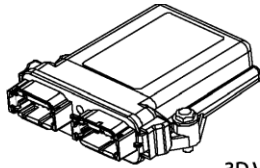


DAWN Mini ADAQ 1000™ Details

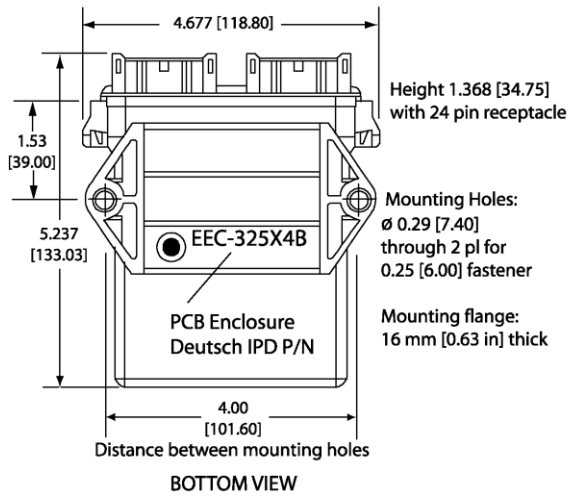
Housing Dimensions and Typical Connections:



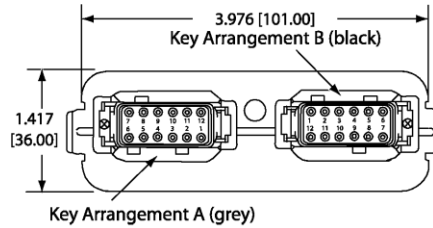
3D VIEW
Housing with 24 Pin Receptacle

HOUSING DIMENSIONS

Housing Material: High Temperature Nylon (Black)

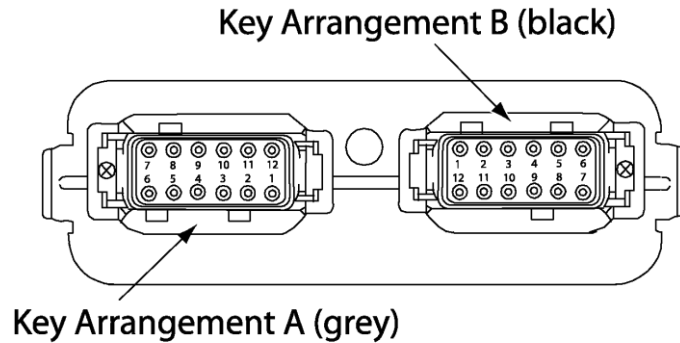


FRONT VIEW 24-PIN RECEPTACLE (NOT TO SCALE)



Mating Plug Assemblies for 24-pin receptacle:
Deutsch IPD P/N: DTM06-12SA and DTM06-12SB
with wedgelocks WM12S and contacts
(Contact factory for contact specification.)

Dimensions: inches [mm]
excluding mating plug(s)



FRONT VIEW 24 PIN RECEPTACLE

Table 5.0. Electrical Pin Out			
Grey Connector		Black Connector	
Pin #	Function	Pin #	Function
1	Analog GND 5	1	Input 6
2	Analog GND 4	2	Input 7
3	Analog GND 3	3	Input 8
4	Analog GND 2	4	Input 9
5	Analog GND 1	5	Input 10
6	Batt -	6	CAN_H
7	Batt +	7	CAN_L
8	Input 1	8	Analog GND 10
9	Input 2	9	Analog GND 9
10	Input 3	10	Analog GND 8
11	Input 4	11	Analog GND 7
12	Input 5	12	Analog GND 6

Power Input Specifications

Power Supply Input - Nominal	12 or 24Vdc nominal operating voltage 8...60 Vdc power supply range for voltage transients
Surge Protection	Provided
Reverse Polarity Protection	Provided
Quiescent Current	< 25mA @ Vin = 24V

General Specifications

Microprocessor	STM32F205VGT6
Communications	1 CAN port (2.0B, SAE J1939) A CANopen® model is available (PN AX030121). An on-board RS-232 port is used for factory programming only.
EMC Compliance	CE mark

Signal Input Specifications

Inputs	<p>10 user selectable inputs (See Table 1.0.)</p> <ul style="list-style-type: none"> Analog 12-bit (0-5V, 0-10V, 0-20 mA, 4-20 mA) PWM 12-bit (low or high frequency) Frequency/RPM Counter input 16-bit Digital (active high/active low) [ON when input $\geq 1.5V$] The "Input Sensor Type" setpoint is used to configure input type. <table border="1" data-bbox="532 478 1037 888"> <caption>Table 1.0. Inputs – Sensor Type Selections</caption> <thead> <tr> <th>Setpoint</th> <th>Input Type</th> </tr> </thead> <tbody> <tr><td>0</td><td>Disabled</td></tr> <tr><td>1</td><td>Voltage (0-5 V)</td></tr> <tr><td>13</td><td>Voltage (0-10 V)</td></tr> <tr><td>2</td><td>Current (0-20 mA)</td></tr> <tr><td>21</td><td>Current (4-20 mA)</td></tr> <tr><td>40</td><td>Frequency (0.5 to 50 Hz)</td></tr> <tr><td>41</td><td>Frequency (10 Hz to 1 kHz)</td></tr> <tr><td>4</td><td>Frequency (100 Hz to 10 kHz)</td></tr> <tr><td>3</td><td>PWM Low Frequency (<1 kHz)</td></tr> <tr><td>51</td><td>PWM High Frequency (>100 Hz)</td></tr> <tr><td>5</td><td>16-bit Counter</td></tr> <tr><td>6</td><td>Digital (normal)</td></tr> <tr><td>61</td><td>Digital (inverse)</td></tr> <tr><td>62</td><td>Digital (latched)</td></tr> </tbody> </table> <p>All inputs with the exception of 16-Bit Counter are sampled every 1ms. Analog Input types have a 12-bit resolution.</p> <p>With current inputs, short circuit protection is provided.</p>	Setpoint	Input Type	0	Disabled	1	Voltage (0-5 V)	13	Voltage (0-10 V)	2	Current (0-20 mA)	21	Current (4-20 mA)	40	Frequency (0.5 to 50 Hz)	41	Frequency (10 Hz to 1 kHz)	4	Frequency (100 Hz to 10 kHz)	3	PWM Low Frequency (<1 kHz)	51	PWM High Frequency (>100 Hz)	5	16-bit Counter	6	Digital (normal)	61	Digital (inverse)	62	Digital (latched)										
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Diagnosics	The 10 Universal Input ECU supports diagnostic messaging. DM1 message is a message, containing Active Diagnostic Trouble Codes (DTC) that is sent to the J1939 network in case a fault has been detected. The Universal Inputs setpoint group includes diagnostic related setpoints. There are three additional fault diagnostic setpoint groups namely Over Temperature, Over Voltage and Under Voltage.
Electrical Connections	Deutsch DTM series 24 pin receptacle (DTM13-12PA-12PB-R008) Mating plug: Deutsch DTM06-12SA and DTM06-12SB with 2 wedgelocks (WM12S) and 24 contacts (0462-201-20141). 20 AWG wire is recommended for use with contacts 0462-201-20141.
Packaging and Dimensions	High Temperature Nylon housing - Deutsch IPD PCB Enclosure (EEC-325X4B) 4.62 x 5.24 x 1.43 inches 117.42 x 133.09 x 36.36 mm (W x L x H excluding mating plugs)
Operating Conditions	-40 to 85°C (-40 to 185°F)
Weight	0.55 lbs. (0.25 kg)
Protection	IP67, Unit is conformal coated in the housing.
Mounting	Mounting holes sized for ¼ inch or M6 bolts. The bolt length will be determined by the end-user's mounting plate thickness. The mounting flange of the controller is 0.63 inches (16 mm) thick. If the module is mounted without an enclosure, it should be mounted vertically with connectors facing left and right to reduce likelihood of moisture entry. The CAN wiring is considered intrinsically safe. The power wires are not considered intrinsically safe and so in hazardous locations, they need to be located in conduit or conduit trays at all times. The module must be mounted in an enclosure in hazardous locations for this purpose. All field wiring should be suitable for the operating temperature range. Install the unit with appropriate space available for servicing and for adequate wire harness access (6 inches or 15 cm) and strain relief (12 inches or 30 cm).