



# Motor Controller 10A Pro CAN





## Technical Data

Construction	Plastic housing
Connector	Socket 9 pole GP9/T
Housing Dimensions	30 x 30 x 50 mm
Weight	72 g
Ambient Temperature	- 40°C bis 85°C (bei 85°C nicht volle Last)
Protection Class	IP30
Operating Voltage U <sub>B</sub>	9 - 30 V DC
Quiescent Current	820 mA
Protection	10A

## 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	Low/high-speed
According to CAN 2.0A	11-bit standard address identifier
According to CAN 2.0B	29-bit extended address identifier
Baud Rate	10-kBit/s – 1000-kBit/s, Standard-125kBit/s

## Technical Examination

EMV	In progress
E1 Approval Number	10 R - 057817

## Possible Inputs and Outputs

Analog Inputs	3
Input X und C configurable as: current-, pull up- or frequency-input	
Digital inputs	3
PWM outputs 5 A	2



## Technical Data Inputs and Outputs

### Characteristics Digital Inputs

Load Current	2.5 A/channel
Threshold Level On	4 V
Threshold Level Off	6.5 V

### Characteristics Analog Inputs

	X and C	X and C	30V
Input Voltage	0 V... 5 V	0 V... 10 V	0 V... 33.68 V
Resolution	12-bit		
Input Resistance	90.9 kΩ	22.7 kΩ	66.6 kΩ
Pull-Down Resistor	100k Ω	10kΩ	10kΩ
Input Frequency	fg = 36 Hz	fg= 50 Hz	

### Characteristics Current Input

Characteristics Current Input	Current Input
Input Voltage	0 mA ... 24.5 mA
Resolution	12-bit
Current Sink	600 Ω

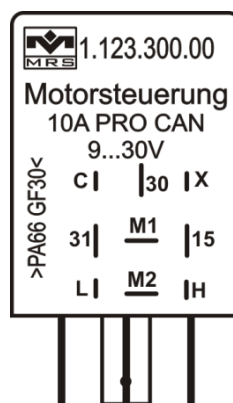
### Characteristics PWM-Outputs

PWM-Frequency	Max. 1 kHz
Duty Cycle	0...100%
Resolution	1 promille
Load Current	10 A as Full-Bridge 5 A as Half-Bridge

## Programming

Interface	CAN-Bus
Software	MRS Developers Studio with built-in function library, similar programmable like FUP. Customized program components can be integrated into "C-code". Program memory is sufficient for about 300 simple components.

## Design



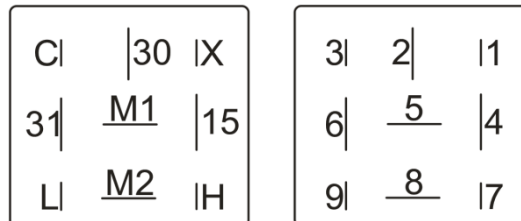


### Connection Assignment

Pin	Signal	Pin Description
01	AI_X DI_X	Analog Input 0-5 V/ 0-10 V OR digital Input
02	30 - Vcc	Operating voltage 9 - 30 V
03	AI_C DI_C	Analog Input 0-5 V/ 0-10 V OR digital Input
04	AI_KL15	Ignition OR analog input 0-11V
05	M1 - PWM_H1	PWM-output half bridge 1
06	-	Mass
07	-	CAN_H
08	M2 - PWM_H2	PWM-output half bridge 2
09	-	CAN_L



### Connection Diagramm - Bottom View



### Order Information

Designation	Housing	Order Number
Motor Controller 10A Pro CAN	G3	1.123.300.00

### Accessories

Designation	Order Number
Programming Tool MRS Developers Studio	1.100.100.09
Socket	1.017.002.00
Cable Set for Micro SPS CAN	109446
FASTON Terminal® 6.3 mm 1.5-2.5 mm²	103064
FASTON Terminal® 6.3 mm 1.0 mm²	102355
FASTON Terminal® 2.8 mm 0.5-1.0 mm²	105292
Bracket for Housing	1.017.080.00
PCAN-USB Interface	105358



## Block Diagram

