

Data Sheet

DP-40044-02-000

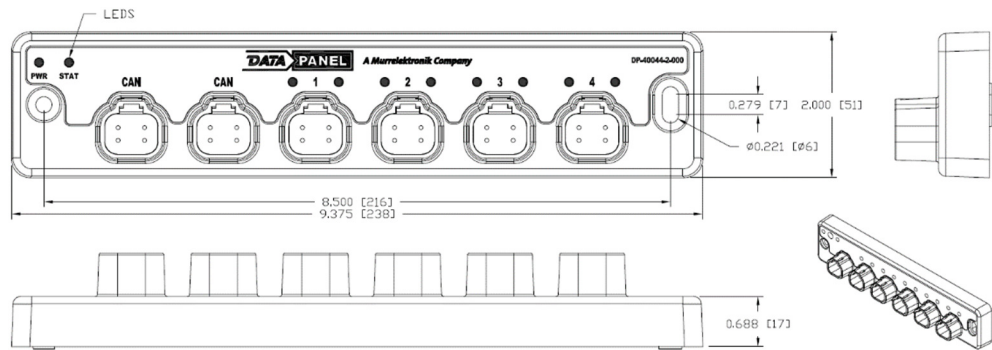
xtremeDBm

xDBm08-ADIN

**Input Module
Digital and Analog**


CAN bus

8...32 V DC




Technical Data

Housing	Molded glass filled nylon
Dimensions (l x w x h)	2.000 x 9.375 x 1.34 in (51 x 239 x 34 mm)
Weight	0.66 lbs (0.30 kg)
Installation (mounting hardware not included)	Screw: 2 x #10 (2 x M5) Torque: 21 in-lbs (2.4 Nm) max.
Mating Connectors and Accessories	4 Pole Plug 10 x DT06-4S or equivalent
DEUTSCH® size 16 Socket	0462-201-16141 (16 – 20 AWG)
DEUTSCH® Seal Plug	1062-16-0122 (14 – 18 AWG)
Cable Length per Port	114017
Operating Voltage	98.4 ft (30 m) max.
Operating Current	8...32 V DC protected against reverse polarity
Communication Interface and Baud Rate	13 Amps node current max with one POWER pin 26 Amps node current max with two POWER pins 0.2 Amps continuous per sensor power output pin max.
Source Address	2 non-isolated J1939 ports 250kb (default) & 500kb
Total Inputs	Base Address 217d (0xD9h) Offset 0...7
Inputs Diagnostics	8
Output (sensor power)	Over voltage and sensor power overcurrent
Operating Temperature	1 Amp max.
Storage Temperature	-40...85 °C
Protection Class	-40...85 °C
	IP67: Connector seal plugs required for unused pins Sealing plugs required for unused ports IP68/IP69K: Using Murrelektronik MDC xtreme cables

Rev	Description	Date	Name	Date	Name	Data Sheet xtremeDBm AI/DI Module xDBm08-ADIN	Art. No.: DP-40044-02-000	Sheet 1 of 5
d	DCN F820	02.02.22	FSa	Originator	07.12.21			
c	Errata	12.16.21	FSa	Approved	07.12.21	FSa		
b	DCN F750	09.08.21	FSa	 A Murrelektronik Company				
a	DCN F714	07.12.21	FSa	DP-40044-02-000_db_e_d.docx			The trademark DEUTSCH is owned by the TE Connectivity Ltd. family of companies.	

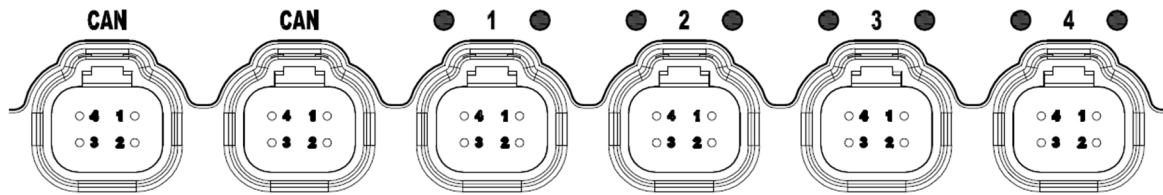
Characteristics of the Input Ports

<p>Inputs Digital Port 1: B, A Port 2: B, A Port 3: B, A Port 4: B, A</p>	<p>Positive switching Input A threshold > 1.6 V DC Input B threshold > 4.0 V DC Input resistance 10 kΩ Input response 20 mSec</p> <p>Ground switching Input A threshold < 1.6 V DC Input B threshold < 4.0 V DC Input resistance 470 kΩ Input response 20 mSec</p> <p>Frequency/Counter/Encoder Mode Port 3A & Port 4A Positive switching >1.6 V DC Frequency 0-5000 Hz</p> <p>Default configuration Positive switching</p>
<p>Inputs Analog Port 1: B Port 2: B Port 3: B Port 4: B</p>	<p>Analog Input Resolution 12 bit Accuracy 1% Full Scale Input response 20 mSec</p> <p>5 V DC Mode Input voltage 0...5 V DC Input resistance 166 kΩ Input fault limit > 5.5 V DC</p> <p>10 V DC Mode Input voltage 0...10 V DC Input resistance 55 kΩ Input fault limit > 11.0 V DC</p> <p>32 V DC Mode Input voltage 0...32 V DC Input resistance 37.6 kΩ Input fault limit > 35.0 V DC</p> <p>4-20 mA Mode Input current 0-25 mA Input resistance 162 Ω Input fault limit >25 mA</p> <p>Ratiometric Mode Input voltage 0...32 V DC Resolution 0.1% (0 – 100.0%) Input resistance 37.6 kΩ</p>

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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

Connector Interface



Connections:


Ports CAN

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

Connections:

Ports 1 – 4

- Pin 1 = SENSOR POWER
- Pin 2 = INPUTB
- Pin 3 = GROUND A
- Pin 4 = INPUTA

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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

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Application Notes


<p>POWER GND-EXT</p>	<p><i>Module battery power and negative return. In a module application with < 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>Port J1 – J4 GROUND A</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 A is an analog ground circuit for sensors.</i></p>

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Article Numbers

DP-40044-02-000	xDBm08-ADIN J1939 Module



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