



# Wiper Control System



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## Features

The Mega-Guard Wiper Control System (WCS) controls up to 9 windshield wipers. Each wiper has its own on/off button and fore and aft wipers are grouped together for simultaneous on/off control.

Separate Aft and Fore buttons are available for Low/High Speed, Heating and Washing functions. In Low speed mode the interval can be varied with the Interval+/Interval- pushbuttons.

The wipers are synchronized with each other. The washing function includes spraying, wiping and purging.

The Mega-Guard WCS supports multiple Operator Panels. A typical lay-out includes two Wiper Operator Panels: one installed in fore bridge and one installed in aft bridge. The Operator Panels are inter-connected by a redundant Ethernet network.



WCS Operator Panel

### Mega-Guard WCS Operator Panel

Touchscreen	5,7"
Pushbuttons	6
Front	metal or glass
Microprocessor	ARM
Ethernet ports	4
WCS Operator Panel	Up to 4

### Mega-Guard WCS Controller

Wiper outputs	9
Wiper functions	3 (high/low spd, park)
Function outputs	6 (wash/heat/purge)
Power supply	24VDC (-25% ~+30%)
Output specification	24VDC (max. 90W)

### WCS environmental and approvals

Ambient temperature	-25 - 70°C
Class approval	LRS,DNV-GL, ABS RINA, BV, RMRS, CCS, NKK, PRS, KR

## System lay-out and operation

The Mega-Guard WCS consists of the following items:

- ▶ **WCS Operator Panel** for flush panel mounting in bridge console
- ▶ **WCS Controller** for din-rail mounting inside bridge console
- ▶ **I/O Cable** connecting the WCS Operator Panel with WCS Controller

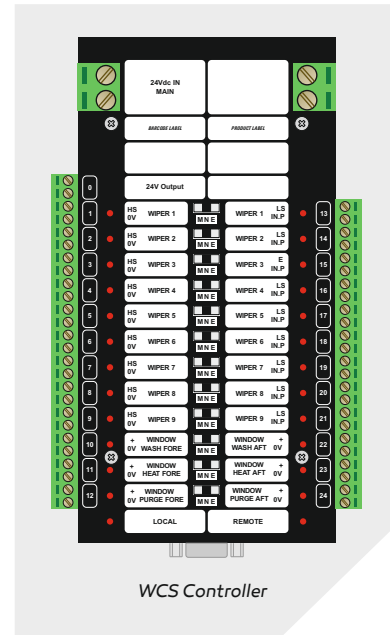
The WCS Operator Panel is operated through a user friendly 5,7" touchscreen for intuitive operation and monitoring. This Operator Panel is available in two different versions, a panel with a metal front for commercial and navy ships and a panel with glass front for mega yachts.

The WCS Controller is DIN rail mounted inside bridge console and the window wiper connections are directly connected to this Controller. In addition, the WCS Controller is equipped with manual on/off switches for each individual wiper. The WCS Controller should be mounted in such a way that it can be reached without using tools in order to make use of this function.

The I/O Cable with length of 3 or 5 meter, inter-connects the WCS Operator Panel with the WCS Controller.

## WCS Operator Panel functions

- ▶ Touch buttons for controlling individual wipers
- ▶ Wiper Fore and Wiper Aft touch button for activating all fore and aft wipers
- ▶ Wiper PS and Wiper SB touch button for activating all port and starboard wipers
- ▶ High Speed Fore and Aft touch buttons for toggling low speed / high speed
- ▶ Interval- and Interval+ touch button for in-/decreasing cycle time for low speed
- ▶ Heating Fore and Aft touch buttons for heating the windows
- ▶ Wash Fore and Aft touch buttons for washing the windows
- ▶ Ack button for acknowledging alarms
- ▶ Stop Horn button for deactivating the external horn and the internal buzzer
- ▶ System on and fault indication
- ▶ Touch buttons used for dimming and entering Installation mode
- ▶ 5,7" touchscreen display
- ▶ Internal buzzer
- ▶ Fail output (voltage-free)
- ▶ Horn output (voltage-free)
- ▶ USB port to load configuration from memory stick
- ▶ Redundant Ethernet port to connect to other Mega-Guard Operator Panels
- ▶ I/O Bus connector to connect to I/O Cable
- ▶ Supports up to 4 WCS Operator Panels

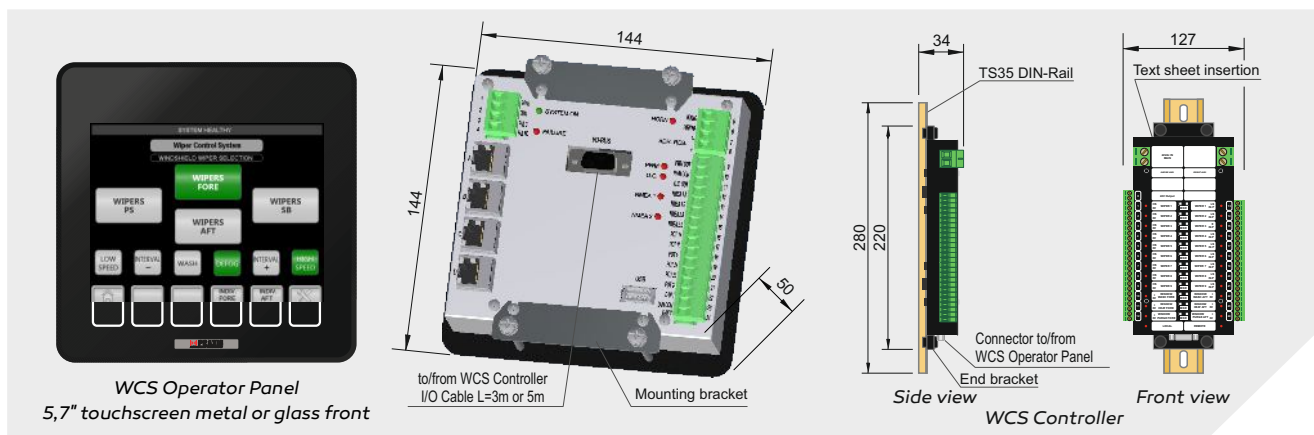


## WCS Controller functions

- ▶ 9 pcs Wiper High speed output
- ▶ 9 pcs Wiper Low speed output
- ▶ 2 pcs Wash output
- ▶ 2 pcs Heat output
- ▶ 2 pcs Purge output
- ▶ All outputs active 24VDC and max. 90W
- ▶ Power supply input: 19~32VDC
- ▶ Power supply output: 19~32VDC connected to the WCS Operator Panel
- ▶ I/O Bus connector to connect to I/O Cable



## Mounting & dimensions



Vessel Management System



Power Management System



Fire Alarm System



CCTV Video Distribution



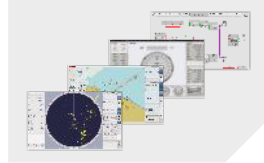
Ship Performance Monitor



Fleet Management System



Integrated Navigation System



Heading Control System



Propulsion Control System



Dynamic Positioning System



BNWAS Watch Alarm System



Navigation Light Control



Wiper Control System



Energy Management System



Electric Propulsion Motor



Electric Steerable POD



High Power Inverter



DC bus Generator



Electric Energy Storage



Electric Fin Stabilizer



*Ship automation,  
navigation and  
electric propulsion*