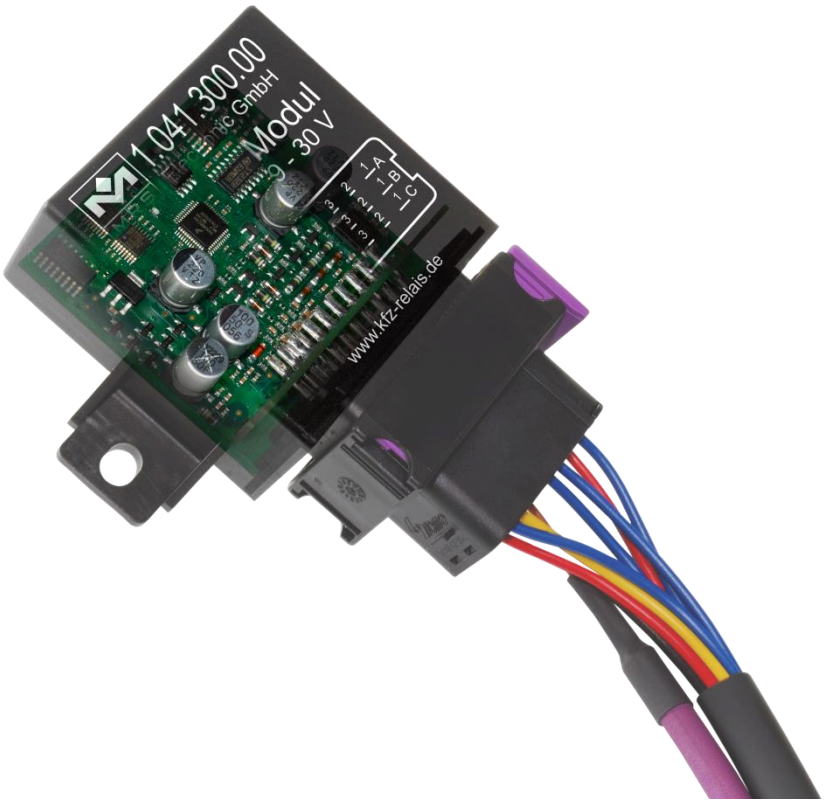
CAN I/O & CAN PLC Waterproof PRO



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Technical Data

Construction	Waterproof plastic housing with plug attachment
Connector	Sicma 211 PL249S0005
Housing Dimensions	60 x 60 x 30 mm/with connector: 60 x 80 x 30 mm
Weight	
Ambient Temperature	- 40°C to 85°C (at 85°C is not full load)
Storage Temperature	- 40°C to 85°C
Protection Class	IP 68
Operating Voltage U_B	9 - 30V DC

Protection against reverse polarity and electrical transients. The module has two operating voltage pins, one for a quad high-side driver. The connectors are rated for 10 A, so the module can deliver up to 20 A.

Current Consumption	30 mA
Quiescent Current	800 µA
Protection	20 A

Processor

Manufacturer	Freescale
Processor Type	S9S08DZ60
Clock Frequency	40 MHz
Flash	60 K
Ram	4 K
EEPROM	2 K

Interfaces

CAN-bus	
According to ISO 11898-2/3/5	Low/High Speed
According to CAN 2.0B	29-bit extended address identifier
According to CAN 2.0A	11-bit address identifier
Baud rate	20-kBit/s – 1000-kBit/s Default 125-kBit/s
RS232 & **RS485**	
Baud Rate	4.8-kBit/s – 115.2-kBit/s

After assembly, the bus option RS232 or RS485 cannot be altered.

Technical Examination

e1-Approval Number	04 6710

Possible Inputs and Outputs

Digital Inputs	(ID & KL15) KL15 Wake-up input)	2
Analog Inputs	(Pull-up & current in software-selectable)	6
Analog Inputs or Digital Outputs	With high-side current measurement	2
Analog inputs or PWM outputs	With integrated current control	4
PWM outputs	With high-side current measurement	2

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Technical data Inputs and Outputs

Characteristics of Digital Inputs	
Input Voltage	0 V…U_B
Start-Up Level	> 7 V
Start-Off Level	< 4.5 V
Input Resistance	22.6 kΩ
Input Frequency	max. 100 Hz

Characteristics of Digital Outputs	
Load Current	2.5 A/channel
Overload Capability	Double switching current for max. 5 minutes

Characteristics of Analog Inputs	
Input voltage	0 V…11.3 V DC
Resolution	12-bit
Input resistance	22.68 kΩ / KL 30 66.68 kΩ
Pull-up resistor	10 kΩ software-selectable (DO_PUx)
Current inputs	0.5 kΩ software-selectable (DO_PDx)
Input frequency	Max. 100 Hz

Characteristics PWM-Outputs	
PWM-Frequency	Max. 1 kHz
Duty Cycle	0…100%
Resolution	Frequency-dependent
Load Current	2.5 A
Overload Capability	Double switching current for max. 5 minutes

Programming

Interface	CAN-bus
Software	MRS Developers Studio with built-in functions library, similar to programming with FUP. Custom software blocks can be integrated into “C-code”. Program memory is sufficient for about 300 basic logic components.

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Connection Assignment

Pin	Signal	I/O	Pin description
A1	KL30_2		Supply B1, C1, C2, C3 / analog input
A2	RS232_TX / RS485_A		RS232 / RS485 Bus
A3	AI_5		Analog input
A4	AI_4		Analog input
A5	AI_2		Analog input
A6	AI_1		Analog input
A7	VREF_OUT		Vref output optional possible
A8	KL30_1		Supply B8, C6, C7, C8 / analog input
B1	PWM_3	X	PWM output / analog input / integrated current control
B2	RS232_RX / RS485_B		RS232 / RS485 bus
B3	DI_ID		Ident-Pin digital input
B4	CAN_H		CAN-bus
B5	DI_KL15		Digital input
B6	AI_0		Analog input
B7	GND		Mass KL 31
B8	PWM_4	X	PWM output / analog input / HSD-current measurement
C1	PWM_2	X	PWM output / analog input / Integrated current control
C2	PWM_1	X	PWM output / analog input / Integrated current control
C3	PWM_0	X	PWM output / analog input / Integrated current control
C4	AI_3		Analog input
C5	CAN_L		CAN-bus
C6	DO_OUT1	X	Digital output / analog input
C7	DO_OUT0	X	Digital output / analog input
C8	PWM_5	X	PWM output / analog input / HSD-current measurement

	8	7	6	5	4	3	2	1
A	KL30_1	VREF_OUT	AI_1	AI_2	AI_4	AI_5	RS232_TX	KL30_2
B	PWM_4	GND	AI_0	DI_KL15	CAN_H	DI_ID	RS232_RX	PWM_3
C	PWM_5	DO_OUT0	DO_OUT1	CAN_L	AI_3	PWM_0	PWM_1	PWM_2

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Order Information

Designation	Execution	Housing	Order Number
CAN I/O & CAN PLC Waterproof PRO	5 V Vref, Wake-up, CAN-HS, RS232	G7	1.041.301.1000E
CAN I/O & CAN PLC Waterproof PRO	5 V Vref, Wake-up, CAN-HS, RS485	G7	1.041.321.1000E

Accessories

Designation	Order Number
Programming Tool MRS Developers Studio	1.100.100.09
Connector Package for CAN I/O Waterproof PRO	110421
Cable Set CAN I/O Waterproof PRO	110490
Crimp Contacts 2.8 mm / 1 – 2.5 mm²	109947
Crimp Contacts 1.5 mm / 1.3 - 2 mm²	109949
Blanking Plugs FCI Filler Plug	110268
PCAN-USB Interface	105358

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