KISTLER-MORSE®
Measure of Success

ORB™

Remote Inventory Management System.
Material information when, where and how you want it.

TECHNICAL SPECIFICATIONS

The ORB™ Remote Inventory System transforms inventory and process data into management information that can increase productivity and reduce supply chain costs. By providing a reliable means of gathering and transmitting real-time inventory and process information via your LAN or the Internet, high volumes of data can be securely monitored, retrieved and organized by various users within the plant or remotely.

FEATURES AND BENEFITS

Remote Inventory Management

- Access inventory information and stored data from a remote location
- Manage multiple sites with multiple vessels
- Manage inventory via the internet
- Set notifications/alarms to automatically send alerts via email

Increase Supply Chain Visibility

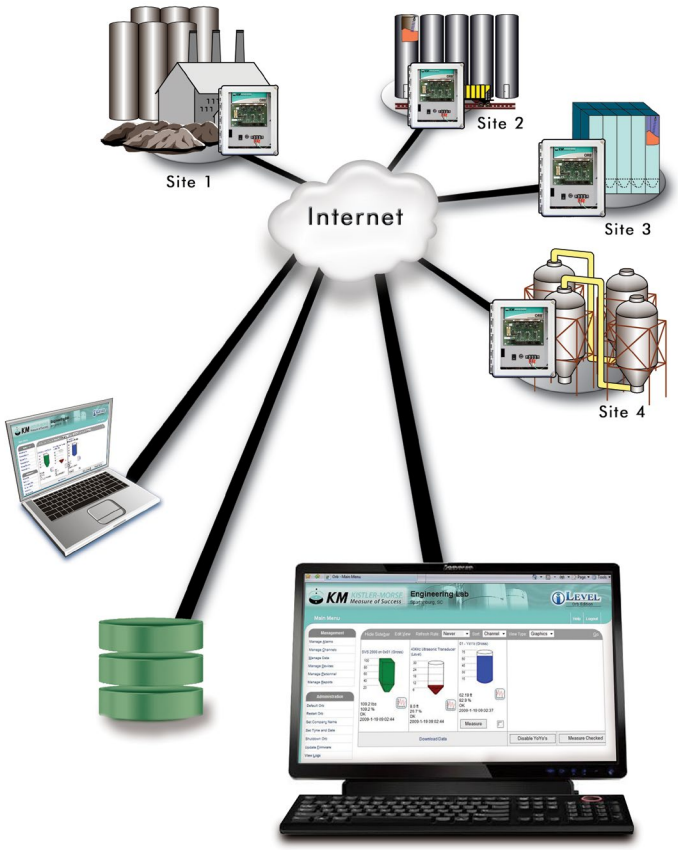
- Automate re-order process with suppliers
- Grant permissions for remote supplier communication
- Improve efficiencies with real-time accessibility to inventory levels

Improve Data Management

- Integrate or import to the ERP system
- Store historical data
- Run reports for tracking trends or other statistical measures

Reduce Local Site Maintenance

- Store and replicate calibration settings for all vessels remotely
- Remote instrument maintenance
- Eliminate routine and manual inventory reporting



HOW TO ORDER

ORB™ Inventory Management System	ORB-KM

SPECIFICATIONS

TYPES OF DATA AVAILABLE

Material level & weight; any 4-20mA process variable signal
Historical data
Alarm conditions
Logs of user access and configuration changes

DATA ACCESS METHODS

Over intranet or Internet via web browser
Data download to spreadsheet or delimited file
Automatic transmission to client database in XML format

ALARM ALERTS

Any user-specified condition for level, weight, or other process variables
Malfunction status of connected devices
Alarm conditions viewable via web
Alerts transmitted electronically to e-mail, handheld devices, or fax systems

SYSTEM SETUP

Plug-and-play configuration with Bindicator® and Kistler-Morse® systems
Customized units of measure
Frequency of data collection
User configuration and access permissions

DEVICE COMPATIBILITY

Bindicator® Level Devices: GP-4™ and Mark-4™ Yo-Yo™ (Version 1.05 or higher), Sonotracker™ ultrasonics, TDR-2000 Guided Wave Radar (Via 4-20 mA input)

Kistler-Morse® Weighing Systems: SVS2000™, Weigh II™ (Rev B firmware or higher), STX+™, MVS™ (rev G firmware or higher), Sono II (Rev L firmware or higher), Ultra-wave™ (Rev L firmware or higher)

COMMUNICATION PORTS

1 Ethernet TCP/IP (RJ45)
3 RS-422/485/232C
Power Supply Requirements:
90 VAC - 254 VAC; 40 watts

OPERATING TEMPERATURE

-22° to 125° F (-30° to 52° C)
Humidity: 0-100% non-condensing

ENCLOSURE

NEMA-4X, Fiberglass Reinforced Plastic

PHYSICAL DIMENSIONS

10.5 in. H x 8.5 in. W x 6.5 in. D (130.2 mm x 215.9 mm x 165.1 mm)
6.5 lbs (2.95 kg)

MOUNTING HOLE PATTERN

10.94 in. x 6 in. (278.87 mm x 152.40 mm)

APPROVALS

CE

System Description

The ORB™ is a controller that connects to process instrumentation via serial and 4-20 dedicated interfaces. The ORB™ contains a database and integrated web server. It becomes a gateway between process instruments and the Internet. The ORB™ web pages can be accessed using any browser from any device that has Internet connectivity.

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97-7004 Rev. J

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ORB™ 4-20 mA Input Box

TECHNICAL SPECIFICATIONS

The ORB™ 4-20 mA Input Box promotes communication from the 4-20 mA devices and transforms the data to a serial RS-422/485 communication for interfacing with other instruments and management equipment. The 4-20 mA Input Box enhances the communication ability of all the measuring and weighing devices as well as other devices such as temperature and moisture sensors.

FEATURES AND BENEFITS

Promotes Communication

- Converts 4-20 mA data into RS-422/485
- Allows 16 devices to be connected to a single input box
- Each data stream is addressed and communicated individually

All Devices Are Visible

- The ORB remote inventory management system can obtain and monitor information for any 4-20mA device at a location

InvisiLink™ Wireless Radio Option

- Eliminate costly wiring and conduit with direct communication between devices

HOW TO ORDER

ORB 420-01	4-20 mA Input Box for ORB; Includes (1) 4-Channel Input Board, (1) Power Supply, (1) Enclosure with Expansion Room for 3 Additional Input Boards
ORB 420-02	4-20 mA Input Box for ORB; Includes (2) 4-Channel Input Boards, (1) Power Supply, (1) Enclosure with Expansion Room for 2 Additional Input Boards
ORB 420-03	4-20 mA Input Box for ORB; Includes (3) 4-Channel Input Board, (1) Power Supply, (1) Enclosure with Expansion Room for 1 Additional Input Board
ORB 420-04	4-20 mA Input Box for ORB; Includes (4) 4-Channel Input Boards, (1) Power Supply, (1) Enclosure
SPK-ORB-420-01	4-Channel Input Board w/Mounting Hardware for ORB
4-20 mA Input Box with InvisiLink Wireless Radio	
(ORB 4-20mA PN)-B11	With InvisiLink Wireless Capabilities, Standard Antenna, RS-422
(ORB 4-20mA PN)-B21	With InvisiLink Wireless Capabilities, Extended Range Antenna, RS-422; includes 6 ft (1.8 m) Connection cable

4-20mA STANDARD SPECIFICATIONS

Power Supply	120 VAC
Communication	RS-422/485
Input	4-20mA
Addressing	8 position dip switches for binary addressing
Temperature	0 to 120°F (-17° to 48° C) Operating -20 to 150°F (-20° to 65° C) Storage Humidity: 0 to 100% non-condensing
Enclosure Size	6" x 8" x 10"
Board Size	3" x 5" x 0.75"
Enclosure	NEMA-4X, Fiberglass Reinforced Plastic

INVISILNK™ SPECIFICATIONS

FUNCTION	
Input/Output	RS-485, RS-422
Frequency	900 Mhz
Power Supply	120 VAC
Ambient temperature (Electronics)	-40° to 185° F (-40° to +85° C) 4-20 mA: 0° to 120° F (-17 to 48° C)
PERFORMANCE	
Transmission Speed (Baud Rate)	RS-485: 115.2 RS-422: 9600
Transmit Power	1 mW to 1 W
Transmission Distance	3000 ft (701 m)*
PHYSICAL	
Housing Material	NEMA 4X, Fiberglass
Extended Range Antenna	Up to 40 miles (64 km) NEMA 4X Outdoor includes lightening arrestor**
Visual Indicators	LED Lights (Power, Communication and Signal)

*Distances may be reduced depending on environment. Maximum distance determined in indoor/urban environment with direct line of sight, no obstacles.

** Consult Factory for extended range distances.

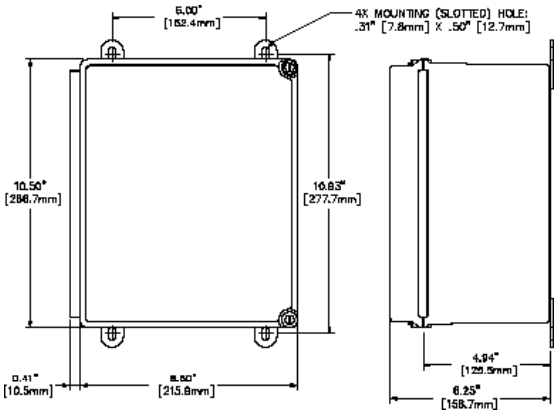
PRODUCT COMPATIBILITY

	COMMUNICATION	
DEVICE	RS-485	RS-422
Bindicator® 3D Level Scanner	x	
Bindicator Mark-4/GP-4 Yo-Yo	x	
Bindicator/Kistler-Morse ORB™		x
Bindicator/Kistler-Morse ORB 4-20mA Input Box		x
Bindicator SonoTracker		x
Kislter-Morse Ultrawave		x
Kistler-Morse MVS		x
Kistler-Morse STXplus		x
Kistler-Morse SVS2000		x
Kistler-Morse Weigh II		x
Niagara Meters 5600 Controller		x

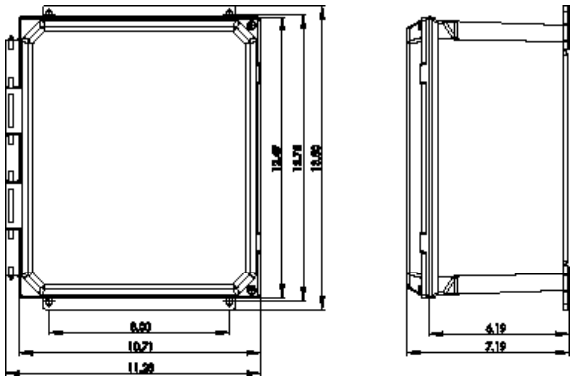
Note: RS-485 Communication will be programmed at a baud rate of 115200; RS-422 Commuication will be programmed at a baud rate of 9600.

DIMENSIONAL DRAWINGS

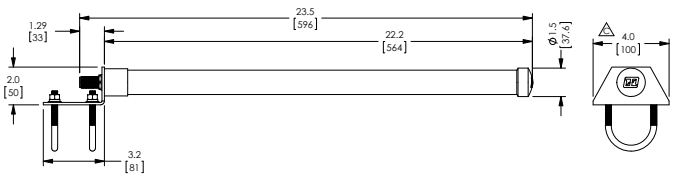
Standard 4-20mA Input Box



4-20mA Input Box with InvisiLink Wireless Radio



Extended Range (Optional) Antenna



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