

Databus Hubs



DataBus Protocol

The ICT Proprietary Databus protocol operates on a three wire bus giving the customer maximum flexibility in the layout of their data logging system. The three wires of the Databus provide power and communication for all Smart sensors connected to the SL5 data logger. Due to the simplicity of this bus system, sensors and extension cables can be connected anywhere on the Databus. The Databus system uses the following wiring for all connected Smart sensors and extension cables:

Connector	Function	Sensor Cable Wire Colour	ICT Extension Cable Wire Colour
PIN 1	Power supply positive	Red	Red
PIN 2	Serial Data	Yellow	Yellow
PIN 3	Ground (Power & Data)	White	Blue & Green

Because the Databus cabling is all connected in parallel, Databus extension cables and Smart sensor cables can be laid out in either radial or daisychain configurations or a combination of both. To maximise the flexibility of this feature, ICT offers a variety of databus hubs. These include the IB14, IB8-WP and IB16-WP Databus hubs.

IB14

IB14 databus hub includes 12 standard connections in addition to a pair of ConXall sockets. The ConXall sockets have been provided for backwards compatibility with older systems. Customers who have a sensor suite that utilises the ConXall connectors will also typically have the older ConXall databus hub which can be connected directly into the IB14.



The IB14 is situated within the LH3 logger housing and is connected directly to the SL5 data logger data bus port. The IB14 is then typically used for connecting most meteorological sensors that have been mounted on the Weather Station and any extension cables being used to extend the Databus to other locations away from the logger housing. The IB14 Hub also connects any auxiliary batteries to the Databus.

IB8-WP

The IB8-WP is a low cost databus hub providing 8 connections to the databus. It is best suited to systems with only a small numbers of sensors at each hub location. The IB8-WP is contained within a yellow plastic weatherproof box with a slot cut in the bottom of the box for cable entry.

IB8-WP continued...

To enhance the weatherproofing of this databus hub in outdoor situations, customers are advised to orientate or hang the box such that the cables protrude vertically from the slot at the bottom of the box. While this method will provide adequate water ingress protection in most situations, if the customer expects that water ingress may become a problem due to flooding, extreme weather or sprinklers, then the IB16-WP databus hub will be better suited.



IB16-WP

The IB16-WP provides 16 connections to the databus. As the largest hub supplied by ICT, it is generally used in larger systems or where water ingress is likely to be a problem. The IB16-WP is housed in a grey weatherproof enclosure and cable entry is via cable glands at the base of the enclosure.



In order to provide maximum water ingress protection, any sensors or extension cables to be connected to the IB16-WP are required to have the green three way connectors removed temporarily prior to insertion through the cable gland and then re-connected from inside the enclosure. The only tool required for this is a small screwdriver.

Once the cables have been passed through the cable gland, the gland can be screwed down such that the rubber seal squeezes against the cables. Silicon sealant can then be used to complete the seal.