3004N

NEON REMOTE LOGGER

The 3004N Neon Remote Logger is a data logger/RTU with 4 to 6 high-resolution analog channels housed in a 2016 NRT equivalent case which has a smaller form factor than the standard metal 3004 enclosure. 3004N, when used in conjunction with the 3110A Field Termination Strip (FTS) connects to sensors in the field, collects readings from those sensors and either transmits the collected data to a central server via either cellular 3G/4G/LTE, Cat M1 and NBIoT or Iridium SBD networks, or it can be used as a stand-alone datalogger/RTU.

All NRL/RTU units routinely collect and log sensor data. NRLs then periodically connect to a central Neon comms and web server via an IP network and use a push data model to upload the logged data. The central Neon server can be cloud-hosted, virtual, or physical. The Neon server is offered as a Neon data hosted service using a Unidata Neon server for a monthly fee. Otherwise, customers can purchase a Neon server license and run the Neon software on their own server. The Neon system receives, processes, displays, stores, and reports collected data in many ways. The Neon system also can issue control commands based on pre-set algorithms and issue alarms/notifications via several mediums. Alarm setpoints can be set up on the NRL/RTU unit itself as well as on the Neon central server. The alarm notifications can be sent via several methods, including email and SMS text messages. Alarm triggers can initiate physical actions in the field, such as turning pumps on and off or activating other control functions based on the internal program within the NRL/RTU.

The Neon system has fully bi-directional communications between the NRL/RTU units and the central Neon server. This allows for remote diagnosis, remote programming and remote firmware updating for the operation of the remote equipment, thereby reducing costly site visits. NRL/RTU units can be configured to read sensors, log data internally to local memory and push data to the central Neon server at user-settable intervals such as once a minute, every few minutes, every hour, once a day. Data to be viewed on the Neon Web server in near real-time from any browser and can be reported to other systems using email, FTP, and web services.

SPECIFICATIONS

MATERIAL	Powder Coated Aluminium Enclosure
SIZE	L108mm x W97mm x H81mm, 330g
OPERATING TEMPERATURE	-20°C to 60°C. Not affected by humidity
ANTENNA	Model dependant
SCAN RATE	Programmable from 1 second to 5 minutes
LOG RATE	Programmable from 1 second to 24 hours
TIME CLOCK	Battery Backed Real Time Clock, Accuracy ±10 sec/month (non-Neon version), locked to server time clock (Neon)
CPU	16 Bit, 20MHz, Ultra Low Power
STORAGE MEMORY	7.5Mbytes Flash (non-volatile), 3.75 Million log data points
EXTERNAL POWER	9 to 30V DC
EXTERNAL BATTERY	Optional
INTERNAL BATTERY	Single 3.6 Volt Lithium D Cell
CURRENT DRAW	< 65µA Standby, Max 500mA Active
RTC BACKUP BATTERY	3V Li Coin Cell (5 year life)
CONFIGURATION PORT	USB B Micro Port and SD Micro Card
LCD	Optional 240 x 320, Colour, Resistive Touch Panel
ANALOG CHANNELS	Default: 4 Single-ended (max) or 2 Differential (max), Different configurations on request, 24-bit resolution, 4 user-selectable gain ranges

COUNTER CHANNELS	2 x 16 bit, DC to 20kHz potential free contacts or 0 to 5V DC digital input (C0/C2); 2 x 16 bit, DC to 300Hz potential free contacts or 0 to 5V DC digital input (C1/C3), Different configurations on request
INSTRUMENT POWER	5.5V (100mA) to 18V (60mA) regulated, User Programmable
INSTRUMENT REFERENCE VOLTAGE	2.5V 10mA Max
SDI-12	Single Channel, SDI V1.3 Compliant instrument and recorder modes supported
MODBUS	Single Channel, RS485 RTU or ASCII protocol, 57600 baud (max) Functions 01, 02, 03, 04, 05/15, 06/16
HSIO	Yes, High speed serial interface, bi-directional
DIGITAL OUTPUT	Single - Open Drain FET 30VDC 250mA max
ACCELEROMETER	Yes, Senses changes in logger orientation
BAROMETER	260-1260hPa Absolute, resolution: 0.1 hPa
BLUETOOTH	Yes
RELAY	1 x Normally Open and Normally Closed Contacts 1A 30VDC, 0.5A 125VAC (with FTS 3110)
MODEM OPTIONS	- Cellular 3G/4G/LTE, Supports 2 x SIM Cards - NBIoT, Supports 2 x SIM Cards - Satellite Iridium SBD