Diligence EV
Quick Reference Guide
N2015 Current Loop Data Loggers

The New N2015 data logger is a single channel current loop data logger measuring over the range 4-20mA. It is designed to connect in series with your existing current loop. The following guide will explain some of the features of the new data logger as well as giving details of the wiring required. Further information can be found in the Diligence EV manual which is installed with the software. To open select Start-Programs-Evolution-Diligence EV Manual. The document is in Word Format.

The Evolution software now supports a number of new features for quicker programming and data retrieval from the data logger. 'Quick Program' allows the user to write and program a TASK with a click of a mouse button.

Quick Program

The easiest way to write a TASK for a data logger is to use the Evolution software feature Quick Program. Activate your logger by pressing the navigation button on the front. Place it face down in the Interface. Run the software and select Quick Program. After a few seconds a data logging task for your data logger will be displayed. Each task has a number of predetermined settings. These are as follows:

Description

The Diligence EV data logger can store a short summary of the logging run being performed. This text appears when the logged data is retrieved.

Channel Configuration

Channel (1) Only – 4-20mA Current Loop.

Channel Name

A descriptive name can be included for the channel.

Sensor Type

Diligence EV model N2015 is the current loop model measuring over the range 4-20mA.

Units

The software will automatically offer a list of Units applicable to the sensor type chosen above. The setting can only be changed on the 1st enabled channel.

Scale Mapping

The scaling of the 4-20mA input can be chosen to display in a scale that you are more familiar with, e.g. 4-20mA might represent
0-500mBar Pressure for instance. Use this section of the task form to set this up.
For example:

Enter maximum current (Hi) e.g. 20mA and corresponding unit value as e.g. 500mBar.
Enter minimum current (Lo) e.g. 4mA and corresponding unit value as e.g. 0mBar.

Resolution

The software allows the user to set the decimal point for the data. The software will then set the numerical value associated with that decimal point setting, e.g. setting 0 decimal points allows values of +/-32000 to be recorded, whereas setting 4 decimal points gives readings to +/-3.2000 only. Select the number of decimal points that best represents the data you wish to store.

Data Logger Operation

Once you have written the task you must either save it for use later or use it to program the logger. To save click on the Save button and enter a file name. To program the logger select Program. The logger is now ready for use.

For Diligence EV models with display, it is possible to view the last logged reading and the alarm status of each individual channel. With each single press of the navigation button on the front of the data logger a single bleep is emitted and the Diligence EV display will cycle from the clock display through all enabled channels. The Bell symbol appears when any of the enabled channels has logged an alarm. The Ringing Bell symbol appears whenever any of the enabled channels is currently in alarm. It is possible to determine which channel is in alarm by cycling through the channel readings and noting when "H" representing a high alarm or "L" representing a low alarm is displayed. An alarm indication can be acknowledged and cleared down by pressing and holding the button on the front of the data logger for 3 seconds. A single bleep is heard on the initial press followed by another single bleep after the 3 seconds has elapsed. Any further NEW alarm conditions will still be indicated.

Connecting To Your Logger

The Diligence EV N2015 allow monitoring and logging of the loop current in a 4-20mA system. The unit does not provide loop power and is intended for wiring into an existing transmitter circuit. The N2015 socket accepts a Lumberg SV60 locking plug. A pre-wired plug with wire tails is supplied to facilitate wiring into the current loop. The red wire is positive, white is negative.

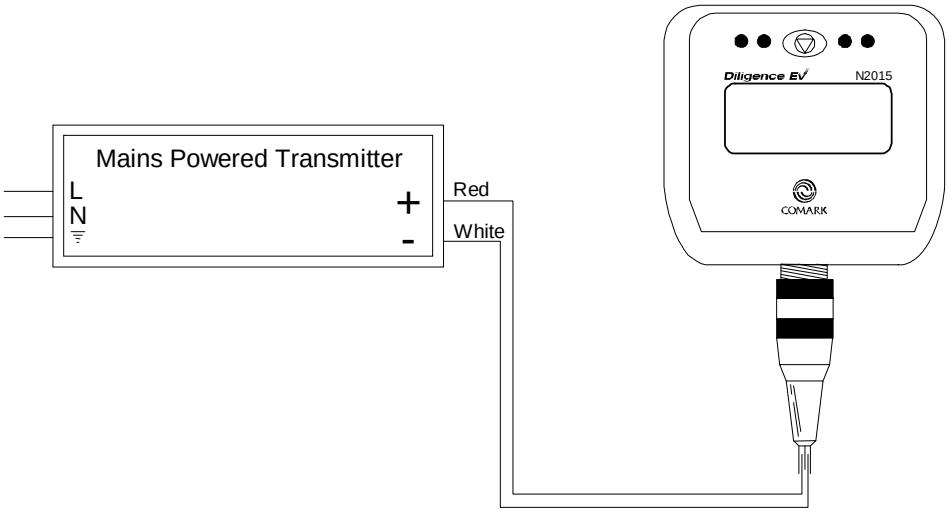

Fig 1. Example Wiring

Additional plugs are available from Comark Limited as an accessory item, (Part Number 4187). The pin-out is given below if the user wishes to make his own connector arrangement.

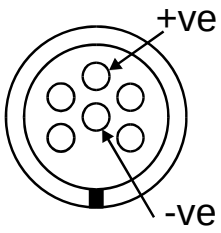

Fig 2. Connector Pin-out

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Part No. 17766/2