

Seaeye Brushless DC Thrusters



Seaeye SM7 thruster



Seaeye SM4 thruster

Saab Seaeye was the first manufacturer to successfully introduce reliable brushless DC motor technology for ROV propulsion and won technology awards for its thruster innovations. Part of this development was to incorporate the drive circuitry within the thruster housing. Today, all Seaeye thrusters incorporate:

- Closed loop velocity feedback for precise response to input commands
- Self contained drive electronics within the thruster housing
- Titanium shafts for lightness and strength (on all thrusters but the SM8)
- Angular contact thrust bearings for longer life
- Fouled propellor detector and reset circuitry
- Under voltage protection of the electronics
- Tungsten carbide shaft seals
- Integral pressure compensation for full ocean depths of operation

Specification	MCT 1	SM4	SM5	SM6	SM7	SM8
Used on	Falcon Falcon DR	Tiger Lynx TMS8	Panther Plus	Cougar	Cougar-XT Cougar-XTi Panther-XT Panther-XT Plus Jaguar TMS8	Jaguar TMS10
Voltage	48 VDC ± 10%	250 VDC ± 10%	250 VDC ± 10%	250 VDC ± 10%	500 VDC ± 10%	500 VDC ± 10%
Current	3.25A normal running	4.5A normal running	4.5A normal running	4.5A normal running	5A normal running	9A normal running
Thrust	14kgf @ 300W	25kgf @ 2000rpm	38kgf @ 2000rpm	38kgf @ 2000rpm	60kgf @ 1048rpm	120kgf @ 1000rpm
Weight in air	4.3 kg	3.7 kg	8 kg	8 kg	9 kg	26 kg
Weight in	2.5 kg	2.2 kg	4 kg	4 kg	4 kg	14 kg

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seawater

Depth rating	1000m (option 3000m)	1500m	1500m	2500m (option 6000m)	3000m (option 6000m)	3000m (option 6000m)
Dimensions:						
Housing O/D	57 mm	81.3 mm	87 mm	87 mm	111 mm	139 mm
Nozzle O/D	221 mm	173 mm	299 mm	299 mm	299 mm	362 mm
Length	193 mm	260 mm	441 mm	344 mm	340 mm	438 mm
Control signals	RS485 Telemetry	Speed signal: PWM	Speed signal: PWM	Speed signal: PWM	Speed signal: PWM or RS485 Telemetry	RS485 Telemetry
Electronics	-	24VDC / @ 200mA reversible for direction control	24VDC / @ 200mA reversible for direction control	24VDC / @ 200mA reversible for direction control	-	-
Connector	5 way Seaeye penetrator: - 2 ways for power - 2 ways for telemetry - 1 way for Earth	7 pin Seaeye Metal Shell: - 2 pins for 250VDC power - 2 pins for 24VDC power - 1 pin for speed signal - 1 pin for earth	7 pin Seaeye Metal Shell: - 2 pins for 250VDC power - 2 pins for 24VDC power - 1 pin for speed signal - 1 pin for earth	7 pin Seaeye Metal Shell: - 2 pins for 250VDC power - 2 pins for 24VDC power - 1 pin for speed signal - 1 pin for earth	7 pin Seaeye Metal Shell: - 2 pins for 500VDC power - 1 pin for telemetry - 1 pin for speed/telemetry - 1 pin for direction telemetry - 1 pin for Earth	5 pin Seaeye Metal Shell: - 2 pins for 500VDC power - 2 pins for telemetry - 1 pin for Earth