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Data sheet 6ES7153-2BA10-0XB0

spare part SIMATIC DP, connection ET 200M IM 153-2 High Feature for max. 12 S7-300 modules with redundancy capability, time stamping suitable for isochronous mode new features: up to 12 modules can be used Device Initiative for Drive ES and Switch ES expanded quantity structure for HART auxiliary variables operation of the 64-channel modules 32 signals/slot +++observe compatibility notes in manual+++

General information	
Product type designation	IM 153-2 DP HF
Firmware version	V6.0.0
Vendor identification (VendorID)	801Eh
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
external protection for power supply lines (recommendation)	2,5 A
Mains buffering	
● Mains/voltage failure stored energy time	5 ms
Input current	
Current consumption, max.	650 mA; with 24 V DC supply
Inrush current, typ.	3 A
I^2t	0.1 $A^2 \cdot s$
Output current	
for backplane bus (5 V DC), max.	1.5 A
Power loss	
Power loss, typ.	5.5 W
Address area	
Address space per module	
● Inputs	244 byte
● Outputs	244 byte
Hardware configuration	
number of modules per DP device interface, max.	12
Time stamp	
Accuracy	1 ms; 1 ms at up to 8 modules; 10 ms at up to 12 modules
Number of message buffers	15
Messages per message buffer	20
Number of stampable digital inputs, max.	128; Max. 128 signals/station; max. 32 signals/slot
Time format	RFC 1119
Time resolution	0.466 ns
Time interval for transmitting the message buffer if a message is present	1 000 ms
Time stamp on signal change	rising / falling edge as signal entering or exiting
Interfaces	
Transmission procedure	RS 485
Transmission rate, max.	12 Mbit/s
1. Interface	
automatic detection of transmission rate	Yes
Interface types	
● Output current of the interface, max.	70 mA
● Design of the connection	9-pin sub D socket
PROFIBUS DP device	
● GSD file	SI05801E.GSG
● automatic baud rate search	Yes

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Protocols	
Bus protocol/transmission protocol	PROFIBUS DP to EN 50170
Protocols (Ethernet)	
● TCP/IP	No
PROFIBUS DP	
● Number of node addresses, max.	1 to 125 permitted
Services	
— SYNC capability	Yes
— FREEZE capability	Yes
— Direct data exchange (slave-to-slave communication)	Yes; as publisher with all IO, as subscriber with F-IO only
Potential separation	
Potential separation exists	Yes
Isolation	
Isolation tested with	Isolation voltage 500 V
Degree and class of protection	
IP degree of protection	IP20
Ambient conditions	
Ambient temperature during operation	
● min.	0 °C
● max.	60 °C
● horizontal installation, min.	0 °C
● horizontal installation, max.	60 °C
● vertical installation, min.	0 °C
● vertical installation, max.	40 °C
Altitude during operation relating to sea level	
● Installation altitude above sea level, max.	3 000 m
Configuration	
Configuration software	
● STEP 7	Yes; STEP 7 / COM PROFIBUS / non-Siemens tools via GSD file
Dimensions	
Width	40 mm
Height	125 mm
Depth	117 mm
Weights	
Weight, approx.	360 g
Classifications	

	Version	Classification
eClass	16	27-24-26-08
eClass	14	27-24-26-08
eClass	12	27-24-26-08
eClass	9.1	27-24-26-08
eClass	9	27-24-26-08
eClass	8	27-24-26-08
eClass	7.1	27-24-26-08
eClass	6	27-24-26-08
ETIM	10	EC001604
ETIM	9	EC001604
ETIM	8	EC001604
ETIM	7	EC001604
IDEA	4	3564
UNSPSC	15	32-15-17-05

Approvals / Certificates	
General Product Approval	

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Manufacturer Declaration

Miscellaneous

General Product Approval				EMV	
RCM	EAC	China RoHS	Manufacturer Declaration	EG-Konf.	UKCA

EMV	For use in hazardous locations				
RCM	FM	UL	Miscellaneous	IECEx	ATEX

For use in hazardous locations	Maritime application				
CCC-Ex	ABS	BUREAU VERITAS	DNV	LRS	NK / Nippon Kaiji Kyokai

Maritime application			Industrial Communication
RINA	CCS (China Classification Society)	KR (Korean Register of Shipping)	Profibus

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