFICATION AND INSTALLATION DETAILS



SmartFlex™

NEW Airmar SmartFlex™ Diesel Flow Meters

Airmar's innovative SmartFlex™ Diesel Flow Meters (DFMs), is a groundbreaking solution that has redefined the way diesel fuel is monitored and managed in the marine industry. These cutting-edge sensors seamlessly integrate with the award-winning Airmar SmartBoat Modules (ASMs) through a digital interface, offering unmatched precision and efficiency. With models catering to various flow rate requirements (1 to 4000 liters/hour), our DFMs are setting new standards in accuracy, ease of installation, cost-effectiveness, and fuel system longevity.

Part Numbers and Specifications

Part Number	Variations	Chambers	Working Range	Weight	Mounting L x W	Thread Type
DFM-50-SA	-L	Single	1 – 50 LPH $\pm 1\%$ (.2 – 2 GPH $\pm 1\%$)	0.96 kg (2.11 lbs)	90 x 70 mm (3.54" X 2.75")	M14 x 1.5
DFM-100-SA	-L	Single	2 – 100 LPH $\pm 1\%$ (.5 – 26 GPH $\pm 1\%$)	0.96 kg (2.11 lbs)	90 x 70 mm (3.54" X 2.75")	M14 x 1.5
DFM-250-SA	-L	Single	5 – 250 LPH $\pm 1\%$ (1 – 66 GPH $\pm 1\%$)	1.30 kg (2.86 lbs)	90 x 70 mm (3.54" X 2.75")	M14 x 1.5
DFM-500-SA		Single	10 – 500 LPH $\pm 1\%$ (2 – 132 GPH $\pm 1\%$)	1.29 kg (2.84 lbs)	90 x 70 mm (3.54" X 2.75")	M16 x 1.5
DFM-1000-SA-L	F, -SB	Single	20 – 1000 LPH $\pm 1\%$ (5 – 264 GPH $\pm 1\%$)	2.90 kg (6.39 lbs)	42 x 32 mm (1.65" X 1.25")	3/4" BSP
DFM-2000-SA-L	F, -SB	Single	40 – 2000 LPH $\pm 1\%$ (10 – 528 GPH $\pm 1\%$)	3.12 kg (6.87 lbs)	42 x 16 mm (1.65" X .62")	1" BSP
DFM-4000-SA-L	F, -SB	Single	80 – 4000 LPH $\pm 1\%$ (21 – 1056 GPH $\pm 1\%$)	5.64 kg (12.43 lbs)	52 x 20 mm (2.04" X .78")	1 1/4" BSP
DFM-100-DA		Dual	10 – 100 LPH $\pm 1..3\%$ (.5 – 26 GPH $\pm 1\%$)	1.50 kg (3.30 lbs)	135.8 x 45 mm (5.34" X 1.77")	M14 x 1.5
DFM-300-DA		Dual	50 – 300 LPH $\pm 1..3\%$ (13 – 79 GPH $\pm 1\%$)	2.16 kg (4.76 lbs)	152.8 x 45 mm (6.01" X 1.77")	M14 x 1.5
DFM-600-DA		Dual	100 – 600 LPH $\pm 1..3\%$ (26 – 158 GPH $\pm 1\%$)	2.07 kg (4.56 lbs)	155.8 x 45 mm (6.13" X 1.77")	M16 x 1.5

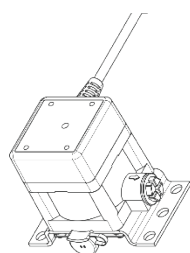
Variations available by special order: F (Flange mount) / -L (LCD display) / -SB (Brass housing)

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

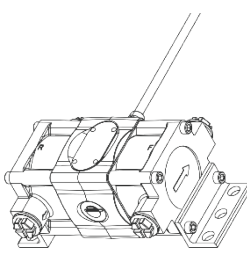
Accuracy can vary according to ratio of feed chamber and reverse chamber flow rate

Common Specifications

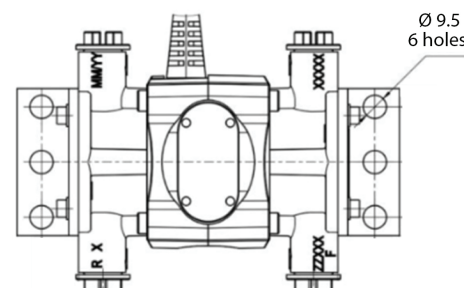
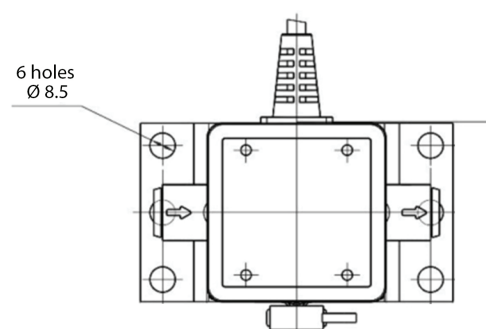
Parameter	Value
Maximum Pressure	25 bar
Kinematic Viscosity	1.5 – 6.0 mm ² /s (cSt) (.059" – .23" ² /s (cSt))
Maximum size of inclusions	0.08 mm (.003")
Max Pressure drop at max flow	0.2 bar
Supply voltage range	10 – 16 VDC
Operating ambient temperature	-40 – 85 °C (-40 – 185 °F)
Water ingress protection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



Single-Chamber DFM



Dual-Chamber DFM



Diesel Flow Meter

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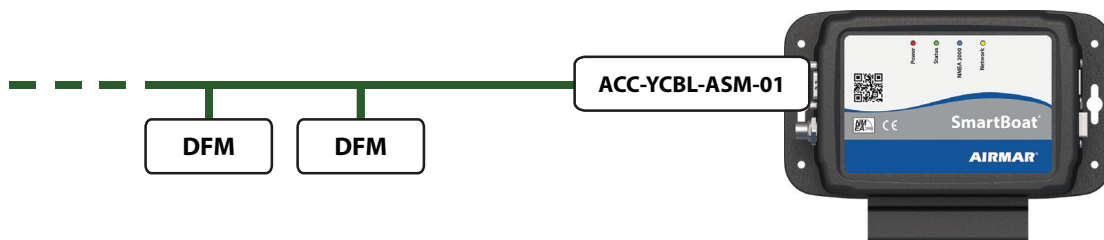
Installation Guide

AIRMAR Diesel Flow Meters are intended for use only with Airmar SmartBoat Modules (ASMs). 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 CES modules.
7. Appropriate bus termination must be provided; or the ASM internal termination may be used.

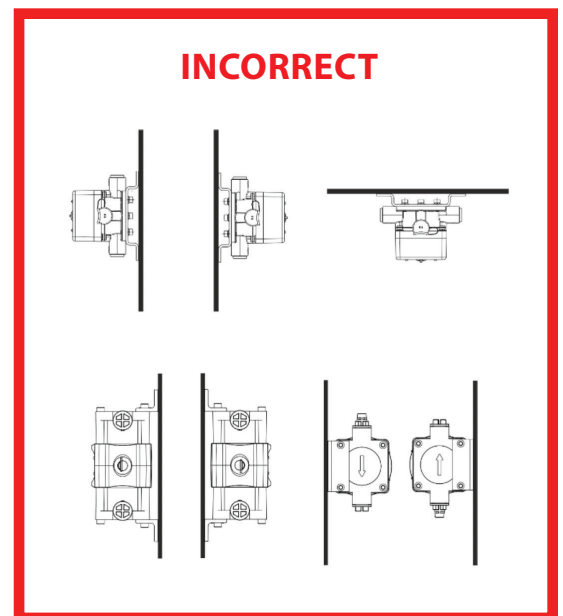
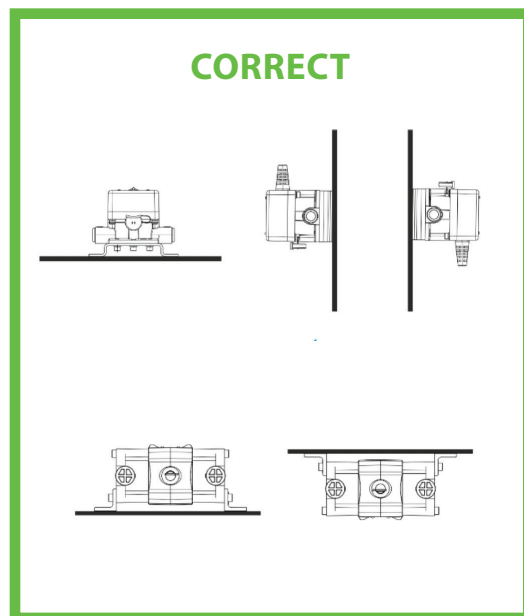
Note: DFM devices cannot be directly connected to a NMEA 2000 backbone or display.



Mounting Orientation

Single-Chamber DFM

Dual-Chamber DFM



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