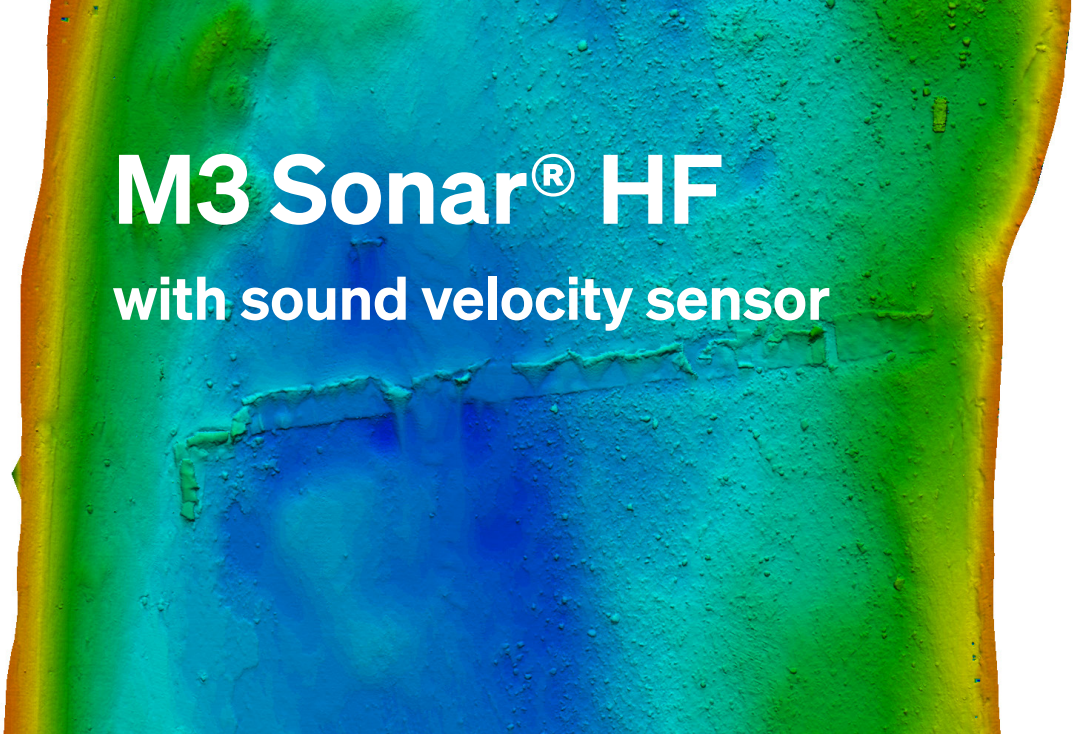
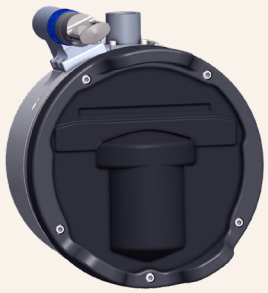


M3 Sonar® HF

with sound velocity sensor

KONGSBERG



Multimode multibeam sonar

922-2036000

Kongsberg Discovery's M3 Sonar HF is a multibeam system with both imaging and profiling capabilites. The M3 Sonar HF provides high-resolution and easy-to-interpret images by combining the rapid refresh rate of a conventional multibeam sonar with image quality comparable to a single-beam sonar.

The complete package

This model includes an integrated Sound Velocity Sensor. The embedded processor inside this sensor handles all signal processing, timing, and math, allowing the device to provide continuous realtime sound velocity measurements.

Don't miss a thing

Detection of small objects out to 100 meters combined with up to a 140° field of view allows the operator to see the complete underwater picture in real-time. The M3 Sonar HF provides high-resolution images at short range, reducing the time it takes to search for and locate targets.

Multiple installation options

The M3 Sonar HF is suitable for a wide range of vehicles from ROVs to USVs and ASVs. When using a surface vessel, you can easily deploy the M3 Sonar HF on a pole mount. This sonar can also be tripod mounted.

User-friendly software

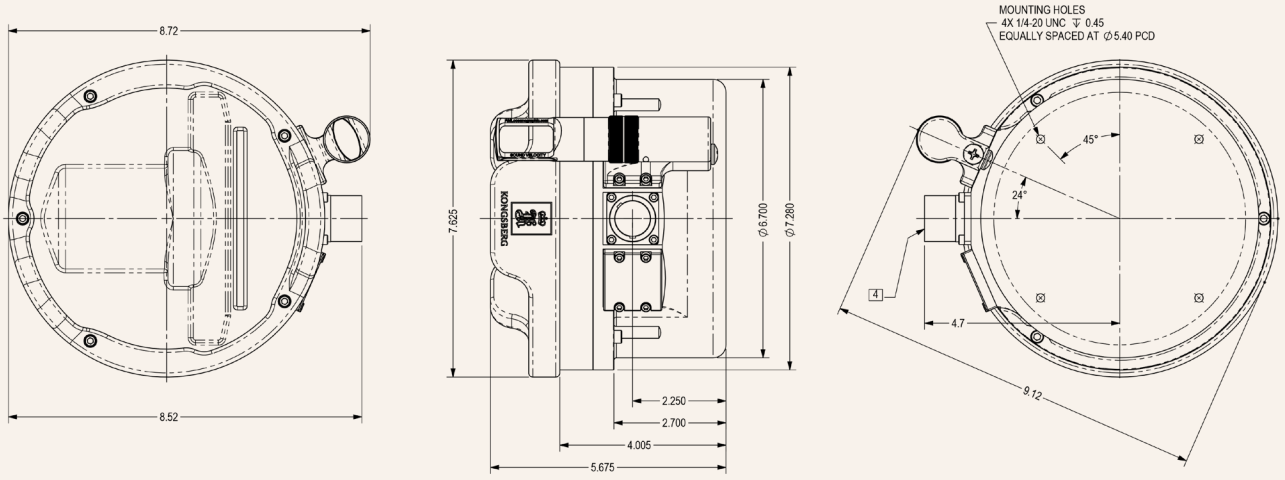
The operating software was developed specifically for the M3 Sonar HF to manage communications with the head and operate all beamforming and image processing. The predefined imaging modes present distortion-free images at a high update rate. For an alternative data visualization, the provided profiling modes generate a 3D point cloud.

FEATURES

- Up to 4000 m water depth
- Imaging and profiling capabilities
- 700 kHz to 1400 kHz operating frequency
- GeoTIFF output for image mosaics
- Intuitive and easy-to-use software
- Significant time savings
- Integrated tilt and pan/tilt control
- Integrated Sound Velocity Sensor

APPLICATIONS

- Pipeline survey and inspection
- Fish behaviour monitoring
- Fish habitat mapping
- Infrastructure inspection
- Dredge monitoring
- Cable laying and trenching



Technical specifications

M3 Sonar® 922-20360000

Sonar Specifications

Range	0.2 m to 100 m
Range resolution	1 cm
Frequency	700 kHz - 1400 kHz
Pulse types	CW, CHIRP
Update rate	up to 40 Hz*
Max. number of beams	512

700-khz modes	Imaging	Bathymetry
Detection range / Nadir depth	100 m*	50 m*
Coverage	140°	140°
Beamwidth	1.0° x 30°	1.0° x 1.8°
Ping rate (maximum, range dependant)	30 Hz*	35 Hz*

950-khz modes	Imaging	Bathymetry
Detection range / Nadir depth	90 m*	40 m*
Coverage	140°	140°
Beamwidth	0.8° x 27°	0.8° x 1.4°
Ping rate (maximum, range dependant)	30 Hz*	35 Hz*

1200-khz modes	Imaging	Bathymetry
Detection range / Nadir depth	50 m*	20 m*
Coverage	75°	75°
Beamwidth	0.65° x 21°	0.65° x 1.1°
Ping rate (maximum, range dependant)	30 Hz*	35 Hz*

1400-khz modes	Imaging	Bathymetry
Detection range / Nadir depth	30 m*	20 m*
Coverage	45°	45°
Beamwidth	0.55° x 18°	0.55° x 0.9°
Ping rate (maximum, range dependant)	30 Hz*	35 Hz*

Interface Specifications

Communication	Ethernet
Data rates	10/100 Mbps
Input voltage	12 to 36 VDC
Input power	50 W (avg.), peak power < 70 W, mode dependant
Operating system	Windows 11
Synchronization	PRI Sync, 1PPS
Sound velocity range	1375 - 1625 m/s

Environmental Specifications

Operating temperature	-4°C to +38°C
Storage temperature	-40°C to +55°C

Mechanical Specifications

Width	221.4 mm (8.72 in)
Height	144 mm (5.67 in)
Weight in air	7.9 kg (17.5 lbs)
Weight in seawater	5.1 kg (11.2 lbs)
Depth rating	4000 m
Connector type	SEACON®
Connector model	MINK-10-FCRL
Materials	Titanium, Stainless Steel, Elastomeric Polyurethane

** Specifications under ideal conditions.*

Specifications subject to change without any further notice.

Kongsberg Discovery Canada Ltd.
1598 Kebet Way, Port Coquitlam
BC, Canada, V3C 5M5

Phone: 604-464-8144
Toll-Free: 1-888-464-1598
sales.vancouver@kd.kongsberg.com