Digital mobile electronics CL-307
Robust construction with plug-in connection for mobile applications
Protection class IP68
5/3 inputs / 8 outputs, for up to 4 pairs of proportional solenoids, or 8 switching solenoids, or 8 digital outputs
CAN connection
Freely programmable

DESCRIPTION
Microcontroller based control with multifunctional inputs/outputs of the PME devices family (Programmable Mobile Electronics). Delivered in a robust and compact plastic housing, it is designed for the hard use in working devices and is perfectly suitable for various open loop and closed loop control tasks.

FUNCTION
The control can be used and programmed as a stand alone unit, or as part of a distributed, decentralised system architecture. The variably usable inputs and outputs enable reading and controlling sensors and actuators of all kinds.

APPLICATION
This mobile electronics is used mainly in the mobile field because of the compact construction, protection class IP67 as well as the extensive operating temperature range and the selected plug connection. Customer-specific requirements can be easily implemented.

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GENERAL SPECIFICATIONS
Execution Plastic molded housing
Dimensions 119 x 36 x 133 mm (see Dimensions)
Mounting Mounting flange, screwed on
Weight 250 g
Device receptacle Deutsch DTM04-12PC/D pin header
Mating connectors Deutsch DTM06-12SC / DTM06-12SD
Working temperature -40...+70°C

ELECTRICAL SPECIFICATIONS
Protection class IP68
Supply voltage 8...32 VDC
No-load current 43 mA at 13.8 V, 27 mA at 28 V
Analogue Inputs
Number of inputs 3
Input voltage range 0...5.5 V
Input resistance 58.7 kOhm
Resolution 12 bit
Digital Inputs
Number of inputs Master: 2, Client: none
Switching threshold positive >3.5 V, negative <1.5 V
STG Switch To Ground input Pull-up resistor 389 Ohm to internal 5 V
FREQ Frequency Input Pull-up resistor 3.92 kOhm to internal 5 V
Resolution < 5 Hz
Frequency range max. 1 kHz
(open drain, sinking sensor) max. 10 kHz
(Active push-pull sensor)
HID Harness Identification (Client addressing)

Digital outputs
Number of outputs up to 8 / up to 4 x 2
Protection Short to GND
Short to Battery
Overcurrent
Pull-up resistance 10 KOhm for diagnostics
DOUT Digital Outputs
maximum current 3.0 A (individual)
2.5 A (grouped)
PWM Pulse Width Modulation Outputs
maximum current 3.0 A (individual)
2.0 A (grouped)
ECC Estimated Current Feedback, 0.2–3.5 A/12 bit
Accuracy ECC +/-0.5mA at 2 A
CC Constant Current (4 pairs)
current sensing 0...3.43 A / 12 bit
CAN 40 kbit/s to 250 kbit/s

Software
Apart from the programming tools, a software for diagnostics and error eliminating for the commissioning of the system is available.
CONNECTOR WIRING DIAGRAM / PIN ASSIGNMENT

**X1, green, 12-pole, connector C-coded**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Function</th>
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<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ground - Analog inputs</td>
<td>1</td>
<td>Return(-) Outputs 5-6</td>
</tr>
<tr>
<td>2</td>
<td>BAT(-) Module</td>
<td>2</td>
<td>Return(-) Outputs 7-8</td>
</tr>
<tr>
<td>3</td>
<td>CAN1-H</td>
<td>3</td>
<td>Output #5 DOUT(+) / PWM(+) / CC(+) (2A)</td>
</tr>
<tr>
<td>4</td>
<td>CAN1-L</td>
<td>4</td>
<td>Output #6 DOUT(+) / PWM(+) / CC(+) (2A)</td>
</tr>
<tr>
<td>5</td>
<td>BAT(+) Outputs 1-4</td>
<td>5</td>
<td>Output #7 DOUT(+) / PWM(+) / CC(+) (2A)</td>
</tr>
<tr>
<td>6</td>
<td>BAT(+) Module / Input #6 Battery Voltage</td>
<td>6</td>
<td>Output #8 DOUT(+) / PWM(+) / CC(+) (2A)</td>
</tr>
<tr>
<td>7</td>
<td>Output #1 DOUT(+) / PWM(+) / CC(+) (2A)</td>
<td>7</td>
<td>BAT(+) Outputs 5-8</td>
</tr>
<tr>
<td>8</td>
<td>Output #2 DOUT(+) / PWM(+) / CC(+) (2A)</td>
<td>8</td>
<td>Input #1 AIN (0-5.5VDC)</td>
</tr>
<tr>
<td>9</td>
<td>Output #3 DOUT(+) / PWM(+) / CC(+) (2A)</td>
<td>9</td>
<td>Input #2 AIN (0-5.5VDC)</td>
</tr>
<tr>
<td>10</td>
<td>Output #4 DOUT(+) / PWM(+) / CC(+) (2A)</td>
<td>10</td>
<td>Input #3 AIN (0-5.5VDC)</td>
</tr>
<tr>
<td>11</td>
<td>Return(-) Outputs 1-2</td>
<td>11</td>
<td>Master: Input #4 STG / FREQ; Client: HID 1</td>
</tr>
<tr>
<td>12</td>
<td>Return(-) Outputs 3-4</td>
<td>12</td>
<td>Master: Input #5 STG / FREQ; Client: HID 2</td>
</tr>
</tbody>
</table>

DOUT = Digital output  
CC = Constant current  
PWM = Pulse width modulation  
AIN = Analog input  
STG = Switch to ground input  
FREQ = Frequency input  
HID = Harness identification code digital inputs for addressing client modules

**X2, brown, 12-pole, connector D-coded**