

IDC Data Sheet 16 November 2010

The Coherent Research IDC is an internet appliance for the collection of metering data. The IDC connects to an Ethernet network and establishes an internet or intranet connection to a Coherent Data Collection Server (DCS). The IDC may be deployed in customers' premises behind a firewall providing Network Address Translation or a proxy server. The IDC establishes an HTTP connection to DCS which is used for all communications with DCS. No incoming ports need to be opened on the firewall, and only standard HTTP outgoing traffic is used. This connection is normally permitted since it is used for web browsing.

The IDC has a RS232 and a RS485 communications port which can be used for interrogating serial interface meters via a variety of proprietary protocols. A further serial interface is provided via a 4P4C modular jack for attaching optical interfaces for meter reading. Coherent is able to supply compatible probes for IEC62056-21 or PACT interfaces. In addition it has a ModBus port with a 12V supply for attaching ModBus meters and other ModBus devices, in particular the Coherent ModBus Pulse Counter and the Coherent ModBus Radio-Tech receiver.

A plastic optical fibre receiver can also be fitted as an option for receiving metering data over an electrically isolated link which permits collection of metering data from within hazardous areas.

For meters which provide time series data, the IDC provides a transparent link to the DCS which can be used to collect time series data and register reads, and for engineering access to the meters. For meters which do not provide time series data, the IDC reads the meter registers at regular intervals and buffers the resultant interval data for collection by the DCS.

The IDC is designed to be powered from the Ethernet connection, 'POE Class 2' but it can be powered from a local mains supply via a plug in power adaptor if power is not available from the network.

The IDC automatically checks and downloads any required software updates from the DCS and can be remotely configured over the network.

The IDC can be connected to any type of meter, i.e. electricity, water, gas, heat and steam, and is independent of meter manufacturer. The DCS and IDC support the meter protocols of commonly used electricity meters. Support for more exotic meters can be added and the IDC software updated from the DCS.

The IDC is supplied in a 4 module wide M36-DIN standard enclosure. The overall dimensions are width 70mm (length of DIN rail required), height 102mm including terminals and depth 58mm.

The IDC has a 4 MByte flash memory for remote reprogramming and data buffering.

The IDC has the following connectors:

8P8C Modular Jack (RJ45) for 10/100 Mbps Ethernet connection.

2 Pin pluggable terminal block and 2.1mm coaxial power inlet for auxiliary 12V 0.5A power supply connection.

4 Pin pluggable terminal block for 2-Wire ModBus output including 12V 0.4A supply for ModBus devices. All ModBus data rates and parity options supported.

9 Pin D connector for RS232 and RS485 serial connections.

4P4C modular jack for IEC62056-2I and PACT optical probe connection.

Optional plastic optical fibre receiver for 1mm fibre with 2.2mm cladding.