

## ELECTRONIC ENGINE REMOTE CONTROL

### Type EC4

#### High quality with the latest technology

This high quality electronic engine control lever is made of high-grade stainless steel (AISI 316) with hand-polished stainless steel (AISI 316) casing and is suitable for power and sailing yachts. It can operate 1 or 2 engines and has multiple helm station possibilities with identical controls at all helm stations. The communication goes via CAN-bus protocol. The EC4 is easy to install and configure and meets the EMC requirements as standard.

#### Characteristics

- Available for 12 and 24 Volt
- Waterproof (IP67)
- Suitable for mechanically controlled engines, combination mechanical / electronic engine control or fully electronic engine control
- Suitable for mechanical or hydraulic gearboxes and stern drives

#### Optional

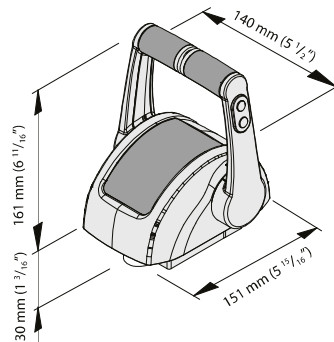
Trolling valve control, trim tab or bow thruster control.

Type	Length (mm)	Width (mm)	Height (mm)	Engines
EC4H1	151	140	161	1 (left handle)
EC4H1R	151	140	161	1 (right handle)
EC4HT1	151	140	161	1 with trim control
EC4H2	151	140	161	2
EC4HT2	151	140	161	2 with trim control

This engine control can be used with electrical and / or mechanical controlled diesel engines and gearboxes. Ask your dealer for more information.



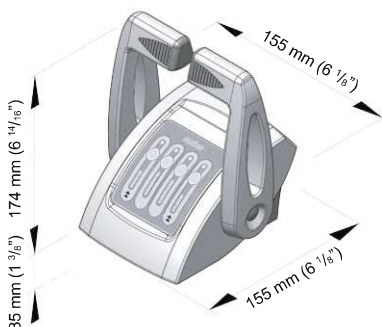
EC4



### Type EC3

The housing of the EC3 model is made from composites. All other technical specifications are the same as the EC4.

Type	Length (mm)	Width (mm)	Height (mm)	Engines
EC3H1	155	155	174	1
EC3HT1	155	155	174	1 with trim control
EC3H2	155	155	174	2
EC3HT2	155	155	174	2 with trim control



EC3

## Selection table



EC3 / EC4 Electronic motor control system			1 Engine	2 Engine	1 Engine	2 Engine	1 Engine	2 Engine	1 Engine	2 Engine	Optional
Control method: first position=Throttle, Second position = Gear actuation M = mechanical, E = Electrical			M/M	M/M	M/E	M/E	E/E	E/E	E/M	E/M	Per extra control head Max. total units = 4
EC3 Composite control head 1 engine	EC3H1		O = 1		O = 1		O = 1		O = 1		+1/+2/+3
EC3 Composite control head 1 engine + Trim buttons	EC3HT1		O = 1		O = 1		O = 1		O = 1		+1/+2/+3
EC3 Composite control head twin engines	EC3H2			O = 1		O = 1		O = 1		O = 1	+1/+2/+3
EC3 Composite control head twin engines + Trim buttons	EC3HT2			O = 1		O = 1		O = 1		O = 1	+1/+2/+3
EC4 Stainless steel control head 1 engine	EC4H1/ EC4H1R (right)		O = 1		O = 1		O = 1		O = 1		+1/+2/+3
EC4 Stainless steel control head 1 engine + Trim buttons	EC4HT1		O = 1		O = 1		O = 1		O = 1		+1/+2/+3
EC4 Stainless steel control head 2 engines	EC4H2			O = 1		O = 1		O = 1		O = 1	+1/+2/+3
EC4 Stainless steel control head 2 engines + Trim buttons	EC4HT2			O = 1		O = 1		O = 1		O = 1	+1/+2/+3
Electronic control box for full mechanical control	12 +24V	EC3UMM1	1	2	x	x	x	x	x	x	
Electronic control box for full mechanical control and trim	12+24V	EC3UMMT1	1	2	x	x	x	x	x	x	
Electronic control box for mechanical motor and electrical gear	12+24V	EC3UME1	x	x	1	2	x	x	x	x	
Electronic control box for 2 mechanical motor and electrical gear	12+24V	EC3UME2	x	x	x	1	x	x	x	x	
Electronic control box for mechanical motor and electrical gear and trim	12+24V	EC3UMET1	x	x	1	2	x	x	x	x	
Electronic control box for 2 mechanical motor and electrical gear and trim	12+24V	EC3UMET2	x	x	x	1	x	x	x	x	
Electronic control box for mechanical motor and electrical gear and trolling	12+24V	EC3UMETR1	x	x	1	2	x	x	x	x	
Electronic control box for full electric control and trim	12V	EC312EE	x	x	x	x	1	1	x	x	
Electronic control box for full electric control and trim	12V+24V	EC3UEE	x	x	x	x	1	1	x	x	
Electronic control box for full electric control and trolling	12+24V	EC312EET	x	x	x	x	1	1	x	x	
Electronic control box for electric motor control and mechanical gear	12V	EC312EM1	x	x	x	x	x	x	1	2	
Electronic control box for electric motor control and mechanical gear and trim	12V	EC312EMT1	x	x	x	x	x	x	1	2	
Electric throttle cable universal L=3M		EC3E3U	x	x	x	x	O = 1	O = 2	O = 1	O = 2	
Electric throttle cable for VF engine L=3M		EC3E3M	x	x	x	x	O = 1	O = 2	O = 1	O = 2	
Electric gear cable L=3M (12V only boxes 3 wires)		EC3G3M	x	x	O = 1	O = 2	O = 1	O = 2	x	x	***
Electric gear cable L=3M (12V+24V boxes 6 wires)		ECG3/6	x	x	O = 1	O = 2	O = 1	O = 2	x	x	
Electric gear cable L=5M (12V+24V boxes 6 wires)		ECG5/6	x	x	O = 1	O = 2	O = 1	O = 2	x	x	
Electric gear cable L=7M (12V+24V boxes 6 wires)		ECG7/6	x	x	O = 1	O = 2	O = 1	O = 2	x	x	
Trim/Trolling cable L=2M		EC3T2	O = 1		O = 1		O = 1		O = 1		
Trim/Trolling cable L=3M		EC3T3	O = 1		O = 1		O = 1		O = 1		
Trim/Trolling cable L=3M for Mercruiser		EC3T3MM	O = 1		O = 1		O = 1		O = 1		

x = Not applicable O = Optional \*\*\* = For box with 3p connector



## ELECTRONIC ENGINE REMOTE CONTROL

### Type ECS

The ECS electronic engine controls developed by Rexroth meet the highest production and quality standards and provide operators with maximum reliability, as proven by endurance testing with one million lever actuations. They feature plug-and-play installation and easy operation with a unique design and extensive range of options.

Type ECS can be used to control single or twin engine applications from up to four control stations. Trolling gear control is available as an option. The system is designed for pleasure and small work boats and is compatible with all common engine types and reversing gears. The hardware originates from proven automotive applications. The well-established CAN-bus technology ensures reliable communication between all the components. Sophisticated auto-diagnostics inform the operator of the current operating state.



**ECS**

Type	Length (mm)	Width (mm)	Height (mm)
ECSH1	125	130	160
ECSH2	125	130	160

#### Design - pairing form with function

- Timeless appearance
- Easy to integrate
- Backlit illumination

#### Safety

- Proven BOSCH components
- ABYC compliant

#### User experience

- Wi-Fi web server for diagnostics
- Auto-configuration
- Language-independent icons
- Plug and play installation



Electronic motor control system	1 Engine		2 Engines		1 Engine		2 Engines		Optional
	1	2	1	2	1	2	1	2	
Control method first position=Throttle, Second position = Gearbox M = Mechanical, E = Electrical	M/M	M/M	M/E	M/E	E/M	E/M	E/E	E/E	Per extra control head. Max. total units = 4
ECS Control head 1 engine	1	xx	1	xx	1	xx	1	xx	+1/+2/+3
ECS Control head twin engines	xx	1	xx	1	xx	1	xx	1	+1/+2/+3
ECS system control unit	1	1	1	1	1	1	1	1	
ECS Single engine wiring harness	1	xx	1	xx	1	xx	1	xx	
ECS Twin engine wiring harness	xx	1	xx	1	xx	1	xx	1	
ECS Actuator 12/24V (incl. 1 connection kit for push-pull cable *)	2	4	1	2	1	2	xx	xx	
		CABLF15/20	2	4	1	2	1	2	
Mechanical push-pull cables and connectors		KOGELGEWR	2	4	1	2	1	2	
		KABEKL	2	4	1	2	1	2	
ECS power cable 5/10 m (**)		ECSPC5/10	3	5	2	3	2	3	xx xx
ECS bus cable (station and prop). 5/10/15/20/30 m		ECSBC05/10/15/20/30	3	5	2	3	2	3	1 1 +1/+2/+3
ECS gender changer male / female (to extend standard cable length)		ECSBCC	0	0	0	0	0	0	0 0
ECS Terminating resistor		ECSBTR	2	2	2	2	2	2	xx xx
ECS Gear control cable without connector 10 m /a	xx	xx	1 (a/b)	2 (a/b)	xx	xx	1 (a/b)	2 (a/b)	
ECS Gear control cable solenoid valve 5/10 m /b	xx	xx	1 (a/b)	2 (a/b)	xx	xx	1 (a/b)	2 (a/b)	
ECS electrical throttle cable 4-20mA 10/20 m /c	xx	xx	xx	xx					
ECS electrical throttle cable 0-5V 10/20 m /d	xx	xx	xx	xx	1 (c/d/e)	2 (c/d/e)	1 (c/d/e)	2 (c/d/e)	
ECS electrical throttle cable PWM 10/20 m /e	xx	xx	xx	xx					
ECS auxiliary cable start interlock 10 m	0 = 1	0 = 2	0 = 1	0 = 2	0 = 1	0 = 2	0 = 1	0 = 2	
ECS cable start interlock contact safety stop high idle 10 m	0 = 1	0 = 2	0 = 1	0 = 2	0 = 1	0 = 2	0 = 1	0 = 2	
ECS cable alarm and monitoring interface 10 m	0 = 1	0 = 2	0 = 1	0 = 2	0 = 1	0 = 2	0 = 1	0 = 2	
ECS Power ignition cable 20 m	0 = 1	0 = 1	0 = 1	0 = 1	0 = 1	0 = 1	0 = 1	0 = 1	
ECS trolling/PWM (special order)		ECSTRPWM							

(\*) Mechanical push pull cables to be ordered from the VETUS catalogue

(\*\*) 10M power supply wire not to be used with 12V actuator

xx = Not applicable (a/b/c/d/e) = Select correct cable 0 = Optional