YASKAWA

Accessories

All it takes to work perfectly

www.vipa.com

VIPA CONTROLS

Teleservice - Talk2M

Talk2M is an internet service portal which is specially constructed for the increasing demand for safe broadband and mobile radio access to your systems and machines.

With a few mouse clicks a secure VPN connection can be established. Changes to the security settings of the IT network are not required, neither on the side of the system nor the user. This guarantees a trouble-free application with the complex infrastructure of IT networks.

Security and reliability

Security has the highest priority with Talk2M: all VPN protocols are OpenSSL and OpenVPN 2.1 based. In case of server failure we are able to move the VPN connections from one VPN server to the other within a very short time.

Access control

Every Talk2M account has an unlimited number of installations available. For you this means no limitation on the number of users and installations.

Scalability

The Talk2M architecture was in fact already developed with the ulterior motive of scalability. Start small and grow with your requirements.

Worldwide availability

We distributed our server worldwide to guarantee the shortest latency times between the IP packages.

SMS & E-Mail-Relay

This feature enables you to send text/e-mail messages without using a SIM card. This function was specially developed for installations and applications abroad that are not compatible with customary SIM card. So there is no need to constantly top up prepaid SIM cards nor to conclude a mobile phone contract abroad.

Free mobile web access

You have easy access to your installation data via web browser from your smartphone or tablet PC. You can provide your customers with mobile access to their machines and industrial facilities without additional costs. There is no need to install any software for this.

Teleservice modules from VIPA Controls offer access to your systems and machines all over the world as if you were sitting right next to them.

CONNECTION ESTABLISHMENT

① The installation automatically establishes an outbound internet connection to the Talk2M server.
② At the other end the user also establishes an outbound connection via PC or the eCatcher VPN software to the Talk2M server.
③ If both participants are registered and authenticated, a secure VPN connection is established between the two participants.

Cost saving by avoiding of unnecessary business trips.

For example, assistance during commissioning by programmers who are not on site, can generate enormous potential for savings. In this way you can optimize you installation without having to travel to the site. Even the use of one teleservice module can reduce the service costs by up to 90%. The use of an employee on site with travel costs plus expenses creates more expenditure than the one-time investment in a teleservice module. You will have already saved money in the next operation, instead of losing it.

Be prepared in time for maintenance and service or:

„Already know yesterday what could have happened tomorrow.“

Access to your controllers, your panels as well as other automation components or regular maintenance, Condition Monitoring or status monitoring – with the VIPA teleservice modules you are well prepared for each application.

The advantages of Talk2M at a glance

- Talk2M is the connection interface between you and your system.
- Talk2M uses only standard ports:
  Port 80 (web access)
  Port 1194 (UDP) or
  Port 443 (HTTPS)
- Talk2M works only with „outbound“ connections.
- Talk2M uses the OpenVPN protocoll.
- Talk2M is able to establish connections via a proxy.
- Complete access to serial, MPI/PROFI-BUS and network interfaces.
- Cost saving and benefits through the usages of existing medium of communications (e.g. ADSL/LAN…).

Remote Access

TM-C WIFI / WAN

TM-C WAN

TM-C 3G+ / WAN

Easy installation and handling:

Connect any Ethernet device without having to configure the gateway. The machinery doesn`t have to be stopped during the configuration of the VPN router.

Firewall friendly outgoing connection:

Outgoing internet connection via the factory LAN via port 443 (HTTPS) or UDP port 1194. The firewall can be installed easily and trouble free whereas there is only access to the machinery and not to the factory LAN.

Connection of older serial PLCs:

Support of larger PLCs – RS232/ RS485/422, MPI/Profibus with Ethernet – compatible with leading PLC producers (VIPA Controls, Rockwell Automation, Schneider Electric, Omron, Mitsubishi, Modbus, Siemens etc.).

Control for customer:

The VPN access can be controlled with an external key switch.

Integrated WLAN, cellular connection:

Thanks to WLAN and cellular modems, internet connections can even be established without participation of the factory / company LAN. They offer a cost free access, high bandwidth, easy deployment (no cabling), and simplification of the network security management.

Secure VPN connections:

Completely secure SSL based VPN tunnel. The information which is exchanged during the communication is enciphered (SSL - 2048 Bit key), so only authenticated users can connect with Talk2M.

	TM-C (WAN)	TM-C (WIFI / WAN)	TM-C (3G+ / WAN)
Remote maintenace via MPI/PROFIBUS	-	-	-
Remote maintenace via Routing/Plug'n Route	-	-	-
Ethernet/serial gateway	-	-	-
Variable read/write	-	-	-
Alarm management	-	-	-
Tailor-made web pages	-	-	-
M2Web	•	•	•
Basic Skripting	-	-	-
Talk2M capable	•	•	•
Integration in an existing VPN network	-	-	-
MPI/PROFIBUS/PPI (RS485)	-	-	-
LAN (RJ45) | machine network	4x	4x	4x
Fieldbus interface	USB	USB	USB
Input/output	2x DI, 1x DO	2x DI, 1x DO	2x DI, 1x DO
SD card reader	ja	ja	ja
WAN connectivity	LAN	LAN + WLAN 802.11 b/g/n	LAN + GSM/ GPRS/ EDGE/ HSPA+ Modem
WAN (RJ45) | external network	1x	1x	1x
Integrated modem	-	-	-
Suitable for	broadband connection	broadband connection	mobile broadband connection

Web based configuration

- All teleservice modules are configured via a web interface. You only have to open your browser for this.

Everything accessible!

- Connect each device that is equipped with an Ethernet interface. With the Plug‘n‘Route feature you don`t even have to register a gateway. Therefore upgrade your existing systems too.

Via MPI/PROFIBUS to the plant

- Thanks to the integrated MPI/PB interface you have direct access to your controllers and panels. Not many producers offer this feature to their customers.

Solid and reliable

- The robust construction, the powerful chip and the expanded temperature range make the teleservice modules a standard in all machines.

TM-H WAN/LAN
TM-H WAN/LAN/HSPA+

TM-C (WAN/LAN)	TM-H (WAN/LAN)	TM-H (WAN/LAN/ HSPA+)
•	•	•
•	•	•
•	•	•
-	•	•
-	•	•
-	•	•
•	•	•
-	•	•
•	•	•
•	•	•
1x	1x	1x
4x	4x	4x
-	-	-
-	1x DI, 1x DO	1x DI, 1x DO
-	-	-
WAN + LAN	WAN + LAN	WAN + LAN + HSPA+
1x	1x	1x
-	-	HSPA+
broadband connection	broadband connection	mobile broadband connection

Alarm management

- The Teleservice modules can read out data directly from the PLC via ISO TCP, MPI/PB, PPI and Modbus TCP and process it internally and use it as an alarm.
- As soon as a defined limit value is exceeded or undershot, an SMS or an email will be sent. The transmission of data via FTP is also possible.

Ethernet/serial gateway

- Gateway between ISO TCP and MPI/PB data. The device automatically changes the data.
- Data exchange between serial MPI/ PROFIBUS data and Ethernet based ISO TCP data.

Tag Polling

- The VIPA Teleservice modules can read and write data of the connected controller.
- This data will be read and written via MPI, PROFIBUS, PPI or ISO TCP.

Highlights TM-H

- Versatile top all-rounder, very well equipped
- All features integrated (alarm management, Tag Polling, Customized Web pages, etc.)
- Ideal for all teleservice functions
- VPN capable
- Ideal for broadband connections via LAN/ADSL und HSPA+

PLC remote maintenance

- Remote access to your components as if you were standing directly in the room next door.
- The connection to the teleservice module is established via PSTN, ISDN, mobile service or broadband communications.

Customized web pages

- Data that is stored in tags can be displayed on a specially created website.

M2Web

- Access to the web interface of the teleservice modules from VIPA Controls via each web browser (also on the smartphone, tablet PC, web panel, etc.).

Industrial Ethernet - unmanaged

Industrial switch EN5-R

Industrial switch EN8-R

VIPA Controls offers unmanaged Ethernet switches with high port density. These industrial switches have compact, space saving dimensions and are suitable for a variety of applications.

Highlights

- Cost-effective Ethernet switch in industrial quality
- Broadcast electric current protection
- Redundant power supply
- Firm hardware design for hazard areas (class 1/Div.2/ATEX)

Technical data

- Robust 5/8 port basic Ethernet switch for the industrial deployment
- 5/8x RJ45 10/100BaseTX full-/half duplex
- Supports IEEE 802.3 and IEEE 802.3u/x and automatic MDI/MDI-X recognition
- Redundant power supply for 12-45 VDC
- Solid hardware design for hazard areas (class 1/Div.2/ATEX)
- IP30 aluminium case for mounting on a DIN rail
- Operating temperature: -10°C up to 60 °C
- FCC, TUV, UL and CE approval

Technical application examples

- The industrial Ethernet switches EN5-R / EN-8R support the IEEE 802.3 and IEEE 802.3u/x with 10/100M full-/ half duplex and automatic MDI/MDI-X recognition.
- These switches were constructed for harsh industrial environments. These are for example hazard areas (class 1/Div.2/ATEX) in accordance with the standards FCC, TUV, UL and CE.
- They offer additional flexibility for industrial applications with redundant power supply, a operating temperature range of -10 up to 60 °C as a standard, and a broadcast electric current protection which can be activated via a DIP switch.

Industrial Ethernet - managed

Industrial switch PN5-RD

Industrial switch PN8-RD

Managed Ethernet switches support intelligent network management functions such as QoS, IGMP Snooping/GMRP, VLAN, Port Trunking, SNMP V1/V2c/V3, IEEE802.1X and https/SSL.

Highlights

- PROFINET RT, class B
- Call of PROFINET diagnosis / status information via device functionalities
- SPEED7 Studio fully integrated
- Management functions such as IGMP Snooping, IEEE 802.1Q VLAN, QoS, RMON, SNMP
- Port mirroring
- PROFINET I/O parameters, I/O cyclic data, DCP, DHCP
- Turbo Ring™ and Turbo Chain™ (Recovery time < 20 ms at 250 switches)
- Redundant power supply
- Solid hardware design for hazard areas (class 1/Div.2/ ATEX)
- Protection of service quality based on IEEE 802.1p and TOS/DiffServ improves the deterministic operation
- Operating temperature: 0°C up to 60 °C
- Rail-/telecommunication applications: EN 50121-4
- FCC, TUV, UL and CE approval

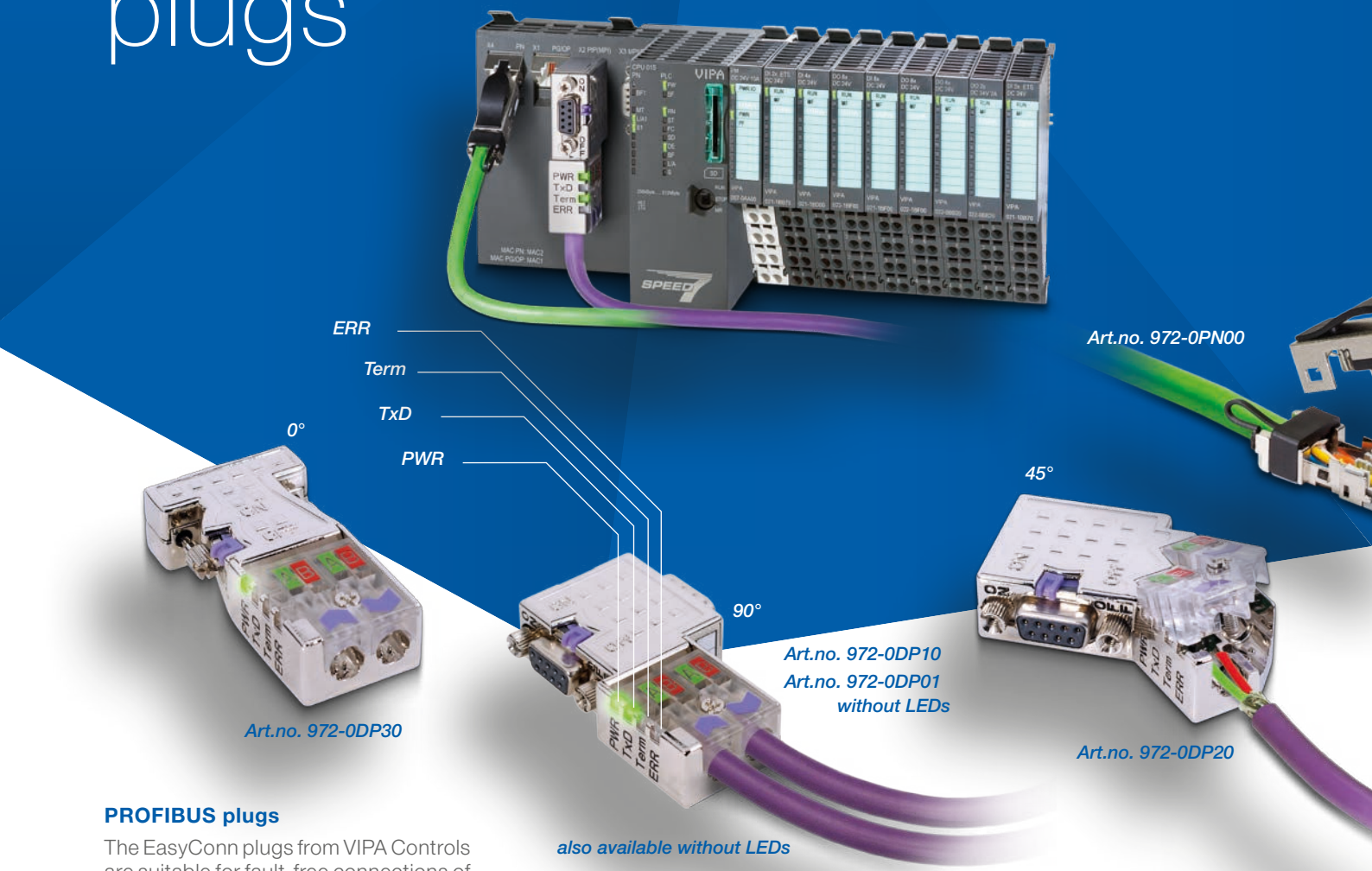
Technical data

- 8x RJ45 10/100BaseTX full-/half duplex, automatic MDI/ MDI-X recognition
- Support of PROFINET and Modbus/TCP protocols
- PROFINET v2 Conformance class B
- PROFINET diagnosis via GSDML integration
- Command lines (CLI) for fast configuration of important functions

Technical application examples

- PN5-RD / PN8-RD offer special features for diagnosis of PROFINET networks. Within the VIPA Controls engineering system SPEED7 Studio the switches can be integrated and used in the configured PROFINET network by Drag&Drop. In addition open-system integration by means of GSDML file is of course also possible.
- With their short boot times and the recovery technologies, Turbo Ring™ and Turbo Chain™, they allow a performance improvement in PROFINET networks.
- Additionally they support many usable management functions such as IGMP Snooping, IEEE 802.1Q VLAN, QoS, Port Mirroring, SNMP, bandwidth management and alarm message by email or relay output.

PROFIBUS & PROFINET plugs



PROFIBUS plugs

The EasyConn plugs from VIPA Controls are suitable for fault-free connections of PROFIBUS users.

Features:

- Visual connection control (polarity inversion, position of shield and cable)
- Highest interference resistance through robust full-metal case
- Integrated diagnosis LEDs for bus cable functions
- Cable connection via comfortable IDC technology
- Loss-free one screw mounting system
- Integrated add-on terminator
- Versions: 0°, 45° and 90° cable outlet
- We always offer an integrated PG diagnosis jack at the 45° and 90° versions

PROFIBUS® Article no.

100m ring:	830-0LC00
200m ring:	830-0LD00
500m roll:	830-0LE00
1000m roll:	830-0LF00

PROFINET plugs

The PROFINET plugs from VIPA Controls are flexibly deployable. Whether in the office, in industry or for the building cabling: this plug always cuts a fine figure. Existing from only 2 parts it reduces the effort for mounting considerably.

These field-configurable plugs distinguish themselves by very easy handling and high robustness. Of course assembly is done without tools. The plugs are compatible with the existing standards and are suitable for the connection of fixed and flexible wires. The assembly is completed within a few seconds.

We offer you these plugs individually but of course also in an advantage pack of 10.

Advantage pack: 972-8PN00

Features:

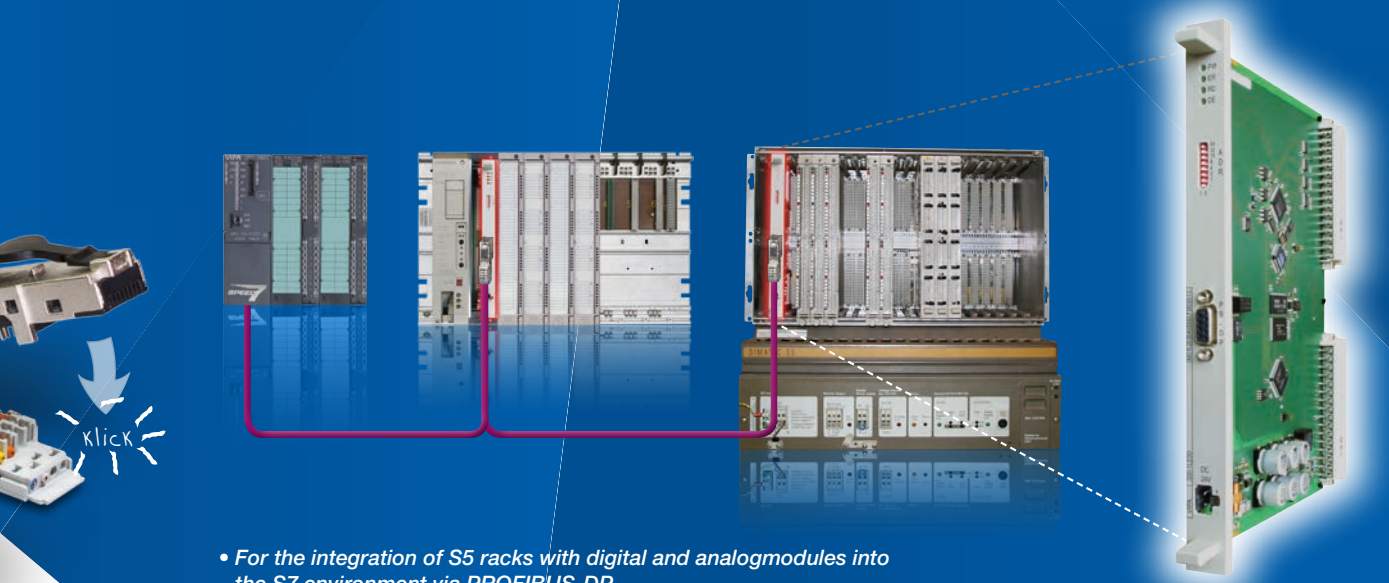
- Existing of only 2 parts
- Field-configurable multiport capable Cat-6A plug
- Transmission rate 10GBit, suitable in accordance with IEEE 802.3an
- Eight-wire field-configurable RJ45 plug for AWG 22
- industry-compatible zinc die cast housing
- Protected latch
- Easy assembly without special tools

PROFINET® Article no.

100m ring:	830-0PC00
200m ring:	830-0PD00
500m roll:	830-0PE00
1000m roll:	830-0PF00

IM 306

Conversion of the existing S5 systems to SPEED7 controllers:



- *For the integration of S5 racks with digital and analogmodules into the S7 environment via PROFIBUS-DP*
- *Central and expansion modules of 115U, 135U and 155U series*
- *Successive conversion at minimum downtime*
- *Redundant construction for maximum safety*

With the IM 306 DP slave module step by step and easy conversion of existing applications of AG 115U, 135U and 155U series is possible.

PU or EU and CC switches are replaced by the IM 306 DP slave module and are connected to a controlling master system via PROFIBUS-DP. Using the IM306 DP slave modules, a CPU must not be installed on the rack. Project engineering is carried out in the hardware configuration of the PROFIBUS-DP master project engineering tool. For the integration of modules a GSD file is included in the supply.

	Article no.	Name
LE	306-1LE00	IM 306 DP slave - 115U ZG/ER IM
UZ	306-1UZ00	IM 306 DP slave - 135U/155U ZG CPU
UE	306-1UE00	IM 306 DP slave - 135U/155U ZG/EG IM

PROFIBUS REPEATER

Repeater B1
920-1BB10

Repeater D1
920-1BD10

MultiRepeater B2-R
920-1CB20

Highlights

- Compact PROFIBUS repeater
- 12 MBps core
- Unlimited cascading
- Increases the RS485 signal strength
- Permanent monitoring of the data on the glitches which are filtered out digitally

Highlights

- Compact and robust PROFI-BUS repeater in demanding IP66 environments
- 12 MBps core
- Unlimited cascading
- Increases the RS485 signal strength
- Permanent monitoring of the data on the glitches which are filtered out digitally

Highlights

- Deployable for all PROFIBUS-DP protocols, Profisafe and MPI
- Optional robust mode (High-integrity telegram checking)
- Variable bus setup with tree or star topology possible
- Optional bus redundancy possible

The ProfiHub B5 is an advanced, flexible and robust IP20 repeater for PROFIBUS-DP installations. With this, it is possible to create spur lines and backbone structures with star and tree stuctures in an IP20 environment.

As innovative components for this kind of application, the ProfiHub B5 is nearly perfect. It is a perfect and economic solution for building up operationally reliable spur lines in high speed DP networks. It has the functionality of a transparent 5-times repeater with galvanically isolated channels.

This allows network structures with extended spur lines that can individually handle up to 31devices and have a length equal to the main bus line. The ProfiHub B5 refreshes the received messages on a channel and forwards them to all other channels.

As the ProfiHub B5 creates galvanically isolated segments, the devices can now be removed and added during operation. Furthermore electrical disturbances on the bus and EMC interferences on the spur line do not spread to other segments.

The intelligent logic and the isolation circuits of the ProfiHub B5 ensure that the bit width remains unchanged. So there are no limitations for the serial interconnection with ProfiHub devices. The intelligent logic detects the transmission speed automatically.

To simplify the installation work the termination is already integrated by terminating resistors and can be switched on and off.

Also the grounding concept is selectable: direct or capacitive grounding. The ProfiHubs are powered with 10 to 32 Volts DC. For troubleshooting, maintenance and commissioning the ProfiHub B5 is equipped with LEDs, which indicate the status of each channel.

Create reliable, flexible and object-related DP installations with the ProfiHub B5.

MultiRepeater A5
920-1CA50

MultiRepeater B5-R
920-1CB50

MultiRepeater B5-RD
920-1DB50

Highlights

- Flexible network components for PROFIBUS-DP installations
- Allows the implementation of long spur lines with many users
- Network structures with star/tree form segments
- Deployable in IP65 environments

Highlights

- Modern and robust network components for PROFIBUS-DP installations
- PROFIBUS-DP protocols, Profisafe and MPI
- Optional robust mode (High-integrety telegram checking)
- Variable bus setup with tree or star topology possible
- Optional bus redundancy possible

Highlights

- First PROFIBUS repeater with integrated PROFIBUS-DP slave
- Transfers the diagnosis data to another PLC
- Ideal for maintenance and monitoring of PROFIBUS-DP installations
- Ship approval: DNV

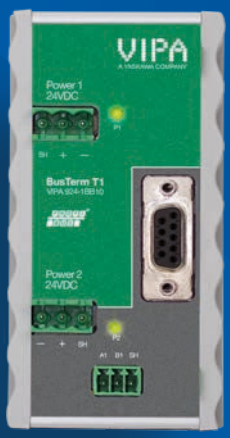
The ProfiHub B5 is an important and decisive solution in maintenance, if practical and cost-efficient set up or hot swapping is required.

Field of application

- Dynamic spur lines to rotary drive, flowmeter, pH analyser, etc.
- Draggable and pluggable motor control center
- EMV sensitive applications
- Roof mounted devices in tank facilities
- Dirty and humid environment
- Protection against non-galvanically isolated devices
- Large star and tree form structured networks

PROFIBUS REPEATER

MultiSwitch B5-R



Bus-Terminator T1

Highlights

- 5 channel Profibus-DP/MPI MultiSwitch
- Variable adjustable baud rate per channel
- Deployable for all PROFIBUS-DP-protocols, Profisafe and MPI
- Optional robust mode (High-integrety telegram checking)
- Variable bus setup with tree or star topology possible
- Optional bus redundancy possible

Highlights

- For active termination of PROFIBUS RS485 networks
- Switch off, detaching and replacement of devices without disturbing the bus communication

Main features PROFIBUS Repeater

- Deployable for all PROFIBUS-DP protocols, Profisafe and MPI
- Adjustable baud rate per channel - 9.6 kbps .. 12 Mbps
- Optional robust mode (High-integrety telegram checking)
- Bus length up to 1200 m segment length
- Redundant power supply 9 .. 31 VDC
- Robust version as IP20 and IP66

YASKAWA

VIPA Gesellschaft für Visualisierung und Prozessautomatisierung mbH

Ohmstraße 4
91074 Herzogenaurach
Germany
Ph.: +49 (0) 9132 744-0
Fax: +49 (0) 9132 744-1864
E-Mail: info@vipa.com

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