

MiniRover

Specifications

PERFORMANCE

Maneuverability:	3-axis translation
Horizontal speed:	Greater than 4 knots on surface with minimal tether deployed
Operating depth:	300 m (984 ft) of seawater

PHYSICAL CHARACTERISTICS

Size:	29.2 cm (11.5 in) high
	39.4 cm (15.5 in) wide
	66 cm (26 in) long
Weight:	20 kg (44 lbs) for standard 2-horizontal thruster configuration, excluding ballast and installed options

THRUSTERS

Horizontal:	Two 1 hp magnetically coupled brushless DC motors.
Forward static thrust:	18.1 kg (40 lb) per thruster
Reverse static thrust:	10.4 kg (23 lb) per thruster
Vertical:	One 1/3 hp magnetically coupled brushless DC motor
Forward static thrust:	8.2 kg (18 lb) per thruster
Reverse static thrust:	4.1 kg (9 lb) per thruster
Lateral (optional):	One 1/3 hp magnetically coupled brushless DC motor
Forward static thrust:	8.2 kg (18 lb) per thruster
Reverse static thrust:	4.1 kg (9 lb) per thruster
Propeller:	Stainless Steel
Nozzle:	Nylon Kort

VIEWING SYSTEM (Both cameras mounted in Lexan tube)

Camera 1:	High resolution color video - NTSC
Resolution:	470 lines
Sensitivity:	0.1 lux @ 50 IRE
Tilt mechanism:	270° for both cameras simultaneously
Camera 2:	High resolution B/W video - NTSC
Resolution:	600 lines
Sensitivity:	0.003 lux @ 50 IRE
Lights:	Variable intensity LED arrays - 270° light coverage 1 Port & 1 Starboard – External to camera enclosure

OPTIONAL REAR FACING CAMERA

Camera Option A:	High resolution color video- NTSC
Resolution:	480 lines
Sensitivity:	0.01 lux @ 50 IRE

SENSORS

Pitch/Roll:	±20°, ±0.2° with 0.2° resolution
Heading:	0–360°, ±1° with 1° resolution
Depth:	±1° of operating depth

SURFACE CONTROL UNIT & VEHICLE POWER SUPPLY

Physical Characteristics

Size:	37.1 cm (14.6 in) high
	56.2 cm (22.1 in) wide
	56.0 cm (22.0 in) long
Weight:	41 kg (90 lbs)

ELECTRICAL SPECIFICATIONS

Input Power Requirements:	100–130 VAC or 200–250 VAC, 47–63 Hz, auto-sensing - single phase, 3000 Watts - 5000 VA maximum, depending on installed options. Adjustable current limiting for use with small generators
Output Power to Vehicle:	150-300 VDC 12 Amps - isolated, regulated at vehicle

TETHER - DUAL COAX

Diameter:	1.65 cm (0.65 in)
Weight in Fresh Water:	Neutral
Weight in Air:	65 kg/305 m (143 lb/1000 ft) nominal
Breaking Strength:	900 kg (2000 lb) nominal
Peak Tension Load:	164 kg (360 lb) maximum
Minimum Bend Radius:	20 cm (8 in)
Construction:	Outer yellow foam polyurethane flotation jacket over Kevlar braid
Conductors:	(2) 75 ohm coax, (4) 16 AWG, and (2) 26 AWG twisted shielded pair
Maximum Length:	500 m (1640 ft)

TETHER - SINGLE COAX

Diameter:	Less than .65 in.
Conductors:	(1) 75 ohm coax, (4) 16 AWG (1) 26 AWG twisted shielded pair Maximum length - 300 meters

(Specifications continued next page)