

## S2CR 7/17

### PRODUCT INFORMATION



S2C Technology: reliable data transmissions with up to 6.9 kbit/s

Advanced data delivery protocol

Hemispherical beam pattern, optimized for vertical and slant channels

Depth rated long-range device

### **TECHNICAL SPECIFICATIONS**

|                    | TECHNICAL SPECIFICATIONS  |                           |   |  |  |  |
|--------------------|---------------------------|---------------------------|---|--|--|--|
|                    | OPERATING DEPTH           | Delrin                    | 200 m   |  |  |  |
|                    |                           | Aluminium Alloy           | 1000 m  |  |  |  |
| CONNECTION GENERAL |                           | Stainless Steel           | 2000 m  |  |  |  |
|                    |                           | Titanium                  | 6000 m  |  |  |  |
|                    | OPERATING RANGE           |                           | 8000 m  |  |  |  |
|                    | FREQUENCY BAND            | )                         | 7 - 17 kHz  |  |  |  |
|                    | TRANSDUCER BEAM PATTERN   |                           | hemispherical   |  |  |  |
|                    | ACOUSTIC CONNECTION       |                           | up to 6.9 kbit/s  |  |  |  |
|                    | BIT ERROR RATE            |                           | less than $10^{10}$   |  |  |  |
|                    | INTERNAL DATA BUFFER      |                           | 1 MB, configurable  |  |  |  |
|                    | HOST INTERFACE 1)         |                           | Ethernet, RS-232 (RS-485/422*)                              |  |  |  |
|                    | INTERFACE CONNECTOR       |                           | up to 2 SubConn® Metal Shell 1500 Series                    |  |  |  |
|                    | CONSUMPTION               | Stand-by Mode             | 2.5 mW  |  |  |  |
|                    |                           | Listen Mode <sup>2)</sup> | 5 - 285 mW  |  |  |  |
|                    |                           | Receive Mode 3)           | 0.8 W   |  |  |  |
| POWER              |                           | Transmit Mode             | 3 W, 2000 m range   |  |  |  |
| Ó                  |                           |                           | 10 W, 4000 m range  |  |  |  |
|                    |                           |                           | 40 W, 8000 m range  |  |  |  |
|                    |                           |                           | 45 W, max. available  |  |  |  |
|                    | POWER SUPPLY <sup>4</sup> |                           | External 24 VDC (12 VDC*) or internal rechargeable battery* |  |  |  |
|                    | DIMENSIONS 5)             | Housing                   | Ø 113 mm ×260 mm  |  |  |  |
|                    |                           | Total length              | 420 mm  |  |  |  |
| <u>C</u>           | WEIGHT dry/wet            | Delrin                    | 4700/600 g  |  |  |  |
| PHYSICAL           |                           | Aluminium Alloy           | 4160/1560 g   |  |  |  |
| Δ.                 |                           | Stainless Steel           | 8000/5800 g   |  |  |  |
|                    |                           | Titanium                  | 7780/5180 g   |  |  |  |
|                    |                           |                           |   |  |  |  |

Specifications subject to change without notice. © Evologics GmbH - April 2018

<sup>\*</sup> optional

1) See the Configuration Options for available standard interface combinations.

2) User-configurable Listen Mode is only available with a Wake-Up module installed. Power consumption in Listen Mode depends on Listen Mode settings.

3) Power consumption for the RS-232 interface option. Add 500 mW for the Ethernet interface option. Add 0.3 W for Wake-Up Module.

4) Contact Evologics for more information on power supply options.

5) Dimensions of a Delrin housing, other builds are slightly larger. Marked\* weights are estimates.



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### **APPLICATIONS**

Reliable long-range communication

Communication link for deep-sea AUVs and ROVs

Seafloor observatories

Underwater acoustic sensor networks

### **CONFIGURATION OPTIONS**

|           | DELRIN            | Plastic non-magnetic corrosion-resistant housing for short-term deployments, depth rating 200 m |                   |  |  |
|-----------|-------------------|---|-------------------|--|--|
| HOUSING   | ALUMINIUM ALLOY   | Light metal housing for short-term deployments, depth rating 1000 m                             |                   |  |  |
|           | STAINLESS STEEL   | Robust metal, suitable for long-term deployments in harsh environments, depth rating 2000 m     |                   |  |  |
|           | TITANIUM          | Corrosion resistant, suitable for long-term deployments in har depth rating 6000 m              | rsh environments, |  |  |
| INTERFACE | 1 CONNECTOR       | RS-232 <sup>1)</sup> or   |                   |  |  |
|           |                   | Ethernet  |                   |  |  |
|           | 2 CONNECTORS      | RS-232 + RS-232 or  |                   |  |  |
|           |                   | RS-232 + Ethernet   |                   |  |  |
| MODULES   | WAKE-UP MODULE 2) | RS-232 interface  | ✓                 |  |  |
|           |                   | Ethernet interface  | x                 |  |  |
|           |                   | RS-232 + RS-232 interface   | ✓                 |  |  |
| >         |                   | RS-232 + Ethernet interface   | ×                 |  |  |

### **OPERATING CONDITIONS**

| g 0°C - +60°C   |
|---|
| -4°C - +60°C  |
| 20g, 11 ms half sine                                  |
| frequency range 5-150 Hz, 5-25 Hz: ±2mm; 25-50 Hz: 5g |
|   |

<sup>11</sup> One RS-232 Interface can be replaced with a RS-422 interface. More interface configurations available by special request. Contact Evologics for more information.

2 The Wake Up Module turns the rest of the device on if it detects incoming acoustic signals or incoming data on the host interface. Once the device completes receiving or transmitting data, it switches itself off.