DSE**M835** – 3.5” Programmable Display

Part Numbers: M835-02

Overview

The DSE**M835** is a 3.5” programmable display designed for use on vehicles and off highway machinery. The DSE**M835** provides users with outstanding flexibility. The DSE**M835** is configured using CODESYS 3.5.

Key Features

- Robust HMI / programmable display specifically designed for mobile applications
- Optically bonded 3.5” colour screen for harsh environments
- Auto on / off heated display for use in low temperatures
- Powerful processor with Cortex M7 400 MHz clock speed
- 1 MB of SDRAM and 8 MB of flash storage
- 4 configurable inputs, digital and analogue capability
- 3 configurable digital outputs
- 1 VREF output (to power sensors)
- Real time clock
- 2 independent CAN interfaces, each configurable as J1939 or Raw CAN
- PCAN interface for programming
- Flexible user programming via CODESYS 3.5
- IP67 protection / NEMA 6

Product Documentation

057-313 – DSE**M835** Installation and Operator Manual

NEMA6 IP67 CE

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Specifications	
DC Supply	
Continuous Voltage Rating	8 V DC to 32 V DC continuous
Maximum Operating Current	< 80 mA at 24 V without external loads < 100 mA at 12 V without external loads
Display	
Measurement	320 x 240 resolution 24 bit colour. Optically bonded.
Brightness	500 cd/m² (nit)
Inputs	
Quantity	4
Type	Voltage 0 V to 10 V Current 0 mA to 20 mA Resistive 0 Ω to 3400 Ω Frequency (Input 1 and Input 2 only) 1 Hz to 150 Hz Encoder (Input 1 only with Input 2 used as reference) 1 Hz to 150 Hz Digital Positive / Negative
Outputs	
Quantity	3
Type	Digital - High side / Low side
Processor	
Type	STM32h743
Speed	400 MHz Clock Speed
RAM	1 MB total 288 kB for CODESYS including application variables and fonts.
Non-volatile FRAM	16 kB for device settings and application persistent variables
Real Time Clock	
Date / Time Retention	Approximately 800 hrs when device is unpowered

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Registered in England & Wales No.01319649
VAT No.316923457

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Part Numbers: M835-02

Specifications	
Interfaces / Communications	
CAN	CAN Interfaces 2.0 A/B, ISO11898 50 kbits/s... 1 Mbit/s SAE J1939 or Raw CAN
Temperature	
Operating Temperature	-40 ˚C to +85 ˚C / -40 ˚F to + 185 ˚F
Storage Temperature	-40 ˚C to +85 ˚C / -40 ˚F to +185 ˚F
Dimensions	
Overall (W x H x D) with buttons	112.5 mm x 115 mm x 49 mm / 4.43” x 4.53” x 1.93” (W x H x D)
Panel Cut-Out	82 mm (3.23 “) hole is suitable. If a punch or milling machine is available, adding ‘flats’ at 74 mm (2.91 “) spacing serves to prevent rotation of the device in the panel cut-out.
Weight	1 kg 2.20 lb
Maximum Panel Thickness	6 mm / 0.24”

Related Products		
Programmable Controllers		
DSEM643	Programmable Controller (34 I/O)	M643-01
DSEM640	Programmable Controller (68 I/O)	M640-01
Expansion Devices		
DSE2170	CAN RTD / Thermocouple / Analogue Output Expansion Module	2170-01
DSE2160	CAN Input / Output Expansion Module	2160-01
Accessories		
Deutsch connector A, 18 way complete with pins		007-850
M835 / E050 connector harness		016-176
M835 / E050 configuration harness		016-177
PCAN USB PC configuration interface		016-179

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Environmental Testing Standards	
CE Marking	
EN 61000-6-2	Electromagnetic compatibility (EMC) noise immunity
EN 61000-6-4	Electromagnetic compatibility (EMC) emission standard
BS EN 61010-1	Safety requirements for electrical equipment for measurement, control and laboratory use
Water and Dust	
IEC 60529	IP67 / NEMA6
Salt Spray	
BS EN 60068-2-52	Test Kb - Salt Mist Cyclic (Sodium Chloride Solution) Severity 3 One test cycle consisting of: Salt mist temperature: +15 ˚C to +35 ˚C Spray period: 2 hours Followed by humidity storage period: 20 hours to 22 hours at 93 + 2 % to 3 % rh and +40 ˚C ± 2 ˚C Four test cycles (as above) to be applied followed by a Storage Period: 3 days @ 45 % to 55 % rh and +23 °C ± 2 °C
Mechanical Tests	
EN 60068-2-6	Vibration Resonance Search Freq range: 10 Hz to 2 kHz Acceleration: 10 g
EN 60068-2-64	Vibration Random Freq range: 10 Hz to 350 Hz
EN 60068-2-27	Mechanical Shock: Operational Shock Pulse Shape: Half Sine Amplitude: 50 g Duration: 11 ms Number of Shocks: 3 in each direction of each axis (9 in total of each duration)
EN 60068-2-27	Mechanical Shock Amplitude: 50 g Duration: 6 ms
Load Dump	
ISO 7637-2	151 V (Ri 1 Ω) 202 V (Ri 8 Ω)

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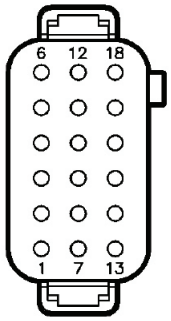
Connector A			
Pin	**Description**	**Comments**	**Switching Current**
1		Batt GND	
2		CAN Screen	
3		CAN 1 L	
4		CAN 1 H	
5	IA004	AIN	
6	IA001	AIN, FREQ, ENC	
7		VDC Batt +	
8		CAN Screen	
9		CAN 2 L	
10		CAN 2 H	
11		GND	
12	IA002	AIN, FREQ	
13		VREF GND	
14	QA001	OUT H, L	1 A
15	QA002	OUT H, L	1 A
16	QA003	OUT H, L	1 A
17		VREF Out +ve	100 mA
18	IA003	AIN	

Connector Diagrams



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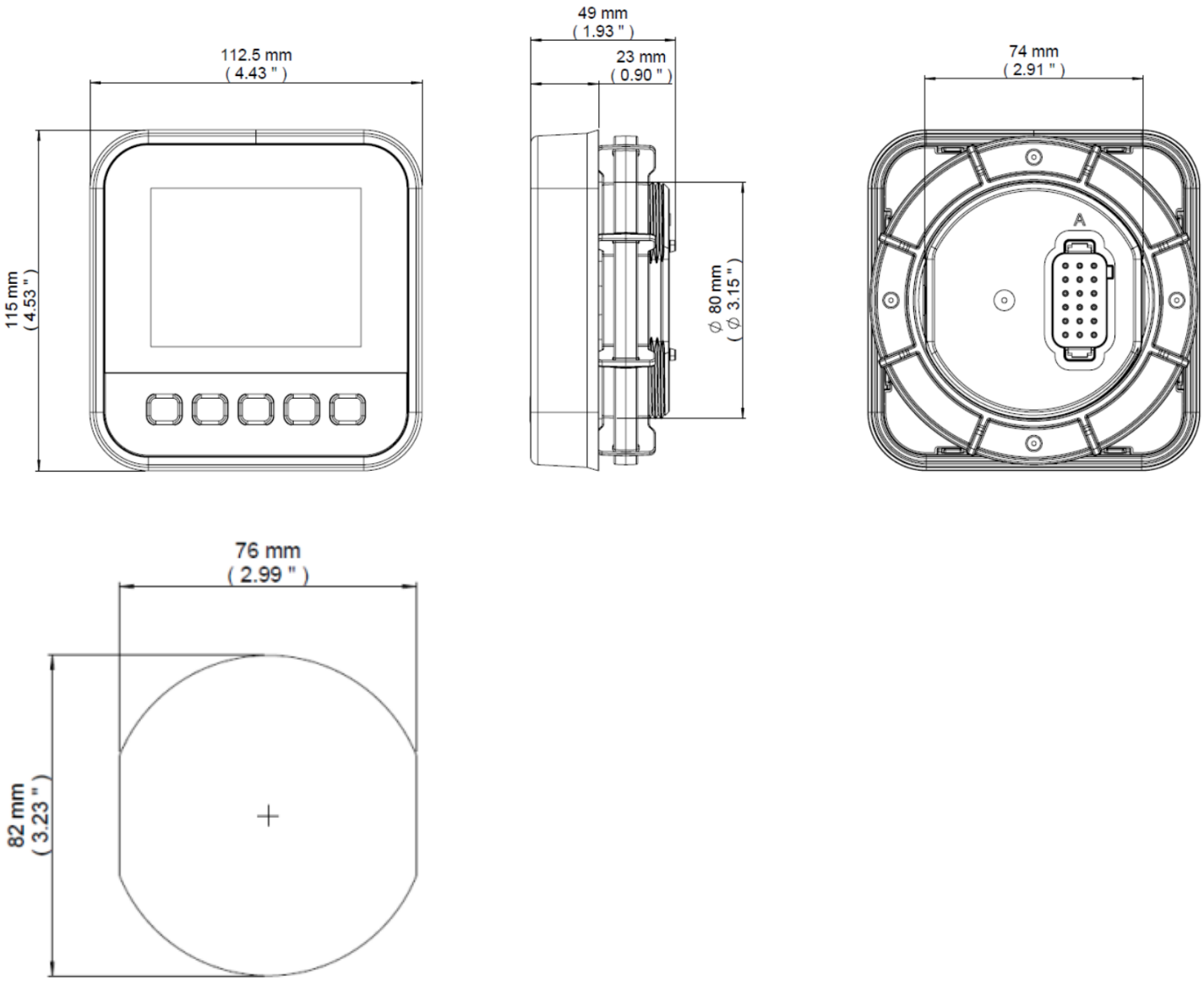
Technical Drawing



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