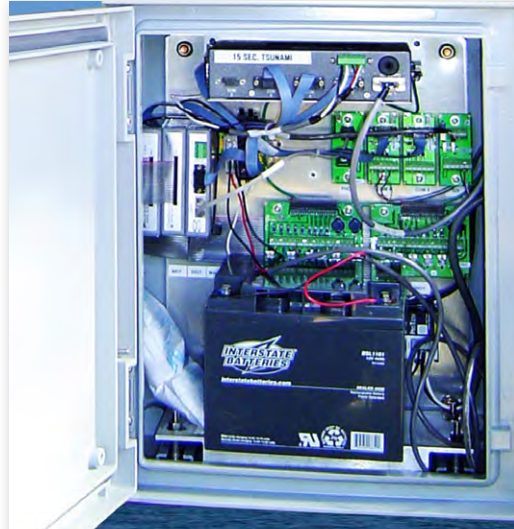


NOS-APPROVED TIDE STATIONS REDUNDANT GAGE 3101-0000-2



The Redundant Gage includes an Xpert Datalogger without a display & Xpert Voice Modem.

GAGE DIMENSIONS

Height 24" Weight 50 lbs. Width 20" Depth 10"

XPERT DATALOGGER WITHOUT DISPLAY

Temperatures	-40°C to +60°C Operating
Processor	486 Class processor @66 MHz
Memory	32 MB Flash Memory for log & configuration; Expandable. 16MB Flash Operating System; 32 MB RAM Expandable SD/MMC cards & USB
Battery Backup	Unnecessary. Memory is flash, for clock only. Lithium Battery: 2 yrs min.
Watchdog Timer	System reset if microprocessor failure
Sample Intervals	Multiple sample intervals, increments of 1 sec. to 24 hr., in 1 sec increments
Data Retrieval	RS-232 Ports & SD Cards, MMC Cards, USB thumb drives
Serial Sensor	Using 1 sensor comm port (Qty 3 RS-232) SDI-12: Dedicated SDI-12 V1.3
Communications - up to 4	Satellite Radio, LOS Radio, Voice & Data Modems (Speech Synthesis), Iridium, MODBUS, Direct Connect
Power Supply	No internal battery or charger External 6.5 aH @ 12V, operates Xpert for 45 days at 15 minutes sampling.
Power Consumption	Quies: 2 mA; Typical Avg: 5 mA @ 15 - min. intvls of shaft encoder sample
Digital I/O	Add as needed w/ I ² C modules. Digital I/O module adds 8 additional digital I/O lines.
Analog I/O	8080-0003 Analog Module adds 6 inputs. Each 8080-0007 Analog Module adds 10 inputs.
Resolution	22 bits
Input Range	-5V to +5

DIGITAL I/O MODULE

Digital Inputs & Outputs	8 digital I/O lines supporting CMOS level inputs. Under software control, 6 of the 8 can be configured as outputs & all 8 can be configured as inputs. Inputs can be configured to support shaft encoders, tipping buckets, counters, & binary inputs.
Sensor Excitation	Software control of switched 12 VDC battery power. 250mA max load.
Shaft Encoders	Quadrature output encoder (4 max) uses 2 digital inputs each. 8 bit gray code encoder (1 max) uses 8 digital inputs.
Tipping Bucket Rain Gages	Input: 100 Kohm pullup for switch closure, software debounced. Uses 1 digital input each (6 max). Counter Inputs: Input frequency - 1 kHz max. 32 bit resolution. Uses 1 digital input each (8 max).
Switchable Thresholds	Software configurable 0.03 V threshold with hysteresis. (2 inputs max) For use with low level output devices such as the 5600-0200 wind sensor without amplifier.
Digital Outputs	Open drain with 100K pull-up to +5V. Switch on impedance 110 Ohms. 70 mA maximum sink current. Outputs can be externally pulled up to the switched battery voltage (12V nominal). When output is externally pulled above 5V, internal pull-up is automatically disabled.
Analog Inputs	6 inputs configurable in various combinations of single ended and differential ranging from 6 single ended to 3 differential.

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REDUNDANT GAGE - VOICE MODEM SPECIFICATIONS

V.90, 56 kbps Data Receiving	RS 232 interface, Baud Rate Up to 115,200
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DTMF Decode	Voice Playback & Record
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V.42 bis & MNP-5 Data Compression	V.42, MNP 2-4 & 10-EC Error Correction
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Power Jumper: Selectable +5 +0.25V 0.5 Min. or +12 +3V 0.5A min

NOTE: Xpert can be configured to supply power out pin 9 of DB-9 interface. Xpert w/ 6461-1197 DB-9 com port board can supply +12V, Xpert w/ 6461-1234 can supply +5(rec om mend ed) or +12.

RATINGS @ 25° C PARAMETER	Min.	Max	Units
Tip / Ring Current Continuous .	0	120	mA
Dielectric Withstanding Voltage	-	1650	VRMS
Operating Temperature	-40	+85	°C
Relative Humidity	10	95	%
Voltage Requirement	4.75	5.25	V
Power Consumption	720	880	mW
Transmit & Receive Level	-10 Tx	-43 Rx	dbm

AGENCY APPROVALS

FCC68 & CS-03 approved

CSA/UL1950 3rd Edition approved (E189947)

European CE

TUV approved (R2072525)

MORE FEATURES

Modem enters power-down mode when DTR is low. In this mode, power is turned off to the modem thus conserving the 120mA that the would otherwise be used. When a ring is detected, full mode power is automatically turned on (apprx. 2.5 sec.). Modem will then answer phone on next ring to make connection.

Auto power up on ring with 60 second timer.

DLG - Digital Line Guard Protection (Modem has built-in Digital Line Guard Circuit that automatically detects an over current on the Tip and Ring pins thus protecting the modem in case it is accidentally connected to a Digital Telephone Line.

*Countries Supported: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Denmark, Finland, France, Germany, Greece, Hong Kong, Iceland, India, Ireland, Italy, Japan, Korea, Malaysia, Mexico, Netherlands, Norway, Philippine, Poland, Portugal, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, UK, US and TBR21 Generic