

Data sheet

SM 153, PB-DP slave (153-4PH00)

Technical data

Type	Order no.	153-4PH00
Note PROFIBUS-DP slave Sinputs Soutputs	Туре	SM 153, PB-DP slave
Note PROFIBUS-DP slave Sinputs Soutputs		
Features PROFIBUS-DP slave 8 inputs 8 autoputs Technical data power supply Power supply (rated value) DC 24 V Power supply (permitted range) DC 20.428.8 V Reverse polarity protection yes Current consumption (rated value) 55 mA Technical data digital inputs Number of inputs 8 (16 Cable length, unshielded 1000 m Cable length, unshielded 600 m Rated load voltage DC 24 V Reverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) - Rated value DC 24 V Input voltage for signal "0" DC 05 V Input voltage for signal "1" DC 1528.8 V Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis - Frequency range - Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 1.5 mA Input delay of "1" to "0" 3 ms Number of simultaneously utilizable inputs vertical configuration 8 Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 (4 Cable length, unshielded 600 m		
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Rated load voltage	Cable length, shielded	1000 m
Reverse polarity protection of rated load voltage Current consumption from load voltage L+ (without load) Rated value DC 24 V Input voltage for signal "0" DC 05 V Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis - Frequency range - Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 1.5 mA Input delay of "0" to "1" 3 ms Input delay of "1" to "0" 3 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration 8 Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 (4 Cable length, shielded 1000 m Cable length, unshielded 600 m	Cable length, unshielded	600 m
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Frequency range Input resistance Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible Max. permissible BERO quiescent current Input delay of "0" to "1" 3 ms Input delay of "1" to "0" 3 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Rumber of simultaneously utilizable inputs vertical configuration Input characteristic curve IEC 61131-2, type 1 Intial data size 1 Byte Technical data digital outputs Number of outputs 8 (4 Cable length, shielded 1000 m Cable length, unshielded 600 m	Input voltage for signal "1"	DC 1528.8 V
Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 1.5 mA Input delay of "0" to "1" 3 ms Input delay of "1" to "0" 3 ms Number of simultaneously utilizable inputs horizontal configuration 8 Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 (4 Cable length, shielded 600 m	Input voltage hysteresis	-
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Number of outputs 8 (4 Cable length, shielded 1000 m Cable length, unshielded 600 m	Initial data size	1 Byte
Cable length, shielded 1000 m Cable length, unshielded 600 m	Technical data digital outputs	
Cable length, unshielded 600 m	Number of outputs	8 (4
	Cable length, shielded	1000 m
Rated load voltage DC 24 V	Cable length, unshielded	600 m
	Rated load voltage	DC 24 V



Reverse polarity protection of rated load voltage	_ A YASKAWA COMPANY
Current consumption from load voltage L+ (without load)	50 mA
Total current per group, horizontal configuration, 40°C	4 A
Total current per group, horizontal configuration, 60°C	2 A
Total current per group, vertical configuration	2 A
Output voltage signal "1" at min. current	L+ (-0.8 V)
Output voltage signal "1" at max. current	L+ (-1.5 V)
Output current at signal "1", rated value	1 A
Output delay of "0" to "1"	150 µs
Output delay of "1" to "0"	100 μs
Minimum load current	
Lamp load	5 W
Parallel switching of outputs for redundant control of a load	not possible
Parallel switching of outputs for increased power	not possible
Actuation of digital input	yes
Switching frequency with resistive load	max. 1000 Hz
Switching frequency with inductive load	max. 0.5 Hz
Switching frequency on lamp load	max. 10 Hz
Internal limitation of inductive shut-off voltage	L+ (-52 V)
Short-circuit protection of output	yes, electronic
Trigger level	1.5 A
Number of operating cycle of relay outputs	-
Switching capacity of contacts	-
Output data size	1 Byte
Status information, alarms, diagnostics Status display	green LED per channel
Interrupts	no
Process alarm	no
Diagnostic interrupt	no
Diagnostic functions	no
Diagnostics information read-out	possible
Supply voltage display	yes
Group error display	red SF LED
Channel error display	none
Isolation	
Between channels	-
Between channels of groups to	-
Between channels and backplane bus	-
Between channels and power supply	-
Max. potential difference between circuits	-
Max. potential difference between inputs (Ucm)	-
Max. potential difference between Mana and Mintern (Uiso)	-
Max. potential difference between inputs and Mana (Ucm)	-
Max. potential difference between inputs and Mintern (Uiso)	-
Max. potential difference between Mintern and outputs	-
Insulation tested with	DC 500 V



Racks, max.	_ A YASKAWA COMPANY
Modules per rack, max.	-
Number of digital modules, max.	-
Number of analog modules, max.	-
Communication	
Fieldbus	PROFIBUS-DP to EN 50170
Type of interface	RS485
Connector	Sub-D, 9-pin, female
Topology	Linear bus with bus termination at both ends
Electrically isolated	yes
Number of participants, max.	125
Node addresses	1 - 99
Transmission speed, min.	9.6 kbit/s
Transmission speed, max.	12 Mbit/s
Address range inputs, max.	1 Byte
Address range outputs, max.	1 Byte
Number of TxPDOs, max.	-
Number of RxPDOs, max.	-
Datasizes	
Input bytes	1
Output bytes	1
Parameter bytes	7 + 5
Diagnostic bytes	13
Housing	
Material	PPE / PA 6.6
Mounting	Profile rail 35 mm
Mechanical data	
Dimensions (WxHxD)	101.6 mm x 76 mm x 48 mm
Weight	220 g
Environmental conditions	
Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C
Certifications	
UL certification	yes
KC certification	