AS-I Commissioning and Maintenance Course

A one-day course designed as an add-on to the PROFIBUS or PROFINET Commissioning & Maintenance courses covering Actuator Sensor-interface sub networks and gateways.

What is AS-i?

The Actuator Sensor-interface or AS-i is widely recognised as the simplest solution for networking actuators and sensors at the lowest level in a control or automation system. AS-i is suitable for the manufacturing, materials handling and storage sectors and is applicable to most machine control and monitoring systems. AS-i is fundamentally aimed at simple and small systems which mainly use digital or switching sensors and actuators, although analogue IO and more complex devices can be catered for.

One of the most important developments has been the AS-i "Safety at Work" profile, which is allows a simple but high integrity functional safety system to be built using AS-i technology. This includes emergency stop, machine guarding and interlocking systems. These safety protection systems can be integrated into the AS-i control network giving many advantages in maintenance and trouble shooting.

What does the course cover?

This is a practical course aimed at people who have previously taken the PROFIBUS or PROFINET Commissioning & Maintenance courses. It can be easily incorporated as an additional day of training for those who need to commission or maintain AS-i sub-networks and gateway devices.

Each pair of students is provided with a rack of AS-i slave devices and a PROFIBUS/AS-i gateway. The course teaches how the gateway is set up and how the AS-i IO data is accessed over both PROFIBUS and PROFINET, the latter being via a PROFINET PLC AS-I Master Module. The course is manufacturer independent and covers PROFIBUS gateways devices from Siemens, Pepperl+Fuchs, IFM and WAGO, giving the trainees the confidence to deal with any of the many gateway devices that are available. A wide range of AS-i slaves from many manufacturers are used on the course. (Note that for on-site training it is possible to use specific gateway devices on the course if desired; please contact CSL to find out more about this option).

PROFIBUS – AS-i

PROFINET-AS-i

You will learn about device identification and IO codes and how to recognise and use device profiles. This practical course teaches the various ways to program device addresses, how to set up and use automatic addressing, exercise IO and locate faults on devices and wiring. The course also covers how to use an oscilloscope and analyser to perform a network health check and locate network errors.

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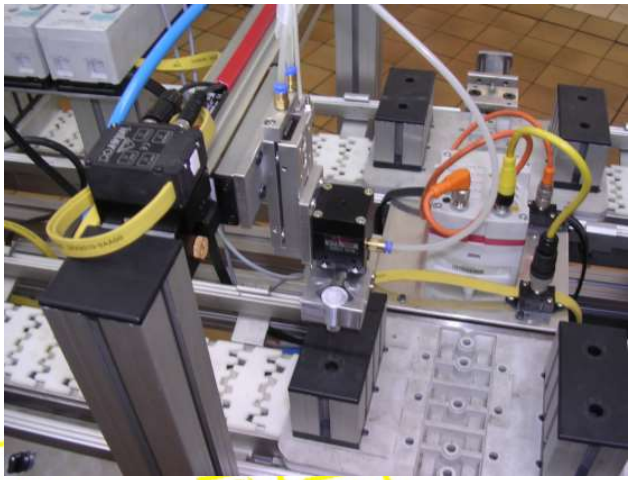
The course also covers the basics of the Safety at Work profile and shows how to fault find and maintain such systems. Please note that the course does not cover the specific safety related considerations that are required for designing and implementing AS-i safety protection systems.



Why must I do the PROFIBUS or PROFINET Courses first?

By far the most common application of AS-i is as a sub-network from a higher fieldbus such as PROFIBUS or PROFINET. Therefore it makes sense to cover this as an integrated part of the standard PROFIBUS or PROFINET training. Attendees will incorporate AS-i sub networks onto a working PROFIBUS (or PROFINET) system and use modern PROFIBUS / PROFINET tools to set up and interpret AS-i diagnostics from this higher level

Booking Information – for dates, costs and booking information, please contact:

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Control Specialists Ltd are a PROFIBUS and PROFINET International Training Centre (PITC) who also provide site-based support on PROFIBUS networks. They also provide training and support on PROFINET, AS-I, CANBUS, IO-LINK and EMC

Peter Thomas of Control Specialists Ltd is the technical officer of PI UK and chairman of the PITC working group which, amongst other things, is responsible for defining the learning outcomes of PI-certified training courses.