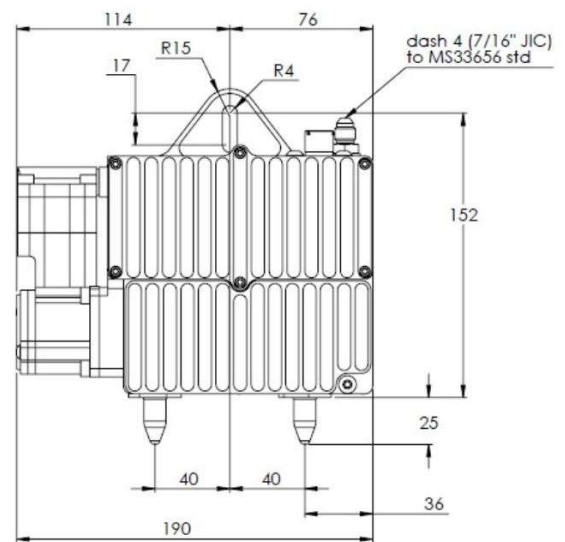


## Installing The Air Power Source.

The Air Power Source replaces a separate compressor and accumulator. It is a combined accumulator and compressor with integrated control electronics which provides a light weight and extremely compact pneumatic power source for the shift and related vehicle pneumatic systems.

### Installation Steps:

1. Select a suitable location for the APS. The APS can be mounted horizontally or vertically. The APS mounts via two feet which should ideally engage with rubber bushes and one retaining bolt. It is recommended the APS is installed with the air intake away from the direction of vehicle travel, ensure there is sufficient clear space around the APS and that there are no direct heat sources close to the APS.
2. Connect a -4 Air hose from the APS to the actuator or device you wish to supply with pneumatic power, use copperslip if required not Loctite or PTFE tape. In the case of multiple items requiring pneumatic power a dash 4 T-Piece can be used in a convenient position to split the air system.
3. Make the electrical connection to the vehicle. The APS is equipped with a Deutsch Autosport Connector of type AS010-35PN which requires a mating half of type AS610-35SN. Use the correct crimp tool when fitting this connector to the mating loom. The APS Connector pin out is provided in the table below:



Pin No	Definition
1	+12V Battery
2	+12V Battery
3	+12V Battery
4	+12V Battery
5	GND
6	GND
7	GND
8	GND
9	CAN High

Pneumatic systems • Paddle shift • Clutch control • DRS • Boost control

10	CAN Low
11	+12V Battery – clean supply low power
12	+12V Battery
13	GND

## Configuring An ECU With Transmission Control To Use APS.

The APS is self contained with regards control of the system pressure etc. and transmits information related to the system status via CANBus. CAN transmit information is provided below to allow configuration of your ECU:

TX/RX	Name	Message ID	Rate	Start Bit	Length	Scaler	Big Endian
TX	SYSTEM PRESSURE	0x798	2ms	0	8	X0.05	No
TX	VBAT APS	0x798	2ms	8	8	X0.1	No
TX	APS TEMP	0x798	2ms	24	8	X1 – 40	No
TX	ON TIME	0x798	2ms	32	16	X36	No
TX	ERROR STATE	0x798	2ms	48	8	X1	No

The ERROR STATE message provides diagnostic information on the APS in the form of a bit code. The below table shows the relevant message for each bit code:

Code (decimal)	Bit	Failure
0	No errors	
1	0	Error Compressor Pressure sensor out of range
2	1	Error Compressor Temperature sensor out of range
4	2	Error Voltage out of range
8	3	Error Pressure Rise Fail
16	4	Error Max Pressure exceeded
32	5	Error Max Temperature exceeded
64	6	Error System run-time exceeded
128	7	Error Pressure Rise Max fail count exceeded