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Questions about PROFIBUS or PROFINET? Visit our online forum.

INSTALLED NODES PASS 18.8 MILLION! 20 million expected shortly

Annual sales of PROFIBUS nodes reached a new high of 3.4 million in 2006 bringing the total number installed worldwide to 18.8 million!

This reaffirms PROFIBUS as the world's most widely-used fieldbus. "No other fieldbus comes close to our achievement," said PI Chairman Edgar Küster (pictured right). "Furthermore, growth looks

set to continue, so we are now sure that PROFIBUS is and will remain the most popular fieldbus the world has ever seen."

Developments in Asian markets, spearheaded by China, have been particularly rapid. Above-average growth is expected there in years to come. The foundation of a PROFIBUS organization for the

Middle East in Dubai (see below) is further proof of the globalization of PROFIBUS fieldbus technology.



If current trends continue, the forecast made at the start of 2004 - that the number of PROFIBUS nodes would reach 20 million by 2008 - will be met earlier than expected.

The trend is mirrored in process automation, an important sub-sector. Here, the number of installed PROFIBUS PA devices reached 630,000, which means today there are approximately 3.3 million PROFIBUS devices (DP and PA) in process automation.

"The main reason for this," said Küster, "is that process automation typically involves hybrid applications where discrete field devices need to be connected alongside field instruments. PROFIBUS DP and PA use the same protocol and integrate perfectly so they are the number one choice, both from the point of view of technology and in terms of cost."

PROFIBUS continues to build on its position as the leading safety solution too. The number of installed PROFIsafe systems has risen to approximately 26,000, and the number of PROFIsafe products in use now tops 230,000. Vendors are now able to offer a highly diverse range of products.

PROFIsafe boasts particular benefits for customers when used in conjunction with PROFIBUS and PROFINET, PI's Industrial Ethernet solution, thanks to their shared functionality and harmonized 'look and feel'.

DUBAI DEBUT FOR MIDDLE EAST PROFIBUS ASSOCIATION



February 12 2007 saw another milestone event for PI, with the launch of the first PROFIBUS organization in the Middle East.

PROFIME (PROFIBUS Middle East) was successfully launched with representation and guest speakers from PI, Netherlands-based training organization PROCENTEC and other Regional PI Associations (RPAs) and PROFIBUS/PROFINET Competence Centers (PICCs).

New Chairman Preges Naidoo said that Middle East vendors first met exactly a year ago to discuss the possibility of establishing a Middle East RPA and PICC to market, support, and promote PROFIBUS as a leading fieldbus technology.

PROFIME (and its proposed PICC), together with System Integrators, will support and market the technology in 8 countries. Currently based in Dubai, UAE, PROFIME boasts 15 members and is in the process of signing a further 10 from the region.

Committed supporters are: E&H, Adaptive Measuring and Control, Al Khaleej Sugar, Belden, COMSOFT, Cube Technologies, ICS Triplex, Jordan-marka - Jordan, Kuwaitronics - Kuwait, LAPP, METSO, Moeller, Pepperl and Fuchs, PHOENIX Contact, PROCENTEC, SIEMENS, Stahl and Wieland. www.profime.com or rpa@profime.org

PI News

**NEW VERSION
OF PROFIBUS
PA BOOK**

The book
"PROFIBUS PA"
by Christian
Diedrich,



Thomas Bangemann and several
co-authors, is now available in a
revised and updated English
version.

The book is a 'must' for all who
need in-depth information about
PROFIBUS in the process
industries. It is also aimed at
developers of PA devices,
planners, end users and
maintenance staff.

Introductory chapters give an
overview of the functionality of
process devices using PROFIBUS
PA, and the general automation
principles of process engineering,
especially in hybrid applications.
The transmission and installation
technologies are treated in detail,
with special consideration of the
ex zones existing in chemical
engineering. Included are
explanations of the MBP
transmission method and the
FISCO concept, both of which
play a special role in process
automation with fieldbuses.

After the description of the
PROFIBUS DP protocol - which is
the basis of all PROFIBUS PA
communication - the profile 'PA
Devices' for process automation
is introduced. Current
amendments of the PA-profile,
'PROFIsafe for PA Devices',
'Condensed Status and
Diagnostic Messages' (based on
the VDI/VDE/NAMUR/WIB 2650
guideline) and 'Identification and
Maintenance Functions' are
comprehensively considered.

Chapters for device integration,
device development and
interoperability testing and a
glossary round out the contents of
this book and make it an
indispensable reference for
experienced engineers as well as
for newcomers.

'PROFIBUS PA – Instrumentation
Technology for the Process
Industry' is published by
Oldenbourg Industrieverlag (2007)
ISBN 978-3-8356-3125-0. It has
320 pages and costs •52.00.

More information here.

**PI TEST LAB
FOR PROFINET**

The news that a
new PI Test Lab
for PROFINET
has been



established in the Czech Republic
(see Page 5) brings the number of
PROFINET test labs worldwide to
four. There are now eight Test Labs
worldwide for certifying PROFIBUS
and/or PROFINET devices. **ANF
Data** or profinet@anfdata.cz. Full
details of Test Labs are **here**.

**Se habla
Español? NEW
SPANISH AND
PORTUGUESE
BROCHURES
AVAILABLE**

PROFIBUS Brazil has translated a
set of marketing brochures into
Spanish and Portuguese. Newly
available are the PROFINET and
PROFIsafe brochures in Spanish,
plus all Portuguese versions. All
brochures are available for free
download on the PI Web site:

- > **PROFIBUS for Process
Automation**
- > **PROFIdrive**
- > **PROFINET**
- > **PROFIsafe**

**PROFIBUS AND
PROFINET AT
HANOVER FAIR**

Hall 11

Booth A41

Germany 16-20 April 2007

On the joint
PROFIBUS and
PROFINET
exhibition booth
(Hall 11, Booth
A41) on this



year's Hanover Fair (Germany, 16 -
20 April 2007), experts of all
industries will come together to
discuss the latest trends and
technologies in industrial
automation.

40 companies will show their
products on a 50 meter boulevard.
Don't miss this unique opportunity to
see what's going on with
PROFIBUS, PROFINET,
PROFIdrive, PROFIsafe, IO-Link, TCI
- Tool Calling Interface, intelligent
pumps, and of course PROFIBUS
and PROFINET in Process
Automation.

Among the many demos will be a
PROFIdrive multivendor application,
showing the interoperability between
controllers and drives of different
vendors. Products from Danfoss,
Lenze, SEW and Siemens, as well
as controllers from Bachmann and
Siemens are embedded in the
demonstrator, which will highlight the
USPs of PROFIdrive on PROFINET,
including the use of multiple
controllers, fast isochronous
communication, flexible topologies
and interoperability based on IEC
61800-7.

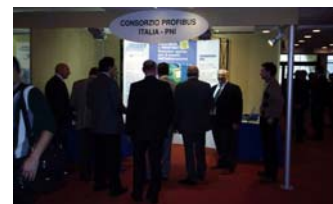
As in previous years, 'The future of
Automation' forum will be organised
jointly by PNO and the Interbus Club
and will take place on the
PROFIBUS and PROFINET booth.
Presentations will be in German.
You can find the
forum program here.

**INTENSIVE
PROFIBUS/
PROFINET**

PNI, the Italian RPA, has created an
intensive promotional program for
2007. This follows its success at
BIAS2006 where the speech of the
PNI president, Mr. Maurizio Ghizzoni,
was broadcast by a TV network
specializing in industrial innovations.

In 2006, PNI participated for the first
time in 'MC4, Motion Control For' fair
in Bologna. During seminars, the PNI
presentation about PROFINET was
attended by a large number of people.

The main topic for 2007 is 'Training at
any Level'. Seven training courses are
proposed, each one tailored to a
specific area. Training quality is
assured because the Italian
Competence and Training Center,
located at the University of Brescia,
delivers university-level teaching.

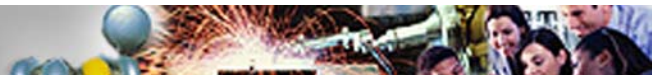


Companies associated with PNI can
access courses for free, or with
discounts up to 50%. These benefits
can be extended to customers.

The most interesting training
courses are the 'Certified
PROFIBUS Engineer' and the
'PROFINET Isochronous Real Time'
courses, the latter organized to help
OEMs building automated machine
tools.

There's a 'PROFINET Day 2007' in
Milano, the Automation Fair in
Verona, 'C2C Control &
Communication' and 'VforM Vision
for Manufacturing' fairs. In addition
there are four technical seminars in
four different cities.

PNI is making great efforts, reflecting
the dominant position of PI
technologies in the Italian market.



New Products

TROUBLESHOOTING TOOLKIT

Get the job done and keep your PROFIBUS installation running with this magnificent toolkit ... or so says PROCENTEC! Intended for engineers, installers and maintenance technicians the toolkit is equipped with all the tools required to maintain and troubleshoot a PROFIBUS network efficiently. PROCENTEC based the toolkit on extensive field experience and use it themselves. It contains tools such as ProfiTrace, Handyscope, PA Probe, Cables, Connectors, etc. PROCENTEC or info@procentec.com



PROFINET HMI

Copa-Data has launched an IEC61131-3 Soft PLC called STRATON supporting PROFINET. It has been introduced following the naming of PROFINET by the AIDA automotive group in Germany as its preferred communications protocol. Copa-Data say they are responding to demands from customers supplying SoftPLC solutions such as HMI and SCADA to the AIDA members, who include Audi, BMW, DaimlerChrysler and Volkswagen. **Copa-Data: +43 662 431002 0** or sales@copadata.at or www.copadata.com

PROFIBUS GATEWAY

The Ethernet/PROFIBUS gateway 'Fieldbus Network Link' is available in a new version. It allows connection to all copper based PROFIBUS DP and PROFIBUS PA networks and supports DP and DP-V1 master services as well as DP Slave. It can be integrated using an OS-independent TCP/IP interface and allows remote communication concepts to be implemented in extensive plants via satellite or VPN. An FDT container application, the COMSOFT Network Configurator and an OPC Server are available. **COMSOFT: +49 721 9497 0** or silke.kuchler@comsoft.de



INTERFACE MODULE

A new interface module IM154-8 with CPU functionality has been added to the distributed I/O system ET200pro. The CPU is based on the CPU 315-2 PN/DP and has the same quantitative framework functionality. It offers a PROFIBUS DP interface and a PROFINET interface. Using ERTEC 400, the module has an integrated switch with three PROFINET Ports. Thus, hierarchical network topologies and linear structures can be configured, supporting IRT and web-server functionality. **Siemens: +49 911 895 5010** or Malden.Junker@siemens.com



PA POWER HUB

Need a few PROFIBUS PA devices connected to your PLC? This newest and smallest Segment Coupler by the experts in fieldbus installation technology is configuration free. It takes care of power supply for two segments and transparent communication between DP and PA. Seamless data integration into the DCS or PLC of your choice is made possible by transparency: All PA instruments appear and are configured as DP-slaves. Communication is full speed on the DP-side. Come and see it live in Hannover Hall 7/C14. **Pepperl+Fuchs: www.fieldconnex.info** or www.pepperl-fuchs.com



PA CABLE

Northwire has introduced DataCELL FIELD rugged cables for PROFIBUS PA applications. An arctic-rated marine shipboard version suitable for use down to -55°C is offered. DataCELL FIELD PROFIBUS PA is ISA/SP50 Type A cable available in 18AWG, with foil shielding. It is rated for CSA CMX-Outdoor-CMG and FT4. DataCELL FIELD PROFIBUS PA is also rated for ITC (instrument tray cable)/PLTC (power limited tray cable) exposed-



run (ER) applications. This allows users to eliminate the conduit when the cable is installed in accordance with recent National Electrical Code (NEC) amendments. All Northwire ITC/PLTC cables are approved for use in Class 1 and 2, Div 2 hazardous areas. The cable's PVC jacket is resistant to oil, sunlight, ozone and water and is available in standard and custom colors. **Northwire: www.northwire.com/profibus** or **+1 877 210 9945**

PROFIsafe SENSORS

Type 3 ROTOSCAN RS4-4/PROFIsafe safety laser scanners and the Type 4 COMPACTplus/PROFIsafe safety light curtain now feature an integrated PROFIsafe interface and full support for the PROFIsafe V2 profile for use with PROFIBUS and PROFINET. The PROFIBUS DP bus connection is performed directly. Both safe cyclic and acyclic data traffic are supported on PROFIBUS DP. COMPACTplus/PROFIsafe meets the requirements of SIL3 in accordance with IEC 61508 and is available with the blanking, muting and cycle control function packages. Configuration is performed either via switches in the device or via the optical PC interface of the receiver using the SafetyLab diagnostics and parameterization software. **Telefon +49 8141 5350-123** or www.leuze.de



PROFINET CABLE

PROFINET components have been added to the Y-Con series from Yamaichi, offering protection ratings of IP69K, IP68, IP67 and IP20. The four-stranded PROFIBUS wire has a PUR sheathing, is specified for Cat 5e and suitable for temperatures from -20°C to +80°C. The Y-Con PROFIBUS connector employs piercing contacts and can be used with standard RJ45 jacks. Yamaichi also offers ready-made cable assemblies for industrial PROFIBUS applications. **Yamaichi: steve.r@yamaichi.de** or www.yamaichi.de or **+49 89 45109 70**



HIGH SPEED WIRELESS

Implement PROFIBUS 'over-the-air' at up to 1.5 Mbs/s using this new ProLinX Wireless Gateway. Progressive technology provides unprecedented flexibility, allowing heterogeneous networks to share process and status data wirelessly. Data is transferred securely and efficiently between different networks and protocols in a high-performance way. **Prosoft Technology: www.prosoft-technology.com** or info@prosoft-technology.com



DECENTRALISED CONTROL

New standard head modules for the PSSuniversal decentralised control platform from Pilz mean it can now communicate via PROFIBUS DP - exclusively or in combination with SafetyBUS p. So, analogue and digital process signals can be controlled via PROFIBUS, without a connection to the safety technology. It does not matter whether you need to process 100 per cent standard control signals, safety-related signals only or any combination of the two - the whole range of required functions can be implemented using a single platform. **Pilz: +49 0711 34 09 0** or pilz.gmbh@pilz.de or www.pilz.de



MORE PRODUCTS ONLINE

Our online Product Guide now has over 2,500 product entries. Keywords make searching for the right product or service easy and efficient. You can search on the basis of a keyword or by entering the full text. E.g. you can specify the 'Product Type', the 'Technology' (PROFIBUS or PROFINET), the relevant definition format (GSD, EDD or DTM), and whether a profile (e.g., PROFIdrive, PROFIsafe, etc.) is applicable. You can even specify certified products only. The Guide is one of our most frequently visited web pages. PI members may list their products here for free. Not listed? Contact pi@profibus.com.



Member News

FOCUS ON LIFE CYCLE COSTS DURING ANTWERP BREAKFAST EVENT

In January, Antwerp was the scene of PROFIBUS Belgium's first 'Breakfast Event'. The theme, 'PROFIBUS in the Process Industry', attracted a large group of end users and interested individuals.

How can PROFIBUS technology contribute to higher efficiency in the process industry? This was



improvement is a key issue for the European, and therefore also for the Belgian, process industry.

Various studies, including one carried out by the ARC Advisory Group, show that the greatest gains to be achieved with a

contribute enormously to the life cycle benefits of the installation.

Chris Baltus (pictured above) of Sabc Europe and a member of the working group NE74 Namur Fieldbus Requirements, presented an overview of its work. In close cooperation with PI the working group sets requirements that the fieldbus equipment has to meet. Central are conformity, interoperability, integrate-ability and, above all, exchange-ability. Examples include the ability of skilled maintenance staff to operate equipment, the accessibility of different manufacturers, products using the same user interface, and the replacement, addition and removal of equipment during operation.

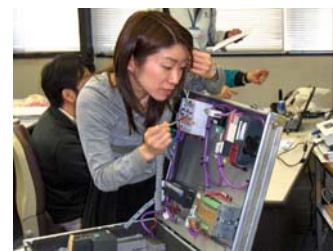
PROFINET in the process industry

PROFINET will also play a prominent part in the process industry in the next few years. That is the view of Edgar Küster, Chairman of PI (pictured left), who gave a presentation on the importance of PROFINET in process automation. According to Küster, the process industry will only switch to a new technology if: it offers the same functions as current fieldbus systems, it can be integrated and if it offers real added value. He expects the process industry to focus even

more on the use of existing IT technology in automation projects. Another major development is the vertical integration of PROFINET with business applications such as MES and ERP. The use of 'proprietary' systems with all their limitations is not an option.

CERTIFYING ENGINEERS IN JAPAN

17 Engineers from Yokogawa Japan were trained on-site by PROCENTEC recently, and



passed the Certified PROFIBUS Engineer exam with the PA additions. In one week they were trained in the disciplines required to handle PROFIBUS DP and PA, including engineering, troubleshooting and validation. The engineers are responsible for PROFIBUS projects and instrumentation under development.

www.procentec.com or dbooma@procentec.com or www.jp.profibus.com

ONLINE FORUMS

PI's website offers a way to share knowledge and expertise.

There are two public forums (PROFIBUS and PROFINET). Both are moderated and both have been up and running for some time. Taking an active part is an excellent way of increasing your knowledge.

They are free – just **browse here.**



one of the key questions addressed in several presentations. Because of worldwide competition, efficiency

technology such as PROFIBUS are not so much made during the initial stage of the installation but during the operational stage. It is essential, therefore, that we consider the full Life Cycle Costs (LCC) or Total Costs of Ownership (TCO).

PROFIBUS can of course be configured easily and quickly, and considerable savings can be made on the cable work. But even more important are the savings in maintenance and diagnostics. PROFIBUS has much to offer in these areas. Worldwide availability, a huge range of suppliers and the support of PI Competence Centres also



PI World

MIDDLE EAST



A new RPA has been established in the region, based in Dubai. A launch meeting was held on February 12th to formally announce PROFIME (PROFIBUS Middle East). See Page 1 for more details or contact www.profime.com or middle.east@profibus.com

CZECH REPUBLIC

A new PI Test Lab for PROFINET has been established here, with IRT and PROFIDrive expertise. Located at ANF Data, who became a PI Competence Center in early 2005, this brings the number of PROFINET test labs worldwide to four. **ANF Data** or profinet@anfdata.cz

CHINA



The 2006 CPO Members Meeting was held at the end of 2006 in Beijing, led by Mr. Jiyang Tang, the new CPO Chairman. 24 Member companies attended this meeting. Mr. Baihuang Li, the original Chairman of CPO, summarized CPO's work in 2006 and members then discussed and amended existing regulations. Mr. Baihuang Li was selected as the honorary chairman of CPO. A CPO Standing Committee was set up, to include director Mr. Jiyang Tang from CAMETA and vice-directors Mr. An Luo from Beijing HollySys Co., Ltd., Mr. Xuejun Chen from China Silian Instrument Group Corporation Limited, Mr. Lianwang Dou from Endress + Hauser, Shanghai Automation Equipment Co. Ltd., Mr. Jinsong Ouyang from Instrumentation Technology & Economy Institution (ITEI), Mr. Linbao Sun from Nanjing Phoenix

Contact Co. Ltd., Mr. Weihua Bao from Shanghai Automation Instrumentation Co. Ltd., Mr. Aidong Xu from Shenyang Institute of Automation Chinese Academy of Sciences, Mr. Dennis.Chen from Siemens Ltd. China and Mr. Yonghua Wang from Zhengzhou University of Light Industry. Finally, three **working groups** covering Marketing, Technology and Standards, were founded, with Mr. Dennis Chen from Siemens Ltd. China, Mr. Jiyang Tang and Mr. Baihuang Li selected as the leaders. Members enthusiastically joined each working group. In 2007, CPO is continuing to promote the development of PROFIBUS/PROFINET in the Chinese market. china@profibus.com

SOUTHERN AFRICA

The Process Show has traditionally been the flagship of the PROFIBUS User Group Southern Africa for the launch and display of new technology: 2007 promises the highest participation so far. The Process Show 2007 runs from May 15 to 18, 2007, at the National Exhibition Center in Johannesburg, South Africa. **Details here.** Another tradition - the PROFIBUS Breakfast - will be held in conjunction with the Process Show, on May 16. PI Chairman Edgar Küster will present the transformation of PI from a fieldbus organisation to an automation organisation and will introduce PROFINET for the process industry. Another Breakfast is announced for Friday, May 11, 2007, at Durban. kessi.coetzee@za.endress.com.

UK

The PROFIBUS International User Conference 2007 at Coombe Abbey, Coventry on June 26 and 27 will feature a keynote address from Alaister Gemmill, Engineering Manager of Enpure, a specialist systems supplier in the water industry. The presentation will have particular emphasis on integration of fieldbus into modern process systems. Other papers will cover design, diagnostics, PROFINET for Process, fieldbus for Hazardous Areas, case studies of PROFIBUS DP, PA and AS-Interface and a

worked example of a process project presented entitled 'How to estimate data rate'. Both days will feature hands-on workshops. Manfred Popp, Chairman of the PROFINET Working Group, will talk on PROFINET. **More details of the conference here.** UK has also published a useful slide set on PROFINET presented by Andy Verwer at the recent MTEC trade fair. **Download it here.**

USA



PTO has started its series of 2007 training events, which this year will beat the record set in 2006. The FREE one-day training classes started March 6th with a Process day in Augusta. There are 26 cities in the initial schedule and more will be added. Classes are educational with three curricula centering on PROFIBUS, PROFIBUS in the process industry, and PROFINET. **Details here.** A series of Webinars about Ethernet Basics has been introduced, allowing the PROFINET one-day training events to focus on PROFINET. **Find details here.** Additional Ethernet Basics may be added if there is a demand. March 15 marked the debut of the more in-depth PROFINET curriculum in Kansas City. New is that all class attendees now receive a certificate for 5.5 PDH (Professional Development Hours) and they get to participate in a raffle for a free seat at a Certified Network Engineer class, valued at \$2,695. PROFITech Certified Engineer Training continues as before but the number of PROFINET Developers' Workshops has risen to three. ARC Advisory Group's Harry Forbes speaks at each event about the explosive growth of Industrial Ethernet. Developers' Workshops are scheduled for Detroit on May 22, Scottsdale on July 31, and Boston in October. For details and links to registration **visit this page** or call 480-483-2456.

PI Network

Australia - Mr. John Immlman
Tel: +61 3 9761 5595; Fax: +61 3 9761 5525
Email: australia@profibus.com
www.aus.profibus.com

Belgium - Mr. Herman Looghe
Tel: +32 2 706 80 00; Fax: +32 2 706 80 09
Email: belgium@profibus.com
www.be.profibus.com

Brazil - Mr. Cesar Cassiolato
Tel: +55 16 3946 3519; Fax: +55 16 3946 3595
Email: brazil@profibus.com
www.br.profibus.com

China - Mrs. Wang Jun
Tel: +86 10 62 02 92 18; Fax: +86 10 62 01 78 73
Email: china@profibus.com
www.cn.profibus.com

Czech Republic - Mr. Zdenek Hanzalek
Tel: +420 2 2435 7610; Fax: +420 2 2435 7610
Email: czechrepublic@profibus.com
www.cz.profibus.com

Denmark - Mr. Kim Husmer
Tel: +45 40 78 96 36; Fax: +45 44 07 77 36
Email: denmark@profibus.com
www.dk.profibus.com

Finland - Mr. Taisto Kajanan
Tel: +35 8 9 5307 259; Fax: +35 8 9 5307 360
Email: finland@profibus.com
www.fi.profibus.com

France - Mrs. Christiane Bigot
Tel: +33 1 42 83 79 13; Fax: +33 1 42 83 79 13
Email: france@profibus.com
www.fr.profibus.com

Germany - Mr. Peter Wenzel
Tel: +49 721 96 58590; Fax: +49 721 96 58589
Email: germany@profibus.com
www.de.profibus.com

Ireland - Mr. Hassan Kaghazchi
Tel: +353 61 202 107; Fax: +353 61 202 582
Email: ireland@profibus.com
www.ir.profibus.com

Italy - Mr. Maurizio Ghizzoni
Tel: +39 030 3384030; Fax: +39 030 396999
Email: it@profibus.com
www.it.profibus.com

Japan - Mr. Shinichi Motoyoshi
Tel: +81 3 54 23 86 28; Fax: +81 3 54 23 87 34
Email: japan@profibus.com
www.jp.profibus.com

Korea - Mr. Cha Young Sik
Tel: +82 2 523 5143; Fax: +82 2 523 5149
Email: korea@profibus.com
www.kr.profibus.com

Middle East - Mr. Pregs Naidoo
Tel: +971 4 398 2760; Fax: +971 4 398 2761
Email: middle.east@profibus.com
www.profime.com

Netherlands - Mr. Dolf van Eendenburg
Tel: +31 33 469 0507; Fax: +31 33 461 6638
Email: netherlands@profibus.com
www.nl.profibus.com

Norway - Mr. Ivar Solrie
Tel: +47 2272 8972; Fax: +47 904 05509
Email: norway@profibus.com
www.no.profibus.com

Poland - Mr. Dariusz Germanek
Tel: +48 32 371 365; Fax: +48 32 372 680
Email: poland@profibus.com
www.profibus.com

Russia - Mrs. Olga Sinenko
Tel: +7 095 742 68 28; Fax: +7 095 742 68 29
Email: russia@profibus.com
www.rus.profibus.com

Slovakia - Mr. Richard Balogh
Tel: +421 7 6029 1411; Fax: +421 2 6542 9051
Email: slovakia@profibus.com
www.sk.profibus.com

South-East Asia - Mr. Volker Schulz
Tel: +65 6490 6464; Fax: +65 6490 6465
Email: southeastasia@profibus.com
www.sea.profibus.com

Southern Africa - Mr. Dieter Dichert
Tel: +27 11 201 3200; Fax: +27 11 609 5950
Email: southernafrica@profibus.com
www.rsa.profibus.com

Sweden - Mr. Peter Bengtsson
Tel: +46 4 51 49 460; Fax: +46 4 51 89 833
Email: sweden@profibus.com
www.se.profibus.com

Switzerland - Ms. Karin Beyeler
Tel: +41 32 672 03 25; Fax: +41 32 672 03 26
Email: switzerland@profibus.com
www.ch.profibus.com

UK - Mr. Bob Squirrel
Tel: +44 20 7871 7413; Fax: +44 870 141 7378
Email: uk@profibus.com
www.uk.profibus.com

USA & CANADA - Mr. Michael Bryant
Tel: +1 480 483 2456; Fax: +1 480 483 7202
Email: usa@profibus.com
www.us.profibus.com

Addresses of PI Competence Centers and Test Labs can be found at www.profibus.com and www.profinet.com

Editor: Geoff Hodgkinson
1 West St, Titchfield, Hants, UK PO14 4DH.
Tel: +44 (0) 1329 846166; Fax: +44 (0) 1329 512063
geoff@ggh.co.uk

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D-76131 Karlsruhe, Germany