



BULLHORN REMOTE MONITORING



REVISION 1



Bullhorn i-series ICP Information

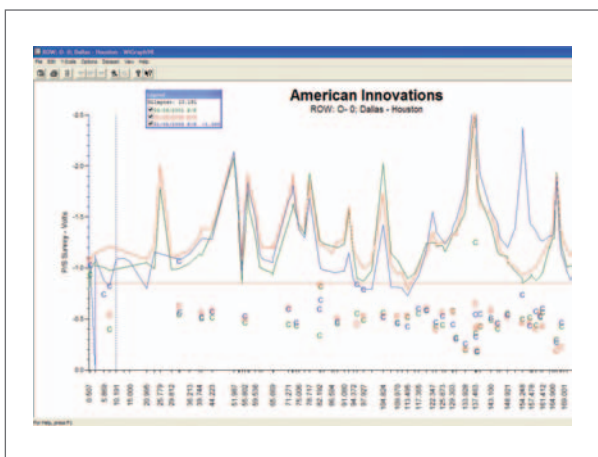
American Innovations' Bullhorn® i-series ICP is a satellite based remote monitoring device that provides scheduled and by exception inbound reporting as well as two-way communication for on-demand reads and activating/deactivating ancillary equipment. The device can be field upgraded to include a MicroMax® GPS80 current interrupter enabling the collection of IR-free cathodic protection (CP) reads in the most efficient, economical way possible. The ICP uses the OrbComm satellite system and enables equipment monitoring and control in very remote locations. It is ideal for international use.

The ICP monitors many different kinds of equipment in the cathodic protection industry including rectifiers, test points and critical bonds. It is also ideal for monitoring equipment in a number of other industries. The ICP provides automatic notifications of alarm events via email, cell phone or pager. With secure access, data can be viewed on the internet from anywhere in the world, day or night.

The ICP unit is available in 2 and 4 analog channel versions. The 5th analog channel is used internally when a MicroMax® is utilized and is not available for other purposes. Both versions have 6 digital inputs and 6 digital outputs. For CP applications, analog inputs are available with filtering and surge protection. The ICP is easy to install since all configuration of the device takes place via the satellite system, so there is no need for a laptop computer in the field. It accepts customer supplied AC or DC line power or DC solar power. In the event of power loss, an internal rechargeable battery provides backup power.

- Remote interruption by adding MicroMax® GPS80 Interrupter
- Easy to install
- Configure via the web
- Up to 4 analog channels for external inputs
- Satellite for global coverage

ROW Code	Survey Date	Location #	Shup P/S	Casing P/S	Location	Pipeline Code	Survey
0-0	03/23/1992	0.010	-1.063		Highway 55	1	1992 Annual Survey
0-0	03/23/1992	0.507	-1.151		Amoco King	1	1992 Annual Survey
0-0	04/23/1992	0.607	-1.112		Pig Trap & Sta	1	1992 Annual Survey
0-0	04/23/1992	1.059	-1.087	-1.081	Railroad	1	1992 Annual Survey
0-0	04/23/1992	2.703	-1.151		Valero Station	1	1992 Annual Survey
0-0	04/23/1992	2.705	-1.147		Valero Crossing	1	1992 Annual Survey
0-0	03/23/1992	2.753			Phillips King	1	1992 Annual Survey
0-0	04/23/1992	2.798	-1.247	-0.606	Texas 35	1	1992 Annual Survey
0-0	04/23/1992	5.869	-1.179		Co Rd 743	1	1992 Annual Survey
0-0	04/23/1992	7.872	-1.215	-0.544	Fm 524	1	1992 Annual Survey
0-0	04/23/1992	8.877	-1.178	-0.541	Fm 524	1	1992 Annual Survey
0-0	04/23/1992	10.191	-1.143	-0.595	Fm 1301	1	1992 Annual Survey





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I - series ICP Product Information

Data Inputs	<p>Up to 5 Analog channels</p> <p>Available input ranges:</p> <p>0-100V</p> <p>0-10V</p> <p>0-100mV</p> <ul style="list-style-type: none"> Analog inputs are isolated Inputs specified at time of order <p>1 digital input available</p> <p>Remaining digital inputs:</p> <p>Available for use with MicroMax GPS</p> <p>Current Interrupter</p>
Outputs	Available for use with MicroMax GPS current interrupter
Config. Parameters	Configuration via web interface
Supporting Products	MicroMax GPS80 Interrupter, AC Present Sensor, Interruption Verification Sensor
Power Supply	<p>AC (Line Power Supplied by Customer) w/ Nominal Voltage of 110VAC. DC (line power supplied by customer) 15-36VDC.</p> <p>Backup battery has a Nominal Voltage of 12 VDC and 7AH Capacity. Solar Power Option Available for an additional fee.</p>
Physical Description	<p>Aluminum or Fiberglass enclosure available:</p> <p>Height- 13.5 inches, Width- 11.5 inches, Depth- 7.125 inches</p>
Data Integrity	Data stored in non-volatile (EEPROM) memory
Environmental	Temp: -40 degrees C to +85 degrees C; Humidity: 0-95% non-condensing
Compliance	UL/CUL General Classification (pending); FCC Part 15; Enclosure: NEMA 4 compliant for all Bullhorn types
Software Interface	Bullhorn secure website. Standard web browsers. AI Network operations center
Communications	Orbcomm satellite