

Data sheet SM 153, CANopen slave (153-4CH00)

Technical data

Order no.	153-4CH00
Туре	SM 153, CANopen slave
General information	
	-
Note Features	- CAN slave
realures	8 (12) inputs 4 (8) outputs
Technical data power supply	
Power supply (rated value)	DC 24 V
Power supply (permitted range)	DC 20.428.8 V
Reverse polarity protection	✓
Current consumption (no-load operation)	
Current consumption (rated value)	55 mA
Tackground data digital inguita	
Technical data digital inputs	0.440
Number of inputs	8 (12
Cable length, shielded	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 hysteresis	•
Frequency range	-
Input resistance	-
Input current for signal "1"	7 mA
Connection of Two-Wire-BEROs possible	✓
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	12
Number of simultaneously utilizable inputs vertical configuration	12
Input characteristic curve	IEC 61131-2, type 1
Initial data size	2 Byte
Technical data digital outputs	
Number of outputs	8 (4
Cable length, shielded	1000 m
Cable length, unshielded	600 m



Rated load voltage	DC 24 V	A YASKAWA COMPANY
Reverse polarity protection of rated load voltage	-	
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 <i>μ</i> s	
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	✓	
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. - Number of digital modules, max. - Number of analog modules, max. - Communication - Fieldbus CANopen Type of interface CAN Connector Sub-D, 9-pin, male Topology Linear bus with bus termination at both ends Electrically isolated	Hardware configuration	
Number of digital modules, max. - Communication - Fieldbus CANopen Type of interface CAN Connector Sub-D, 9-pin, male Topology Linear bus with bus termination at both ends Electrically isolated ✔ Number of participants, max. 128 Node addresses 1 - 99 Transmission speed, min. 10 kbit/s Transmission speed, max. 1 Mbit/s Address range inputs, max. 2 Byte Address range outputs, max. 1 Byte Number of TxPDOs, max. 1 Number of TxPDOs, max. 1 Datasizes Input bytes 2 Output bytes 1 Parameter bytes 1 Parameter bytes 1 PPE / PA 6.6 Mounting Profile rail 35 mm Mechanical data Dimensions (WxHxD) 101.6 mm x 76 mm x 48 mm Weight 216 g Environmental conditions -25 °C to 70 °C Certifications	Racks, max.	-
Number of analog modules, max. -	Modules per rack, max.	-
Communication Fleidbus CANopen Type of Interface CAN Connector Sub-D, 9-pin, maile Topology Linear bus with bus termination at both ends Electrically isolated Number of participants, max. 128 Node addresses 1 - 99 Transmission speed, min. 10 kbit/s Address range inputs, max. 1 Mbit/s Address range outputs, max. 1 Byte Number of TxPDOs, max. 1 Mumber of TxPDOs, max. 1 Number of TxPDOs, max. 1 Datasizes Input bytes 2 Output bytes 2 Output bytes 1 Parameter bytes Diagnostic bytes	Number of digital modules, max.	-
Fleidbus	Number of analog modules, max.	-
Type of interface CAN Connector Sub-D, 9-pin, male Topology Linear bus with bus termination at both ends Electrically isolated Number of participants, max. 126 Node addresses 1 - 99 Transmission speed, min. 10 kbit/s Transmission speed, min. 10 kbit/s Address range inputs, max. 2 Byte Address range outputs, max. 1 Byte Number of TxPDOs, max. 1 Number of RxPDOs, max. 1 Datasizes Input bytes 2 Output bytes 2 Output bytes 1 Parameter bytes - Diagnostic bytes - 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 216 g Environmental conditions Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Communication	
Connector Sub-D, 9-pin, male Topology Linear bus with bus termination at both ends Electrically isolated ✓ Number of participants, max. 126 Node addresses 1 - 99 Transmission speed, min. 10 kbtt/s Transmission speed, min. 10 kbtt/s Address range inputs, max. 2 Byte Address range outputs, max. 1 Byte Number of TxPDOs, max. 1 Number of TxPDOs, max. 1 Datasizes Input bytes 2 Output bytes 2 Output bytes 1 Parameter bytes - Diagnostic bytes - 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 216 g Environmental conditions Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Fieldbus	CANopen
Topology Linear bus with bus termination at both ends Electrically isolated Number of participants, max. 126 Node addresses 1 - 99 Transmission speed, min. 10 kbit/s Transmission speed, min. 11 Mbit/s Address range inputs, max. 2 Byte Address range outputs, max. 1 Byte Number of TxPDOs, max. 1 Mumber of RPDOs, max. 1 Datasizes Input bytes 2 Output bytes 2 Output bytes 1 Parameter bytes - Diagnostic bytes - Housing Material PPE / PA 6.6 Mounting Profile rail 35 mm Mechanical data Dimensions (WxHxD) 10.6 mm x 76 mm x 48 mm Weight 20 certifications Por to 60 °C Storage temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Type of interface	CAN
Electrically isolated	Connector	Sub-D, 9-pin, male
Number of participants, max. Node addresses 1 - 99 Transmission speed, min. 10 kbit/s Transmission speed, max. Address range inputs, max. 2 Byte Address range outputs, max. 1 Byte Number of TxPDOs, max. 1 Number of RxPDOs, max. 1 Datasizes Input bytes 2 Output bytes 1 Parameter bytes - Diagnostic bytes - 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 Environmental conditions Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Topology	Linear bus with bus termination at both ends
Node addresses	Electrically isolated	✓
Transmission speed, min. 10 kbit/s Transmission speed, max. 1 Mbit/s Address range inputs, max. 2 Byte Address range outputs, max. 1 Byte Number of TxPDOs, max. 1 Number of RxPDOs, max. 1 Datasizes 1 Input bytes 2 Output bytes 1 Parameter bytes - Diagnostic bytes - Housing PPE / PA 6.6 Mounting Profile rail 35 mm Mechanical data Dimensions (WxHxD) 101.6 mm x 76 mm x 48 mm Weight 216 g Environmental conditions O °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Number of participants, max.	126
Transmission speed, max. 1 Mbit/s Address range inputs, max. 2 Byte Address range outputs, max. 1 Byte Number of TxPDOs, max. 1 Datasizes 1 Input bytes 2 Output bytes 1 Parameter bytes - Diagnostic bytes - Housing PPE / PA 6.6 Mounting Profile rail 35 mm Mechanical data Dimensions (WxHxD) Weight 216 g Environmental conditions O °C to 60 °C Storage temperature 0 °C to 70 °C Certifications	Node addresses	1 - 99
Address range inputs, max. Address range outputs, max. 1 Byte Number of TxPDOs, max. 1 Number of RxPDOs, max. 1 Datasizes Input bytes 2 Output bytes 1 Parameter bytes - Diagnostic bytes - Housing Material PPE / PA 6.6 Mounting Profile rail 35 mm Mechanical data Dimensions (WxHxD) Dinensions (WxHxD) To 1.6 mm x 76 mm x 48 mm Weight Pind g Environmental conditions Operating temperature O °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Transmission speed, min.	10 kbit/s
Address range outputs, max. Number of TxPDOs, max. 1 Number of RxPDOs, max. 1 Datasizes Input bytes 2 Output bytes 1 Parameter bytes Diagnostic bytes Housing Material PPE / PA 6.6 Mounting Profile rail 35 mm Mechanical data Dimensions (WxHxD) Dinensions (WxHxD) Dinensions (WxHxD) Environmental conditions Operating temperature O °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Transmission speed, max.	1 Mbit/s
Number of TxPDOs, max. 1 Number of RxPDOs, max. 1 Datasizes Input bytes 2 Output bytes 1 Parameter bytes - Diagnostic bytes - Housing PPE / PA 6.6 Mounting Profile rail 35 mm Mechanical data Dimensions (WxHxD) Dimensions (WxHxD) 101.6 mm x 76 mm x 48 mm Weight 216 g Environmental conditions O °C to 60 °C Storage temperature -25 °C to 70 °C Certifications O	Address range inputs, max.	2 Byte
Number of RxPDOs, max. 1 Datasizes 1 Input bytes 2 Output bytes 1 Parameter bytes - Diagnostic bytes - Housing - Material PPE / PA 6.6 Mounting Profile rail 35 mm Mechanical data Dimensions (WxHxD) Dimensions (WxHxD) 101.6 mm x 76 mm x 48 mm Weight 216 g Environmental conditions O °C to 60 °C Storage temperature -25 °C to 70 °C Certifications -25 °C to 70 °C	Address range outputs, max.	1 Byte
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Input bytes 2	Number of RxPDOs, max.	1
Output bytes 1 Parameter bytes - Diagnostic bytes - 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 216 g Environmental conditions Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Datasizes	
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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 216 g Environmental conditions Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Output bytes	1
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 216 g Environmental conditions Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Parameter bytes	-
Material PPE / PA 6.6 Mounting Profile rail 35 mm Mechanical data Dimensions (WxHxD) 101.6 mm x 76 mm x 48 mm Weight 216 g Environmental conditions Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Diagnostic bytes	-
Mounting Profile rail 35 mm Mechanical data Dimensions (WxHxD) 101.6 mm x 76 mm x 48 mm Weight 216 g Environmental conditions Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Housing	
Mechanical data Dimensions (WxHxD) 101.6 mm x 76 mm x 48 mm Weight 216 g Environmental conditions Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Material	PPE / PA 6.6
Dimensions (WxHxD) 101.6 mm x 76 mm x 48 mm Weight 216 g Environmental conditions Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Mounting	Profile rail 35 mm
Weight 216 g Environmental conditions Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Mechanical data	
Environmental conditions Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Dimensions (WxHxD)	101.6 mm x 76 mm x 48 mm
Operating temperature 0 °C to 60 °C Storage temperature -25 °C to 70 °C Certifications	Weight	216 g
Storage temperature -25 °C to 70 °C Certifications	Environmental conditions	
Certifications	Operating temperature	0 °C to 60 °C
	Storage temperature	-25 °C to 70 °C
UL508 certification yes	Certifications	
	UL508 certification	yes