

## PROFIBUS Commissioning & Maintenance Course

A one-day course designed as an add-on to the Certified PROFIBUS Installer Course covering the practical techniques of fault finding on "operational" PROFIBUS networks.

### Who is this course aimed at?

The one-day Certified PROFIBUS Installer Course gives an excellent introduction to PROFIBUS technology and how to properly layout and install networks. The verification and fault-finding methods taught are however generally limited to non-operational networks and static testing.

The 4/5-day Certified PROFIBUS Engineer Course covers the full in-depth theory and practice of PROFIBUS operation and fault-finding. Although it is desirable to have one or two fully qualified PROFIBUS Engineers, it is by no means essential that all maintenance personnel be so highly trained.

The PROFIBUS Commissioning and Maintenance course provides an intermediate level of training for technicians and engineers who are involved with commissioning, health checking and fault finding on operational PROFIBUS systems.

### What does the course cover?

This is a practical course based around a working PROFIBUS network. Each pair of students has a rack of devices and laptop with ProfiTrace Ultra for PROFIBUS device exercising and fault-finding.

Techniques taught on the course include the use of ProfiTrace Ultra to diagnose and locate network faults, device faults and I/O problems. Students also learn how to use the built-in digital storage oscilloscope to diagnose and locate a wide range of cable, connection and device faults.

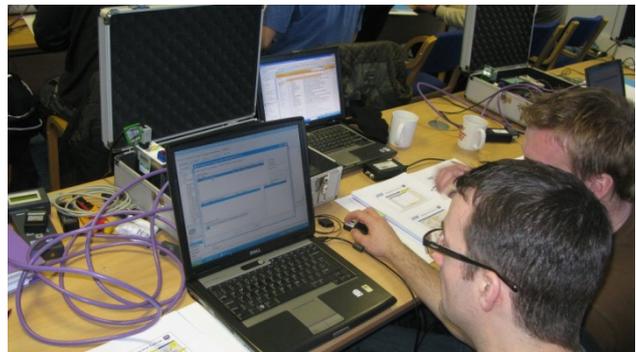
The course covers how to health check a working PROFIBUS system and quickly troubleshoot and locate problems. The course is very practical, based on hands-on exercises using a working system on which faults can be systematically introduced.

Frame#	Slave	Address	Service	Data type	Req/Res
54465	6969.35	as	SD2 1->30	SD2_MOTION	Data Exchange Req
54466	6969.39	as	SD2 1->30	SD2_MOTION	Data Exchange Req
54467	6969.39	as	SD2 1->31	SD2_MOTION	Data Exchange Req
54468	6969.47	as	SD2 1->31	SD2_MOTION	Data Exchange Req
54469	6969.47	as	SD2 1->32	SD2_MOTION	Data Exchange Req
54470	6969.65	as	SD2 1->32	SD2_MOTION	Data Exchange Req
54471	6969.77	as	SD2 1->33	SD2_MOTION	Data Exchange Req
54472	6969.86	as	ACK	Event acknowledgement	Req
54473	6969.89	as	SD4 1->34	SD4_MOTION	Data Exchange Req
54474	6969.94	as	SD2 1->34	SD2_MOTION	Data Exchange Req
54475	6970.04	as	SD2 1->40	SD2_MOTION	Data Exchange Req
54476	6970.17	as	ACK	Event acknowledgement	Req
54477	6970.20	as	SD2 1->41	SD2_MOTION	Data Exchange Req
54478	6970.29	as	SD2 1->42	SD2_MOTION	Data Exchange Req
54479	6970.46	as	SD2 1->42	SD2_MOTION	Data Exchange Req
54480	6970.55	as	SD2 1->42	SD2_MOTION	Data Exchange Req
54481	6970.66	as	SD2 1->43	SD2_MOTION	Data Exchange Req
54482	6970.76	as	SD2 1->43	SD2_MOTION	Data Exchange Req
54483	6970.88	as	SD4 1->44	SD4_MOTION	Data Exchange Req
54484	6970.94	as	SD2 1->44	SD2_MOTION	Data Exchange Req
54485	6971.04	as	SD2 1->45	SD2_MOTION	Data Exchange Req
54486	6971.13	as	SD2 1->46	SD2_MOTION	Data Exchange Req
54487	6971.21	as	SD4 1->4	SD4_MOTION	Data Exchange Req
54488	6971.56	as	SD4 1->91	SD4_MOTION	Data Exchange Req
54489	6971.72	as	SD4 1->1	Token pass	Pass token

### Why must I do the Installer Course first?

The Maintenance Course teaches how to find and locate faults in working PROFIBUS systems; however the technician must have a good understanding of the types of faults that can occur and their causes. The Certified PROFIBUS Installer Course provides the basic grounding which is essential to understanding the more advanced techniques covered in this course.

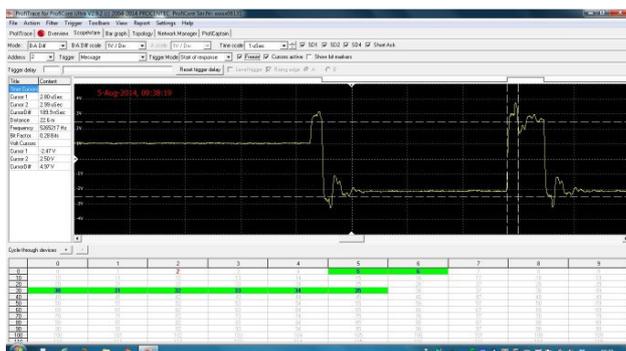
The course is available for on-site delivery and at selected locations around the country for up to 12 people. The course can also be delivered overseas providing a cost effective alternative to sending staff to the UK.

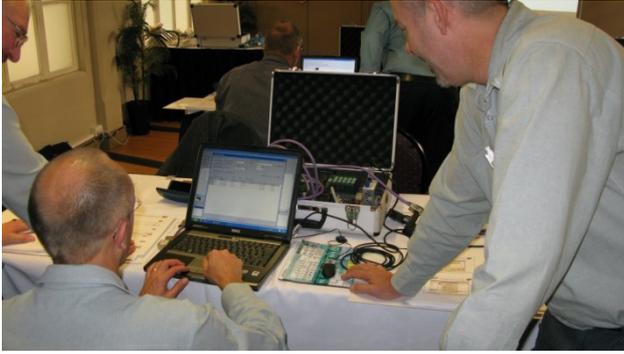


Maintenance training in Scotland

As an optional addition to the on-site training, we can offer half a day of on-plant training for the engineers who take the Installer and Maintenance Course. This can involve supervised checking of a working system at the customer's site.

Note that responsibility for plant production and personnel safety will remain the responsibility of the Company should this option be chosen. Please see the conditions of supply at our web site.





Training in Australia

**Course options**

Because this course is not certified or accredited by PROFIBUS and PROFINET International (PI), the

syllabus can be altered and optimised to meet your exact requirements.

For example many companies in the manufacturing sector only use DP devices, so we can drop the PA material and concentrate more on the DP techniques that will be of use to you. On the other hand some companies in the process sector use mainly PA devices and really require to be able to diagnose problems on the PA cable and use PA specific tools such as PA Class-2 masters and engineering tools.

When the course is open rather than being company specific, we deliver a balanced course which covers both DP and PA technology. We teach how to use ProfiTrace (a modern and very flexible analyser, fault-finding and health-checking tool) on DA and PA systems. We teach how the built-in oscilloscope can be used not only to diagnose problems, but also to locate the fault along the cable.

**Some companies that have undertaken on-site Maintenance training with VTC**

- |                            |                           |                             |
|----------------------------|---------------------------|-----------------------------|
| Alstec Ltd                 | General Panel Systems     | Novartis Vaccines           |
| Alstom Grid                | Honda                     | Ocado                       |
| Astra Zeneca               | IC Electrical             | Park Electrical             |
| Atkins Water               | Iggesund Paperboard       | Ross-shire Engineering      |
| Arla Foods                 | Imtech Process            | Sabic Europe Petrochemicals |
| Artenius Packaging         | Innovia Films Ltd         | SCA Hygiene Ltd             |
| BA (Heathrow)              | ITT Water and Waste Water | Siemens                     |
| BAE Systems                | J N Bentley               | South East Water            |
| Ball Packaging             | Johnson Mathey            | South West Water            |
| Belcom                     | Kinnerton Confectionery   | Tecker Ltd                  |
| Black & Veatch             | Knauf Insulation          | Tetra Pak                   |
| Boulting Group             | KMI Plus                  | Thames Water                |
| Bridges Electrical         | Lapp cables               | Tycon                       |
| Brisbane Water (Australia) | L J Monks                 | UK Gas Technologies         |
| Castlemaine (Australia)    | Lloyd Morris              | Unilever                    |
| Cinetic Landis             | Manchester Airport        | United Utilities            |
| Dairy Crest                | Masterfoods               | Vanderlande                 |
| Diageo                     | May Gurney                | Vauxhall Motors             |
| DHL                        | Muller Dairies            | Veolia                      |
| Dounreay Site Restoration  | National Oilwell Varco    | Watson-Marlow               |
| Fanuc Robotics             | Northern Ireland Water    | Wessex Water                |
| Field Systems Designs Ltd  | Nissan                    | Westbury Dairies            |
| GE Healthcare              | Novartis Grimsby          | Yorkshire Water             |

**A sample of comments from previous attendees**

- “Very practical course, I am sure the techniques that were taught will be useful.”
- “All I’ve got to do now is convince my company to buy me a ProfiTrace kit!”
- “The course was excellent, you are a great teacher Andy”
- “Thank you. Our engineering team have really benefitted from your experience and teaching”
- “Great course, the extra half-day on our plant was the icing on the cake.”

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



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Control Specialists Ltd are a partner of Verwer Training and Consultancy Ltd and are authorised to act on their behalf in the handling of enquiries, bookings and invoicing for training courses.

Peter Thomas of Control Specialists Ltd is registered as a Certified PROFIBUS and PROFINET Instructor with PROFIBUS and PROFINET International Training Centre (PITC).