

EAO – Your Expert Partner for
Human Machine Interfaces



Marine Applications | Yachts
Components and Systems

www.eao.com/catalogues

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Image © Cigarette Racing

Our strengths in marine applications

The world's most prestigious boat builders value EAO's products

EAO developed its first illuminated pushbutton in 1958. The product became a cornerstone of the company's future and set the standard for an entire industry. Since then EAO has flourished to become a world-leading expert partner for Human Machine Interfaces (HMI). Through experience and innovation, it now manufactures the largest range of high-reliability switch components, and develops complete HMI systems to order.

The world's most prestigious boat builders value the superior design, reliability, quality and durability of EAO products and use them in every type of vessel, from super luxury yachts to small leisure craft. They appreciate the wide choice of standard products and consistent global availability.

These strengths have led EAO to the forefront of HMI system design for marine environments. Unique interfaces and control panels are individually designed for a range of specific applications from bridge controls to power distribution systems. EAO aligns equipment to task, to enable users and technologies to work in complete harmony. This results in higher-quality, more functional and easier to use interfaces.





Image © Marc Paris

World class products

EAO products are developed by world class industrial specialists and tested to international standards. They are synonymous with creativity, innovation and excellence – the hallmarks of EAO.

Standard components

Pushbuttons, indicators, keylock and selector switches, joysticks and membrane switches – page 7.

HMI systems

Fully-wired control panels with switches, PCBs, CAN, Profi, etc, for fast and reliable integration within larger systems – page 6.

Specialised experience

EAO aims to make boat building less complex and faster by supplying the most appropriate components and integrated systems.

Customers receive expert advice from product specialists who understand the industry requirements from personal experience gained in the field.

EAO has developed interfaces for:

- Navigation controls
- Bridge communications
- Bow thrusters
- Communication and lighting
- Passenger access

Prestigious customers

EAO serves all type of customers according to their specific needs in the boat building supply chain, including:

- Luxury yacht builders
- Ship builders
- Leisure craft builders
- Electrical suppliers
- Boat system and component suppliers/distributors
- Panel builders
- Assembly companies
- Service and refurbishment centres



Image © Consilium

Applications



Image © Oyster Marine

From leisure craft to power boats, luxury yachts and ships, EAO is the best choice



Image © Sunseeker



Image © Palladium Technologies, Inc.

Bridge and helm controls

The outstanding quality, design and functionality of EAO switches will improve the ergonomics and usability of bridge and helm controls:

- At-a-glance indication of status. Switch functions are more visible using bright, consistent, pure-colour LEDs for backlighting engraved lenses (engraved to specification).
- Dimmable to cope with changing light conditions.
- Press with confidence: high quality tactile feedback.
- Wide choice of materials and colours to highlight functions and create distinctive controls.

Power distribution

EAO caters to larger ships with demanding power requirements:

- High reliability switching products for handling low to high ratings.
- Wide range of contact terminals to suit different assembly techniques: solder, plug-in, PCB-mount or screw terminals, or ribbon cable.
- Products meet all important international standards and norms.

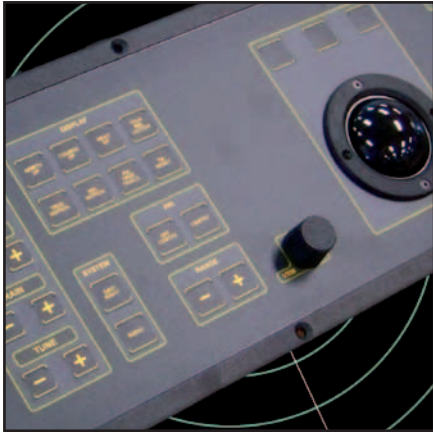


Image © Cigarette Racing



Image courtesy of Southern Wind Shipyard

Communication and navigation

Communication systems require clear, intuitive controls which are fast and easy to navigate. EAO offers the world's largest range of switch types, shapes, materials, symbols and connection possibilities for every type of control.

- Many switch types including pushbuttons, indicators, lever switches, buzzers and keylocks available in most EAO series.
- Possibility to mark switch lens with any symbol or legend.
- Create consistent, good looking control panels.

External cockpit

Control panels exposed to harsh weather conditions need extra protection. EAO switches provide:

- Water resistance up to IP 68 (with protective cap).
- Shock and vibration protection.
- Reliable operation during extreme temperature changes from -40 up to $+70^{\circ}\text{C}$.
- At-a-glance indication of status – maintained position shows whether switch is in operation.
- Proven reliability in numerous outdoor cockpits.

Peripherals

EAO switches are well suited to winches, door access, lighting, alarms and any other type of peripheral/ ancillary control:

- Superb illumination makes it easy to see the button in any conditions, day or night.
- Possibility to mark switch lens with any symbol or legend.
- High quality tactile feedback – press with confidence!
- The right product to suit every environment and application.
- Water resistance up to IP 68 (with protective cap).



Image © Cigarette Racing

Control systems



EAO systems make boat building faster and less complex



Concept to design

With EAO as your knowledgeable partner, you will gain design capacity and global expertise including:

- HMI system design and layout that is functional and intuitive.
- Ability to match overall system appearance: colour, graphics, etc.
- Knowledge of all safety, ergonomic, industry, and international standards.
- Expert toolmakers, engineers, and designers.
- Cost-effective, quality components.

As a worldwide manufacturer of high quality HMI components, EAO's expertise in prototyping, tooling, plastics molding, plating, electrical design, automation, and precision-parts assembly is unsurpassed.

Quality assurance and testing

EAO has a dynamic Total Quality Management system linked to all aspects of our business and is certified and managed to ISO 9001 and ISO 14001.

Our products and systems undergo rigorous testing to assure reliability, repeatability, and a predictable long service life.

Testing capabilities include:

- Environmental test chambers
- Ingress protection (IP) testing
- In-circuit test (ICT), optical and X-ray analyses
- Finite element analysis

Adherence to international standards and extensive product testing makes EAO a trusted, knowledgeable and valued partner in the planning, design, and manufacturing of your HMI control system project.

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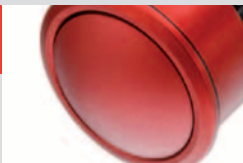
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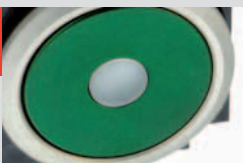
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84



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Products

Series	04	14	18	19	44	51	61	71	84	R
Range										
Pushbutton	■	■	■	■	■	■	■	■	■	■
Indicator	■	■	■	■	■	■	■	■	■	■
Selector Switch	■	■			■	■	■	■		
Key Switch	■	■			■	■	■	■		
E-Stop	■				■		■		■	
Buzzer		■								
Lever switch	■	■								
Mounting										
Flush	■	■	■		■	■	■	■	■	■
Raised	■	■	■	■	■	■	■			
Mounting hole										
8 mm Ø			■	■						
16 mm Ø						■	■			■
19.2 mm Ø										■
22.5 mm Ø	■	■			■	■	■	■	■	
30.5 mm Ø	■	■			■					
square/rectangular	■		■	■		■	■	■		
Switch rating max.										
42 VAC/100 mA			■	■					■	
250 VAC/3 A								■		
250 VAC/5 A		■				■	■			■
500 VAC/10 A	■									
660 VAC/10 A					■					
Terminals										
Solder		■	■	■		■				■
Solder/Plug-in		■		■		■	■		■	
Plug-in	■									
Screw	■				■		■			■
Ribbon cable									■	
PCB		■				■		■	■	
PCB-Terminal available		■	■	■		■	■			
Push-In Terminal PIT	■									
Front Protection degree										
IP 40		■	■	■						
IP 65	■				■	■	■	■	■	■
IP 67	■	■							■	
IP 68 (with protective cap)	■	■			■	■	■	■	■	
Suitable Applications										
Indoor	■	■	■	■	■	■	■	■	■	■
Outdoor	■	■			■	■	■	■	■	■

For more information on these products and many more, including a fantastic range of keypads, consult the EAO catalogue or contact your local sales office (see overleaf).

EAO – Your Expert Partner for Human Machine Interfaces

■ Headquarters:

EAO AG
Tannwaldstrasse 88
4601 Olten, Switzerland
www.eao.com

■ Subsidiaries:

Austria
Phone +49 201 85 87 0
Fax +49 201 85 87 210
sales.ede@eao.com

Belgium
Phone +32 3 777 82 36
Fax +32 3 777 84 19
sales.ebl@eao.com

China
Phone +852 27 86 91 41
Fax +852 27 86 95 61
sales.ehk@eao.com

France
Phone +33 1 64 43 37 37
Fax +33 1 64 43 37 49
sales.es@eao.com

Germany
Phone +49 201 85 87 0
Fax +49 201 85 87 210
sales.ede@eao.com

Italy
Phone +39 035 481 0189
Fax +39 035 481 3786
sales.eit@eao.com

Japan
Phone +81 3 5444 5411
Fax +81 3 5444 0345
sales.esj@eao.com

Netherlands
Phone +31 78 653 17 00
Fax +31 78 653 17 99
sales.enl@eao.com

Sweden
Phone +46 8 683 86 60
Fax +46 8 724 29 12
sales.esw@eao.com

Switzerland
Phone +41 62 388 95 00
Fax +41 62 388 95 55
sales.ech@eao.com

United Kingdom
Phone +44 1444 236 000
Fax +44 1444 236 641
sales.euk@eao.com

USA
Phone +1 203 877 4577
Fax +1 203 877 3694
sales.eus@eao.com

Other Countries
Phone +41 62 286 92 10
Fax +41 62 296 21 62