# Isco 2103 Modem Module

The 2103 Modem Module eliminates the need for frequent site visits and confined space entry, by automating remote retrieval of data in sewer flow studies. The 2103 provides reliable, two-way communication between down-hole 2100 Series Flow Modules and a base computer running Flowlink® Software.

## Improved efficiency for I & I studies, cMOM, SSO, CSO

The 2103 stacks together with one or more of Isco's advanced 2100 Series flow modules to form a complete, integrated system for acquiring and communicating open channel flow data.

The 2103 offers:

- ◆ reliable data retrieval from the comfort and convenience of your office.

- ◆ interrogation of instruments with Isco Flowlink software.

- ◆ the ability to remotely set any of the monitoring parameters, such as data interval, for each site.

- ◆ "scheduling" with Flowlink Software, to dial and download from your entire monitoring network while you are away. Data will be graphed and ready to review at your desk when you return.

- ◆ enhanced error correction protocols to compensate for noisy lines.

- ◆ up to 33.6 kbps communication - to cut download times to one tenth what you'd spend with a typical 2.4 kbps equipment modem.

- ◆ rugged, NEMA 4X, 6P (IP68) case and moisture-tight connections.

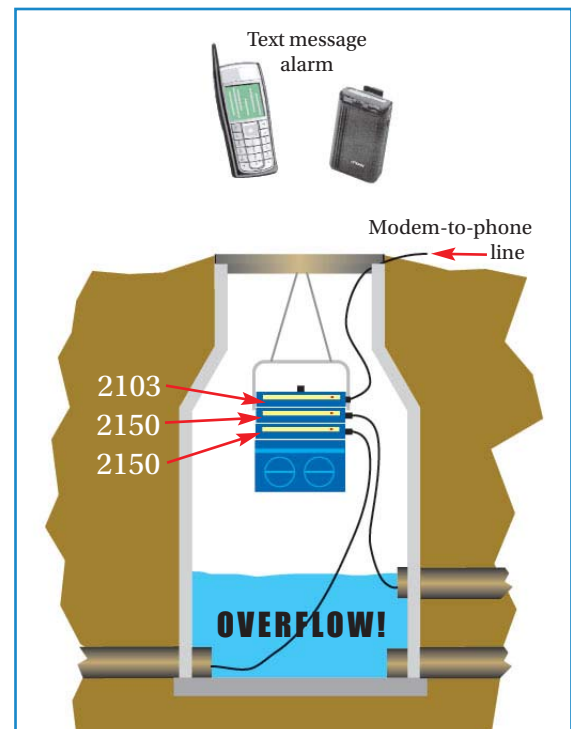- ◆ automatic dial-out alarm for level.

## Pushed-data capability

The 2103 can automatically send data at user-specified intervals to a designated server running Isco Flowlink Pro software. An Oracle® or Microsoft® SQL database on your server is required to use this feature. Contact the factory for additional information.

## Long battery life

The 2103 has very low power consumption, allowing typical 290-day battery life using two 6-volt alkaline batteries – or up to 580 days with two battery modules.

*The 2103 Modem dial-out feature enables the system to transmit a text message alarm to your digital cell phone or pager. In this typical example, an alarm is triggered when an overflow occurs.*

# Specifications

## 2103 Modem Module

| | |
|---|---|
| **Size** *(H x W x D)* | 2.9 x 10.5 x 7.5 in.  (7.4 x 26.7 x 19.1 cm) |
| **Weight** | 2.0 lbs.  (0.9 kg) |
| **Enclosure** *(self-certified)* | NEMA 4X, 6P (IP68) |
| **Material** | High-impact polystyrene |
| **Modulation standards** | Bell 103, Bell 212, V.21, V22, V.22bis, V.23, V.32, V.32bis, V.34 |
| **Error correction standards** | V.42 LAPM, MNP-2, MNP-4, MNP-10 |
| **Communication speeds** | 0.3, 1.2, 2.4, 4.8, 7.2, 9.6, 12.0, 14.4, 16.8, 19.2, 21.6, 24.0, 26.4, 28.8, 31.2, 33.6 kbps |
| **Data compression standards** | V.42 bis, MNP-5 |
| **Power** | 9.0 to 16.6V DC<br>0.41 mA standby, 141 mA typical |
| **Typical Battery Life*** | 290 days (with 2 alkaline batteries) |
| **Operating temperature** | -4° to 140°F  (-20° to 60°C) |
| **Storage temperature** | -40° to 140°F  (-40° to 60°C) |
| **Setup and data retrieval** | Via PC or compatible computer with Isco Flowlink® Software |

## 2191 Battery Module

| | |
|---|---|
| **Size** *(H x W x D)* | 6.0 x 9.6 x 7.6 in.  (15.2 x 24.4 x 19.3 cm) |
| **Weight** *(w/o batteries)* | 3.2 lbs.  (1.4 kg) |
| **Enclosure** *(self-certified)* | NEMA 4X, 6P (IP68) |
| **Material** | High-impact polystyrene |
| **Batteries**<br>  Alkaline<br>  Lead-Acid | Two 6V alkaline lantern or lead-acid lantern<br>25 Ahr capacity<br>5 Ahr capacity |

*\* Battery life with: one 2150 Module and one 2103 Module  using a 2191 battery module with two 6-volt alkalines — 15-minute data intervals, one interrogation per week.*

# Ordering Information

| Description | Part Number |
|---|---|
| **2103 Modem Module** | 68-2000-007 |
| **Wall mount/AC power kit**<br>*Includes stainless steel mounting bracket, 913 Power Pack (120VAC to 12VDC), and adapter cable to connect 913 to 2100 modules* | 60-5314-359 |
| **2103 Modem-to-phone-line cable**<br>*12 ft cable with RJ11C connector* | 60-3214-020 |
| **2103 Modem-to-phone-line cable - H.D.**<br>*Cut-to-length cable with RJ11C connector. Specify desired length (not exceeding 100 feet) at time of order.* | 60-5314-411 |
| **Isco Flowlink Software** | 68-2540-200 |
| **Isco Flowlink Pro Software** | 68-2540-270 |

*2100 Series modems are set up using Isco Flowlink® Data Management Software*

*Photo above shows a typical flow module grouping that includes Isco's 2101 Field Wizard™, a 2103 Modem Module, a 2150 Area Velocity Module, and a 2191 Battery Module.*

*Many other variations are possible. Request a copy of our 2100 Series Flow Module Brochure for complete information.*