

PLD-NS

SHORT PULSE LASER DIODE DRIVER



Key Features

- Special Design for 10/14 pin Butterfly Laser Diode
- Output current up to 2000 mA
- Compliance current up to 3V
- Adjustable pulse width 1–100 ns
- Repetition rate up to 10 MHz
- External trigger option
- USB, RS-232, CAN, UART interfaces
- LabView and Python libraries
- On-Board TEC Controller
- 5Vdc Input Power
- Completed by Heatsink
- Compact size 85 × 60 × 21 mm

PLD-NS CAN Protocol Description

Introduction

This document describes how data is received and transmitted via CAN addressed systems. This document is based on firmware version PLD-NS.

CAN frame format

The device uses CAN 2.0A with 11-bit identifiers. The baud rate is 500 kBit/s.

Identifiers

Each CAN message has an identifier (ID). A base ID can be set as a parameter (default is 0x001). User can change the base ID using micro USB connection in cases when the information about base ID is lost for example. The host ID is always 0x22.

Message format

Message length is always 8 bytes, unless declared differently in the description. Message byte and bit numbering is zero based.

Table 1. Message format example

CAN format	ID	DLC	B[0]	B[1]	B[2]	B[3]	B[4]	B[5]	B[6]	B[7]
Formal description	Base ID	Data size	CMD	Sender ID	0	0	Value byte	Value byte	Value byte	Value byte
Example	0x001	0x08	0x11	0x22	0x00	0x00	0x00	0x00	0x00	0x64

Response description

Most of the commands has two types. The SET type and GET type. GET type forms from SET type CMD byte plus 0x80.

For example, if SET type CMD=0x10, then same GET type CMD+0x80 = 0x90.

If device received SET command type CMD it will send ACK response with the same CMD byte with empty value bytes.

If device received GET command type CMD+0x80, it will send ANSWER response with the same CMD+0x80 with corresponding value bytes

Command list

ALL device commands are listed in Table 2.

Table 2. Commands list

CMD	CMD description	Read/Write																																								
0x12	<p>Laser diode temperature command</p> <p>Value: integer value multiplied with 10</p> <p>Example: Command to SET temperature value 25.2°C, Value = 25.2 * 10 = 252 (0xFC):</p> <table border="1" data-bbox="263 582 1101 609"> <tr> <td>0x001</td><td>0x08</td><td>0x12</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0xFC</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 631 1101 658"> <tr> <td>0x022</td><td>0x08</td><td>0x12</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET temperature value:</p> <table border="1" data-bbox="263 712 1101 739"> <tr> <td>0x001</td><td>0x08</td><td>0x92</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 761 1101 788"> <tr> <td>0x022</td><td>0x08</td><td>0x92</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0xFC</td> </tr> </table> <p>Value = (0xFC) = 252 / 10 = 25.2°C;</p>	0x001	0x08	0x12	0x00	0x00	0x00	0x00	0x00	0x00	0xFC	0x022	0x08	0x12	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0x92	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0x92	0x01	0x00	0x00	0x00	0x00	0x00	0xFC	R/W
0x001	0x08	0x12	0x00	0x00	0x00	0x00	0x00	0x00	0xFC																																	
0x022	0x08	0x12	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0x92	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0x92	0x01	0x00	0x00	0x00	0x00	0x00	0xFC																																	
0x15	<p>Thermistor beta command</p> <p>Value: integer value of thermistor beta</p> <p>Example: Command to SET beta value of thermistor 3984 (0xF90):</p> <table border="1" data-bbox="263 981 1101 1008"> <tr> <td>0x001</td><td>0x08</td><td>0x15</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x0F</td><td>0x90</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 1030 1101 1057"> <tr> <td>0x022</td><td>0x08</td><td>0x15</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET beta value of thermistor:</p> <table border="1" data-bbox="263 1111 1101 1137"> <tr> <td>0x001</td><td>0x08</td><td>0x95</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 1160 1157 1187"> <tr> <td>0x022</td><td>0x08</td><td>0x95</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x0F</td><td>0x90</td> </tr> </table> <p>Value = (0xF90) = 3984;</p>	0x001	0x08	0x15	0x00	0x00	0x00	0x00	0x00	0x0F	0x90	0x022	0x08	0x15	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0x95	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0x95	0x01	0x00	0x00	0x00	0x00	0x0F	0x90	R/W
0x001	0x08	0x15	0x00	0x00	0x00	0x00	0x00	0x0F	0x90																																	
0x022	0x08	0x15	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0x95	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0x95	0x01	0x00	0x00	0x00	0x00	0x0F	0x90																																	
0x16	<p>Thermistor resistance command</p> <p>Value: integer value of thermistor resistance at 25°C</p> <p>Example: Command to SET thermistor resistance value 10000Ohm (0x2710):</p> <table border="1" data-bbox="263 1373 1101 1400"> <tr> <td>0x001</td><td>0x08</td><td>0x16</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x27</td><td>0x10</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 1422 1101 1449"> <tr> <td>0x022</td><td>0x08</td><td>0x16</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET thermistor resistance value:</p> <table border="1" data-bbox="263 1503 1101 1529"> <tr> <td>0x001</td><td>0x08</td><td>0x96</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 1552 1157 1579"> <tr> <td>0x022</td><td>0x08</td><td>0x96</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x27</td><td>0x10</td> </tr> </table> <p>Value = (0x2710) = 10000Ohm;</p>	0x001	0x08	0x16	0x00	0x00	0x00	0x00	0x00	0x27	0x10	0x022	0x08	0x16	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0x96	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0x96	0x01	0x00	0x00	0x00	0x00	0x27	0x10	R/W
0x001	0x08	0x16	0x00	0x00	0x00	0x00	0x00	0x27	0x10																																	
0x022	0x08	0x16	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0x96	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0x96	0x01	0x00	0x00	0x00	0x00	0x27	0x10																																	
0x18	<p>Laser current command</p> <p>Value: integer value bytes multiplied with 100</p> <p>Example: Command to SET current value 1.70A, Value = 1.7*100 = 170 (0xAA):</p> <table border="1" data-bbox="263 1787 1101 1814"> <tr> <td>0x001</td><td>0x08</td><td>0x18</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0xAA</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 1836 1101 1863"> <tr> <td>0x022</td><td>0x08</td><td>0x18</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET current value:</p> <table border="1" data-bbox="263 1917 1101 1944"> <tr> <td>0x001</td><td>0x08</td><td>0x98</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 1966 1101 1993"> <tr> <td>0x022</td><td>0x08</td><td>0x98</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0xAA</td> </tr> </table> <p>Value = (0xAA) = 170 / 100 = 1.7A;</p>	0x001	0x08	0x18	0x00	0x00	0x00	0x00	0x00	0x00	0xAA	0x022	0x08	0x18	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0x98	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0x98	0x01	0x00	0x00	0x00	0x00	0x00	0xAA	R/W
0x001	0x08	0x18	0x00	0x00	0x00	0x00	0x00	0x00	0xAA																																	
0x022	0x08	0x18	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0x98	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0x98	0x01	0x00	0x00	0x00	0x00	0x00	0xAA																																	

CMD	CMD description	Read/Write																																								
0x19	<p>Output frequency for internal generation command</p> <p>Value: integer value in Hz Note: the frequency should be set in increments corresponding to the following ranges</p> <ul style="list-style-type: none"> • 1Hz increment for frequencies from range 1...1000Hz • 1000Hz increment for frequencies from range 1kHz ... 1MHz • 100000 Hz increment for frequencies from range 1MHz ... 30MHz <p>Example: Command to SET frequency value 20.1MH, Value = 20100000 (0x0132B3A0):</p> <table border="1" data-bbox="264 546 1102 575"> <tr> <td>0x001</td><td>0x08</td><td>0x19</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td><td>0x32</td><td>0xB3</td><td>0xA0</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="264 595 1102 624"> <tr> <td>0x022</td><td>0x08</td><td>0x19</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET voltage value:</p> <table border="1" data-bbox="264 674 1102 703"> <tr> <td>0x001</td><td>0x08</td><td>0x99</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="264 723 1158 752"> <tr> <td>0x022</td><td>0x08</td><td>0x99</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x01</td><td>0x32</td><td>0xB3</td><td>0xA0</td> </tr> </table> <p>Value = (0x0132B3A0) = 20100000Hz;</p>	0x001	0x08	0x19	0x00	0x00	0x00	0x01	0x32	0xB3	0xA0	0x022	0x08	0x19	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0x99	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0x99	0x01	0x00	0x00	0x01	0x32	0xB3	0xA0	R/W
0x001	0x08	0x19	0x00	0x00	0x00	0x01	0x32	0xB3	0xA0																																	
0x022	0x08	0x19	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0x99	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0x99	0x01	0x00	0x00	0x01	0x32	0xB3	0xA0																																	
0x20	<p>Laser diode voltage On/Off command</p> <p>Value: 0 – turn laser diode voltage off 1 – turn laser diode voltage on</p> <p>Example: Command to turn laser diode voltage on:</p> <table border="1" data-bbox="264 992 1102 1021"> <tr> <td>0x001</td><td>0x08</td><td>0x20</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="264 1041 1102 1070"> <tr> <td>0x022</td><td>0x08</td><td>0x20</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET diode voltage on/off state,</p> <table border="1" data-bbox="264 1167 1102 1196"> <tr> <td>0x001</td><td>0x08</td><td>0xA0</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="264 1216 1102 1245"> <tr> <td>0x022</td><td>0x08</td><td>0xA0</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td> </tr> </table> <p>Value = 1;</p>	0x001	0x08	0x20	0x00	0x00	0x00	0x00	0x00	0x00	0x01	0x022	0x08	0x20	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xA0	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xA0	0x01	0x00	0x00	0x00	0x00	0x00	0x01	R/W
0x001	0x08	0x20	0x00	0x00	0x00	0x00	0x00	0x00	0x01																																	
0x022	0x08	0x20	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xA0	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xA0	0x01	0x00	0x00	0x00	0x00	0x00	0x01																																	
0x21	<p>TEC on/off command</p> <p>Value: 0 – turn TEC off 1 – turn TEC on</p> <p>Example: Command to SET TEC on:</p> <table border="1" data-bbox="264 1485 1102 1514"> <tr> <td>0x001</td><td>0x08</td><td>0x21</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="264 1534 1102 1563"> <tr> <td>0x022</td><td>0x08</td><td>0x21</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET TEC on/off state:</p> <table border="1" data-bbox="264 1612 1102 1641"> <tr> <td>0x001</td><td>0x08</td><td>0xA1</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="264 1662 1102 1691"> <tr> <td>0x022</td><td>0x08</td><td>0xA1</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td> </tr> </table> <p>Value = 1;</p>	0x001	0x08	0x21	0x00	0x00	0x00	0x00	0x00	0x00	0x01	0x022	0x08	0x21	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xA1	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xA1	0x01	0x00	0x00	0x00	0x00	0x00	0x01	R/W
0x001	0x08	0x21	0x00	0x00	0x00	0x00	0x00	0x00	0x01																																	
0x022	0x08	0x21	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xA1	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xA1	0x01	0x00	0x00	0x00	0x00	0x00	0x01																																	

CMD	CMD description	Read/Write																																								
0x22	<p>On/Off laser pulse emitting command</p> <p>Value: 0 – turn laser pulse emitting off 1 – turn laser pulse emitting on</p> <p>Example: Command to turn laser pulse emitting on: <table border="1" data-bbox="263 459 1101 488"> <tr> <td>0x001</td><td>0x08</td><td>0x22</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td> </tr> </table> Response ACK: <table border="1" data-bbox="263 510 1101 539"> <tr> <td>0x022</td><td>0x08</td><td>0x22</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> Command to GET laser pulse emitting on/off state: <table border="1" data-bbox="263 584 1101 613"> <tr> <td>0x001</td><td>0x08</td><td>0xA2</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> Response ANSWER: <table border="1" data-bbox="263 636 1101 665"> <tr> <td>0x022</td><td>0x08</td><td>0xA2</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td> </tr> </table> Value = 1;</p>	0x001	0x08	0x22	0x00	0x00	0x00	0x00	0x00	0x00	0x01	0x022	0x08	0x22	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xA2	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xA2	0x01	0x00	0x00	0x00	0x00	0x00	0x01	R/W
0x001	0x08	0x22	0x00	0x00	0x00	0x00	0x00	0x00	0x01																																	
0x022	0x08	0x22	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xA2	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xA2	0x01	0x00	0x00	0x00	0x00	0x00	0x01																																	
0x23	<p>Output pulse duration command</p> <p>Value (1ns – 100ns): integer value multiplied with 10 Note: the output maximum duty cycle should be 2%</p> <p>Example: Command to SET duration value 68.1ns, Value = 68.1 * 10 = 681 (0x02A9): <table border="1" data-bbox="263 902 1101 931"> <tr> <td>0x001</td><td>0x08</td><td>0x23</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x02</td><td>0xA9</td> </tr> </table> Response ACK: <table border="1" data-bbox="263 954 1101 983"> <tr> <td>0x022</td><td>0x08</td><td>0x23</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> Command to GET voltage value: <table border="1" data-bbox="263 1028 1101 1057"> <tr> <td>0x001</td><td>0x08</td><td>0xA3</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> Response ANSWER: <table border="1" data-bbox="263 1079 1157 1108"> <tr> <td>0x022</td><td>0x08</td><td>0xA3</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x02</td><td>0xA9</td> </tr> </table> Value = (0x02A9) = 681 / 10 = 68.1ns;</p>	0x001	0x08	0x23	0x00	0x00	0x00	0x00	0x00	0x02	0xA9	0x022	0x08	0x23	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xA3	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xA3	0x01	0x00	0x00	0x00	0x00	0x02	0xA9	R/W
0x001	0x08	0x23	0x00	0x00	0x00	0x00	0x00	0x02	0xA9																																	
0x022	0x08	0x23	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xA3	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xA3	0x01	0x00	0x00	0x00	0x00	0x02	0xA9																																	
0x24	<p>Emitting mode command</p> <p>Value: 0x00 – Internal generation 0x01 – Pulse on demand mode 0x02 – External generation mode</p> <p>Example: Command to SET pulse on demand mode: <table border="1" data-bbox="263 1373 1101 1402"> <tr> <td>0x001</td><td>0x08</td><td>0x24</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td> </tr> </table> Response ACK: <table border="1" data-bbox="263 1424 1101 1453"> <tr> <td>0x022</td><td>0x08</td><td>0x24</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> Command to GET pulse on demand mode value: <table border="1" data-bbox="263 1498 1101 1527"> <tr> <td>0x001</td><td>0x08</td><td>0xA4</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> Response ANSWER: <table border="1" data-bbox="263 1550 1101 1579"> <tr> <td>0x022</td><td>0x08</td><td>0xA4</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td> </tr> </table> Value = (0x01) = Pulse on demand mode;</p>	0x001	0x08	0x24	0x00	0x00	0x00	0x00	0x00	0x00	0x01	0x022	0x08	0x24	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xA4	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xA4	0x01	0x00	0x00	0x00	0x00	0x00	0x01	R/W
0x001	0x08	0x24	0x00	0x00	0x00	0x00	0x00	0x00	0x01																																	
0x022	0x08	0x24	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xA4	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xA4	0x01	0x00	0x00	0x00	0x00	0x00	0x01																																	
0x25	<p>Maximum current command</p> <p>Value: integer value multiplied with 100</p> <p>Example: Command to SET maximum current 2A, Value = 2 * 100 = 200 (0xC8): <table border="1" data-bbox="263 1792 1101 1821"> <tr> <td>0x001</td><td>0x08</td><td>0x25</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0xC8</td> </tr> </table> Response ACK: <table border="1" data-bbox="263 1843 1101 1872"> <tr> <td>0x022</td><td>0x08</td><td>0x25</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> Command to GET maximum current value: <table border="1" data-bbox="263 1917 1101 1946"> <tr> <td>0x001</td><td>0x08</td><td>0xA5</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> Response ANSWER: <table border="1" data-bbox="263 1968 1157 1998"> <tr> <td>0x022</td><td>0x08</td><td>0xA5</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0xC8</td> </tr> </table> Value = (0xC8) = 200 / 100 = 2A;</p>	0x001	0x08	0x25	0x00	0x00	0x00	0x00	0x00	0x00	0xC8	0x022	0x08	0x25	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xA5	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xA5	0x01	0x00	0x00	0x00	0x00	0x00	0xC8	R/W
0x001	0x08	0x25	0x00	0x00	0x00	0x00	0x00	0x00	0xC8																																	
0x022	0x08	0x25	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xA5	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xA5	0x01	0x00	0x00	0x00	0x00	0x00	0xC8																																	

CMD	CMD description	Read/Write																																								
0x26	<p>Minimum current command</p> <p>Value: integer value multiplied with 10</p> <p>Example: Command to SET minimum current 0,1A, Value = 0,1 * 100 = 10 (0x0A):</p> <table border="1" data-bbox="263 432 1101 459"> <tr> <td>0x001</td><td>0x08</td><td>0x26</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x0A</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 483 1101 510"> <tr> <td>0x022</td><td>0x08</td><td>0x26</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET minimum voltage value:</p> <table border="1" data-bbox="263 584 1101 611"> <tr> <td>0x001</td><td>0x08</td><td>0xA6</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 636 1157 663"> <tr> <td>0x022</td><td>0x08</td><td>0xA6</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x0A</td> </tr> </table> <p>Value = (0x0A) = 10 / 100 = 0,1A;</p>	0x001	0x08	0x26	0x00	0x00	0x00	0x00	0x00	0x00	0x0A	0x022	0x08	0x26	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xA6	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xA6	0x01	0x00	0x00	0x00	0x00	0x00	0x0A	R/W
0x001	0x08	0x26	0x00	0x00	0x00	0x00	0x00	0x00	0x0A																																	
0x022	0x08	0x26	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xA6	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xA6	0x01	0x00	0x00	0x00	0x00	0x00	0x0A																																	
0x34	<p>Gated pulses for burst generation command</p> <p>Value: integer count of gated pulses</p> <p>Example: Command to SET 10 gated pulses:</p> <table border="1" data-bbox="263 846 1101 873"> <tr> <td>0x001</td><td>0x08</td><td>0x34</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x0A</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 898 1101 925"> <tr> <td>0x022</td><td>0x08</td><td>0x34</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET gated pulses value:</p> <table border="1" data-bbox="263 999 1101 1025"> <tr> <td>0x001</td><td>0x08</td><td>0xB4</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 1050 1101 1077"> <tr> <td>0x022</td><td>0x08</td><td>0xB4</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x0A</td> </tr> </table> <p>Value = (0x0A) = 10;</p>	0x001	0x08	0x34	0x00	0x00	0x00	0x00	0x00	0x00	0x0A	0x022	0x08	0x34	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xB4	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xB4	0x01	0x00	0x00	0x00	0x00	0x00	0x0A	R/W
0x001	0x08	0x34	0x00	0x00	0x00	0x00	0x00	0x00	0x0A																																	
0x022	0x08	0x34	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xB4	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xB4	0x01	0x00	0x00	0x00	0x00	0x00	0x0A																																	
0x35	<p>Blocked pulses for burst generation command</p> <p>Value: integer count of blocked pulses</p> <p>Example: Command to SET 15 gated blocked pulses:</p> <table border="1" data-bbox="263 1261 1101 1288"> <tr> <td>0x001</td><td>0x08</td><td>0x35</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x0F</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 1312 1101 1339"> <tr> <td>0x022</td><td>0x08</td><td>0x35</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET gated blocked pulses value:</p> <table border="1" data-bbox="263 1413 1101 1440"> <tr> <td>0x001</td><td>0x08</td><td>0xB5</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 1464 1101 1491"> <tr> <td>0x022</td><td>0x08</td><td>0xB5</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x0F</td> </tr> </table> <p>Value = (0x0F) = 15;</p>	0x001	0x08	0x35	0x00	0x00	0x00	0x00	0x00	0x00	0x0F	0x022	0x08	0x35	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xB5	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xB5	0x01	0x00	0x00	0x00	0x00	0x00	0x0F	R/W
0x001	0x08	0x35	0x00	0x00	0x00	0x00	0x00	0x00	0x0F																																	
0x022	0x08	0x35	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xB5	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xB5	0x01	0x00	0x00	0x00	0x00	0x00	0x0F																																	
0x36	<p>Minimum temperature command</p> <p>Value: integer value multiplied with 10</p> <p>Example: Command to SET minimum temperature 20,0°C, Value = 20,0 * 10 = 200 (0xC8):</p> <table border="1" data-bbox="263 1700 1101 1727"> <tr> <td>0x001</td><td>0x08</td><td>0x36</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0xC8</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 1751 1101 1778"> <tr> <td>0x022</td><td>0x08</td><td>0x36</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET minimum temperature value:</p> <table border="1" data-bbox="263 1852 1101 1879"> <tr> <td>0x001</td><td>0x08</td><td>0xB6</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 1904 1157 1930"> <tr> <td>0x022</td><td>0x08</td><td>0xB6</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0xC8</td> </tr> </table> <p>Value = (0xC8) = 200 / 10 = 20°C;</p>	0x001	0x08	0x36	0x00	0x00	0x00	0x00	0x00	0x00	0xC8	0x022	0x08	0x36	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xB6	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xB6	0x01	0x00	0x00	0x00	0x00	0x00	0xC8	R/W
0x001	0x08	0x36	0x00	0x00	0x00	0x00	0x00	0x00	0xC8																																	
0x022	0x08	0x36	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xB6	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xB6	0x01	0x00	0x00	0x00	0x00	0x00	0xC8																																	

CMD	CMD description	Read/Write																																								
0x37	<p>Maximum temperature command</p> <p>Value: integer value multiplied with 10</p> <p>Example: Command to SET maximum temperature 50,5°C, Value = 50,5 * 10 = 505 (0x01F9):</p> <table border="1" data-bbox="263 432 1102 461"> <tr> <td>0x001</td><td>0x08</td><td>0x37</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td><td>0xF9</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 483 1102 512"> <tr> <td>0x022</td><td>0x08</td><td>0x37</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET maximum temperature value:</p> <table border="1" data-bbox="263 584 1102 613"> <tr> <td>0x001</td><td>0x08</td><td>0xB7</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 636 1158 665"> <tr> <td>0x022</td><td>0x08</td><td>0xB7</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td><td>0xF9</td> </tr> </table> <p>Value = (0x01F9) = 505 / 10 = 50,5°C;</p>	0x001	0x08	0x37	0x00	0x00	0x00	0x00	0x00	0x01	0xF9	0x022	0x08	0x37	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xB7	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xB7	0x01	0x00	0x00	0x00	0x00	0x01	0xF9	R/W
0x001	0x08	0x37	0x00	0x00	0x00	0x00	0x00	0x01	0xF9																																	
0x022	0x08	0x37	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xB7	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xB7	0x01	0x00	0x00	0x00	0x00	0x01	0xF9																																	
0x38	<p>Nominal voltage command</p> <p>Value: integer value multiplied with 100</p> <p>Example: Command to SET nominal voltage 20V, Value = 20 * 100 = 2000 (0x07D0):</p> <table border="1" data-bbox="263 875 1102 904"> <tr> <td>0x001</td><td>0x08</td><td>0x38</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x07</td><td>0xD0</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 927 1102 956"> <tr> <td>0x022</td><td>0x08</td><td>0x38</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET nominal voltage value:</p> <table border="1" data-bbox="263 1028 1102 1057"> <tr> <td>0x001</td><td>0x08</td><td>0xB8</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 1079 1158 1108"> <tr> <td>0x022</td><td>0x08</td><td>0xB8</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x07</td><td>0xD0</td> </tr> </table> <p>Value = (0x07D0) = 2000 / 100 = 20V;</p>	0x001	0x08	0x38	0x00	0x00	0x00	0x00	0x00	0x07	0xD0	0x022	0x08	0x38	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xB8	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xB8	0x01	0x00	0x00	0x00	0x00	0x07	0xD0	R/W
0x001	0x08	0x38	0x00	0x00	0x00	0x00	0x00	0x07	0xD0																																	
0x022	0x08	0x38	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xB8	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xB8	0x01	0x00	0x00	0x00	0x00	0x07	0xD0																																	
0x44	<p>Coefficient P command</p> <p>Value: integer value multiplied with 10000</p> <p>Example: Command to SET coefficient P, Value = 10000,0000 * 10000 = 100000000 (0x05F5E100):</p> <table border="1" data-bbox="263 1312 1102 1341"> <tr> <td>0x001</td><td>0x08</td><td>0x44</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x05</td><td>0xF5</td><td>0xE1</td><td>0x00</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 1364 1102 1393"> <tr> <td>0x022</td><td>0x08</td><td>0x44</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET coefficient P value:</p> <table border="1" data-bbox="263 1464 1102 1494"> <tr> <td>0x001</td><td>0x08</td><td>0xC4</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 1516 1158 1545"> <tr> <td>0x022</td><td>0x08</td><td>0xC4</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x05</td><td>0xF5</td><td>0xE1</td><td>0x00</td> </tr> </table> <p>Value = (0x05F5E100) = 100000000 / 10000 = 10000;</p>	0x001	0x08	0x44	0x00	0x00	0x00	0x05	0xF5	0xE1	0x00	0x022	0x08	0x44	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xC4	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xC4	0x01	0x00	0x00	0x05	0xF5	0xE1	0x00	R/W
0x001	0x08	0x44	0x00	0x00	0x00	0x05	0xF5	0xE1	0x00																																	
0x022	0x08	0x44	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xC4	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xC4	0x01	0x00	0x00	0x05	0xF5	0xE1	0x00																																	
0x45	<p>Coefficient I command</p> <p>Value: integer value multiplied with 10000</p> <p>Example: Command to SET coefficient I, Value = 1000,0000 * 10000 = 10000000 (0x989680):</p> <table border="1" data-bbox="263 1783 1102 1812"> <tr> <td>0x001</td><td>0x08</td><td>0x45</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x98</td><td>0x96</td><td>0x80</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 1834 1102 1863"> <tr> <td>0x022</td><td>0x08</td><td>0x45</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET coefficient I value:</p> <table border="1" data-bbox="263 1935 1102 1964"> <tr> <td>0x001</td><td>0x08</td><td>0xC5</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 1986 1158 2016"> <tr> <td>0x022</td><td>0x08</td><td>0xC5</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x98</td><td>0x96</td><td>0x80</td> </tr> </table> <p>Value = (0x00989680) = 10000000 / 10000 = 1000;</p>	0x001	0x08	0x45	0x00	0x00	0x00	0x00	0x98	0x96	0x80	0x022	0x08	0x45	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xC5	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xC5	0x01	0x00	0x00	0x00	0x98	0x96	0x80	R/W
0x001	0x08	0x45	0x00	0x00	0x00	0x00	0x98	0x96	0x80																																	
0x022	0x08	0x45	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xC5	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xC5	0x01	0x00	0x00	0x00	0x98	0x96	0x80																																	

CMD	CMD description	Read/Write																																								
0x46	<p>Coefficient D command</p> <p>Value: integer value multiplied with 10000</p> <p>Example: Command to SET coefficient D, Value = 2000,0000*10000 = 20000000 (0x0131 2D00):</p> <table border="1" data-bbox="263 432 1101 459"> <tr> <td>0x001</td><td>0x08</td><td>0x46</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td><td>0x31</td><td>0x2D</td><td>0x00</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 483 1101 510"> <tr> <td>0x022</td><td>0x08</td><td>0x46</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET coefficient D value:</p> <table border="1" data-bbox="263 584 1101 611"> <tr> <td>0x001</td><td>0x08</td><td>0xC6</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 636 1160 663"> <tr> <td>0x022</td><td>0x08</td><td>0xC6</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x01</td><td>0x31</td><td>0x2D</td><td>0x00</td> </tr> </table> <p>Value = (0x0131 2D00) = 20000000 / 10000 = 2000;</p>	0x001	0x08	0x46	0x00	0x00	0x00	0x01	0x31	0x2D	0x00	0x022	0x08	0x46	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xC6	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xC6	0x01	0x00	0x00	0x01	0x31	0x2D	0x00	R/W
0x001	0x08	0x46	0x00	0x00	0x00	0x01	0x31	0x2D	0x00																																	
0x022	0x08	0x46	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xC6	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xC6	0x01	0x00	0x00	0x01	0x31	0x2D	0x00																																	
0x50	<p>Device type command</p> <p>Value: PLD-NS device type = 0x17</p> <p>Example: Command to GET device type:</p> <table border="1" data-bbox="263 846 1101 873"> <tr> <td>0x001</td><td>0x08</td><td>0xD0</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 922 1101 949"> <tr> <td>0x022</td><td>0x08</td><td>0xD0</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x17</td> </tr> </table> <p>Value = (0x17) = PLD-NS;</p>	0x001	0x08	0xD0	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xD0	0x01	0x00	0x00	0x00	0x00	0x00	0x17	R																				
0x001	0x08	0xD0	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xD0	0x01	0x00	0x00	0x00	0x00	0x00	0x17																																	
0x51	<p>CAN identifier command</p> <p>Value: base ID</p> <p>Example: Command to SET base ID using BROADCAST ID, Value = 1:</p> <table border="1" data-bbox="263 1160 1101 1187"> <tr> <td>0x001</td><td>0x08</td><td>0x51</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 1211 1101 1238"> <tr> <td>0x022</td><td>0x08</td><td>0x51</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Command to GET base ID using BROADCAST ID:</p> <table border="1" data-bbox="263 1312 1101 1339"> <tr> <td>0x001</td><td>0x08</td><td>0xD1</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ANSWER:</p> <table border="1" data-bbox="263 1364 1101 1391"> <tr> <td>0x022</td><td>0x08</td><td>0xD1</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x01</td> </tr> </table> <p>Base ID = 0x01;</p>	0x001	0x08	0x51	0x00	0x00	0x00	0x00	0x00	0x00	0x01	0x022	0x08	0x51	0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x001	0x08	0xD1	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0xD1	0x01	0x00	0x00	0x00	0x00	0x00	0x01	R/W
0x001	0x08	0x51	0x00	0x00	0x00	0x00	0x00	0x00	0x01																																	
0x022	0x08	0x51	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x001	0x08	0xD1	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0xD1	0x01	0x00	0x00	0x00	0x00	0x00	0x01																																	
0x52	<p>Save parameters command</p> <p>Example: Command to save parameters in FLASH memory:</p> <table border="1" data-bbox="263 1547 1101 1574"> <tr> <td>0x001</td><td>0x08</td><td>0x52</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table> <p>Response ACK:</p> <table border="1" data-bbox="263 1624 1101 1650"> <tr> <td>0x022</td><td>0x08</td><td>0x52</td><td>0x01</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td><td>0x00</td> </tr> </table>	0x001	0x08	0x52	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x022	0x08	0x52	0x01	0x00	0x00	0x00	0x00	0x00	0x00	W																				
0x001	0x08	0x52	0x00	0x00	0x00	0x00	0x00	0x00	0x00																																	
0x022	0x08	0x52	0x01	0x00	0x00	0x00	0x00	0x00	0x00																																	