

- **Compact pressure acquisition system.**
- **Complete self-contained pressure acquisition system in a heated enclosure**
- **Temperature compensated (DTC) scanner with 0.06% FS accuracy**
- **Output available over Ethernet, RS232, CAN and ARINC 429*.**
- **Complete with barometric reference measurement to provide absolute pressures.**
- **Complete a purging facility for the pressure lines.**
- **Up to 625KHz per channel acquisition speed (over Ethernet or CAN).**



The HFL64 is a self contained single scanner acquisition system based on the successful Chell CANdaq and the Pressure Systems® pressure scanner. It provides a total solution to in-vehicle acquisition.

The HFL64 has within it a heated enclosure into which all the sensors and electronics are mounted. This gives the HFL64 and operating temperature range of -40°C to 50°C.

The HFL64 can take full advantage of the Pressure Systems DTC technology® within the scanners reducing errors to $\pm 0.06\%FS$. Additionally, the reference lines of the scanner are measured by a Honeywell HPB barometric transducer which measured this reference to 0.01%FS. This enables to user to measure absolute pressure without any additional pipe-work or transducers.

The HFL64 also has an integral purge system so the user can control the purging of the pressure lines over the digital interface.

The HFL64 requires a 7 bar shuttle pressure input together with a regulated purge pressure input to perform the purge function.

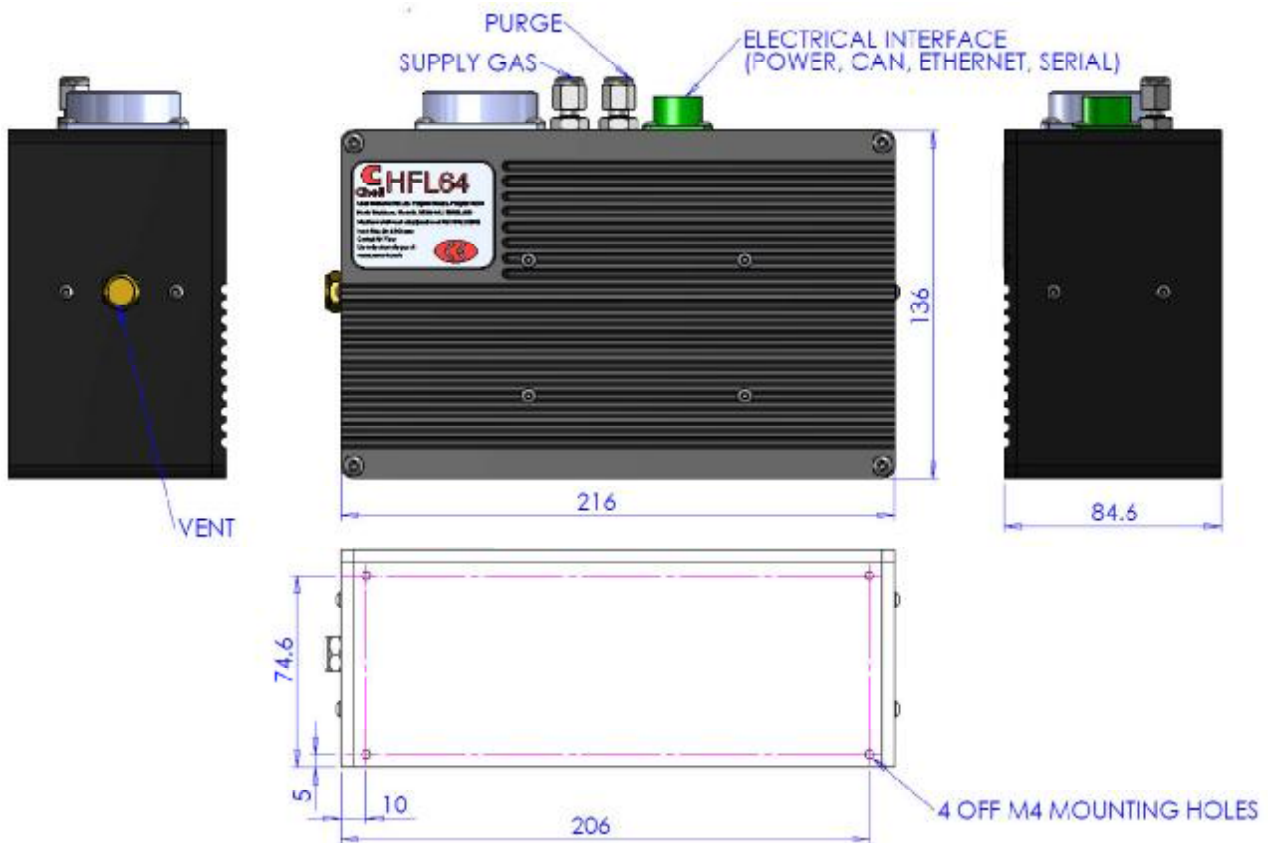
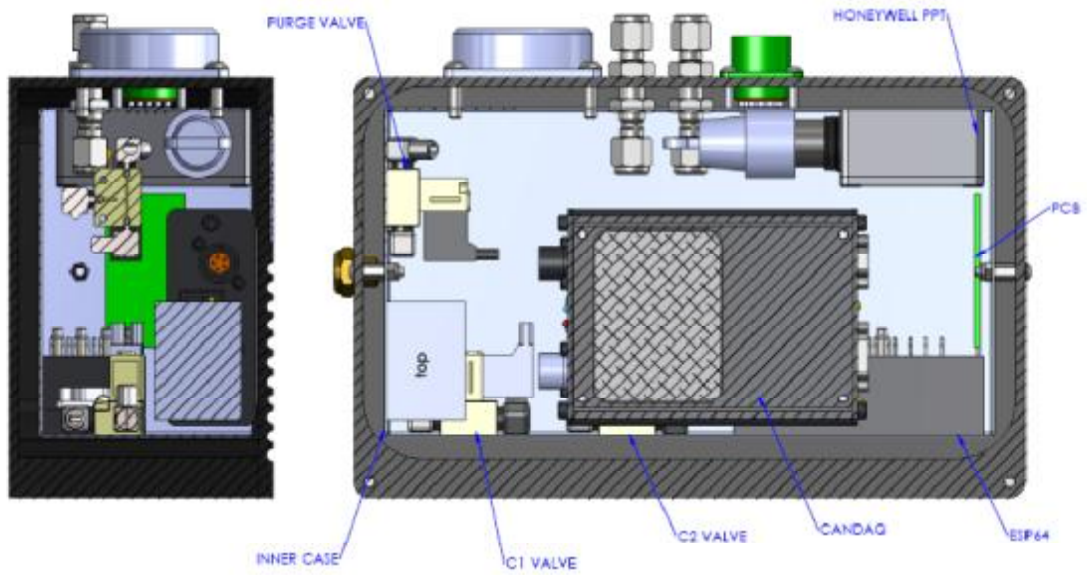
Chell can provide the necessary pneumatic regulation and gas storage if necessary

The control and measurement of the pressure scanner is done over a choice of interfaces; Ethernet, CAN, RS232 and ARINC 429* (*consult the factory for details on the ARINC 429 interface). The unit can be configured to broadcast engineering unit outputs either when polled or by default. If by default, the HFL64 will output data as soon as it has booted up, thereby eliminating and set up and initialisation requirements. The reference transducer is connected by an addition RS2323 or RS485 bus.

All the pressure measurement lines are terminated on a quick disconnect to facilitate quick installation and all digital interfaces are available on the circular mil spec electrical connector.

The software supplied with the HFL64 allows the user to configure the acquisition in terms of speed, averaging and thermal compensation method used. It also provides a calibration interface, real time data window and data logging facilities. Easy to use wizards are also available to help configure the HFL64 to the application.

| HFL64 Specifications | |
|--|--|
| Pressure Measurement Performance | |
| Number of channels | 32 or 64 |
| Ranges available | 1 Kpa to 689 Kpa (4" water to 100 psi) |
| System accuracy (DTC scanner ranges ≥5psi) | +/- 0.06%FS |
| System accuracy (DTC scanner ranges <5psi) | +/- 0.1%FS |
| System accuracy (conventional scanner) | +/- 0.25%FS |
| System resolution | 14 bit |
| Maximum acquisition speed (Ethernet)* | 32 chl : 625Hz and 64 chl : 312Hz |
| Maximum acquisition speed (CAN)* | 32 chl : 500Hz and 64 chl : 312Hz |
| Maximum acquisition speed (RS232)* | 32 chl : 70Hz and 64 chl : 35Hz |
| *All speeds are quoted are measurements / channel / second | |
| Barometric Measurement Performance | |
| Measurement range | 500 to 1200 hPa (mbar) (other ranges available) |
| Measurement accuracy | +/- 0.01%FS |
| Measurement update rate | 1 Hz |
| Services Required | |
| Input supply voltage | 28 VDC @ less than 65 VA max |
| Gas supply | 7-8 bar dry air or nitrogen |
| Purge supply | Regulated dry air or nitrogen |
| Physical Properties | |
| Dimensions | 216 x 84.6 x 136 |
| Weight | 2.90 Kg |
| Operating temperature range | -40 to 50°C |
| Storage temperature range | -40 to 70°C |
| Maximum relative humidity | 95% at 50°C (non-condensing) |
| Warm up time to full accuracy | 30 mins (assumed unit already stabilised at ambient) |
| Heater controller | Adjustable. Factory set to 40°C |
| Measurement ports | 37 way QDCC for 32 channels, 73 way QDCC for 64 channels |
| Interfaces | |
| Ethernet | 10 or 100 mbps auto switching. Unit incorporates an intelligent switch with a single Ethernet output |
| CAN | CAN 2.0B configurable between 100k and 1M |
| RS232 | Maximum baud rate 57600, RS232 used for setup, not recommended for high speed acquisition. |
| ARINC 429 | Consult factory |
| Mil spec connectors used for power, Ethernet, CAN, RS232, ARINC 429 and H/W trigger (optional) | |



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