TELEMETRY EQUIPMENT

MODEL 50386

Real-Time Data Transmitter

General Description

The Model 50386 Real-Time Data Transmitter collects, processes, and transmits analog, digital, and serial sensor data on events and timed intervals. The collection, processing, and transmission of sensor data is controlled by parameters programmed using the 50386 Toolbox software. Sensor data can be transmitted using multiple communication paths with mixed formats and protocols.

The HydroLynx Model 50386 ScadaLynx uses dual processor architecture and the latest in embedded processor technology to minimize power usage when idle and maximize computational power when awake. The main processor is an Intel 386EX that runs data collection, telemetry, and control; a low-power PIC I/O processor collects digital status and counter data and wakes the main processor on timed intervals, event thresholds, radio carrier detect, or console activity.

The transmitter supports up to 16 analog inputs (16-bit A/D), 12 digital status inputs, 4 low-speed up/down counters, 4 high-speed counters, 6 digital outputs, and 1 SDI-12 interface. Virtual sensors can compute averages, maximums, minimums, and runtimes that are tested, alarmed, logged, and transmitted like physical inputs. Two RS232 serial ports (expandable to six) support ALERT/IFLOWS, ScadaLynx, ASCII, and MODBUS over ALERT radio, SCADA radio, modems, GOES, or direct serial connections.

Model 50386 Real-Time ScadaLynx System

Specifications

PCOS Processor

Processor	Intel 80386EX
Clock Speed	33 MHz
Bus Size	16 bits
FLASH Memory	4 MB
RAM Memory	1 MB
EEROM Memory	8 kB

Communications

Serial Ports	2 RS232 standard, expandable to 6
Protocols	ALERT, ScadaLynx, MODBUS, GOES
Radio	ALERT and ScadaLynx transmit/receive

Analog Inputs

Inputs	16 (14 available)
Resolution	16-bit
Input Ranges	0 to 5 Vdc or 4 to 20 mA
Absolute Error	0.0015%

Counters & Digital

Up/Down Counters	4 (max 100 Hz)
High-Speed Counters	4 (max 2 kHz)
Digital Inputs	12
Digital Outputs	6 (open drain, 150 mA)

Power

Fully Asleep	10 to 16 Vdc, < 3 mA

Fully Awake	10 to 16 Vdc, < 150 mA

General

Operating Temp.	-40 to 85 °C
Humidity	0 to 95%, non-condensing
Canister Size	8 in. dia. x 23 in. high
Weight	19 lbs with battery

Ordering Information

50386-54	Transmitter in Round Canister, 1 Precipitation Input, 1 SDI-12 Input
50386-90	Same as 50386-54 plus 1 Up/Down Counter, 2 Analog Inputs
50386-81	Same as 50386-54 plus 1 Up/Down Counter, 7 Analog Inputs, 1 Wind Input
50386N	Transmitter in NEMA 4X Enclosure (2 counters, 7 analog, 2 wind, 8 digital, 2 outputs, SDI-12)
50386NZ	NEMA 4X Enclosure (4 counters, 14 analog, 4 wind, 12 digital, 6 outputs, SDI-12)
50386-B	NEMA 12 x 10 enclosure, 1 precipitation, 1 SDI-12
50386-K	Transmitter in rack enclosure
50386-UG	5096 to 50386 Transmitter upgrade
50386-TU	Trade up from ALERT1 to ALERT2
50386-SIREN	Siren control transmitter

Options

RTR	Radio Link (Specify frequency)
5073TBX	ScadaLynx Toolbox Software
50386-OP1	7-Pin MS Male RS232 Connector
50386-OP2	10-Pin MS Female Digital Status Connector
50386-OP3	3-Pin MS Male SDI-12 Connector
50386-OP4	6 Serial Port Expansion

50386-OP6	Internal Power Supply
50386-OP8	ScadaLynx Radio
50386-OP14	Network Connector
50386-OP21	Cellular Gateway Radio
50386-OP22	Iridium Satellite Radio
50386-OP23	WiFi Gateway Radio

Radio Options

Default	Maxon 5W with Enclosure
Supported	Ritron 5W with or without Enclosure; Ritron 30W with Enclosure