

# Data Sheet

**DP-40044-05-000**

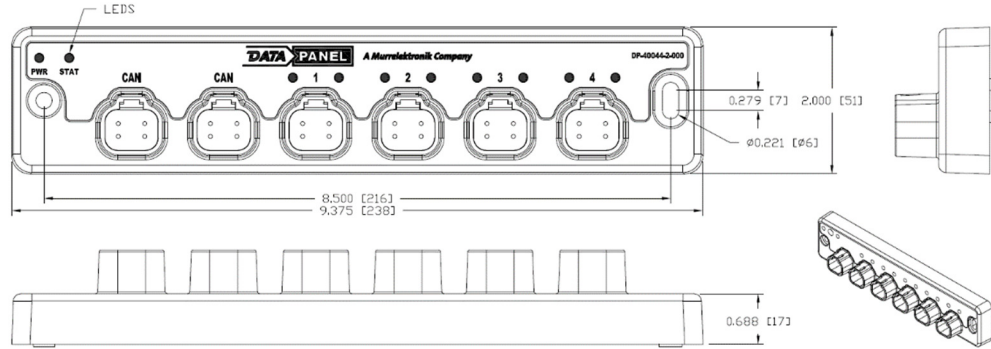
**xtremeDBm**

**xDBm08-DO**

**Output Module  
Digital 5A**


**CAN bus**

**8...32 V DC**



## Technical Data

<i>Housing</i>	<i>Molded glass filled nylon</i>
<i>Dimensions (l x w x h)</i>	<i>2.000 x 9.375 x 1.34 in (51 x 239 x 34 mm)</i>
<i>Weight</i>	<i>0.66 lbs (0.30 kg)</i>
<i>Installation (mounting hardware not included)</i>	<i>Screw: 2 x #10 (2 x M5) Torque: 21 in-lbs (2.4 Nm) max.</i>
<i>Mating Connectors and Accessories</i>	<i>4 Pole Plug 10 x DT06-4S or equivalent</i>
<i>DEUTSCH® size 16 Socket</i>	<i>0462-201-16141 0462-16-0122</i>
<i>DEUTSCH® Seal Plug</i>	<i>114017</i>
<i>Cable Length per Port</i>	<i>98.4 ft (30 m) max.</i>
<i>Operating Voltage</i>	<i>8...32 V DC protected against reverse polarity</i>
<i>Operating Current</i>	<i>13 Amps node current max with one POWER pin 26 Amps node current max with two POWER pins 5 Amps continuous per output pin max.</i>
<i>Communication Interface and Baud Rate</i>	<i>2 non-isolated J1939 ports 250kb (default) &amp; 500kb</i>
<i>Source Address</i>	<i>Base Address 217d (0xD9h) Offset 0...8</i>
<i>Total Outputs</i>	<i>8</i>
<i>Outputs Diagnostics</i>	<i>Short circuit and Overcurrent</i>
<i>Operating Temperature</i>	<i>-40...85 °C</i>
<i>Storage Temperature</i>	<i>-40...85 °C</i>
<i>Protection Class</i>	<i>IP67: Connector seal plugs required for unused pins Sealing plugs required for unused ports IP68/IP69K: Using Murrelektronik MDC xtreme cables</i>

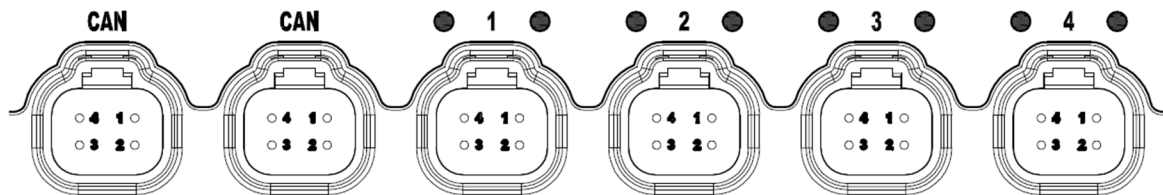
				Date	Name	<b>Data Sheet</b>  <b>xtremeDBm DO 5 Amp Module</b> <b>xDBm08-DO</b>
			Originator	07.12.21	FSa	
			Approved	07.12.21	FSa	
b	DCN F750	09.08.21	FSa	 <b>A Murrelektronik Company</b>		<b>Art. No.: DP-40044-05-000</b>  <i>Sheet</i> 1 of 6
Rev.	Description	Date	Name			
a	DCN F714	07.12.21	FSa	DP-40044-05-000_db_e_b.docx	The trademark DEUTSCH is owned by the TE Connectivity Ltd. family of companies.	

Operating States (LEDs)	Color	Status
PWR	Blue	Module and Ports power are connected
STAT	Green	Module and Communication status good
	Yellow	Warning Status
	Red	Fault Status
I/O Port	Yellow	Left LED – Input A / Output A Right LED – Input B / Output B

**Characteristics of the output ports**

<b>Outputs</b> Port1: B, A Port2: B, A Port3: B, A Port4: B, A	<b>Digital Output</b> Output voltage 8...32 V DC Switching current 5 Amps  Default configuration Digital 5 Amps
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**Connector Interface**



Connections:


**Ports CAN**

- Pin 1 = POWER
- Pin 2 = CAN HIGH
- Pin 3 = GND-EXT
- Pin 4 = CAN LOW

Connections:

**Ports J1 – J4**

- Pin 1 = GROUND B
- Pin 2 = OUTPUTB
- Pin 3 = GROUND B
- Pin 4 = OUTPUTA

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*Communication Protocol*

Control Message [CTRL1]	61401 (0xEFD9h)	Destination Specific Control / Command
PropA Response [STAT]	61184 (0xEF(*CSA))	Destination Specific Module Status

\*CSA is Controller Source Address (SA)


PGN 61401 [CTRL1]	Dec	Hex
Data Length	8	8
EDP & DP	0	0
PDU Format	239	0xEF
PDU Specific	217	0xD9
Transmission Rate	50 mSec	
Message Timeout	200 mSec	

Byte: 1	Bits: 8-1	Command: 81 (0x51h)
Byte: 2	Bits: 8-7	Output 2B
	Bits: 6-5	Output 2A
	Bits: 4-3	Output 1B
	Bits: 2-1	Output 1A
Byte: 3	Bits: 8-7	Output 4B
	Bits: 6-5	Output 4A
	Bits: 4-3	Output 3B
	Bits: 2-1	Output 3A
Byte: 4 - 8	Bits: 8-1	255 (0xFFh)

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PGN 61184 [STAT]	Dec	Hex
Data Length	8	8
Priority 6	24	0x18h
EDP & DP	0	0
PDU Format	239	0xEFh
PDU Specific	CSA	CSA
Transmission Rate	200 mSec	

Byte: 1	Bits: 8-1	software version (hexadecimal 0-F)
Byte: 2	Bits: 8-1	software revision (hexadecimal 0-F)
Byte: 3	Bits: 8-7	Node Alive: Set to 0x01b
	Bits: 6-5	Alternate Configuration Received
	Bits: 4-3	Configuration Saved
	Bits: 2-1	Factory Default Configuration
Byte: 4	Bits: 8-7	Invalid Configuration Received
	Bits: 6-5	Spare - Set to 0x11b
	Bits: 4-3	Fault Counters Not Zero
	Bits: 2-1	Node Fault Present
Byte: 5	Bits: 8-1	Active Fault Code
Byte: 6	Bits: 8-1	User Configured ID
Byte: 7	Bits: 8-7	Configuration Command = 0x55h Received
	Bits: 6-5	Configuration Command = 0x54h Received
	Bits: 4-3	Configuration Command = 0x53h Received
	Bits: 2-1	Configuration Command = 0x52h Received
Byte: 8	Bits: 8-5	Hardware Dash Number (-1, -2, -3, -5)
	Bits: 4-3	Configuration Command = 0x57h Received
	Bits: 2-1	Configuration Command = 0x56h Received

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**Test Standards and Regulation**

<p><i>Climatic test</i></p> <p>* PLANNED</p>	<p><i>Cold Temperature to IEC 60068-2-1:2007, test Ad</i></p> <p><i>Dry Heat to IEC 60068-2-2:2007, test Bb</i></p> <p><i>Temperature Durability to IEC 60068-2-14:2000-08, test Nb</i></p> <p><i>Temperature Shock to IEC 60068-2-14:2000-08, test Na</i></p> <p><i>Humidity Soak to IEC 60068-2-78:2001, test Cab</i></p> <p><i>Humidity Cycle to IEC 60068-2-30:2005, test Db</i></p>
<p><i>Mechanical test</i></p> <p>* PLANNED</p>	<p><i>Swept Sine Vibration to IEC 60068-2-6:2007, test Fc</i></p> <p><i>Random Vibration to IEC 60068-2-64:2008, test Fh</i></p> <p><i>Mechanical Shock to EN 60068-2-27:2008, test Ea</i></p> <p><i>Mechanical Bump to EN 60068-2-27:2008, test Ec</i></p> <p><i>IP protection to EN 60529:2000-09, test IP67, IP68, IP69K</i></p> <p><i>Chemical Loads to ISO 16750-5:2010 Part 5: AA, BA, BC, BD, BE, CC, DB, DD</i></p>
<p><i>Electrical test</i></p> <p>* PLANNED</p>	<p><i>Electrical Tests to ISO 16750-2:2012</i></p> <p><i>EMC Immunity to ISO 13766-1:2018, ISO 13766-2:2018, ISO 13309:2010</i></p> <p><i>EMC Emissions to ISO 13766-1:2018, ISO 13766-2:2018, ISO 13309:2010</i></p> <p><i>Conducted Transients to ISO 13766-1:2018, ISO 13766-2:2018, ISO7637-2:2011, Annex A</i></p>

**Derating Curve Max Total Current**

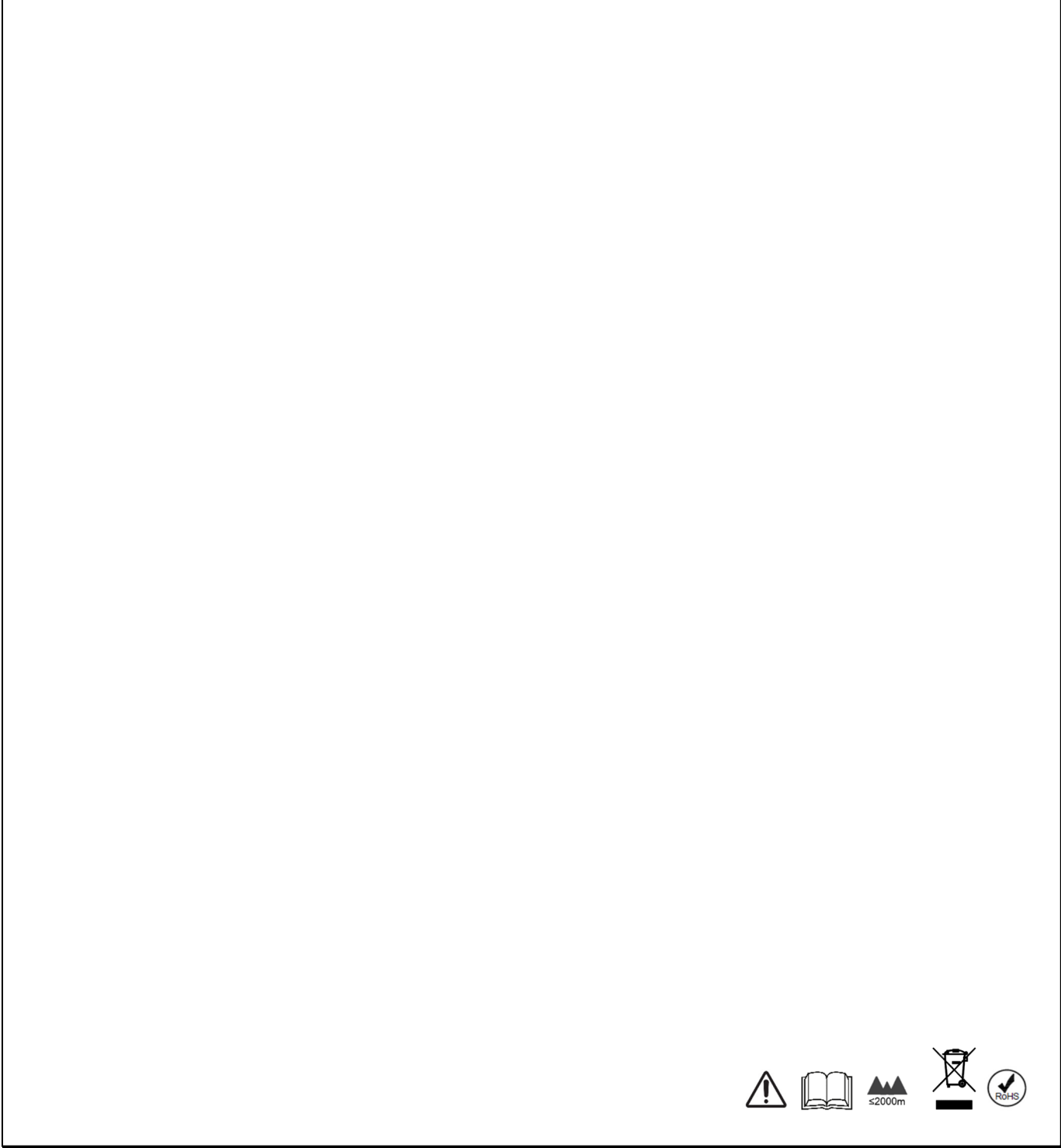
**Application Notes**


<p><b>POWER GND-EXT</b></p>	<p><i>Module battery power and negative return. In a module application with &lt; 13 Amps one GND-EXT and one POWER CAN port pin may be used for the battery circuit connections. In a module application with 13 Amps to 26 Amps both CAN port GND-EXT and POWER pins are used for the battery circuit connections.</i></p>
<p><b>Port J1 – J4 GROUND B</b></p>	<p><i>The module provides reverse battery protection for all external components connected to the ports J1 – J4. Any device connected to the module ports J1 – J4 shall have the device ground connection made at the port and not on the machine or chassis. GROUND B is a dedicated ground circuit for loads connected to the module.</i></p>

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*Article Numbers*

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