

## Data Sheet

**DP-34044-1-200**

**xtremeDB**

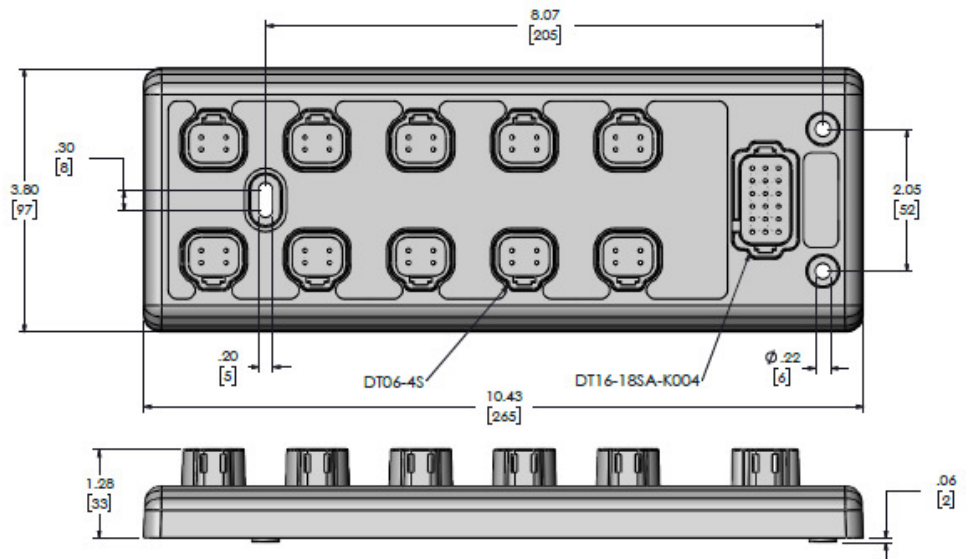
**xDB0808-DIO**

**Molded Plastic**

**I/O Module  
Digital and Analog**

**CANOpen**

**8...32 Vdc**



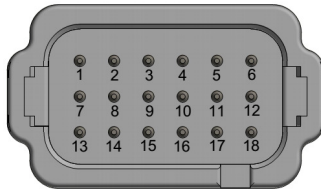
### Technical Data

|                                                                                                |                                                                                                                                         |
|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Housing                                                                                        | Molded plastic                                                                                                                          |
| Dimensions (l x w x h)                                                                         | 3.80 x 10.43 x 1.34 inch (97 x 265 x 34 mm)                                                                                             |
| Weight                                                                                         | 1.5 lbs (0.68 kg)                                                                                                                       |
| Installation (mounting hardware not included)                                                  | Screw: 3 x #10 (3 x M5)<br>Torque: 21 in-lbs (2.4 Nm) max.                                                                              |
| Mating Connectors and Accessories<br>Operating Voltage, Ground, and Configuration<br>I/O-Ports | 18 Pole Plug DT16-18SA or equivalent<br>4 Pole Plug 10 x DT06-4S or equivalent                                                          |
| DEUTSCH size 20 Socket<br>DEUTSCH size 16 Socket<br>DEUTSCH Seal Plug                          | 0462-201-20141<br>0462-201-16141<br>114017-ZX                                                                                           |
| Cable Length                                                                                   | Max. 98.4 ft (30 m)                                                                                                                     |
| Operating Voltage                                                                              | 8...32 V DC protected against reverse polarity                                                                                          |
| Operating Current                                                                              | 13 A continuous per pin max.<br>26 A max node current                                                                                   |
| Communication Interface and Baud Rate                                                          | 2 non-isolated CANOpen 250kb (default) & 500kb                                                                                          |
| Node ID                                                                                        | Node ID = 1<br>Offset 0...15 (J0: CNFGx-A/B)                                                                                            |
| Total Inputs and Outputs                                                                       | 16 (8 Inputs & 8 x 4 A Outputs)                                                                                                         |
| Inputs Diagnostics                                                                             | Over voltage and sensor power over current                                                                                              |
| Output (sensor power)                                                                          | 1 A max.                                                                                                                                |
| Operating Temperature                                                                          | -40...80 °C                                                                                                                             |
| Storage Temperature                                                                            | -40...85 °C                                                                                                                             |
| Protection Class                                                                               | IP67: Connector seal plugs required for unused pins.<br>Sealing plugs required for unused ports<br>IP68/IP69K: Using MDC xtreme cables. |

|      |             |          |      |                                            |          |      |                                                                                    |                 |
|------|-------------|----------|------|--------------------------------------------|----------|------|------------------------------------------------------------------------------------|-----------------|
|      |             |          |      |                                            | Date     | Name | <div>Data Sheet</div> <div>xtremeDB IO Module CANOpen</div> <div>xDB0808-DIO</div> |                 |
|      |             |          |      | Originator                                 | 05.13.20 | TMc  |                                                                                    |                 |
|      |             |          |      | Approved                                   | 05.13.20 | FSa  |                                                                                    |                 |
|      |             |          |      | <div><div>DATA</div><div>PANEL</div></div> |          |      |                                                                                    |                 |
| b    | DCN F363    | 08.11.20 | FSa  | A Murrelektronik Company                   |          |      | Art. No.: DP-34044-1-200                                                           | Sheet<br>1 of 5 |
| Rev. | Description | Date     | Name |                                            |          |      |                                                                                    |                 |
| a    | DCN F257    | 05.13.20 | FSa  | DP-34044-1-200_db_e_b.docx                 |          |      | The trademark DEUTSCH is owned by the TE Connectivity Ltd. family of companies.    |                 |

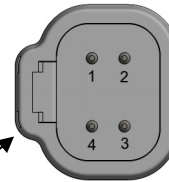
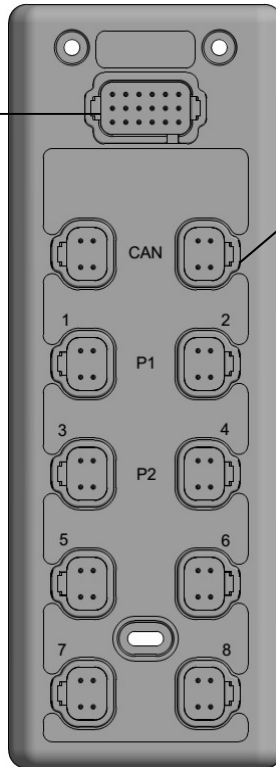
| Characteristics of the input / output ports                                               |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inputs Digital</b><br>Port5: 5B, 5A<br>Port6: 6B, 6A<br>Port7: 7B, 7A<br>Port8: 8B, 8A | <b>Positive switching</b><br><b>Positive counter</b><br><br><b>Ground switching</b><br><b>Input resistance</b><br><b>Input frequency</b>                                                                                                                                                                                           | >0.8 Vdc<br>Port7 7A, Port8 8A<br>10 – 3000 Hz<br><br><0.3 Vdc<br>0.71 MΩ<br>8 mSec                                                                                                |
| <b>Inputs Analog</b><br>Port5: 5B<br>Port6: 6B<br>Port7: 7B<br>Port8: 8B                  | <b>Voltage Input</b><br><b>Input voltage</b><br><br><br><b>Resolution</b><br><b>Input resistance</b><br><b>Input frequency</b><br><b>Accuracy</b><br><br><b>Current Input</b><br><b>Input current</b><br><b>Resolution</b><br><b>Input resistance</b><br><b>Input frequency</b><br><b>Accuracy</b><br><br><b>Ratiometric Input</b> | 0...5 Vdc<br>0...10 Vdc<br>0...32 Vdc<br><br>12 bit<br>3.3 MΩ<br>14 mSec<br>1% Full Scale<br><br>4-20 mAmp<br>12 bit<br>162 Ω<br>14 mSec<br>1% Full Scale<br><br>0-1000 (0-100.0%) |
| <b>Outputs</b><br>Port1: 1B, 1A<br>Port2: 2B, 2A<br>Port3: 3B, 3A<br>Port4: 4B, 4A        | <b>Digital Output</b><br><b>Output voltage</b><br><b>Switching current</b><br><br><b>PWM &amp; PWM(i) Output</b><br><b>PWM frequency</b><br><b>PWM(i) frequency</b><br><b>Switching current</b>                                                                                                                                    | 8...32 Vdc<br>4 Amps<br><br>40-1100 Hz<br>100-700 Hz<br>4 Amps                                                                                                                     |
| Operating States (LEDs)                                                                   |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                    |
|                                                                                           | Color                                                                                                                                                                                                                                                                                                                              | Status                                                                                                                                                                             |
| PWR                                                                                       | Blue                                                                                                                                                                                                                                                                                                                               | Module and Ports power are connected                                                                                                                                               |
| COM & STAT                                                                                | Green                                                                                                                                                                                                                                                                                                                              | Module and Communication status                                                                                                                                                    |
| FLT                                                                                       | Red                                                                                                                                                                                                                                                                                                                                | Fault Status                                                                                                                                                                       |
| IN                                                                                        | Yellow                                                                                                                                                                                                                                                                                                                             | Left LED – Input A<br>Right LED – Input B                                                                                                                                          |
| OUT                                                                                       | Yellow                                                                                                                                                                                                                                                                                                                             | Left LED – Output A<br>Right LED – Output B                                                                                                                                        |
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## Connector Interface



### Connections J0:

1. BAUD1-A
2. CNFG1-A
3. CNFG2-A
4. CNFG3-A
5. CNFG4-A
6. NC
7. BAUD1-B
8. CNFG1-B
9. CNFG2-B
10. CNFG3-B
11. CNFG4-B
12. GROUND B
13. BATTERY P1
14. BATTERY P2
15. NC
16. GROUND B
17. GROUND B
18. GROUND B



### Connections:

#### CAN Port 1 & 2

- Pin 1 = POWER
- Pin 2 = CAN HIGH
- Pin 3 = GROUND A
- Pin 4 = CAN LOW

#### OUTPUT Ports 1 to 4

- Pin 1 = GROUND B
- Pin 2 = OUTPUT B
- Pin 3 = GROUND B
- Pin 4 = OUTPUT A

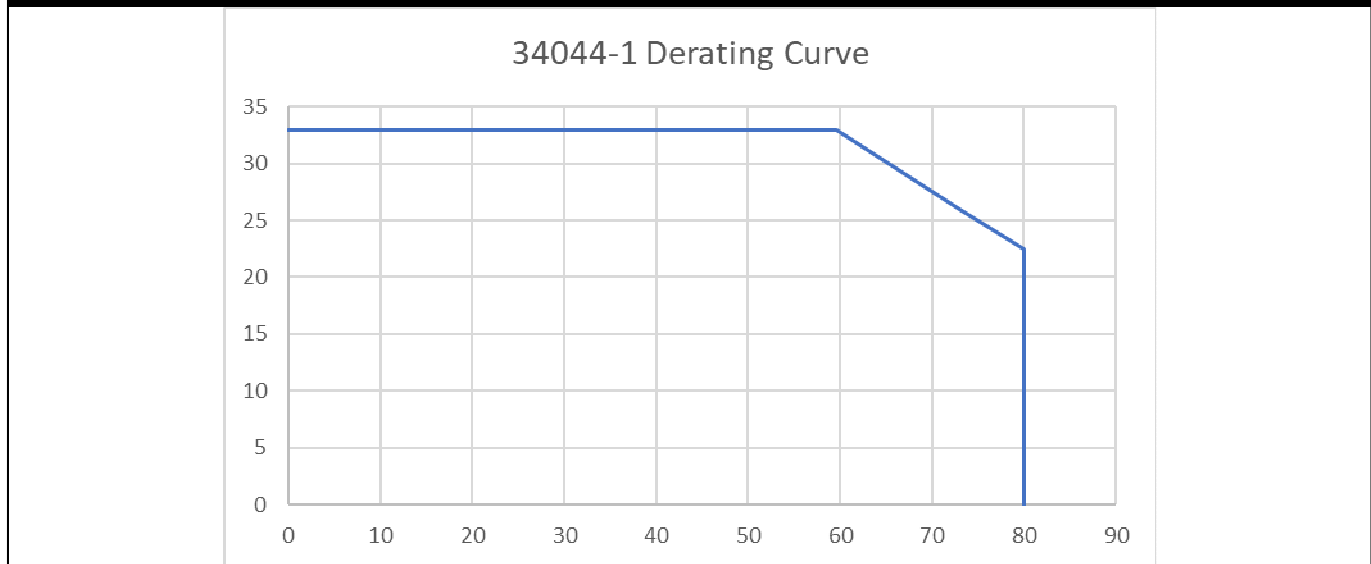
#### INPUT Ports 5 to 8

- Pin 1 = SENSOR POWER
- Pin 2 = INPUT B
- Pin 3 = GROUND A
- Pin 4 = INPUT A

|      |             |          |      |                                                                                |          |      |                                                                                    |  |        |
|------|-------------|----------|------|--------------------------------------------------------------------------------|----------|------|------------------------------------------------------------------------------------|--|--------|
|      |             |          |      |                                                                                | Date     | Name | <div>Data Sheet</div> <div>xtremeDB IO Module CANOpen</div> <div>xDB0808-DIO</div> |  |        |
|      |             |          |      | Originator                                                                     | 05.13.20 | TMc  |                                                                                    |  |        |
|      |             |          |      | Approved                                                                       | 05.13.20 | FSa  |                                                                                    |  |        |
|      |             |          |      | <div><div>DATA</div><div>PANEL</div></div> <div>A Murrelektronik Company</div> |          |      |                                                                                    |  |        |
| b    | DCN F363    | 08.11.20 | FSa  |                                                                                |          |      | <div>Art. No.: DP-34044-1-200</div>                                                |  | Sheet  |
| Rev. | Description | Date     | Name |                                                                                |          |      |                                                                                    |  | 3 of 5 |
| a    | DCN F257    | 05.13.20 | FSa  | DP-34044-1-200_db_e_b.docx                                                     |          |      | The trademark DEUTSCH is owned by the TE Connectivity Ltd. family of companies.    |  |        |

| Test Standards and Regulation |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Climatic Tests</i>         | <i>Cold Temperature to IEC 60068-2-1:2007, test Ad</i><br><i>Dry Heat to IEC 60068-2-2:2007, test Bb</i><br><i>Temperature Durability to IEC 60068-2-14:2000-08, test Nb</i><br><i>Temperature Shock to IEC 60068-2-14:2000-08, test Na</i><br><i>Humidity Soak to IEC 60068-2-78:2001, test Cab</i><br><i>Humidity Cycle to IEC 60068-2-30:2005, test Db</i>                                                                                                     |
| <i>Mechanical Tests</i>       | <i>Swept Sine Vibration to IEC 60068-2-6:2007, test Fc</i><br><i>Random Vibration to IEC 60068-2-64:2008, test Fh</i><br><i>Resonance Vibration to IEC 60068-2-6:2007, Section 8.1</i><br><i>Mechanical Shock to EN 60068-2-27:2008, test Ea</i><br><i>Mechanical Bump to EN 60068-2-27:2008, test Ec</i><br><i>IP protection to EN 60529:2000-09, test IP67, IP68, IP69K</i><br><i>Chemical Loads to ISO 16750-5:2010 Part 5: AA, BA, BC, BD, BE, CC, DB, DD</i> |
| <i>Electrical Tests</i>       | <i>Electrical Tests to ISO 16750-2:2012</i><br><i>EMC Immunity to ISO 13766-1:2018, ISO 13766-2:2018, ISO 13309:2010</i><br><i>EMC Emissions to ISO 13766-1:2018, ISO 13766-2:2018, ISO 13309:2010</i><br><i>Conducted Transients to ISO 13766-1:2018, ISO 13766-2:2018, ISO7637-2:2011, Annex A</i>                                                                                                                                                              |
| <i>CE</i>                     | <i>RoHS: Directive 2011/65/EU</i><br><i>EMI/EMC: Directive 2014/30/EU</i>                                                                                                                                                                                                                                                                                                                                                                                         |

### Derating Curve Max Total Current



|      |             |          |      |                                                                                |          |      |                                                                                    |  |        |
|------|-------------|----------|------|--------------------------------------------------------------------------------|----------|------|------------------------------------------------------------------------------------|--|--------|
|      |             |          |      |                                                                                | Date     | Name | <div>Data Sheet</div> <div>xtremeDB IO Module CANOpen</div> <div>xDB0808-DIO</div> |  |        |
|      |             |          |      | Originator                                                                     | 05.13.20 | TMc  |                                                                                    |  |        |
|      |             |          |      | Approved                                                                       | 05.13.20 | FSa  |                                                                                    |  |        |
|      |             |          |      | <div><div>DATA</div><div>PANEL</div></div> <div>A Murrelektronik Company</div> |          |      |                                                                                    |  |        |
| b    | DCN F363    | 08.11.20 | FSa  |                                                                                |          |      | <div>Art. No.: DP-34044-1-200</div>                                                |  | Sheet  |
| Rev. | Description | Date     | Name |                                                                                |          |      |                                                                                    |  | 4 of 5 |
| a    | DCN F257    | 05.13.20 | FSa  | DP-34044-1-200_db_e_b.docx                                                     |          |      | The trademark DEUTSCH is owned by the TE Connectivity Ltd. family of companies.    |  |        |

| Article Numbers |                                              |
|-----------------|----------------------------------------------|
| DP-34044-1-000  | J1939 Slave Module                           |
| DP-34044-1-100  | DPLoLogic™ enabled Master, user programmable |
| DP-34044-1-200  | CANOpen Slave module                         |



**DPLoLogic™**

User function / logic generating and programming tool for creating vehicle personality.  
Similar to Ladder Logic with user enhanced features for troubleshooting and diagnostics.



|                                                                                 |             |          |      |                                                                                |          |      |                                                                                    |        |
|---------------------------------------------------------------------------------|-------------|----------|------|--------------------------------------------------------------------------------|----------|------|------------------------------------------------------------------------------------|--------|
|                                                                                 |             |          |      |                                                                                | Date     | Name | <div>Data Sheet</div> <div>xtremeDB IO Module CANOpen</div> <div>xDB0808-DIO</div> |        |
|                                                                                 |             |          |      | Originator                                                                     | 05.13.20 | TMc  |                                                                                    |        |
|                                                                                 |             |          |      | Approved                                                                       | 05.13.20 | FSa  |                                                                                    |        |
|                                                                                 |             |          |      | <div><div>DATA</div><div>PANEL</div></div> <div>A Murrelektronik Company</div> |          |      |                                                                                    |        |
| b                                                                               | DCN F363    | 08.11.20 | FSa  |                                                                                |          |      | <div>Art. No.: DP-34044-1-200</div>                                                | Sheet  |
| Rev.                                                                            | Description | Date     | Name |                                                                                |          |      |                                                                                    | 5 of 5 |
| a                                                                               | DCN F257    | 05.13.20 | FSa  | DP-34044-1-200_db_e_b.docx                                                     |          |      |                                                                                    |        |
| The trademark DEUTSCH is owned by the TE Connectivity Ltd. family of companies. |             |          |      |                                                                                |          |      |                                                                                    |        |