MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Selected official pages for procurement and maintenance review

PRODUCT BRAND

Siemens

PRODUCT MODEL

6ES7180-0AA00-0XA0

PROFIBUS DP Master Interface. Relevant section pages: 181, 182. Adjacent model text on shared pages is outside this product reference.

OFFICIAL SOURCE

IK PI 2005 - PROFIBUS Technology Components: Interface modules; IK PI 2005; printed pp.5/181-5/182

Original Siemens documentation (third-party-hosted copy)

Catalog product reference, not installation instructions. Includes architecture, technical data and exact ordering numbers. Actual firmware, host design and configuration require separate verification.

AMIKON PRODUCT SUPPORT

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Amikon Limited prepared this independent reference package. Selected manufacturer pages follow with their original content and pagination visible.

Application

The PROFIBUS DP interface modules make it easy to connect devices to PROFIBUS DP. They are based on the described ASICs from the Siemens AG. The interface modules can be used for a data transmission rate of up to 12 Mbit/s.

Various interface modules are available for different functional requirements and applications.

Interface modules for master:

- IM 180 to connect a field device to PROFIBUS DP in the form of a master
- IM 181 PC carrier board to adapt the IM 180 to the ISA bus of a PC

Interface modules for slaves:

- IM 182-1PC slave board to connect AT-compatible PCs as DP slaves
- IM 183-1 to connect a field device to the PROFIBUS DP as a slave
- IM 184 to connect a simple third-party device to the PROFIBUS DP as a slave

Design

IM 180 interface module

The IM 180 interface module consists primarily of an 80C165 microprocessor, an ASPC 2 ASIC, an OTP-EEPROM and RAM.

A dual port RAM interfaces the module to the host system.

IM 181-1 PC carrier board

The IM 181 -1 PC carrier board is used to accommodate the IM 180 if this is to be operated in a PC system with ISA bus.

Drivers for Windows NT and demo software are available as accessories to demonstrate incorporation of the IM 180/IM 181 -1 into the DOS environment.

IM 182-1 PC slave board

The single PC slave card (ISA bus) IM 182-1 is based on the ASIC SPC 3. It contains all physical bus components. A 9-pin Sub-D plug is used for connection to PROFIBUS DP. The firmware of the SPC 3 can be used in the PC as an accessory. The 1.5 KB RAM of the SPC 3 forms the interface to the host system. A driver for Windows NT is also available.

IM 183-1 interface module

The IM 183-1 interface module consists primarily of the SPC 3 ASIC, the 80C32 microprocessor, an OTP EEPROM as well as an RS 485 interface for connection to the PROFIBUS DP.

An additional RS 232 interface is located on the module.

IM 184 interface module

The IM 184 interface module consists primarily of the LSPM 2 ASIC, OTP EEPROM memory as well as an RS 485 interface for connection to the PROFIBUS DP.

The IM 184 can provide 32 input/output bit.

For further details, see the product brief "PROFIBUS Technology Components", Order No.: 6ZB5310-0CT01-0BA7.

Manuals for PROFIBUS DP interface modules are available for free in the Internet.

Additional information can be found in the Internet under:



http://www.ad.siemens.de/csi/dp

(German)

- Distributed I/Os
- Others
- Technology components, manuals

Additional information can be found in the Internet under:



http://www.ad.siemens.com/csi_e/dp

(English)

- Distributed I/O
- Others
- Development components, manuals

Interface modules

Technical specifications

PROFIBUS DP interface modules

Interface modules	IM 180	IM 181	IM 182-1	IM 183-1	IM 184
Area of application	Master applications	Carrier board for IM 180 interface module	Slave applications	Slave applications	Simple slave applications
Data transmission rate, max.	12 Mbit/s	-	12 Mbit/s	12 Mbit/s	12 Mbit/s
Protocols	PROFIBUS DP	-	PROFIBUS DP	PROFIBUS DP	PROFIBUS DP
ASIC	ASPC 2	-	SPC 3	SPC 3	LSPM 2
Microprocessor	80C165 (40 MHz)	-	Processor of the PC/PG	80C32 (20 MHz)	Not necessary
Firmware size	80 KB	-	4 to 24 KB (incl. test program)	4 to 24 KB (incl. test program)	Not necessary
RAM configuration	2 x 128 Kbyte	-	-	32 KB SRAM; 64 KB EPROM	-
Host interface	Dual port RAM	-	-	-	-
Permissible environmental temperature	0 to +70 °C	-	0 to + 60°C	0 to +70 °C	0 to +70 °C
Power supply	5 V DC	-	5 V DC	5 V DC	5 V DC
Power consumption, typ.	250 mA	-	250 mA	250 mA	150 mA
Board size in mm	100 x 100 mm	168 x 105 mm	168 x 105 mm	86 x 76 mm	85 x 64 mm

Ordering data

Ordering data	Order No.
SIMATIC S5/S7 IM 180 master module For PROFIBUS DP, max. 12 Mbit/s	**6ES7 180-0AA00-0XA0**
IM 181 PC carrier module for IM 180 max. 12 Mbit/s	**6ES7 181-0AA01-0XA0**
SIMATIC S5/S7 IM 182-1 PC slave board For PROFIBUS DP, max. 12 Mbit/s	**6ES7 182-0AA01-0XA0**
SIMATIC S5/S7 IM 183-1 slave module For PROFIBUS DP, max. 12 Mbit/s	**6ES7 183-0AA01-0XA0**
SIMATIC S5/S7 IM 184 slave module For PROFIBUS DP, max. 12 Mbit/s	**6ES7 184-0AA00-0XA0**
Accessories	
Demonstration software Demonstration of the supply to the DPR interface of the IM 180/IM 181 under MS-DOS	**6ES7 195-2AA00-0XA0**
Windows NT driver for IM 180 and IM 182	**6ES7 195-2AC00-0XA0**