

PROFIBUS SELECTION GUIDE

BradCommunications[™]

BradConnectivity[™]

BradControl[™]



Woodhead Industries, a Division of Molex "Empowers the Industrial Infrastructure" with innovative communication, control and connectivity solutions for a wide range of PROFIBUS applications - from the device and sensor level, to the operations and supervisory level, to connectivity with enterprise business and operations systems.

The success of PROFIBUS relies on the quality and performance of its underlying infrastructure - all the devices, components and pathways needed to support the network's communications, connectivity and control capabilities. Our Brad® automation and networking solutions are engineered to facilitate reliable information flow, from machines to PCs and PLCs, and all the way from the plant floor to the enterprise.

Brad® Automation Solutions

Our Brad® product lines - including such globally recognized names as Brad Harrison®, applicom®, Direct-Link™, SST™, mPm®, and RJ-Lnxx® - are designed to help engineers, systems integrators, machine builders and other OEMs successfully implement their PROFIBUS networking projects in harsh and demanding industrial environments.

Brad® product lines are developed in compliance with the standards and specifications published by industrial organizations to guarantee you a high level of performance, reliability and availability. An active member of PROFIBUS Trade Organisation (PTO), Woodhead Industries provides the most complete product offering and technical support for your PROFIBUS network.

Our industrial network solutions include:

BradCommunications™ - Network interface cards, PLC backplanes, switches, gateways, simulation software, diagnostic tools and embedded software stacks

BradConnectivity™ - Connectors, cordsets and distribution boxes for sensor, actuator and bus network applications

BradControl™ - Network I/O for on-machine and in-cabinet applications

BradPower™ - Modular wiring systems for machine power distribution and motor control

Woodhead Industries, a Division of Molex, operates from 21 locations in 10 countries spanning North America, Europe and Asia/Pacific, so we have the resources to assist you locally with all of your PROFIBUS project needs.

PROFIBUS Overview



PROFIBUS-DP (Decentralized Periphery) is a device level bus that supports both analog and discrete signals. It permits Mono-master or Multi-master systems, which provides a high degree of flexibility during system configurations. PROFIBUS allows all automation devices, sensors, actuators, PLC's, etc to communicate with each other over a single bus. It communicates at speeds from 9.6 Kbps to 12 Mbps over distances from 100 to 1,200 meters. PROFIBUS-DP doesn't natively support Intrinsically Safe installations.

PROFIBUS-PA (Process Automation) is a full-function fieldbus that is generally used for process level instrumentation. PROFIBUS-PA communicates at 31.25 Kbps and has a maximum distance of 1,900 meters per segment. PROFIBUS-PA is designed to support Intrinsically Safe applications.

PROFIBUS Network Specifications

Type of Network

DP	Device Bus
PA	Process Control Network

Physical Media Twisted pair, fiber

Network Topology Bus, Ring, Star

Maximum Devices

DP	max.126 stations on one bus (maximum of 244 bytes input and output data possible for each slave)
PA	32 nodes/segment 4-6 per repeated segment depending on power requirements of devices and the type of Intrinsically Safe barrier used.

Maximum Distance

DP	93.75Kbps and less - 1200 meters 500Kbps - 400 meters 1.5Mbps - 200 meters 12Mbps - 100 meters
PA	1,900 meters 9,500 meters with repeaters (max. of 9 repeaters can be used)

Communication Methods

DP	Peer-to-peer, multicast or cyclic master-slave (uses token passing sequence)
PA	Client/server, Publisher/subscriber, Event. Both Scheduled and Unscheduled communications

Primary usage

DP	Used for Discrete and Analog for PLC, Variable Speed Drives, Remote I/O communications
PA	Analog and discrete process control devices

Power and Communications

DP	Power is supplied separately from communications bus
PA	Requires PA power supply

Device Power Supply

DP	Devices are powered separately from communications bus
PA	Can be supplied from bus (typical)

Wiring Types

DP	Shielded twisted pair #22 AWG
PA	Shielded twisted pair #18 AWG (0.8mm)



CONNECTORS, CORDSETS AND DISTRIBUTION BOXES FOR SENSOR, ACTUATOR AND BUS NETWORK APPLICATIONS

BUS CONNECTIVITY

Micro-Change® (M12) Cordsets



- Plug & play connection between PROFIBUS modules
- Single and double ended
- Straight and 90°
- Standard and application specific lengths

Characteristics

- PUR jacketed for chemical and oil resistant applications
- Anti-vibration feature prevents back-out in high vibration applications
- 360° shielded head design to reduce RFI/EMI and improve signal integrity
- IP65/67, NEMA 6P

D-Sub (9-pin) Cordsets



- Plug & play connection between PROFIBUS interface cards and modules
- D-Sub to single or dual ended M12
- D-Sub to single or dual ended D-Sub
- Horizontal, vertical, straight or 90° configurations
- Standard and application specific lengths

Characteristics

- Same performance benefits as M12 cordsets
- Shielded D-Sub connector maintains signal integrity in noisy environments
- D-Sub includes termination switch for field installation flexibility

Data Line Receptacles



- Connects the external bus with an enclosure
- Front panel mount
- Bulkhead feed-thru
- Wire or cable lead

Characteristics

- Used in control panels and junction boxes
- Epoxy potted for rugged industrial environments
- Male and female configurations

Field Attachable Connectors



- Field termination for specific length or repair
- Easy field installation of quick-disconnect design
- D-Sub Horizontal or vertical

Characteristics

- Shielded to reduce RFI/EMI and improve signal integrity
- D-Sub IDC with or without built-in diagnostics
- Male or female configurations

D-Sub Connectors with Diagnostics



- Plug & play connection between PROFIBUS interface cards and modules
- Horizontal, vertical, or 90° configurations
- 9-pin D-Sub connectors

Characteristics

- Integrated programming / diagnostics port available
- 12 Mbaud supported
- LEDs for fast diagnostics and health status of bus and device available

Terminators and Data Line Tees



- Provides quick disconnection of bus line
- Allows disconnection of node without shutting down the network
- Used with remote active IO modules

Characteristics

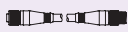
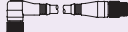
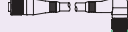
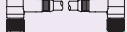
- Shielded to reduce RFI/EMI and improve signal integrity
- Male reverse key Micro-Change® Terminators
- M12 thread

BUS CORDSETS - Order Number

SINGLE-ENDED MICRO-CHANGE® (M12) CORDSETS

				
	<u>MALE STRAIGHT</u>	<u>MALE 90°</u>	<u>FEMALE STRAIGHT</u>	<u>FEMALE 90°</u>
2M	B05S06PP4M020	B05S07PP4M020	B05S00PP4M020	B05S01PP4M020
4M	B05S06PP4M040	B05S07PP4M040	B05S00PP4M040	B05S01PP4M040
5M	B05S06PP4M050	B05S07PP4M050	B05S00PP4M050	B05S01PP4M050
6M	B05S06PP4M060	B05S07PP4M060	B05S00PP4M060	B05S01PP4M060
10M	B05S06PP4M100	B05S07PP4M100	B05S00PP4M100	B05S01PP4M100

DOUBLE-ENDED MICRO-CHANGE® (M12) CORDSETS (FEMALE/MALE)

				
	<u>STRAIGHT/STRAIGHT</u>	<u>90°/STRAIGHT</u>	<u>STRAIGHT/90°</u>	<u>90°/90°</u>
0.6M	BB5S30PP4M006	BB5S31PP4M006	BB5S32PP4M006	BB5S33PP4M006
1M	BB5S30PP4M010	BB5S31PP4M010	BB5S32PP4M010	BB5S33PP4M010
2M	BB5S30PP4M020	BB5S31PP4M020	BB5S32PP4M020	BB5S33PP4M020
3M	BB5S30PP4M030	BB5S31PP4M030	BB5S32PP4M030	BB5S33PP4M030
4M	BB5S30PP4M040	BB5S31PP4M040	BB5S32PP4M040	BB5S33PP4M040
5M	BB5S30PP4M050	BB5S31PP4M050	BB5S32PP4M050	BB5S33PP4M050



CONNECTORS, CORDSETS AND DISTRIBUTION BOXES FOR SENSOR, ACTUATOR AND BUS NETWORK APPLICATIONS

BUS CORDSETS - Order Number

D-SUB (9P) TO MICRO-CHANGE® (M12) CORDSETS

		MALE STRAIGHT [1]	MALE 90° [1]	FEMALE STRAIGHT [1]	FEMALE 90° [1]
	Horizontal	1M BM5S60PP4M010	BM5S61PP4M010	BM5S30PP4M010	BM5S31PP4M010
		2M BM5S60PP4M020	BM5S61PP4M020	BM5S30PP4M020	BM5S31PP4M020
		5M BM5S60PP4M050	BM5S61PP4M050	BM5S30PP4M050	BM5S31PP4M050
	Vertical	1M BM5S62PP4M010	BM5S63PP4M010	BM5S32PP4M010	BM5S33PP4M010
		2M BM5S62PP4M020	BM5S63PP4M020	BM5S32PP4M020	BM5S33PP4M020
		5M BM5S62PP4M050	BM5S63PP4M050	BM5S32PP4M050	BM5S33PP4M050
	Vertical with programming port	1M BP5S62PP4M010	BP5S63PP4M010	BP5S32PP4M010	BP5S33PP4M010
		2M BP5S62PP4M020	BP5S63PP4M020	BP5S32PP4M020	BP5S33PP4M020
		5M BP5S62PP4M050	BP5S63PP4M050	BP5S32PP4M050	BP5S33PP4M050

D-SUB (9P) TO DUAL MICRO-CHANGE® (M12) CORDSETS

						MALE STRAIGHT [1] / FEMALE STRAIGHT [1]
		MALE STRAIGHT [2]	MALE 90° [2]	FEMALE STRAIGHT [2]	FEMALE 90° [2]	
	Horizontal	1M BM5G60PP4M010	BM5G61PP4M010	BM5G30PP4M010	BM5G31PP4M010	BM5G70PP4M010
		2M BM5G60PP4M020	BM5G61PP4M020	BM5G30PP4M020	BM5G31PP4M020	BM5G70PP4M020
		5M BM5G60PP4M050	BM5G61PP4M050	BM5G30PP4M050	BM5G31PP4M050	BM5G70PP4M050
	Vertical	1M BM5G62PP4M010	BM5G63PP4M010	BM5G32PP4M010	BM5G33PP4M010	BM5G72PP4M010
		2M BM5G62PP4M020	BM5G63PP4M020	BM5G32PP4M020	BM5G33PP4M020	BM5G72PP4M020
		5M BM5G62PP4M050	BM5G63PP4M050	BM5G32PP4M050	BM5G33PP4M050	BM5G72PP4M050
	Vertical with programming port	1M BP5G62PP4M010	BP5G63PP4M010	BP5G32PP4M010	BP5G33PP4M010	BP5G72PP4M010
		2M BP5G62PP4M020	BP5G63PP4M020	BP5G32PP4M020	BP5G33PP4M020	BP5G72PP4M020
		5M BP5G62PP4M050	BP5G63PP4M050	BP5G32PP4M050	BP5G33PP4M050	BP5G72PP4M050

D-SUB (9P) TO D-SUB (9P) CORDSETS

		HORIZONTAL	VERTICAL	SINGLE-ENDED
	Horizontal	1M MM3S60PP4M010	MM3S62PP4M010	M03S06PP4M010
		2M MM3S60PP4M020	MM3S62PP4M020	M03S06PP4M020
		5M MM3S60PP4M050	MM3S62PP4M050	M03S06PP4M050
	Vertical	1M MM3S62PP4M010	MM3S63PP4M010	M03S07PP4M010
		2M MM3S62PP4M020	MM3S63PP4M020	M03S07PP4M020
		5M MM3S62PP4M050	MM3S63PP4M050	M03S07PP4M050
	Vertical with programming port	1M MP3S62PP4M010	MP3S63PP4M010	P03S07PP4M010
		2M MP3S62PP4M020	MP3S63PP4M020	P03S07PP4M020
		5M MP3S62PP4M050	MP3S63PP4M050	P03S07PP4M050

D-SUB (9P) TO DUAL D-SUB (9P) (DAISY-CHAIN) CORDSETS

				HORIZONTAL [1] / VERTICAL [1]
		HORIZONTAL [2]	VERTICAL [2]	
	Horizontal	1M MM3G60PP4M010	MM3G61PP4M010	MM3G70PP4M010
		2M MM3G60PP4M020	MM3G61PP4M020	MM3G70PP4M020
		5M MM3G60PP4M050	MM3G61PP4M050	MM3G70PP4M050
	Vertical	1M MM3G62PP4M010	MM3G63PP4M010	MM3G72PP4M010
		2M MM3G62PP4M020	MM3G63PP4M020	MM3G72PP4M020
		5M MM3G62PP4M050	MM3G63PP4M050	MM3G72PP4M050
	Vertical with programming port	1M MP3G62PP4M010	MP3G63PP4M010	MP3G72PP4M010
		2M MP3G62PP4M020	MP3G63PP4M020	MP3G72PP4M020
		5M MP3G62PP4M050	MP3G63PP4M050	MP3G72PP4M050

BUS RECEPTACLES - Order Number

DATA LINE MICRO-CHANGE® (M12) RECEPTACLES

	MALE STRAIGHT	FEMALE STRAIGHT
BACK-PANEL MOUNT		
1M cable	BR5U76PP4M0103	BR5U70PP4M0103
2M cable	BR5U76PP4M0203	BR5U70PP4M0203
5M cable	BR5U76PP4M0503	BR5U70PP4M0503

TRUNK RECEPTABLES (M12)

	MALE STRAIGHT	FEMALE STRAIGHT	BULKHEAD PASS-THROUGH
FRONT-PANEL MOUNT			
3" wire	81688-030	81689-030	BR5L30

BUS FIELD-ATTACHABLE CONNECTORS - Order Number

FIELD ATTACHABLE MICRO-CHANGE® (M12) CONNECTORS

	MALE STRAIGHT	FEMALE STRAIGHT
	BA5S06-32	BA5S00-32

FIELD ATTACHABLE CONNECTORS D-SUB

	VERTICAL	HORIZONTAL	45°
D-Sub with diagnostics	PA9D01-42	MA9D00-42	PA9D08-42
D-Sub without diagnostic	PA9S01-42		

BUS TEES - Order Number

DATA LINE MICRO-CHANGE® (M12) TEES

	PDS01

BUS TERMINATORS - Order Number

MICRO-CHANGE® (M12) TERMINATORS

	STRAIGHT
	B05S06

[1] - one connector configuration

[2] - two connector configuration



CONNECTORS, CORDSETS AND DISTRIBUTION BOXES FOR SENSOR, ACTUATOR AND BUS NETWORK APPLICATIONS

POWER CONNECTIVITY

Auxiliary Power
5-Pole Media



- Supplies auxiliary power to a variety of devices, including active I/O modules or machine stop tees
- Complete system of cordsets (single and double-ended), tees and receptacles
- Standard and application-specific lengths

Characteristics

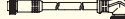
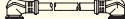
- Rugged IP68 rated connectors bring power to active I/O modules reliably
- Variety of connector configuration and cable length options available

POWER CORDSETS - Order Number

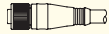
SINGLE-ENDED MINI-CHANGE® CORDSETS

							
MALE STRAIGHT		MALE 90°		FEMALE STRAIGHT		FEMALE 90°	
UL STOOW PVC CABLE, NEC COLOR CODE							
2M	105006A01M020	105007A01M020	105000A01M020	105001A01M020			
4M	105006A01M040	105007A01M040	105000A01M040	105001A01M040			
5M	105006A01M050	105007A01M050	105000A01M050	105001A01M050			
6M	105006A01M060	105007A01M060	105000A01M060	105001A01M060			
10M	105006A01M100	105007A01M100	105000A01M100	105001A01M100			

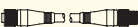
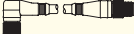
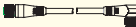
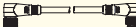
DOUBLE-ENDED MINI-CHANGE® CORDSETS (FEMALE/MALE)

							
STRAIGHT/STRAIGHT		90°/STRAIGHT		STRAIGHT/90°		90°/90°	
UL STOOW PVC CABLE, NEC COLOR CODE							
0.6M	115030A01M006	115031A01M006	115032A01M006	115033A01M006			
1M	115030A01M010	115031A01M010	115032A01M010	115033A01M010			
2M	115030A01M020	115031A01M020	115032A01M020	115033A01M020			
3M	115030A01M030	115031A01M030	115032A01M030	115033A01M030			
4M	115030A01M040	115031A01M040	115032A01M040	115033A01M040			
5M	115030A01M050	115031A01M050	115032A01M050	115033A01M050			

SINGLE-ENDED MICRO-CHANGE® (M12) CORDSETS

							
MALE STRAIGHT		MALE 90°		FEMALE STRAIGHT		FEMALE 90°	
PVC CABLE, IEC COLOR CODE FOR COMPACT I/O MODULES ^[1]							
0.6M	-	-	-	-	-	-	-
1M	-	-	-	-	-	-	-
2M	805006A09M020	805007A09M020	805000A09M020	805001A09M020			
3M	-	-	-	-	-	-	-
4M	805006A09M040	805007A09M040	805000A09M040	805001A09M040			
5M	805006A09M050	805007A09M050	805000A09M050	805001A09M050			
10M	805006A09M100	805007A09M100	805000A09M100	805001A09M100			

DOUBLE-ENDED MICRO-CHANGE® (M12) CORDSETS (FEMALE/MALE)

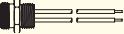
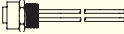
			
<u>STRAIGHT/STRAIGHT</u>	<u>90°/STRAIGHT</u>	<u>STRAIGHT/90°</u>	<u>90°/90°</u>
FOR COMPACT I/O MODULES ^[1]			
885030A09M006	885031A09M006	885032A09M006	885033A09M006
885030A09M010	885031A09M010	885032A09M010	885033A09M010
885030A09M020	885031A09M020	885032A09M020	885033A09M020
885030A09M030	885031A09M030	885032A09M030	885033A09M030
885030A09M040	885031A09M040	885032A09M040	885033A09M040
885030A09M050	885031A09M050	885032A09M050	885033A09M050
885030A09M100	885031A09M100	885032A09M100	885033A09M100

UL ITC/PLTC HIGH FLEX TPE CABLE, IEC COLOR CODE FOR COMPACT I/O MODULES ^[2]

0.6M	-	-	-	-	885030K05M006	885031K05M006	885032K05M006	885033K05M006
1M	-	-	-	-	885030K05M010	885031K05M010	885032K05M010	885033K05M010
2M	805006K05M020	805007K05M020	805000K05M020	805001K05M020	885030K05M020	885031K05M020	885032K05M020	885033K05M020
3M	-	-	-	-	885030K05M030	885031K05M030	885032K05M030	885033K05M030
4M	805006K05M040	805007K05M040	805000K05M040	805001K05M040	885030K05M040	885031K05M040	885032K05M040	885033K05M040
5M	805006K05M050	805007K05M050	805000K05M050	805001K05M050	885030K05M050	885031K05M050	885032K05M050	885033K05M050
10M	805006K05M100	805007K05M100	805000K05M100	805001K05M100	885030K05M100	885031K05M100	885032K05M100	885033K05M100

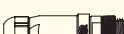
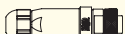
POWER RECEPTACLES - Order Number

MINI-CHANGE® RECEPTACLES

			
FRONT-PANEL MOUNT		MALE STRAIGHT	
½" NPT thread + 12" leads		1R5006A20A120	
M16 thread + 12" leads		51209-030	
		FEMALE STRAIGHT	
		1R5000A20A120	

POWER FIELD-ATTACHABLE CONNECTORS - Order Number

MINI-CHANGE® FIELD-ATTACHABLE CONNECTORS

			
MALE STRAIGHT		FEMALE STRAIGHT	
1A5006-34		1A5000-34	

POWER TEES - Order Number

MINI-CHANGE® TEES

			
STANDARD BUS DROP TEE		BUS DROP MICRO TEE	
PBAPT		PBAPT-D	

MICRO-CHANGE® (M12) FIELD-ATTACHABLE CONNECTORS (FOR COMPACT I/O)

			
MALE STRAIGHT		FEMALE STRAIGHT	
8A4006-32		8A4000-32	

^[1] The standard coupling nut is nickel-plated brass. For 316 Hex stainless steel, add an "8" at the end

^[2] The standard coupling nut is nickel-plated brass with Teflon coating. For 316 Hex stainless steel, add an "8" at the end



IP20 I/O MODULES

IP20 Fieldbus Couplers



- DP-V0 Slave
- Digital and Analog signals
- Carrier Rail DIN 35

Characteristics

- Speed: 9.6 Kbps to 12 Mbps
- Port: D-Sub, 9 pin, female
- Slave address: 1 - 99 (via rotating wheels)
- Front status LED for easy diagnostic

Order Number

BCB-APB-001 PROFIBUS coupler

IP20 Digital Modules

- Input and output modules
- Easy replacement of module without unwiring
- CAGE CLAMP® Connection

Characteristics

- Carrier Rail DIN 35
- Status through Signal LED
- Size: 98 x 80 x 93 mm
- 24 VDC

Order Number

BCB-FDI-081 8 input (5ms)
BCB-FDI-161 16 input (5ms)
BCB-FDI-162 16 input (w/ counter)
BCB-TDI-011 Terminal module



BCB-FDO-081 8 output (1 A)
BCB-FDO-083 8 output (2 A w/ scp^[1])
BCB-FDO-161 16 output (1 A)
BCB-FDO-163 16 output (2 A w/ scp^[1])
BCB-TDO-012 Terminal module
BCB-FDM-161 8 input (5ms) & 8 output (1A)
BCB-FDM-163 8 input (5ms) & 8 output (2A, scp^[1])
BCB-FDM-164 8 input (0.5ms) & 8 output (2A, scp^[1])
BCB-TDM-013 Terminal module
BCB-FDM-165 16 input (5ms) - 16 output (2A, scp^[1])
BCB-TDM-016 Terminal module
BCB-FRO-081 8 relay output (220V/2A)
BCB-TRO-051 Terminal module

IP20 Analog Modules



- Input modules
- Output modules
- Easy replacement of module without unwiring
- CAGE CLAMP® Connection

Characteristics

- Carrier Rail DIN 35
- Size: 98 x 80 x 93 mm
- 12 bit resolution
- 24 VDC

Order Number

BCB-FAI-082 8 input (0 - 10 V DC)
BCB-TAI-023 Terminal module
BCB-FAI-084 8 input (0 - 20 mA)
BCB-TAI-124 Terminal module
BCB-FAO-041 4 output +/- 10V
BCB-FAO-042 4 output 0-20mA
BCB-TAO-022 Terminal module

* All BradControl™ IP67 modules with Micro-Change® (M12) ports accept both threaded cordsets and the new BradConnectivity™ Ultra-Lock™ Connection System, the fastest, easiest, and most secure connection ever. Ultra-Lock™ technology is designed for higher performance and reliability to eliminate downtime, increase productivity, and lower costs.

For more information visit:

woodhead.com/ultralock



IP67 I/O MODULES

Compact with 8 Ports, M8 Connection



- IP67 digital I/O modules - Reliable world-class product for harsh environment
- Standard mounting hole pattern allows for interchangeably with popular I/O modules
- Visible diagnostic through status LEDs for network, module, external power, inputs & outputs

Characteristics

- 30 mm wide package size
- 8 ports, M8 Nano-Change®
- Speed: 9.6 Kbps to 12 Mbps
- Slave DP-V0

Order Number

TBDPB-880x-B84^[2] 8 input
TBDPB-862x-B84^[2] 6 input, 2 output
TBDPB-844x-B84^[2] 4 input, 4 output
TBDPB-808P-B84^[2] 8 output

Compact Threaded and Ultra-Lock™ with 4 Ports, M12 Connection



Characteristics

- 30 mm wide package size
- 4 ports, M12 Ultra-Lock™ technology*
- Speed: 9.6 Kbps to 12 Mbps
- Slave DP-V0

Order Number

TBDPB-480x-B8U^[2] 8 input
TBDPB-462x-B8U^[2] 6 input, 2 output
TBDPB-444x-B8U^[2] 4 input, 4 output
TBDPB-408P-B8U^[2] 8 output

Classic Threaded and Ultra-Lock™ with 8 Ports, M12 Connection



Characteristics

- 60 mm wide package size
- 8 ports, M12 Ultra-Lock™ technology*
- Speed: 9.6 Kbps to 12 Mbps
- Slave DP-V0

Order Number

TCDPB-8D0x-B1U^[2] 16 input
TCDPB-8C2x-B1U^[2] 14 input, 2 output
TCDPB-8B4x-B1U^[2] 12 input, 4 output
TCDPB-888x-B1U^[2] 8 input, 8 output

^[1] - scp, short circuit protection provided

^[2] - replace x by N for NPN input or P for PNP input

PLC BACKPLANES

Backplane for A-B SLC 500



- Connects your Allen-Bradley SLC 500 to a PROFIBUS network
- Simultaneous operation of protocols

Characteristics

- Speed: 9.6 Kbps to 12 Mbps
- Protocols:
 - Master DP-V0
 - Slave DP-V0
 - FDL Send/Receive

Order Number

SST-PFB-SLC Backplane for A-B SLC 500

Backplane for A-B PLC-5



- Connects your Allen-Bradley PLC-5 to a PROFIBUS network
- Simultaneous operation of protocols

Characteristics

- Speed: 9.6 Kbps to 12 Mbps
- Protocols:
 - Master DP-V0
 - Slave DP-V0

Order Number

SST-PFB-PLC5 Backplane for A-B PLC-5

Backplane for A-B ControlLogix



- Connects your Allen-Bradley ControlLogix to a PROFIBUS network
- RLL support: remote configuration and monitoring via A-B RSLinx
- Data exchange up to 1984 bytes I/O
- CommDTM driver - Easy access to DP-V1 devices from any FDT frame applications

Characteristics

- Speed: 9.6 Kbps to 12 Mbps
- Protocols:
 - Master DP-V1 Class-1 & 2
 - Master DP-V0 Class-1 & 2
 - Slave DP-V0

Order Number

SST-PFB-CLX-RLL Backplane for A-B ControlLogix
SST-PFB-CLX-DTM CommDTM Software driver

NETWORK INTERFACE CARDS

Best Choice for SCADA Applications



- Fully integrated package: solution + services
- Compatible with Siemens Simatic® S5 and S7 PLC series
- All PROFIBUS protocols run simultaneously

Characteristics

- PCI Universal 3.3/5V (PCI-X compatible)
- RoHS compliant
- Speed: 9.6 Kbps to 1.5 Mbps
- Protocols:
 - Master DP-V0 Class-1 & 2
 - Client S7/MPI
 - Master PPI/PPI+
 - Master FDL S5
 - FDL Send/Receive
- Software Interfaces included^[1]
- Compatible with various OS^[2]

Order Number

APP-PFB-PCU PCI bus, 3.3/5V, all protocols

APP-PS7-PCU PCI bus, 3.3/5V, S7/MPI protocol only

Combo Card - PROFIBUS + Ethernet

- Combo offer: full PROFIBUS 1.5 Mbps + Ethernet 10/100 Mbps
- All PROFIBUS and Ethernet protocols can run simultaneously

Characteristics

- PCI Universal 3.3/5V (PCI-X compatible)
- RoHS compliant
- Software Interfaces included^[1]
- Compatible with various OS^[2]
- Protocols:

PROFIBUS 9.6 Kbps to 1.5 Mbps

- Master DP-V0 Class-1 & 2
- Client S7/MPI
- Master FDL S5
- Master PPI/PPI+
- FDL Send/Receive

Ethernet TCP/IP 10/100 Mbps

- EtherNet/IP PCCC Logix 5000 (Allen Bradley)
- Alnet II (Altus)
- SRTP (Alstom)
- SRTP (GE Fanuc)
- Melsec (Mitsubishi)
- Fins (Omron)
- Modbus TCP & UDP
- Uni-TE (Schneider)
- Industrial Ethernet (Siemens)

Order Number

APP-EPB-PCU PCI bus, 3.3/5V, all protocols

CompactPCI 3U Interface Card



- All PROFIBUS protocols run simultaneously
- Run DP up to 12Mbps

Characteristics

- Speed: 9.6 Kbps to 12 Mbps
- Protocols:
 - Master DP-V0 Class-1 & 2
 - Slave DP-V0
 - Client S7/MPI
 - Master FDL S5
 - Master PPI/PPI+
 - FDL Send/Receive
- Software Interfaces included^[1]
- Compatible with various OS^[2]

Order Number

APP-PFB-CPI CompactPCI 3U bus

USB Adapter - FDT/DTM



- Connects your laptop to PROFIBUS DP-V1
- CommDTM driver - Easy access to DP-V1 devices from any FDT frame applications

Characteristics

- USB adapter 2.0 & 1.1, RoHS compliant
- Speed: 9.6 Kbps to 12 Mbps
- Protocols:
 - Master DP-V1 Class-1 & 2

Order Number

SST-PFB-USB-DTM USB adapter with DTM Driver

USB Adapter - for Scada Applications



- Economical solution
- Ideal for OEM applications

Characteristics

- USB adapter 2.0 & 1.1, RoHS compliant
- Speed: 9.6 Kbps to 12 Mbps
- Protocols:
 - Client S7/MPI
 - PFB DP-V0 Master/Slave
 - PFB DP-V1 Master/Slave
 - S7/MPI Master
 - S7/MPI Slave
 - S5 for Simatic
- Software Interfaces included^[1]
- Compatible with various OS^[2]

Order Number

DRL-MPI-USB USB adapter MPI/S7

DRL-PFB-USB USB adapter Full PROFIBUS

[1] - Software interfaces include: OPC Server, ActiveX control, Wonderware DAServer, Wonderware I/O server, development libraries (DLL, NI LabVIEW / Labwindows, etc.)

[2] - Support Windows 32 bits (XP, 2000, 2003 Server), XPe, NTe, Ardence RTX, VxWorks, QNX, Linux, DOS

NETWORK INTERFACE CARDS

Embedded Network Interface



- OEM module for fast and easy implementation into systems
- Lower integration costs with direct DPRAM access
- Quick start with development and evaluation kit

Characteristics

- Compact size - 80 x 40 mm
- Speed: 9.6 Kbps to 12 Mbps
- Protocols:

- Master DP-V1 Class-1 & 2	- Client S7/MPI
- Master DP-V0 Class-1 & 2	- FDL Send/Receive
- Slave DP-V0	

Order Number

SST-DC100DPM-S DP Protocols
SST-DC100DPM-H DP Protocols (HE13 conn. version)

Slave Only Interface Card



- PROFIBUS-DP Slave only
- Low cost OEM solution - Ideal for integration into systems
- Direct I/O memory map access

Characteristics

- Port: HE13 10 pin
- Speed: 9.6 Kbps to 12 Mbps
- Protocols:
 - DP-V1 Slave
 - DP-V0 Slave

Order Number

SST-DPS-104 PC/104 bus

Low Cost MPI/S7 Interface Card



- Economical solution
- Dedicated to Siemens Simatic® S7 PLC series
- Ideal for OEM applications

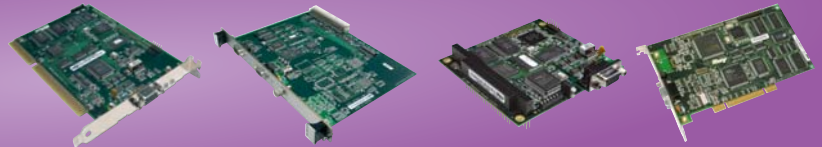
Characteristics

- PCI Universal 3.3/5V (PCI-X compatible)
- Speed: 9.6 Kbps to 12 Mbps
- Protocols:
 - Client S7/MPI
- Software Interfaces included^[1]
- Compatible with various OS^[2]

Order Number

DRL-MPI-PCU PCI bus, 3.3/5V

Interface Cards for High Speed Control Applications



- High speed deterministic communication for control applications
- Highly customizable network access via Direct DPRAM services
- OEM ready, hardware and software components provided separately
- Manage DP Master and Slave modes simultaneously
- CommDTM driver - Easy access to DP-V1 devices from any FDT frame applications

Characteristics

- Speed: 9.6 Kbps to 12 Mbps
- Protocols:
 - Master DP-V1 Class-1 & 2
 - Master DP-V0 Class-1 & 2
 - Slave DP-V0
 - FDL Send/Receive
- Software Components
 - Configuration and Diagnostic Console (Optional)
 - OPC Server DA 3.0 (Optional)
 - Windows DLL in C-Source Code
 - FDT Ready - CommDTM Driver

Order Number

SST-PB3-104 PC/104 bus
SST-PB3-ISA ISA bus
SST-PB3-PCU PCI bus, 3.3/5V (PCI-X compatible)
SST-PB3-VME-1 VME 6U double-eight bus, 1 port
SST-PB3-VME-2 VME 6U double-eight bus, 2 ports

SST-PB3-OPC OPC DA Server
SST-PB3-CNF-P Configuration and Diagnostic Console, Parallel Key
SST-PB3-CNF-U Configuration and Diagnostic Console, USB Key

Interface Cards for Control and Scada Applications



- Deterministic data acquisition
- Auto mapping of I/O in DPRAM card
- Easily embedded in computerized systems
- Manage DP Master and Slave modes simultaneously
- All in one configuration, diagnostic tools, data servers and development libraries

Characteristics

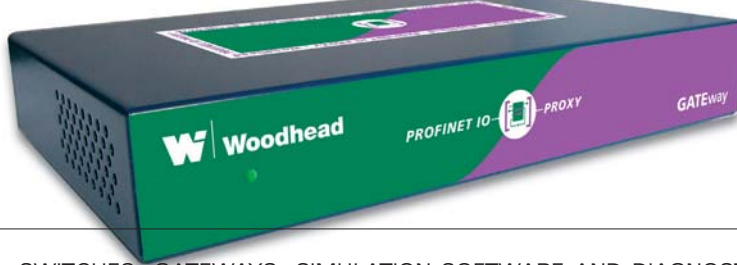
- Speed: 9.6 Kbps to 12 Mbps
- Protocols:
 - Master DP-V0 Class-1 & 2
 - Slave DP-V0
- Software Interfaces included^[1]
- Compatible with various OS^[2]
- RoHS compliant (PCU)

Order Number

DRL-DPM-PCU PCI bus, 3.3/5V (PCI-X compatible)
DRL-DPM-CPI CompactPCI 3U bus
DRL-DPM-104 PC/104 bus (HE13 conn. version)

^[1] - Software interfaces include: OPC Server, ActiveX control, Wonderware DAServer, Wonderware I/O server, development libraries (DLL, NI LabVIEW / Labwindows, etc.)

^[2] - Support Windows 32 bits (XP, 2000, 2003 Server), xPe, NTe, Ardence RTX, VxWorks, QNX, Linux, DOS



NETWORK INTERFACE CARDS, PLC BACKPLANES, SWITCHES, GATEWAYS, SIMULATION SOFTWARE AND DIAGNOSTIC TOOLS

INDUSTRIAL GATEWAYS

Multi-Protocol Intelligent Industrial Gateways



- Enables high speed data exchange between industrial devices (PLC, I/O blocks, etc) through PROFIBUS, Ethernet TCP/IP or Serial connections
- Typical uses: Integration of legacy devices into new architecture, integration of different networks/manufacturers, data concentrator for SCADA connectivity
- No programming, just configuring
- No protocol knowledge required
- Powerful "Change of State" (COS) write access management
- 6 digital inputs / 2 digital outputs

Characteristics

Protocols:

PROFIBUS 9.6 Kbps to 12 Mbps

- Master DP-V0
- Slave DP-V0
- Client S7/MPI
- Client FDL S5

Serial 2400 bps to 115.200 kbps

- Master DF1 (Allen Bradley)
- Master SNP-X (GE Fanuc)
- Master Modbus
- Slave Modbus (ASCII & RTU)
- Slave Uni-Telway (Schneider)
- Master AS511 (Siemens)
- Master TI-Dir (Siemens)

Ethernet TCP/IP 10/100 Mbps

- EtherNet/IP PCCC (Allen Bradley)
- Alnet II (Altus)
- SRTP (Alstom)
- SRTP (GE Fanuc)
- Melsec (Mitsubishi)
- Fins (Omron)
- Modbus TCP & UDP
- Uni-TE (Schneider)
- Industrial Ethernet (Siemens)

Order Number

APP-ESR-GTW

Ethernet to Ethernet/Serial Gateway

APP-ESP-GTW

PROFIBUS to PROFIBUS /Ethernet/Serial Gateway

Multi-Protocol PROFINET IO Proxy



- Provides real-time connectivity between a PROFINET IO controller and PROFIBUS devices
- Easy to use: no programming, just configuring

Characteristics

Speed: 9.6 Kbps to 12 Mbps

Protocols:

- Master DP-V0 Class 1 & 2
- Slave DP-V0
- Client S7/MPI
- Client FDL S5

Order Number

APP-PNT-GTW-P PROFINET IO Proxy to PROFIBUS or Ethernet or Serial

Web Remote Gateway



- Monitors and controls PROFIBUS devices using a standard web browser
- Customizes built-in HTML pages to create user interface
- Manages alarms information to remote centers (email, SMS, IPcallback)

Characteristics

Speed: 9.6 Kbps to 12 Mbps

Protocols:

- Master DP-V0 Class-1 & 2
- Slave DP-V0
- Client S7/MPI
- Master FDL S5

Order Number

APP-WEB-PFB-MTH Web Remote Gateway with modem
APP-WEB-TH thinHMI graphical interface for Webgate

Low Cost PROFIBUS to Serial Gateway



- Easy integration of legacy Serial devices
- Easy configuration of data exchange through GSD
- DIN Rail, IP20 mounting

Characteristics

Manages to up to 20 Slave Modbus devices

I/O memory size:

- 0 to 244 bytes in Read, 0 to 244 bytes in Write (max 300 I/O)

Protocols:

- Slave DP-V0 (9.6 kbps to 12 Mbps)
- Master & Slave Modbus RTU/ASCII (600 to 57600 bps)

Order Number

DRL-DPS-SRM PROFIBUS to Modbus Serial Gateway, Serial installation monitoring

Simple Ethernet/Serial Tunneling Gateway



- Cost-effective Gateway solutions
- Allows easy integration of legacy Ethernet/Serial devices to a PROFIBUS network
- DIN Rail, IP20 mounting

Characteristics

Speed:

- PROFIBUS: 9.6 Kbps to 12 Mbps
- Ethernet: 10/100 Mbps
- Serial: 300 bps to 230.4 Kbps

Protocols:

- Slave PROFIBUS DP-V0
- Master & Slave Modbus RTU & ASCII
- Client & Server Modbus TCP

Order Number

DRL-PFB-SRE Ethernet or Serial to PROFIBUS-DP Slave Gateway

Simple AS-Interface Tunneling Gateway



- Allows easy integration of AS-i sensors and actuators to a PROFIBUS network
- Supports 2 AS-i rungs to connect up to 104 AS-i devices
- Easy-to-use through buttons and display on the Gateway
- DIN Rail, IP20 mounting

Characteristics

Speed: 9.6 Kbps to 12 Mbps

Protocols:

- Slave PROFIBUS DP-V0
- Master AS-interface v2.1

Order Number

DRL-2ASI-PFB AS-interface to PROFIBUS-DP Slave Gateway

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