2016
NEON REMOTE TERMINAL
2G/3G/4G/LTE

unidata

neon

DNV·GL
ISO 9001
QUALITY SYSTEM CERTIFICATION

MODEL F

The 2016 Neon Remote Terminal NRT is small self-contained data logger/rtu in a compact case which connects to sensors in the field, collects readings from those sensors and transmits the collected data to a central Neon server. The model number suffix indicates data transmission via a cellular 2G/3G network or via a cellular 4G/LTE network.

All Neon data logger/ rtu units routinely collect and log sensor data and periodically connect to a central Neon comms and web server via an IP network using 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 or customers can purchase 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 and notifications via several mediums. Alarm set points can be set up on the Neon data logger/ rtu units as well as the Neon central server and 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 Neon data logger/ rtu.

The Neon system has fully bi directional communications between the Neon data logger/ rtu units and the central Neon server. This allows for remote diagnosis, remote programming and remote firmware updating for operation of the remote equipment and thereby reducing costly site visits. Neon data logger/ 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

PHYSICAL SPECIFICATIONS	
MATERIAL:	Powder Coated Aluminium Enclosure
SIZE:	103mm x 70mm x 83mm (LxWxH)
WEIGHT:	400 grams (including battery)
OPERATING TEMPERATURE:	-20°C to 60°C. Not affected by humidity
MODEM:	Sierra MC8548Q (3G) or HL7549 (4G)
ANTENNAE:	stub SMA antenna, optional whip SMA antenna

ELECTRICAL SPECIFICATIONS	
BATTERY:	3.6V 13Ah lithium (non-rechargeable)
BATTERY LIFE:	up to 5 years (based on daily schedule)
EXTERNAL POWER:	6V to 24V DC input available if required
INSTRUMENT POWER:	5V unregulated supply (5mA max) plus 2.5V ref (5mA max)
SDI-12:	SDI-12V 1.3 recorder (1200 baud smart instrument channel)

MODBUS:	Optional RS485 RTU Protocol, 19200 baud max, Functions 01, 02, 03, 04, 05/15, 06/16
I/O:	4 x analog inputs – 12 bit resolution 1 x counter input – 16 bit/3kHz, 3–5V DC signal (included) 3 x counter inputs 8 bit/300Hz, 3–5V DC signal (option) 1 x open collector output, 250mA maximum 1 x HSIO (16 x 16 bit bi-directional, synchronous data) channel 1 x RS232C port / private leased line port

INTEGRATED LOGGER SPECIFICATIONS	
STORAGE MEMORY:	30kB/15,000 readings – non-volatile flash memory
MEMORY EXPANSION:	8MB/4,000,000 readings – non-volatile flash memory
SCAN RATE:	Programmable from 1 second to 5 minutes
LOG RATE:	Programmable from 1 second to 24 hours
TIME CLOCK:	Crystal regulated, +/- 10 seconds/month – automatically network synchronised
CPU:	16 Bit, Ultra Low Power

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2016 Neon Remote Terminal 1917