AlphaRiverPilot MFS
Autopilot

ALPHATRON
Marine

- Slim and compact design
- 5-inch touch screen display
- Fully digital system
- Self-learning adaptive pilot

Category
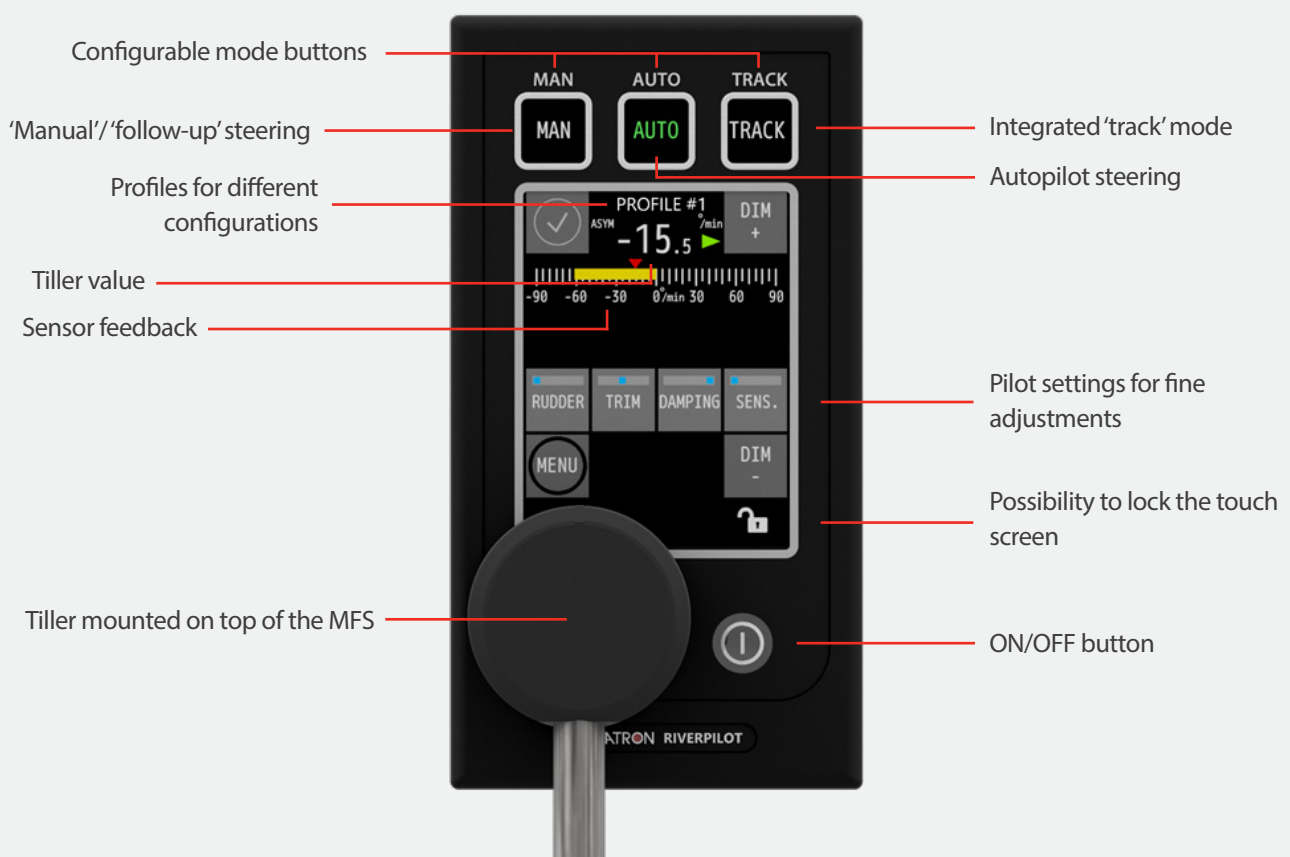
Inland

alphatronmarine.com

Features |

Introducing the all new AlphaRiverPilot MFS, approved with ES-TRIN. The autopilot runs fully digital and supports backwards compatibility for analogue sensors. The processor box has been redesigned for faster installation and replacement and commissioning is made easy with our in-house built programmer. Connect up to four compact MFS tiller units with ease, thanks to our adapter plates that accommodate larger holes. With full control of single rudders, linked rudders, independent rudders, or (in combination with) Azimuth Z-drives, the new pilot offers unparalleled flexibility and control. And if you need to connect to other systems for special configurations such as rotor manoeuvring system (RMS) or other systems, our new pilot also offers connection options to ensure seamless integration.

- AlphaRiverTrackPilot integration
- Ease of access
- Redesigned housing of the processor box makes installation and replacement faster and easier
- In-house build programmer simplifies the commissioning process
- Two variants of the MFS tiller units (surface and flush mounted) offer flexibility and customization
- Full control of single, linked, or independent rudders, as well as Azimuth Z-drives
- AlphaRiverTrackPilot integration

Display |

The AlphaRiverPilot is easy to operate via an intuitive 5-inch color touch screen MFS control panel which will give the operator a clear presentation of information. The user-friendly menu and parameters can be accessed and changed by using the touch screen.

Configurable mode buttons
'Manual'/'follow-up' steering
Profiles for different configurations
Tiller value
Sensor feedback
Tiller mounted on top of the MFS

Integrated 'track' mode
Autopilot steering
Pilot settings for fine adjustments
Possibility to lock the touch screen
ON/OFF button

Modi |

The AlphaRiverPilot can be set as adaptive autopilot when it uses information of speed or draft of the vessel and can be used in several modes. You can select up to 5 different modes with the track button.

Mode	Explanation
Standby	AlphaRiverPilot is in stand-by and does not control steering or rudders as control is overridden.
Auto	Auto mode activates the autopilot and steers the vessel to the reference course set by the tiller. When current will push the vessel off course, the AlphaRiverPilot will counteract.
Manual	Manual mode or also referred to as 'follow up' mode allows the user to hand steer the vessel. Hand steering is typically used when the vessel is manoeuvring and navigating in restricted waters, channels and areas with high shipping density.
Compass	Compass mode can be used to set a course on the MFS that can be set by using the tiller or the fine adjustment buttons on-screen.
Track	Track is a new mode that implements certain aspects of the AlphaRiverTrackPilot. It is now possible to adjust the trackline position and get real-time information.
Slave	When double steering is required, it is possible to control both with one MFS tiller unit. Other MFS tiller units will show 'slave' and the mode selected in the color blue. The slave units will follow the master MFS tiller unit.
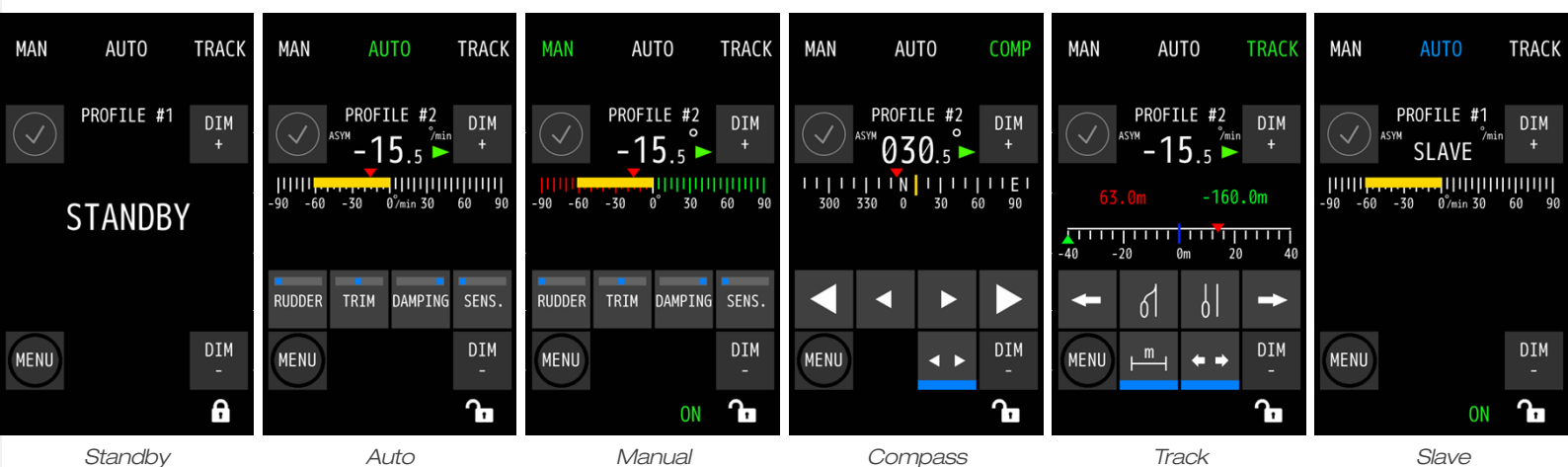
Standby   Auto   Manual   Compass   Track   Slave

Self-learning adaptive pilot |

The autopilot system offers two different operation modes. The first mode is the conventional PID (non adaptive) system, which requires manual adjustment of the autopilot to attain optimal steering performance. On the other hand, the AlphaRiverPilot MFS offers the second mode as an adaptive autopilot system. It automatically adjusts the control parameters, thereby reducing the need for manual adjustments.

Mounted variants |

Our AlphaRiverPilot comes in two variants - surface and flush mounted - giving you the flexibility and customization you need. With the surface-mounted unit, the adapter plate can be placed on both sides and you can even mount extra accessories on top. The flush-mounted unit also allows for the adapter plate to be placed on both sides and for extra accessories to be mounted on top. Choose the variant that best suits your needs and take advantage of the added versatility it provides. Check out the options below:

Adapterplate surface mounted - MFM to MFS
*Only to be used with item G-009682

Adapterplate flush mounted - MFM to MFS
*Only to be used with article G-20220

Adapterplate flush mounted- Sigma to MFS
*Only to be used with article G-20220

Adapterplate flush mounted wide - Sigma to MFS
*Only to be used with article G-20220

Accessoires |

Rudder feedback units

The rudder feedback unit can be mechanically coupled to the rudder post by a chain or a transmission link. The unit contains a dual potentiometer which is proportional to the rudder angle. The output of the rudder feedback unit must be connected to the input of the processor box. This continuously transmitted accurate rudder angle data, will be presented by the MFS tiller units.

Analog interface

Digital interface for reading analog signals. Supported signals include 0..20mA, +/- 10V, and potentiometer signal for using with dimmers or rudder feedback units.

To main control unit ←

The rudder feedback units can also be connected to the analog interface inland Mk2 which will convert the analog signal to a digital MODBUS and IEC61162-1 signal. This output signal can be transmitted to any AlphaLine MF Repeater display which is capable to display graphical rudder information.

Processor box

The complete AlphaRiverPilot MFS system consists of a 5-inch touch screen MFS control panel with a build on top tiller and a separated processor box Mk4 to interface to all necessary data communication signals. Next to this, the processor box Mk4 is provided with multiple terminals to connect different steering system interfaces.
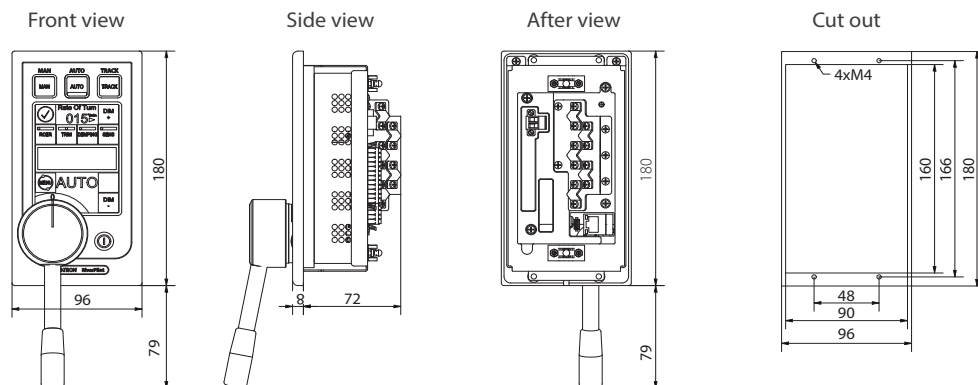
- Proportional valves, thruster, and waterjet
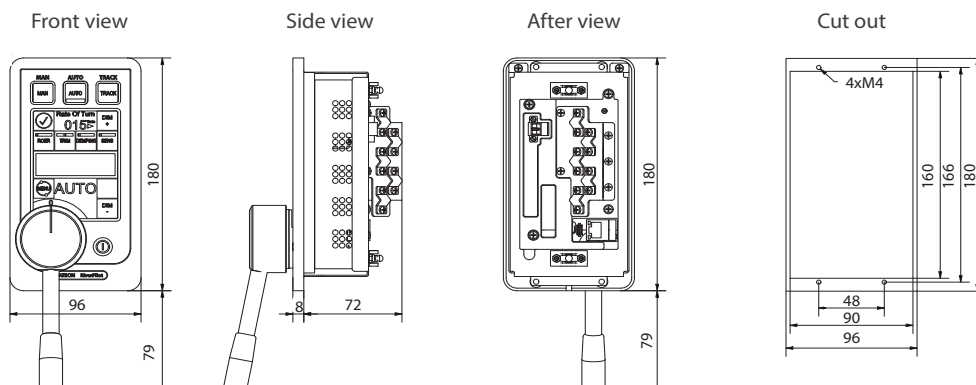- Solenoid valves – (2x): +/-10VDC
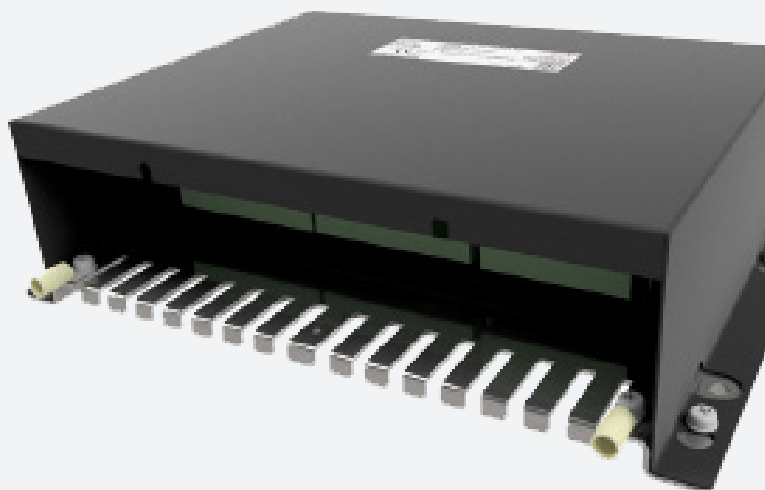
Tech specs |

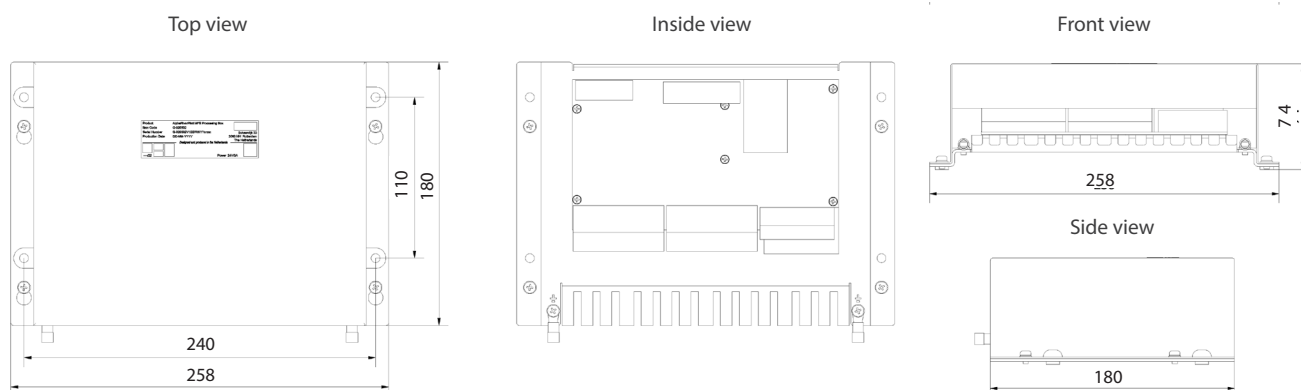## AlphaRiverPilot MFS

G-009682 Weight 1,06 kg (2,34 lbs)

Front view	Side view	After view	Cut out

AlphaRiverPilot MFS (flush mounted)

G-020220 Weight 1,06 kg (2,34 lbs)

Front view	Side view	After view	Cut out

Processor box

G-020502 Weight 1,76 kg (3,88 lbs)

Top view	Inside view	Front view

Side view

Adapterplate surface mounted - MFM to MFS-V
G-022114 Weight 0,24 kg (0,53 lbs)

Front view	Side view	After view	Top view

R2 / R4 / R2 / R2 / M4x0.7 / 180 / 180 / R4 / R4 / 4 / 8 / 4 / 60 / R2 / 64 / 8 / 64
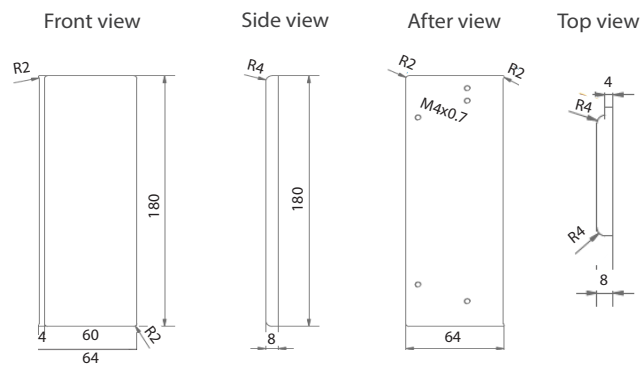
Adapterplate flush mounted - MFM to MFS-VF
G-022113 Weight 0,24 kg (0,53 lbs)

Front view	Side view	After view	Side view

R10 / R10 / M4x0,7 / 180 / 180 / 69,53 / 69,53 / 8 / 69,53 / 8
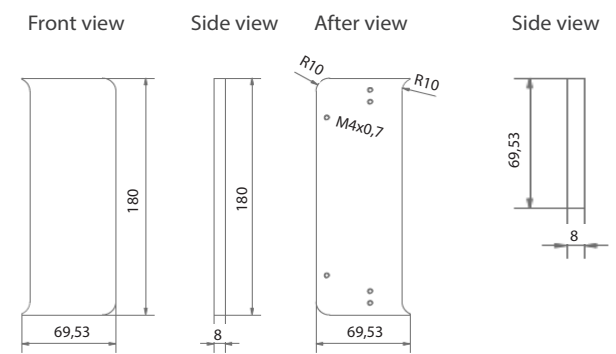
Adapterplate flush mounted wide - Sigma to MFS-VF
G-022776

Front view	Side view	After view	Side view

R10 / R10 / 21 / 9 / M4x0.7 / 180 / 120 / 9 / 21 / 8 / 8 / 32 / 32 / 144 / 8
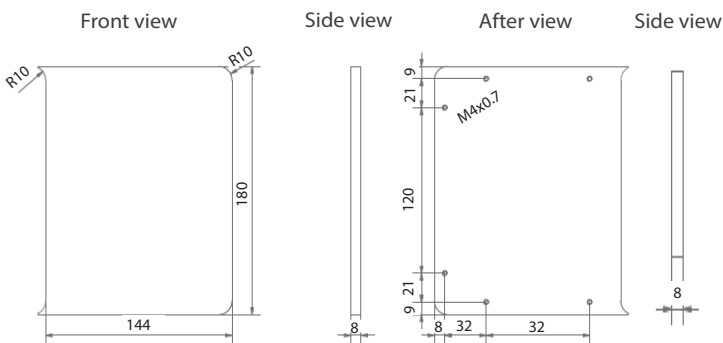
Adapterplate flush mounted- Sigma to MFS-VF
G-022775

Front view	Side view	After view	Side view

R10 / R10 / 21 / 9 / M4x0.7 / 180 / 120 / 9 / 21 / 8 / 8 / 32 / 32 / 72 / 8 / 8
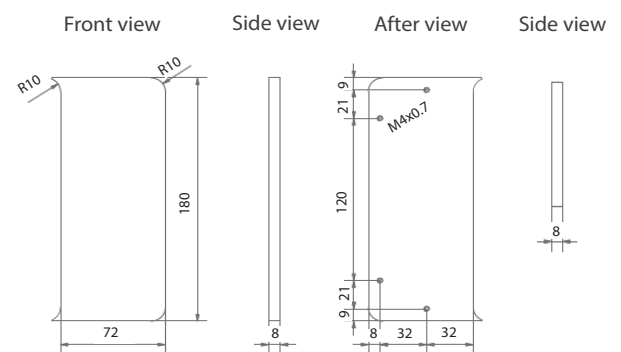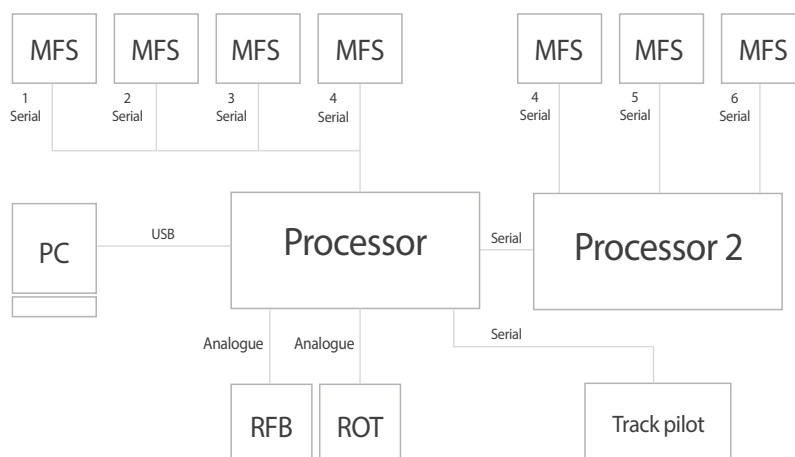
In the box

- Controlpanel MFS-V   G-009682
- Processor box   G-020502
- Rudder feedback unit   G-002291

In the box (flush mounted)

- Controlpanel MFS-VF   G-020220
- Processor box   G-020502
- Rudder feedback unit   G-002291

System diagram |

MFS	MFS	MFS	MFS		MFS	MFS	MFS
1 Serial	2 Serial	3 Serial	4 Serial		4 Serial	5 Serial	6 Serial

PC — USB — Processor — Serial — Processor 2

Analogue / Analogue / Serial

RFB / ROT / Track pilot

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