

Components for engine control system

Installation of ECS in the engine control room

The following items are to be installed in the ECR (Engine Control Room):

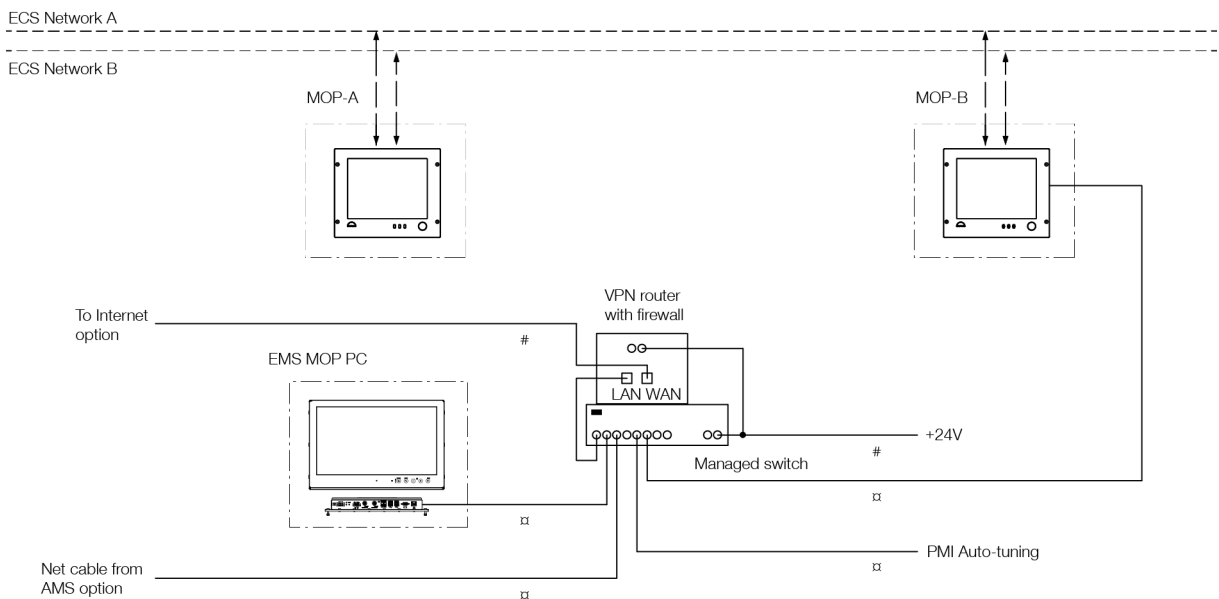
- 2 pcs EICU (Engine interface control unit)
(1 pcs only for ME-B engines)
- 1 pcs ECS MOP-A (Main operating panel)
EC-MOP with touch display, 15"
- 1 pcs ECS MOP-B
EC-MOP with touch display, 15"
- 1 pcs EMS MOP with system software display,
24" marine monitor PC unit
- 1 pcs Managed switch and VPN router with firewall

The EICU functions as an interface unit to ECR related systems such as AMS (alarm and monitoring system), RCS (Remote control system) and safety system. On ME-B engines the EICU also controls the HPS.

MOP-A and -B are redundant and are the operator's interface to the ECS. Via both MOPs, the operator can control and view the status of the ECS. Via the EMS MOP PC, the operator can view the status and operating history of both the ECS and the engine, EMS is described in Section 18.01.

The PMI auto-tuning application is run on the EMS MOP PC. PMI auto-tuning is used to optimize the combustion process with minimal operator attendance and improve the efficiency of the engine. See Section 18.01.

CoCoS-EDS ME Basic is included as an application in the engine management services as part of the standard software package installed on the EMS MOP PC. See Section 18.01.



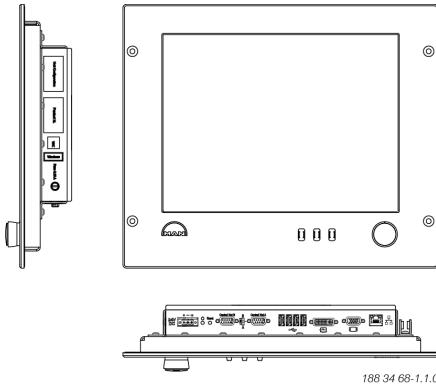
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Abbreviations:		# Yard supply
AMS:	alarm monitoring systems	
EICU:	engine interface control unit	⌘ Ethernet, 10 m patch cable supplied with switch. Type:
EMS:	engine management services	RJ45, STP (Shielded Twisted Pair), CAT 5.
MOP:	main operating panel	In case 10 m cable is not enough, this becomes Yard supply.

Fig. 5.16.01 Network and PC components for the ME/ME-B engine control system

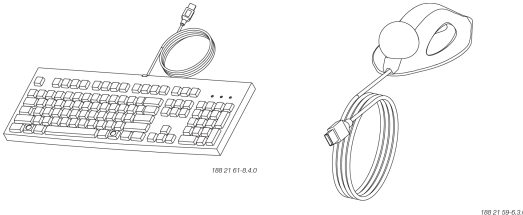
EC-MOP

- Integrated PC unit and touch display, 15"
- Direct dimming control (0-100%)
- USB connections at front
- IP20 resistant front
- Dual Arcnet



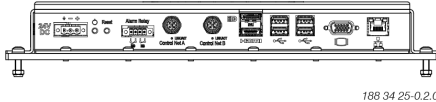
Pointing device

- Keyboard model
 - UK version, 104 keys
 - USB connection
- Trackball mouse
 - USB connection



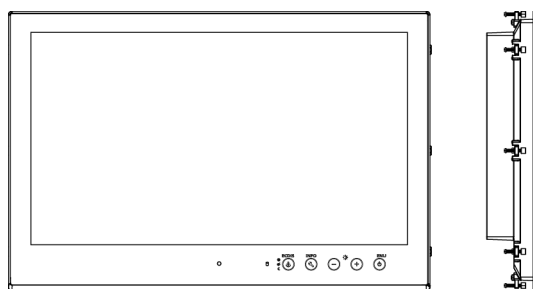
EMS MOP PC

- Standard industry PC with MS Windows operating system, UK version

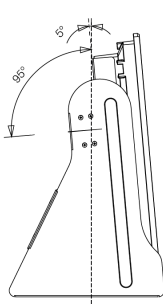


Marine monitor for EMS MOP PC

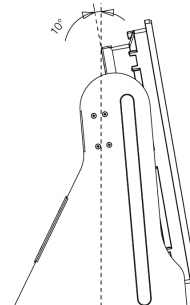
- LCD (MVA) monitor 24"
 - Projected capacitive touch
 - Resolution 1,920x1,080, WSXGA+
 - Direct dimming control (0-100%)
 - IP54 resistant front
 - For mounting in panel
- Bracket for optional mounting on desktop, with hinges (5° tilt, adjustable 95°) or without hinges (10° tilt, not adjustable)



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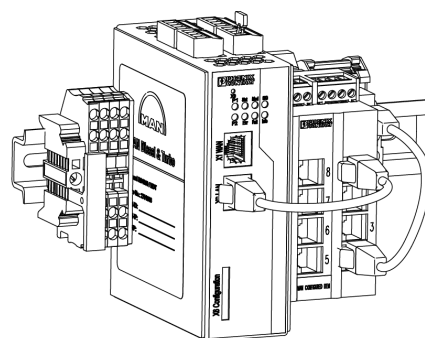
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Network components

- Managed switch and VPN router with firewall

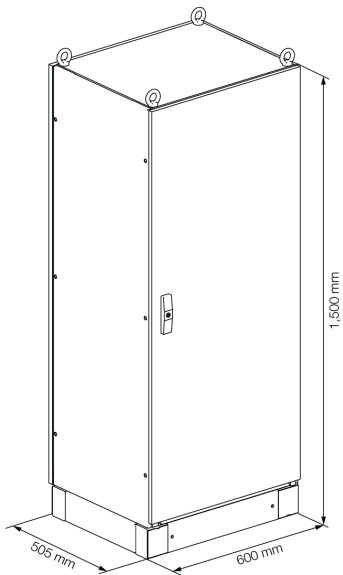


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Fig. 5.16.02 MOP PC equipment for the ME/ME-B engine control system

EICU cabinet

- Engine interface control cabinet for ME-ECS for installation in ECR (recommended) or ER

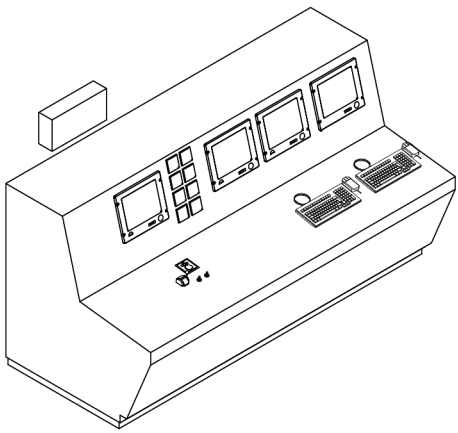
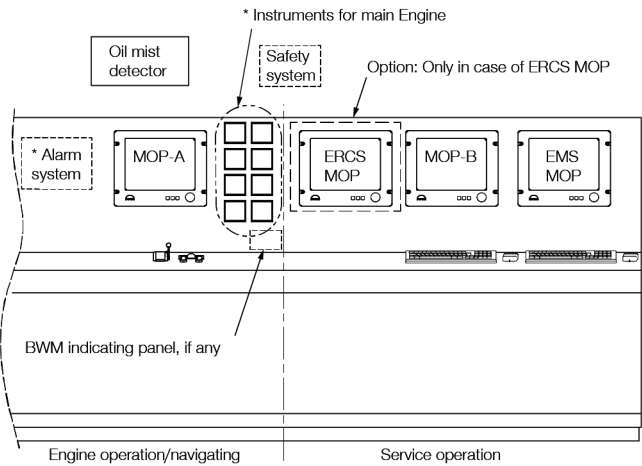


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Fig. 5.16.03: The network printer and EICU cabinet unit for the ME engine control system

Engine control room console

- Recommended outline of Engine Control Room console with ME equipment



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* Yard supply

Oil mist detector equipment depending on supplier/maker
BWM: Bearing wear monitoring

Fig. 5.16.04: Example of engine control room console