The **EM5** is a high performance, rugged, compact and reliable multi-function electric manipulator arm designed for underwater operation on observation class ROVs.

Overview

The **EM5** electric manipulator arm, developed by **TMI-Orion Dynamics**, is a five function manipulator module offering slew, elevation, elbow bend, jaw rotation, and jaw open/close.
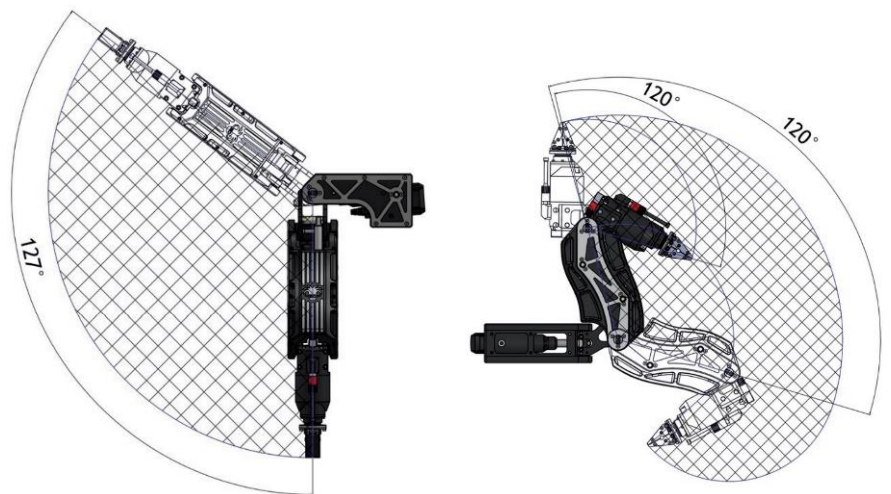
The compact design has an embedded electronic controller, with no additional pod required. Monitoring software is available for remote operation, or a TMI-Orion Surface Control Unit can be ordered separately. The arm can be controlled with a game pad, and Cartesian control mode is available.
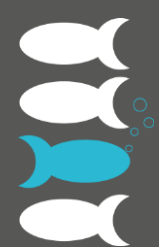
Key Features

- 5 functions, with multiple jaws available
- 3 connectors for auxiliary devices
- Easy to operate and switch
- Mountable as left or right arm

Functions

- 127° Slew
- 120° Elevation
- 120° Elbow bend
- Continuous jaw rotation
- Jaw open/close

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Applications

- Underwater precision manipulation
- Samples collection
- Subaquatic tooling and grabbing
- Scientific and environmental
- Subsea leak detection (pictured right)

Specifications

	EM5
Lift capacity (full reach, dynamic)	16kg
Lift capacity (full reach, static)	50kg
Maximum reach (from slew pivot)	700mm
Height in stowed position	459mm
Input voltage	9–24VDC
Maximum current	6A @ 24VDC
Control interface	RS485
Standard connector	SubConn MCBH8F
Housing materials	Polyethylene, Hard anodised aluminium, Stainless steel
Depth rating	500m
Weight in air	17kg
Weight in water	9kg
Operating temperature	-10°C to +60°C

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OceanTools Ltd
OceanTools House   Claymore Drive   Aberdeen   AB23 8GD
t: +44 1224 709 606   e: sales@oceantools.co.uk
www.oceantools.co.uk