

DIGSI 5 QUICK NOTES

DIGSI-5-QN0009:

SIPROTEC 5 – DIGSI 5 connection via Ethernet:

To make a connection via an Ethernet SCADA interface:

- You must have a valid^[1] setting file open in DIGSI
- You must have the Ethernet SCADA interface selected in the 'DIGSI 5 uses....' Selection.

It is possible to connect to SIPROTEC 5 relays from DIGSI 5 using front panel USB or rear Ethernet connections. DIGSI 5 Quick Note 0007 introduces this topic, and Quick Note 008 steps through the process of downloading fault records via USB or Ethernet connection to Port J. This Quick Note discusses connecting to the relay using an Ethernet SCADA port.

Port J versus other Ports:

Port J:

- Port J is the “Integrated Ethernet Interface” fitted to all SIPROTEC 5 relays.
- It is only available as a copper port.
- Port J is intended as the Remote Engineering Interface, but may also in some versions allow IEC 61850 reporting
- No setting file is need to make a Remote Engineering Connection.

Port E/F/M/N/P:

- SIPROTEC 5 relays have two communication interface **slots** (Port E and Port F) that may be populated with a variety of communication and sensor interfaces. An expansion I/O module may also be fitted adding Ports M, N & P. Commonly Port E or F is fitted with an Ethernet interface for SCADA connection (DNPiP and/or IEC 61850 – or other protocols).
- There are available copper (2 x RJ-45) or fibre Ethernet modules (2 x Optical LC duplex 1300 nm interfaces)
- These Port can be used for SCADA connection, PTP time synchronisation and Remote Engineering Access.
- To allow Remote Engineering Access via SCADA interface, DIGSI must have a valid setting file pre-loaded.

In this Quick Note we assume Port E is fitted with the SCADA Ethernet interface.

QUICK GUIDE TO: DIGSI 5 uses following IP address

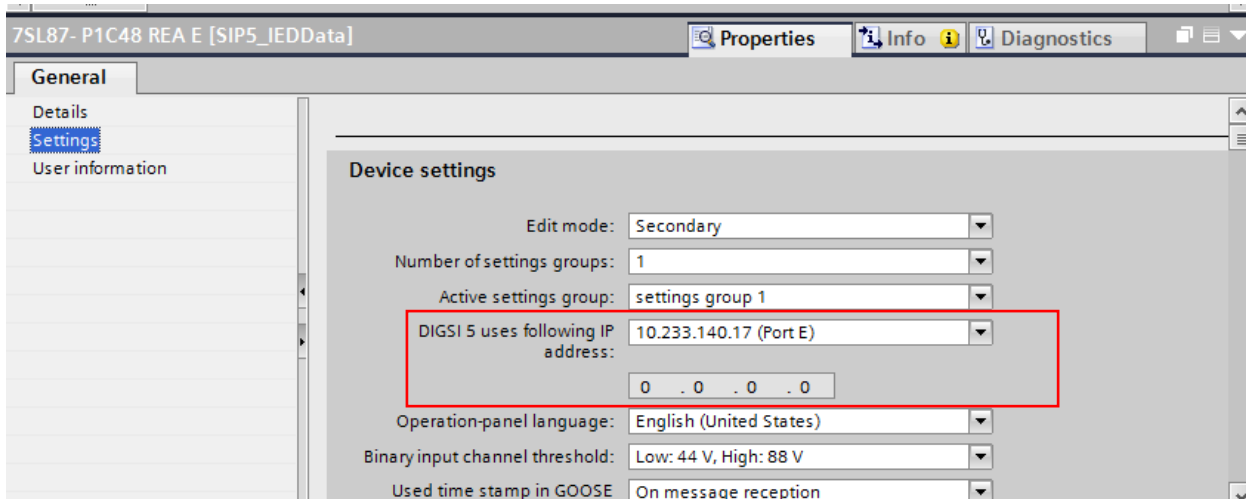


Figure 1. DIGSI 5 setting file showing Port E selected for DIGSI 5 connection.

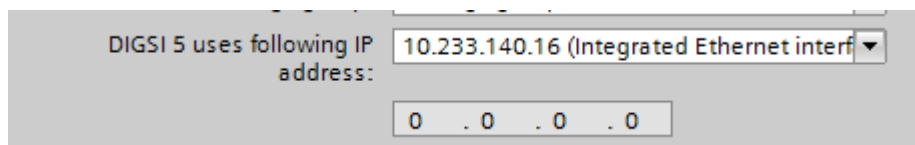


Figure 1. Example showing Port J selected (Port J is the “Integrated Ethernet interface”)

It may be (incorrectly) inferred from Figure 1 & 2, that the relay is pre-set to allow DIGSI 5 to connect via just Port J or just Port E. **This is not the case.** This selection is not actually loaded to the relay, but rather informs DIGSI 5 which interface to make the connection via. [The current selection is saved in the PC setting file].

If a setting file is loaded in DIGSI 5, the “DIGSI 5 uses following IP address” selection can be used to control which Ethernet interface the connection is made by.

[1] The setting file does not need to be the original. It is possible to create a new ‘default’ one provided it has the matching hardware configuration and correct IP address. You can then connect to the remote relay and update the offline file with the online settings. **WARNING** – not recommended in an IEC 61850 environment, as the resulting project file will not have station level information.