WÄRTSILÄ

Valve Remote Control System

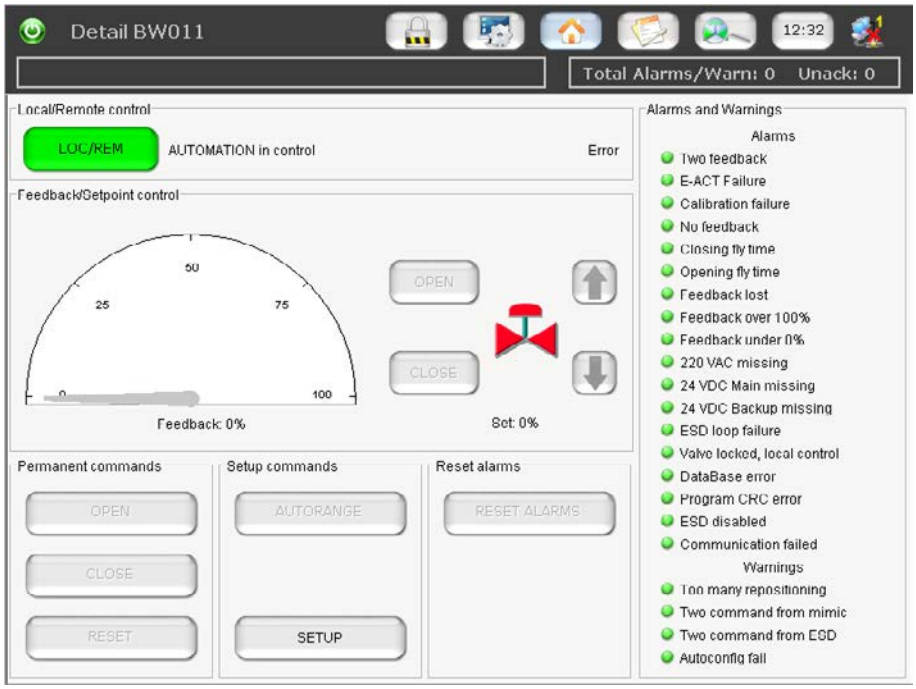
Wärtsilä Valve Remote Control System (VRCS) interfaces with the IAS (Integrated Automation System), with Mimic Diagram and with Emergency Shut Down (ESD) System.

E-ACT-VCU technology has been developed for both Cruise and Mercantile Vessels. This technology is suitable for controlling electro-hydraulic actuated valve systems.

This innovative technology and many years of successful experience enable us to provide turn-key solutions.

Key Benefits

- Redundant power supply
- Redundant digital communication with the IAS
- Hot-swappable cards
- Compatible with any IAS
- Easy configuration and maintenance
- Self-diagnostic
- Cost effective
- Full monitoring of valves and actuators
- All data available to the automation system
- Distributed architecture over main fire zones (MVZ)



Key Elements

E-ACT-MB Motherboard

E-ACT-MB Motherboard can hold up to 8 E-ACT-VCU cards, thus controlling up to 8 valves.

Each E-ACT-MB is equipped with following connections: redundant power Supply 24Vdc, redundant communication bus RS 485 and 230Vac power supply for E-ACT power.

E-ACT-VCU digital valve control cards

Each E-ACT-VCU card controls one single valve and its feedback and interconnects with the IAS via communication cards or, optionally, directly through a Hardwire Interface.

A number of LEDs on the Front Panel and others visible sideways, report the operating status of the card.

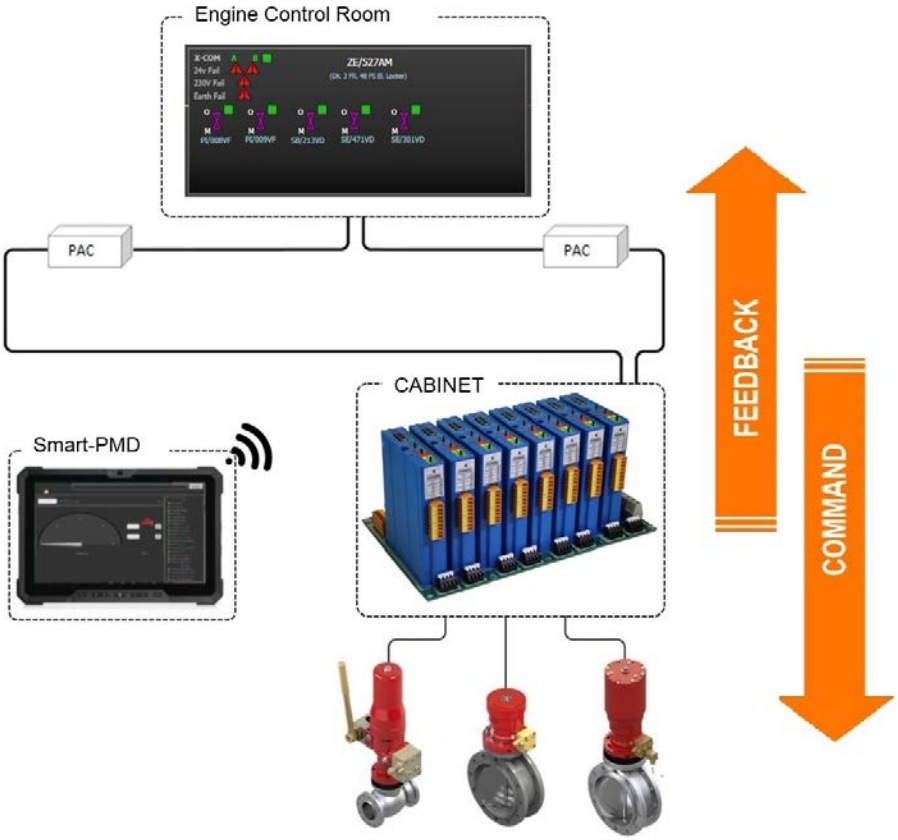
Every card can be controlled locally via 3 simple push-buttons

- Local/Remote pushbutton - Is used for set in control the E-ACT-VCU. This push-button enables Close and Open pushbuttons.
- Close push-button - Is used for a full close command on E-ACT-VCU (if local/remote led is lit)
- Open push-button - Is used for a full open command on E-ACT-VCU (if local/remote led is lit)

Smart-PMD

The SMART-PMD is a portable device, for maintenance purposes only, developed to operate during maintenance on WAPSS systems without cables connections.

The SMART-PMD will connect wireless to VRCS cabinets under bulkhead deck, and can control all valves in cabinets installed in the same MVZ.



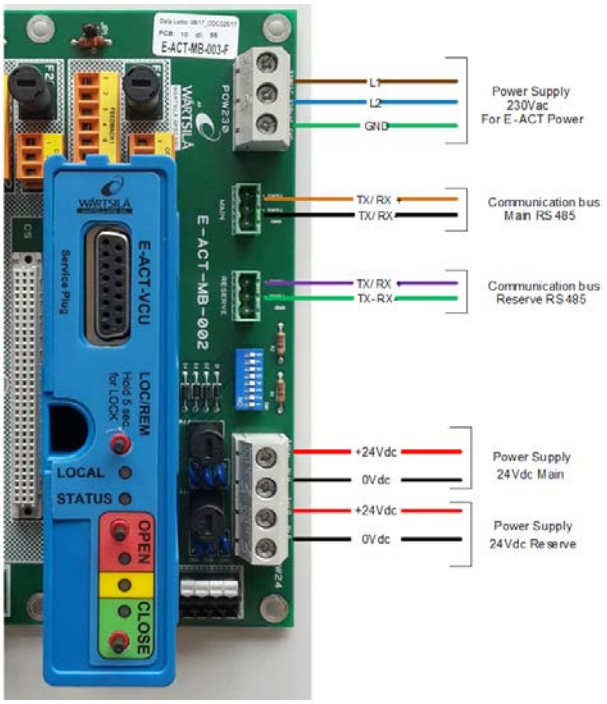
Data Available

Alarm list

- Two feedbacks
- E-ACT Failure
- Calibration Failure
- No feedback
- Closing fly-time
- Opening fly-time
- Feedback lost
- Feedback over 100%
- Feedback under 0%
- 230 VAC missing
- 24 VDC Main missing
- 24 VDC Backup missing
- ESD loop failure
- Valve locked
- Database Error
- Program CRC error
- ESD disabled

Warning list

- Too many repositionings
- Two commands from mimic
- Two commands from ESD



Technical Details

Power supply	Redundant 18-32 Vdc
Consumption	5 W
Operating temperature	0-70°C
Serial interface	Redundant RS485
Digital output (hardware Interface)	Free contact 150 mA 250 V
Approvals	Marine application

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