Danetech srl

Via Italo Calvino 7
Lotto 1 - Edificio A13-14
20017 Rho (MI)

Tel. +39 02 36569371
info@danetech.it
www.danetech.it

MicroDaq-8

512 Channel Pressure Acquisition System

Chell Instruments

- *Intelligent pressure scanner module with engineering unit output.*

- *Compatible with all TE/PSI 16, 32 and 64 channel Pressure Scanners.*

- *Up to 0.05% FS accuracy output.*

- *Complete with IEEE 1588 PTPV2 time stamping*

- *Up to 892 Hz per channel measurement frequency.*

- *Output over Ethernet (100Mbit TCP / UDP) and CAN.*

- *Rugged enclosure for on-vehicle applications.*

- *Fully configurable over Ethernet with embedded web server.*

The MicroDaq-8 is a further development of the well established Chell MicroDaq range. The MicroDaq-8 is a miniature acquisition system capable of acquiring from up to 8 x TE HD DTC or MicroScanner series pressure scanners.

The MicroDaq-8 handles all the scanner interfacing and outputs engineering unit data over Ethernet and CAN.

Like the MicroDaq2, the MicroDaq-8 features hardware implementation of the IEEE 15888 PTPV2 precision time stamping protocol and a conventional hardware trigger for data synchronisation.

The MicroDaq-8 also has an embedded web server for all setup functions.

The MicroDaq-8 consists of two high accuracy 18 bit analogue to digital converters (ADC's) and two powerful processors – one to control the data acquisition and one to control the data output interface.

The ADC's will acquire pressure and temperature data for every data point. The temperature data is used to modify a pressure to compensated pressure look-up-table as the measured temperatures change. This ensures that the temperature compensation is continuous and doesn't require the system to stop and acquire temperature data as a separate event.

All the ADC's, processors and associated electronics are mounted on a single PCB ensuring reliability.

The MicroDaq-8 gives the user access to all the features of a DTC scanners such as 3X deranging option and shuttle valve position sense via the Ethernet interface or embedded web server.

The MicroDaq-8 can multiplex the scanners at 14.285 kHz giving a maximum acquisition speed of 892 Hz per channel when 16 channel scanners are used (16MS). When all 512 channels are used (8 x 64 channel scanners), data can be collected at 223Hz per channel.

The data is available over Ethernet which is auto-negotiating 10/100Mbit. The Ethernet output can be configured as TCP or UDP.
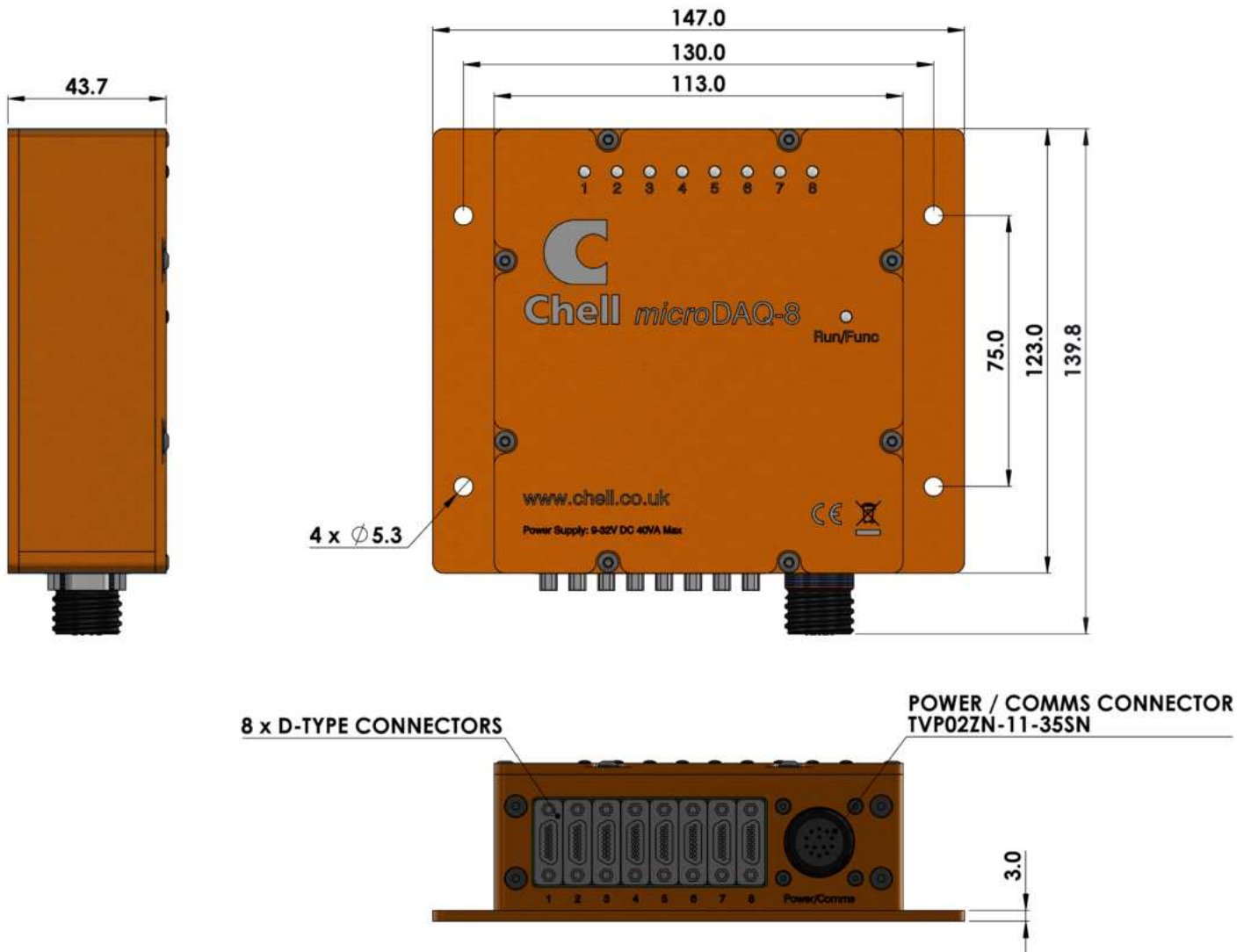
For diagnostic purposes, the MicroDaq-8 senses the current sourced by each scanner. In addition, a LED indicates the presence of a DTC scanner on each channel.

The MicroDaq-8 is packaged to enable it to withstand the harsh environments of on-vehicle testing.

MicroDaq-8 Specifications	
	MicroDaq-8
Compatible scanners	TE HD series DTC scanners (Gen1 or Gen 2) and 16MS MicroScanners
High speed data output.	CAN and Ethernet (TCP/IP and UDP)
System accuracy (DTC scanner range ≥ 5 PSI)	+/- 0.05% FS
System accuracy (DTC scanner 10" water ≤ range ≥ 5 PSI)	+/- 0.1% FS
System accuracy (DTC scanner range < 10" water)	+/- 0.15% FS
Dimensions (width x depth x height in mm)	147x 139.8 x 43.7
Weight	~750 g
Acquisition Speed -512 channels (measurements / channel / second).	223
Input supply	24 VDC
Consumption at 24 VDC	3A
System resolution	18 Bit
Operating temperature range	+5 to+90°C
Storage temperature range	-20 to+90°C
Maximum relative humidity	95% at 50°C (non-condensing)
Ethernet specification	Auto-negotiating 100Mbit TCP/IP or UDP (user configurable)
CAN specification	2.0 B
Time stamp resolution (IEEE 1588 PTPv2)	1µS
Mating connector (scanners)	15 way sub-miniature 'D' type
Mating connector (power and comms)	Amphenol 2M805-001-16-C-10-13-P-A

0687

147.0

130.0

113.0

43.7

139.8

123.0

75.0

Run/Func

Chell microDAQ-8

www.chell.co.uk

Power Supply: 9-32V DC 40VA Max

4 x ⌀ 5.3

8 x D-TYPE CONNECTORS

**POWER / COMMS CONNECTOR
TVP02ZN-11-35SN**

3.0

1 2 3 4 5 6 7 8   Power/Comms