

ROCKSON
AUTOMATION
54° 19' 31" N, 010° 5' 4" E

EVOLUTION V5

maritime automation ... powered by people



At Rockson automation, our goal is to offer the full range of maritime services for maritime automation from one source.

The interests of our customers and clients is the focus of all our activities. Even if we view ourselves as an innovative and reliable partner, we always remain faithful to our tradition and our corporate values. Creating 'added value' for our customers and clients is our understanding of a modern automation provider.

But, it is obvious: shipping and shipbuilding is not for the faint-hearted. So, we continue to be diligent. Because this is what is looming on the horizon – our maritime solutions also like shipping always has and will continue to reward the steady and the brave.

Rockson automation is well known in the maritime market. We are proud of our ability based on our many years of experience. Please, take a look:

EVOLUTION V5

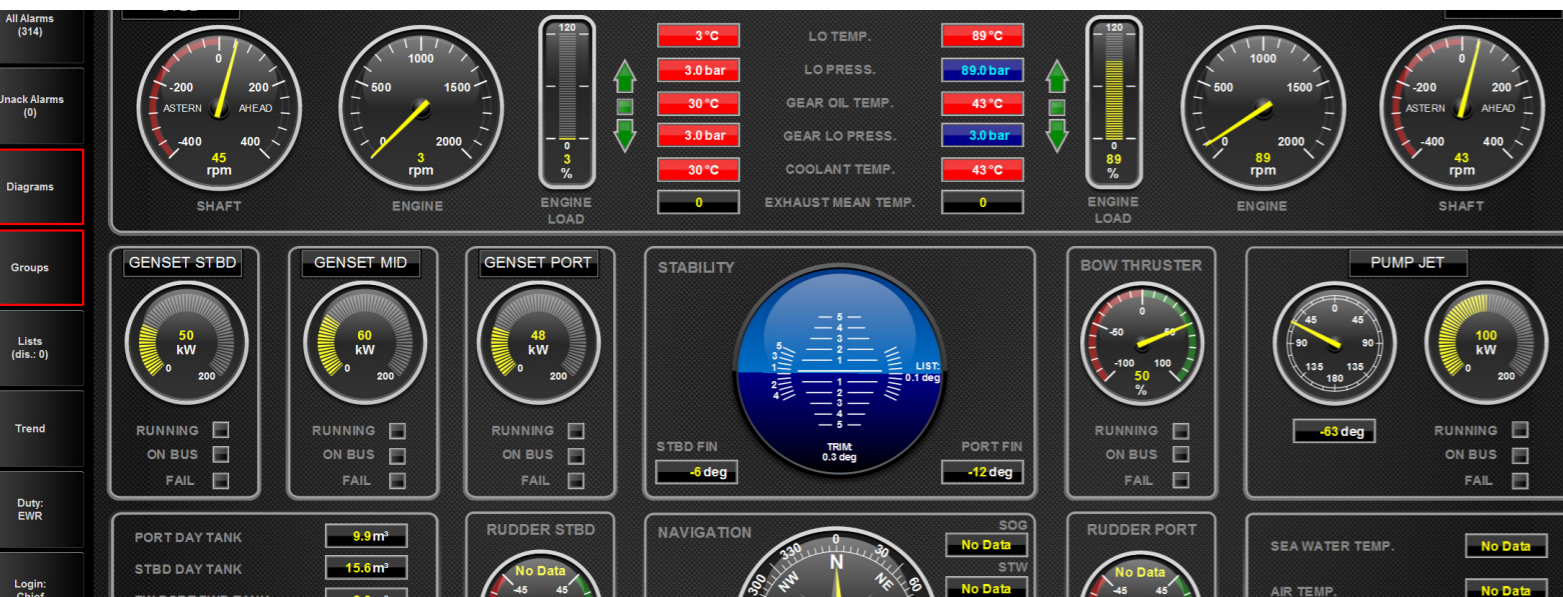
unites more than 20 years of maritime automation engineering „made in germany“

- » high quality state-of-the-art
- » approved standards
- » highly flexible for newbuildings and retrofits
- » modular & scalable
- » robust system components
- » low live cycle costs
- » enhanced reliability
- » trustworthy

EVOLUTION V5

offers approved applications

- engine alarm & monitoring system for watch-free operation «
- pump, standby-pump, valve, compressor and fan control «
- automatic setup of the propulsion machinery «
- ballast, bilge and FO management incl. pre-programmed sequences «
- tank level gauging incl. density related volume calculation and trim correction «
- performance and FO consumption monitoring «
- liquid cargo handling incl. HPU control and overfill protection «
- integrated power management «



EVOLUTION V5

provides features optimized for the maritime needs

- solid-state memory components «
- open communication standard and vector graphics «
- network, server and client redundancy for 100% availability «
- free network topology «
- unlimited number of I/Os «
- remote maintenance diagnostic «
- historical reports and trend curves «
- hot swappable components «
- guided earth fault monitoring «
- capable of "touch" operation «
- multiple language selection «
- project documentation on the system «
- type approved «

EVOLUTION V5

presents a wide steadily increasing range of third party interfaces

- » voyage Data Recorder
- » loading calculator
- » engine control and safety systems
- » main and auxiliary engine
- » master clock
- » energy management systems
- » ... and many others that can be integrated

EVOLUTION VS

brings up owner's benefit

- » low lifecycle costs
- » extended system lifetime
- » enhanced reliability
- » reduced service efforts
- » data collection and preparation for ship owner's database, maintenance system and/or transfer to shore
- » remote maintenance facilities

... shipbuilder's benefit as well

- » attractive price-performance ratio
- » increased automation level
- » easy adaption to third party systems
- » reduced cabling and footprint
- » fast commissioning period

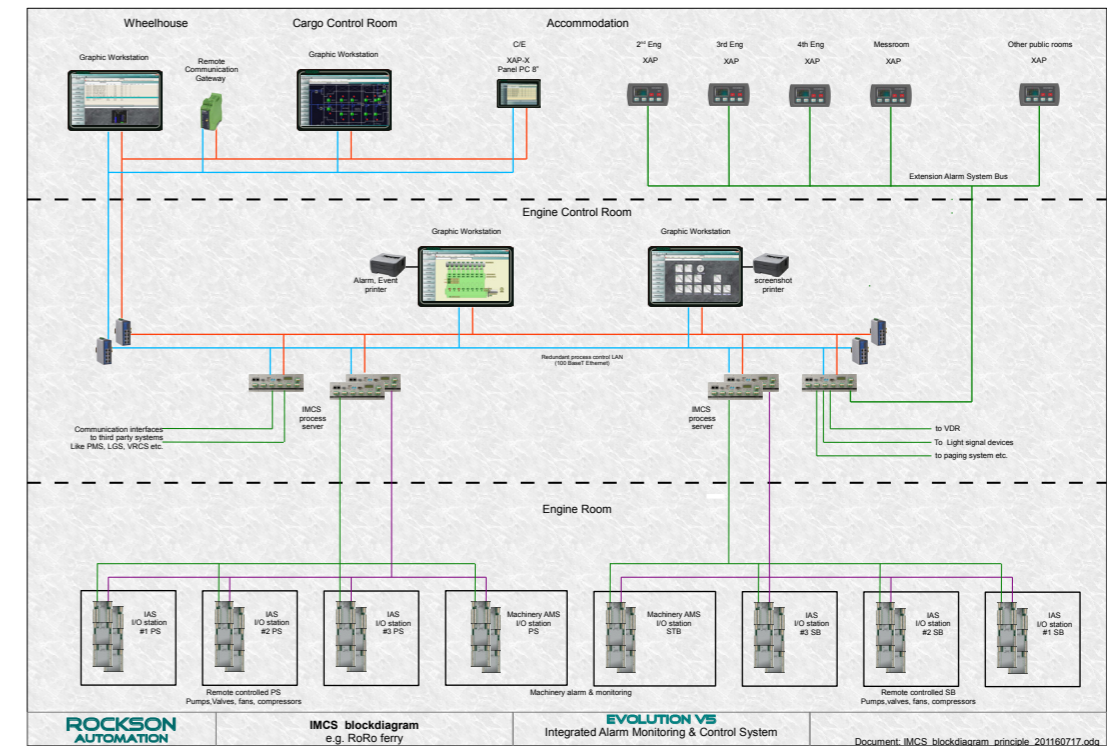
and benefits when processing a retrofit

- » exchange obsolete or not reliable system onboard
- » order to installation period: 4-6 weeks
- » on-trip installation – no down time in ship's operation
- » operating worldwide with experienced crews
- » spare parts available for at least 15 years
- » decreased service expenses
- » decreased service response time
- » reduction of personal costs
- » step forward to state-of-the-art technology
- » extended warranty period

EVOLUTION VS

with straight forward system structure

- » multiple client, multiple server architecture
- » open communication system network
- » decentralized I/O via robust fieldbus
- » server, network and fieldbus redundancy available
- » independent eXtension alarm system
- » remote communication gateway
- » third party systems easy to interface



with user friendly state-of-the art Human Machine Interface

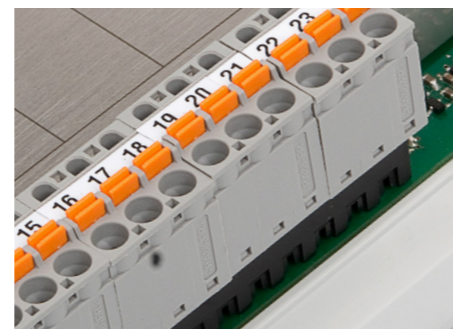
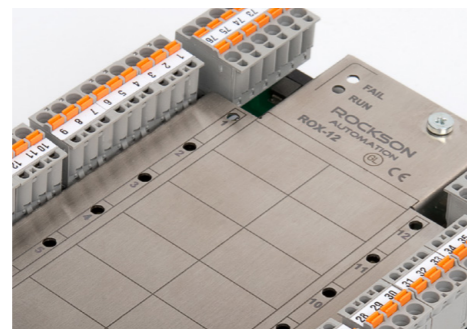
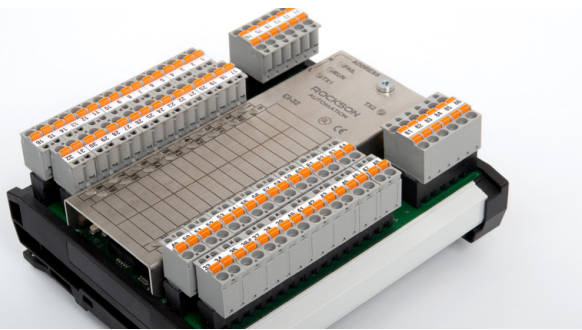
- » capable of touch operation
- » native lists for active and unacknowledged alarms with time stamps
- » native lists for suppressed and manually disabled alarms
- » time adjusted cyclic journals
- » point selection incl. single indication, control and parameter facilities
- » event history and historical data trend curves
- » standardized manufacturer related engine overviews
- » realistic gauge panels
- » customized piping / process mimic diagrams
- » class conform control permission handling
- » user scalable group and trend pages
- » multiple language selection

rugged stainless steel housing process server PSV

- » fanless design
- » solid state technology
- » embedded Linux operating system
- » 6 fieldbus lanes / segments available for I/O module or third party connection
- » redundant process control Ethernet LAN
- » processing up to 800 measuring points

distributed modules for process I/O

- » 35mm DIN rail module with rugged stainless steel cover
- » standardized mechanical outline
- » detachable terminal blocks per channel
- » galvanic isolated I/O design, integrated earth fault monitor
- » redundant power supply
- » redundant isolated fieldbus RS485 / Modbus RTU
- » type approved by major classes
- » easy replacing, set address and go
- » available types:



and a scalable eXtension alarm system consisting of

- » either cost-efficient basic panel with
 - 4 main alarm groups
 - fire and system fail indication
 - duty indication, acoustic acknowledge, lamp test, dimming and listen function
 - single and common engineer call
 - fieldbus connection
 - wall mounting installation
- » and/or panel PC-based comfortable extension alarm HMI
 - essential number of alarm groups
 - alarm lists with time stamp
 - duty indication, acoustic acknowledge, sleep mode and listen function
 - connection via process control Ethernet LAN



- » CI-32
 - 32 contact inputs (potential free)
 - designed to allow "common wire" applications
 - pulse counting and frequency measurement
 - determining period length
- » MI-8
 - excellent flexibility
 - 8 multi-purpose inputs for various signal types:
 - 4 – 20mA, 0 – 10V, RTD (PT100), thermocouple
 - potentiometer
 - potential free contacts with break and short circuit monitoring
 - NPN and PNP initiators
- » MO-8
 - 8 double purpose output sources for different signal types
 - current output 0-25 mA or 4-20 mA
 - voltage output 0-10 V
- » ROX-12
 - 12 single-pole double-throw contacts
 - heavy-duty contacts
 - large safety margin

Our powerful team is very confident and experienced. But, the best is, our enterprise feels like a family. And that's why whenever you can call us with questions, you always get an answer! And with our service stations and partners, we can offer you the same service around the world...