

# Datasheet

## Mobile cable drum for diving robot

- Custom-tailored development for uninterrupted communication with a battery-powered underwater vehicle.
- Within a short period of time a suitable solution, which corresponds to all the requirements of the customer could be developed through the close cooperation with the customer.

### Special challenges during the development process

#### Emergency function

In case of failure of the systems, the underwater robot can be withdrawn with the fiber optic cable. To achieve this result, the cable and the connector were designed for very high tensile strength.

#### Continuous communication throughout the whole diving process

To realize a continuous communication a special rotary transmitter was integrated into the cable drum.

#### Detachable plug connection

One of the main customer requirements was the realization of a plug-in connection at the diving robot. This offers the advantage of an unproblematic repair of the diving robot in case of any defect of the cable by external mechanical influences.

#### Technical data

Cable length	1000 m
Tensile strength	3500 N
Number of fibers	1
Damping of the system	1,7 dB (1550 nm)
Weight of drum	19 kg
Max. data transfer rate	1,25 Gbps (depending on used transiver)
Max. rotation speed for uninterrupted data transfer	2000 U/min
Compressive strength of the connector	4000 m open face
Operating temperature	-5°C bis +50°C

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