

Auto Pilot

Model: SEM300

Efficient Steering

With adaptive Autopilot





Optimal control for safe and efficient steering

The Furuno Autopilot SEM300 provides excellent quality in steering and control, with optimal routing and low fuel consumption as a result.

- ▶ Type approved with Furuno FMD ECDIS, Track control
- ▶ Adaptive Autopilot modes
- ▶ Course Mode for automatic drift compensation
- ▶ NAUT AW compliant with a standby unit
- ▶ Curved EBL – shown on ECDIS
- ▶ Alarm interface for Bridge Alarm Management
- ▶ Intuitive operation
- ▶ 6.5 inch TFT display with high luminance

▶ Design

SEM300 is based on many years of experience in cost efficient and safe Autopilot design. It is designed with a tiller on the control panel, where the navigator can directly change set-point, both heading and radius. The panel is designed with pushbuttons that have LED backlight and an LED lightbar above each button. The lightbar clearly indicates which mode is in use, so operation can be done safely. The navigator is never in doubt, when an order is given due to the required actuation force of both tiller and pushbuttons.

To ensure the best experience and readability on the display at all times, the navigator can choose between day, dusk and night view.

Key information displayed:

- Speed information, water and ground speed
- Rudder order
- Actual rudder (if feedback is provided)
- Clear indication of rudder limits
- Heading, Set Heading
- Actual Gyro in use
- Chosen performance mode
- Course mode (when course mode is used)



SEM300 consists of:

- Autopilot Control Panel (MIP241)
- Autopilot Cable (CE2MM)
- Autopilot Electronic Unit (AEU611)

▶ Adaptive Autopilot modes

SEM300 has two sets of adaptive modes to help with *fuel efficiency* and *steering optimization*. The Autopilot adapts its performance based on the choice made by the navigator.

Precise, Medium and Economy

Three options are available, depending on how tight the vessel needs to follow the set heading. Economy mode provides the most relaxed, fuel saving heading control by minimizing use of rudder movements.

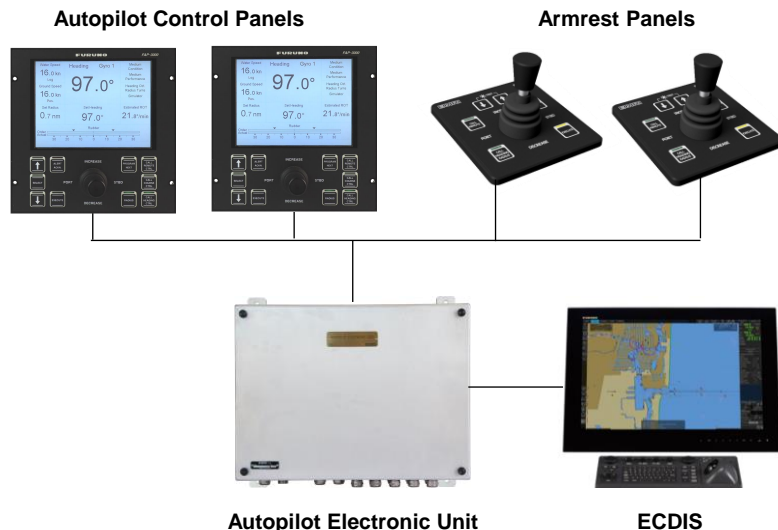
Loaded, Medium and Light

Three options are available, depending on the vessel's loaded condition. The Autopilot will automatically optimize the steering based on the chosen condition.

► Flexible design options

The Autopilot can have up to 4 control panels connected to the same AEU (Autopilot Electronic Unit) in case more panels are requested.

In SEM300 new parameter settings can be uploaded directly to the Autopilot via USB key. It makes it quick and easy to make adjustments if needed.



► Armrest control

Steering from the navigator's chair is possible with an Armrest Panel that is designed for easy control of the essential Autopilot functions while adding better ergonomics for the navigator.

In order to ensure safety and avoid any possible confusion by the navigator, the Armrest Panel has similar layout and functional style as the autopilot control panel. It is operated by the use of pushbuttons with an actuation force of 5.5N and a rocker tiller designed to avoid any unwarranted actions.

The Armrest Panel is installed directly to the Autopilot Electronic Unit via CAN-bus terminals or through a junction box.

► Armrest display (coming soon)

A 5-inch vertical Armrest display that can be built into the same front plate for a slim line control panel.



► Setup

SEM300 is preset from factory, where parameters are loaded into the Autopilot based on known ship data. This makes setup and sea trial simple. The preset is done with decades of experience in the field and acknowledged steering performance.

If requested, additional finetuning can be performed by a service engineer. Useful setup wizards are available and provides extensive opportunities for adjusting to specific individual preferences and vessel steering capabilities.

► Retrofit

SEM300 offers an improved human machine interface with extensive opportunities in its design and functionality. Retrofitting from SEM200 or Furuno FAP-2000 to SEM300 does not require any console work, as the equipment is designed to fit into the existing cut-outs onboard. We can identify and deliver the correct Autopilot setup based on known ship data, making it as simple as possible for the crew onboard. This makes it cost efficient, while also minimizing the time needed to perform the retrofit.

Older/other Autopilots can be retrofitted to SEM300 by performing an observation of the existing system.



► Standard mounting



The control panel is usually mounted in the bridge console cutout by using the four mounting holes.

► Plugged mounting option



The mounting holes are plugged, and the control panel can be mounted in the console from the bottom up in order to create a visually streamlined look in the console.

► Advantages of retrofitting

- Improved display
- More relevant information is provided for the navigator
- Course Mode
- Improved Programming Mode
- Rudder Toe angle – better fuel economy for dual rudder vessels
- Product lifetime considerations
- More bridge design options
- Improved service tools

► Programming Mode

The navigator can plan changes ahead by programming next heading, next course or next radius which is stored in the Autopilot and ready to be executed. It is especially useful when navigating in narrow waters such as the archipelagoes.

When programming the next settings, the navigator can keep the actual settings available in the background and thereby be able to make an easy swap between modification of ongoing maneuvers and programming mode. The Autopilot control panel clearly and logically displays the step-by-step programming using the terminology “next” to avoid any possible confusion.

► Rudder Toe Angle

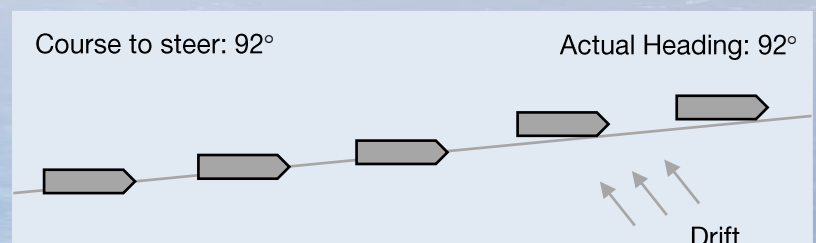
For dual rudder vessels, SEM300 can display the Toe angle on the control panel. When using Toe angle control of the rudders, it is possible to optimize the fuel consumption by avoiding loss of propulsion.

► Course Mode

Besides Heading and Track control, SEM300 can be used in Course Mode which is a drift compensated heading control. No manual corrections are necessary, as the Autopilot automatically compensates for any drift by using the Gyro as dynamic reference and GPS signal as static reference to stay on course.

Heading control

Classic heading control will maintain the set heading making it necessary for the navigator to manually compensate for any drift to stay on course.



Course Mode

When operating in Course Mode the Autopilot will compensate for any drift by automatically adjusting the actual heading to stay on course.

