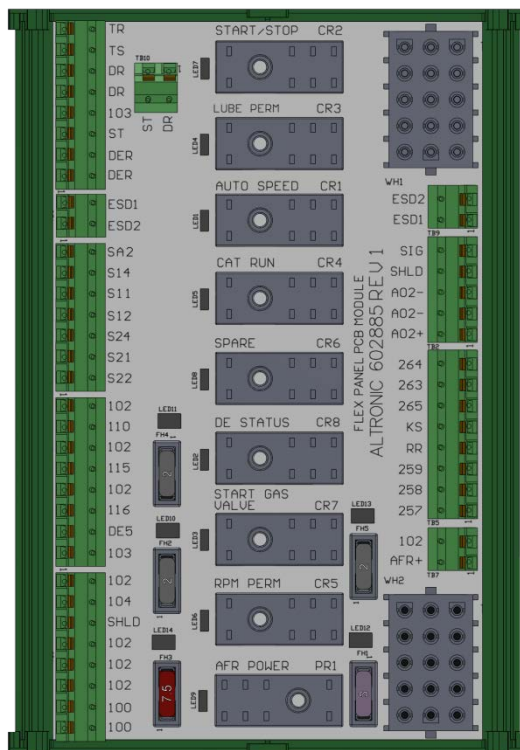


Flex Panel PCB

Flex panels are any DE-3000 panel with a beginning number of 5800-333 or 5800-334.

To increase our capacity, Altronic in Garland, Texas has developed a new Printed Circuit Board (PCB). The PCB is designed to house the majority of custom wiring between the relays, fuse blocks, diode blocks and resistors. It also provides two harness connections for the majority of the wiring that connects to the DE-3000 and remote mounted accessories on the main panel door. Testing shows that production and overall panel reliability are improved.

This is a computer-generated image of the PCB.



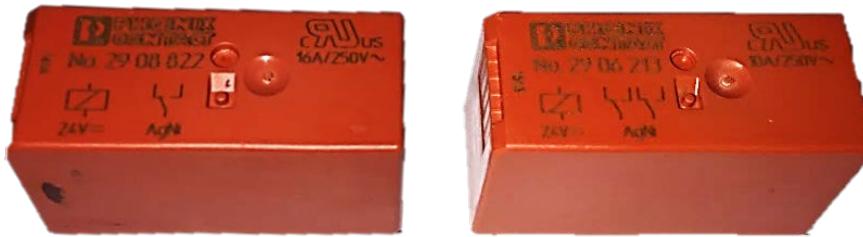
The PCB is equipped with spring-loaded terminal blocks, relay sockets, automotive style fuses and two harness connections.

Relay sockets include all standard relays and one spare. Each relay socket has a blue LED that illuminates when the coil is energized. Each fuse base has a red LED indicating when the fuse is missing or blown; as long as a circuit load is applied downstream of the fuse socket.

All customer connections that were previously located on separate terminal blocks remain, however, they are now on the PCB. The drawing of the original panel remains exactly the same, with the addition of chevrons on the wires that connect to the PCB. Wires no longer in the panel as loose wires,

but solely on the PCB, have had their color ID changed from the color description to the abbreviation PCB. Wires that are grouped in one of two harnesses have had the color ID changed to WH1 or WH2. The WH1 connector is at the top right side of the PCB and the WH2 connector is located at the bottom right side of the PCB.

The spare relay can be turned on by grounding the SPRC- (A2) terminal. The relays are the same relays that Altronic has been using. Altronic now stocks these relays as Cartridge replacements. These will work on this PCB as well as existing relays in older generation panels. The large gray 10 AMP relay has been replaced with a newly designed small 10-AMP relay. It will be available this year. The new 10-AMP relay looks the same as the 6-AMP relay, but it is functionally very different and therefore cannot be interchanged.



The relay cartridge on the left is Altronic part number 1002-4177-00. It is a 10-AMP relay, SPDT. This relay can only be used on the PR1 (Air Fuel Ratio) socket on the PCB or on a special green relay base.

The relay cartridge on the right is Altronic part number 1002-4181-00. It is a 6-AMP DPDT. This relay can be used on the PCB and all traditional green relay bases.

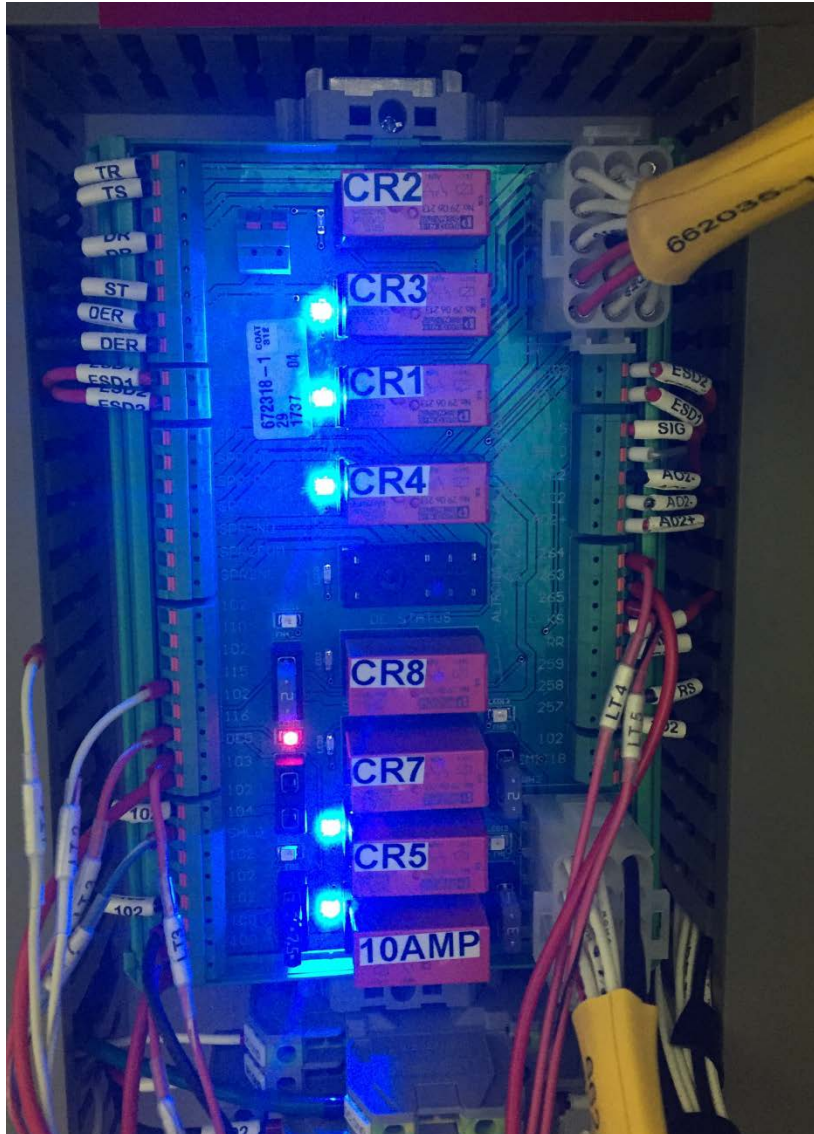
For convenience, Altronic has labeled all 6-AMP relays with the Contact relay number. The spare relay socket is not populated. The relay cartridges use friction-type connectors to hold them in place, but each socket has a channel



under it to allow the use of a wire tie to hold the relay in place should the unit be installed in a higher than normal vibrating environment.

Everything on the board, including all terminals, is labeled with white silk screen ink from the Altronic factory. The wire terminals for customer connections are spring loaded. This prevents wire connections from coming loose. 16- and 18-gauge wires are recommended, with a 10-millimeter exposed wire core and no wire end ferrule. To insert or remove a wire, push in on the orange tab with a small screwdriver.

The installed PCB uses considerably less space than those found in the original flex panel series.

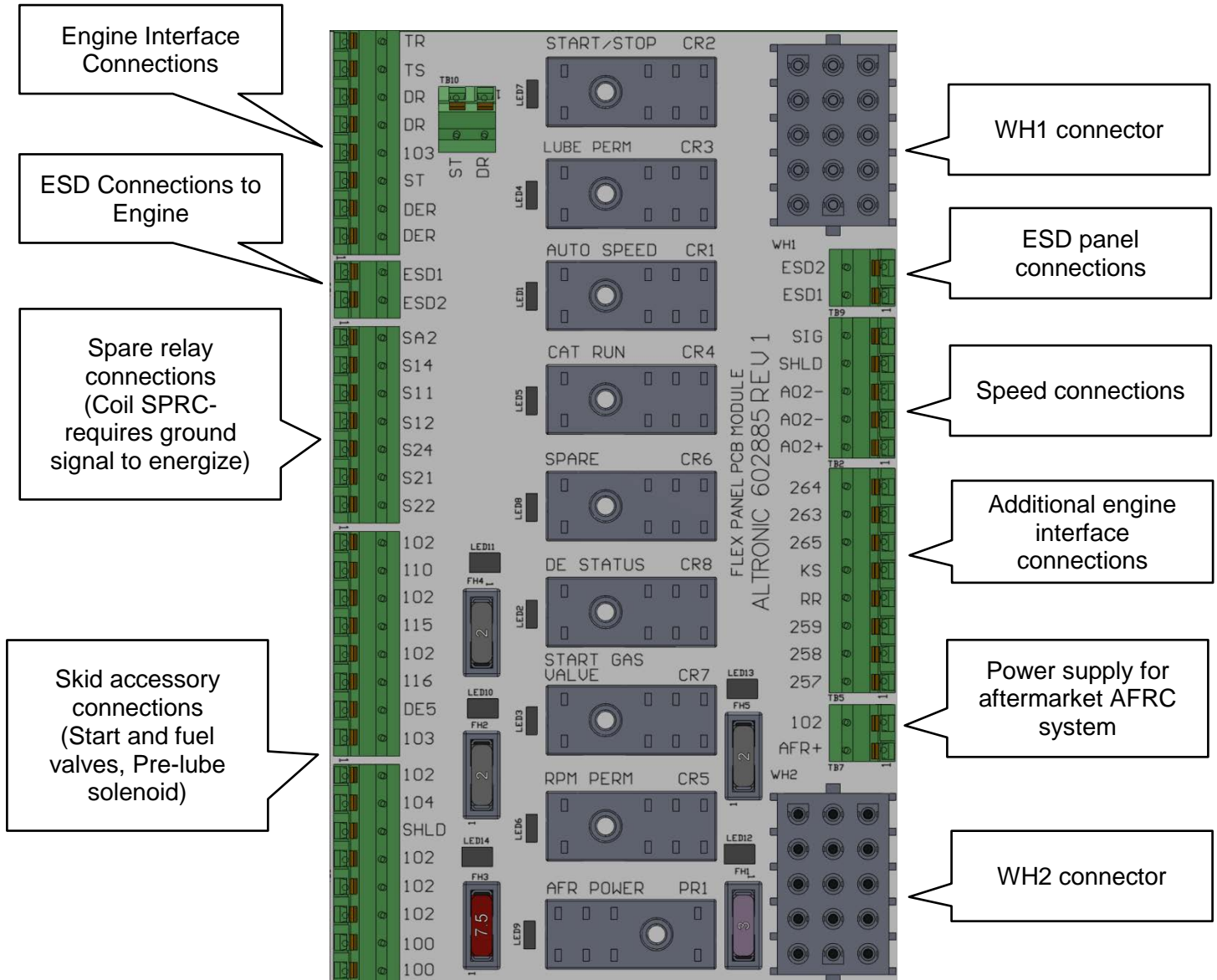


PCB installed in a panel during the QC process. One fuse has been removed to show the red LED. This is the same as if a fuse was blown.

Key Part numbers:

691763-1	Flex Panel PCB
662035-1	WH1 Harness
662034-1	WH2 Harness
1002-4177-00	10 AMP Relay Cartridge SPDT
1002-4181-00	6 AMP Relay Cartridge DPDT
1002-5716-00	2 AMP Fuse
1002-5717-00	3 AMP Fuse
1002-5718-00	7.5 AMP Fuse

Customer Connections



Fuse legend

F1	Main Power	3AMP
F2	Spare accessory Power	2 AMP
F3	AFRC Power	7.5AMP
F4	Pre-lube Solenoid Power	2 AMP
F5	Fuel / Start Valve Power	2AMP