HydroLynx Systems, Inc.

HydroLynx

MODEL 50386/A2
ALERT2 Data Transmitter

General Description

The HydroLynx Model 50386/A2 ALERT2 Data Transmitter uses the HydroLynx ALERT2 Encoder to transmit ALERT2 data reports; implementing the important design goals of ALERT2: which increases the data through-put and data flexibility while eliminating erroneous data reports. To achieve these goals, ALERT2 combines a high baud rate, state-of-the-art data encryption with Forward Error Correction (FEC), and Time Division Multiple Access (TDMA) communications. The 50386/A2 ALERT2 Data Transmitter with the ALERT2 Encoder achieves these ALERT2 design goals.

High baud rate data transmissions allow the ALERT2 data packet to include more information than standard ALERT transmissions. The data content portion of the ALERT2 data packet is designed for format flexibility; this allows various data types to be included in ALERT2 data reports. To insure reliable data transmission, via RF communication paths at a high baud rate, the data packet must include advanced data encryption with FEC. The HydroLynx Systems ALERT2 Encoder provides this ALERT2 Protocol compliant data packet. ALERT2 TDMA communications eliminates the data report collisions inherent in standard ALERT communications. TDMA communications requires the addition of a GPS antenna/receiver to insure that the transmitter's clock keeps the ALERT2 data report within the allocated TDMA time slot.

The 50386/A2 is using the same logic boards: 50386SLB and 50386PCOS, which have provided more than 10 years of reliable field performance in the 50386DCU models. The 50386 collects, processes, and transmits analog and digital sensor data. The 50386/A2 is programmable using the same 50386 Toolbox software which includes a full set of commands for data collection, data logging, and ALERT2 data transmission. With the ALERT2 data packet, the sensor data value may now be calibrated and reported in engineering units in 16 bit unsigned integer format: 0…65,535, signed integer format -32767…32767, single precision (7 decimal digit) IEEE floating point, and double precision (16 decimal digit) IEEE floating point *(ALERT data range: 0…2047)*. The ALERT2 Station ID (SID) range has also increased to 1…65,534 *(ALERT format: 0…8191)*. In addition to the increase in SID numbers, the ALERT2 data packet format includes individual sensors numbers (SN) for each station: 0…254. Both the SID and the SN are programmable values in the 50386A2 ALERT2 Data Transmitter.

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Model 50386/A2-UP ALERT2 Upgrade

The Model 50386/A2-UP ALERT2 upgrade includes the HydroLynx Systems ALERT2 Encoder, a GPS antenna/receiver and a *lynx386.exe* Version 2-XX-XX application program upgrade.

The HydroLynx Systems ALERT2 Encoder installed between the 50386SLB PCB and the radio provides an ALERT2 Protocol compliant data packet. The GPS antenna/receiver insures that the transmitter's clock keeps the ALERT2 data report within the allocated TDMA time slot. The *lynx386.exe* Version 2-XX-XX application program along with the encoder upgrade allows the same 50386 models that have provided more than 10 years of reliable field performance to collect, process, and transmit ALERT2 data.

HydroLynx Systems recommends including a 5033-0.6B Solar Panel along with an 18 amp/hr battery at all sites using the 50386/A2 ALERT2 Data Transmitter.

Contact HydroLynx Systems for additional information, procedures or details on the ALERT2 upgrade.

Ordering Information

50386/A2-54............Transmitter in Round Canister, 1 Precipitation Input
50386/A2-88............Same as 50386-54 with 2 Digital Inputs
50386/A2-90............Same as 50386-54 with 2 Digital & 1 Analog Inputs
50386/A2-81............Same as 50386-54 with 3 Digital & 7 Analog Inputs
50386N/A2 ....Transmitter in NEMA 4X Enclosure
50386/A2-UP...........Alert2 Upgrade to existing 50386 Data Transmitter