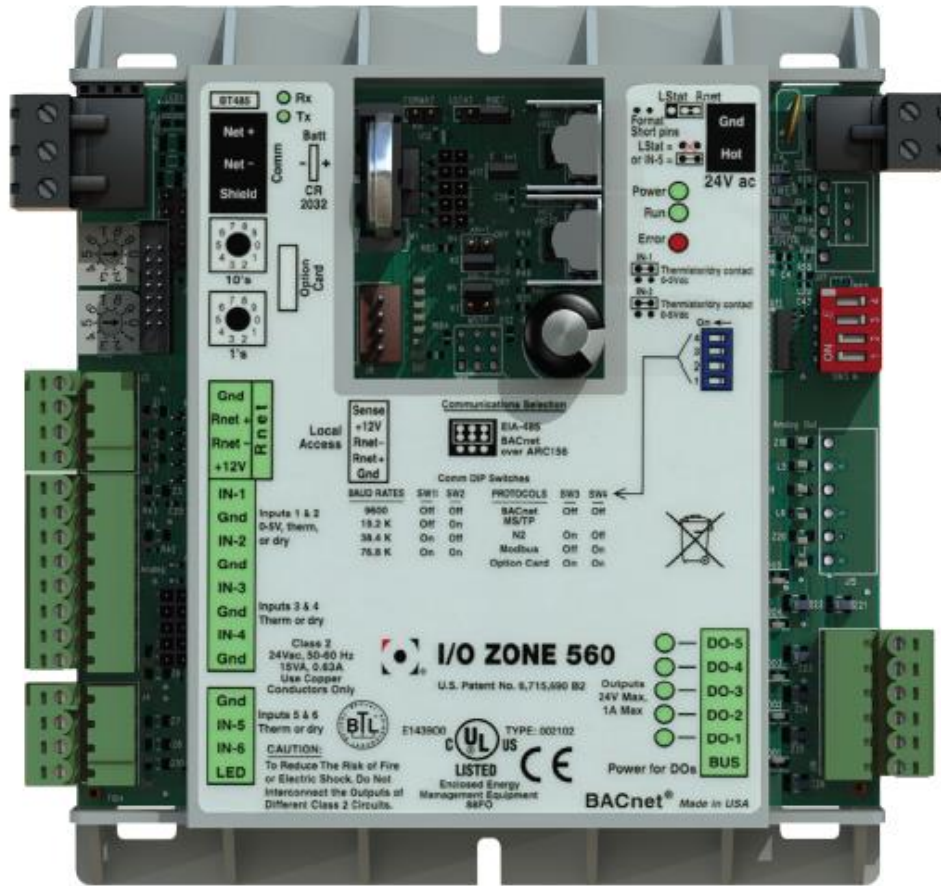


New Paragon™ Slide Valve Controller (PCM)



New ParagonTM Kits

Paragon Capacity Control and Protection Module Kits

***2BSB000928 PCM Controller included in Kit*

Part #	Description	Application
2BSB000928	PCM Controller	All Paragon Compressors
**6BSB000929	High Temp Paragon Controller Kit	R134A
**6BSB000930	Low Temp Paragon Controller Kit	R404A
6BSB000931	Transducer Kit	Required if Control Variable is Pressure
USB-L	PCM Interface Cable	Cable Interface between Controller and Laptop.

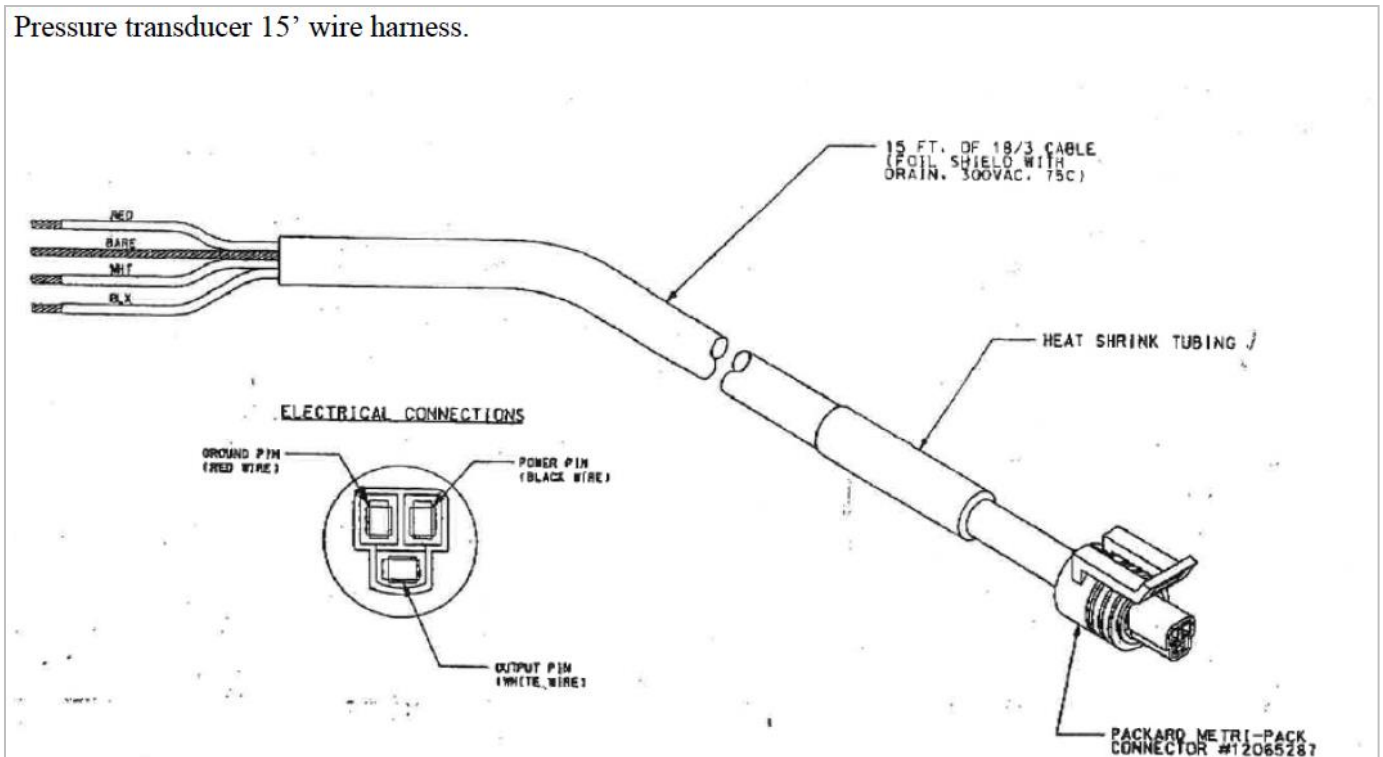
Paragon™ Slide Valve Pressure Transducer Kit 6BSB000931

5 VDC Pressure Transducer

P/N: HK05YZ0003



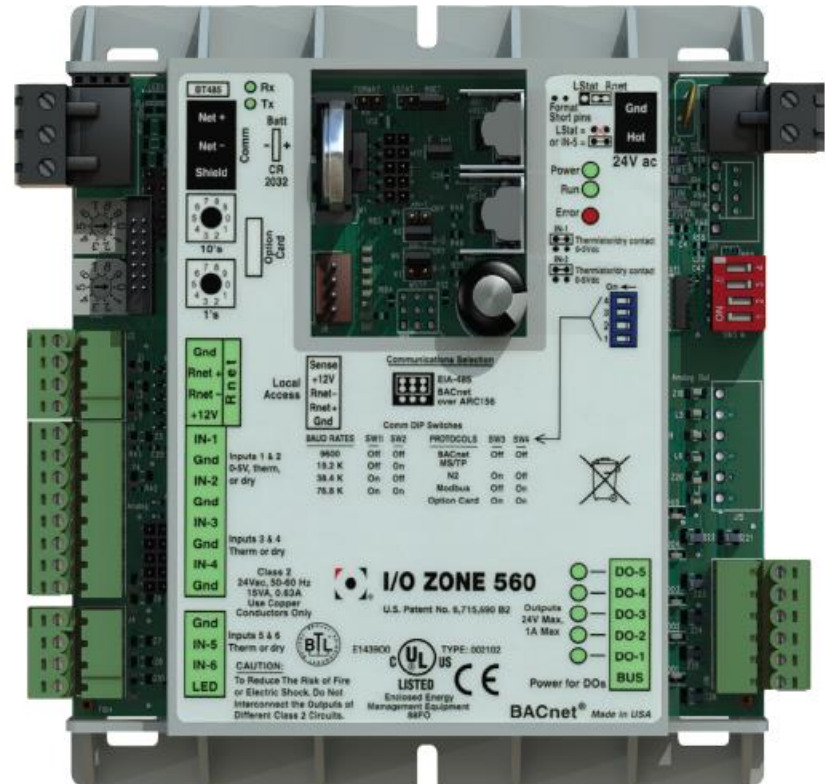
Pressure transducer 15' wire harness.



Paragon™ Slide Valve Controller

General Description

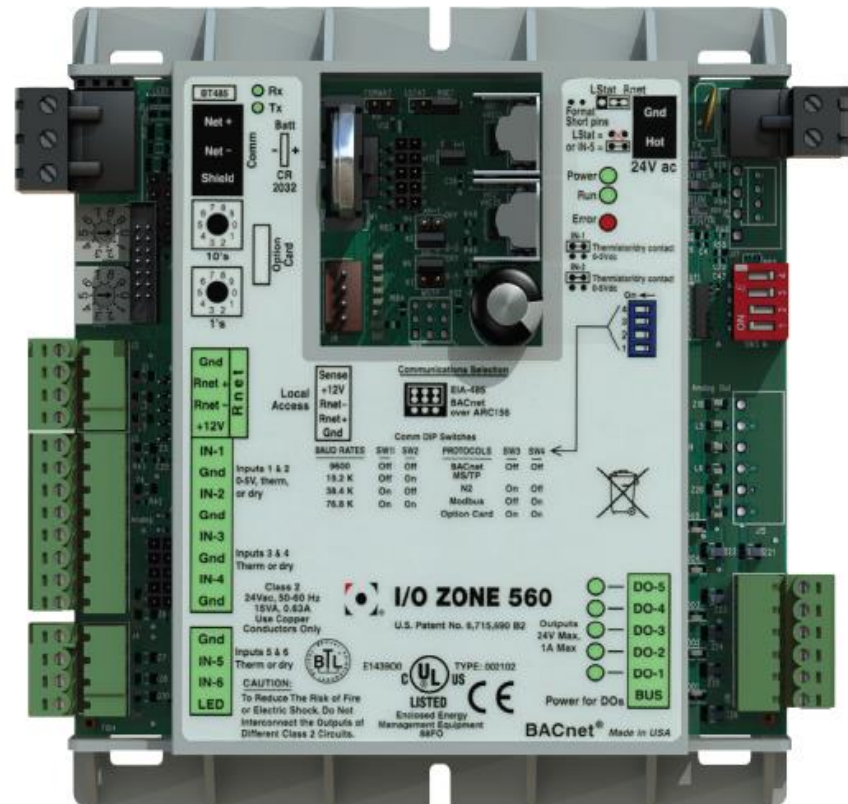
- The Paragon Control Module (PCM) will function to control compressor capacity by operating the compressor unloading slide valve as directed by a pressure transducer or NTC temperature sensor input (control variable) to the PCM.
- The PCM will have functionality to protect the compressor from high motor and discharge temperatures and loss of oil flow to the compressor.
- The PCM will provide LED fault status indication to the end user.
- The PCM is Network capable to communicate to the System Controller using MODBUS, LonWorks, BacNet, or N2. These network parameters are all preconfigured and setup in the PCM.
- PCM comes pre-loaded with Carlyle Software
- PCM is part of a Carlyle Controls Package Kit that provides the user with all necessary hardware to install the PCM and Protection Components.



Paragon™ Slide Valve Controller

Features

- **User Configurable:**
 - Slide Valve & Compressor Protection
 - Slide Valve control only
 - Compressor protection only
 - Control set-point – Pressure or Temperature
- **PCM Inputs:**
 - Controller Set-point – Suction Pressure Transducer or temperature sensor
 - Motor Temperature Sensor
 - Discharge Temperature Sensor
 - Oil Flow
 - Oil level
- **PCM Outputs:**
 - Slide Valve unloader Coils #1 and #2
 - Motor Cooling Valve
 - Compressor start/stop circuit
 - LED Fault Code outputs for:
 - High Motor Temp
 - High Discharge Temp
 - Loss of oil flow to compressor
 - Low oil level in Oil Separator
 - Faulty sensor
- **Network capable – ModBus, BacNet, LonWorks, N2 Open, and RS485 Communication Port**



Paragon™ Slide Valve Controller

LED Fault Indication

The PCM will provide an LED alarm output signal to the System Controller when a compressor fault condition arises. This signal is through Output #4 and or the Communication Port.

Fault Description	LED Indication (Output #4)	Output #5	Compressor	Manual Reset Required
High Discharge Temperature Trip	Solid Red	Opens/De-energized	OFF	Yes
High Motor Temperature Trip	Constant Blinking	Opens/De-energized	OFF	Yes
Compressor Oil Trip	One blink & 2 second pause	Opens/De-energized	OFF	Yes
Faulty Transducer/Thermistor Slide Valve Sensor	Two blinks & 2 second pause	Opens/De-energized	OFF	Yes
Faulty Motor Temperature Thermistor	Three blinks & 2 second pause	Opens/De-energized	OFF	Yes
Faulty Discharge Temperature Thermistor	Four blinks & 2 second pause	Opens/De-energized	OFF	Yes

ParagonTM Slide Valve Controller

PCM Control Points

Motor and Discharge Temperature Control Points

ALC Controller	Injection On (°F)	Injection Off (°F)	Shutdown Compressor (°F)	Manually Reset Compressor (°F)	Time Delay required before manual reset (sec)
Discharge Temp (Td)	NA	NA	Td > 225	Td < 175	30
Motor Cooling Temp (Tm)	Tm > 240	Tm < 225	Tm > 270	Tm < 225	30

Slide Valve Override Control Points

ALC Controller	<u>Restrict Further Compressor Unloading</u> Energized SV Coil #2 continuously (°F)	<u>Fully Load Compressor and restrict unloading below 100%</u> Energize SV Coil #1 and Coil #2 continuously (°F)
*SV – Discharge Temp (Td)	200 < Td < 215 (discontinue SV override when Td < 198F)	Td > 215F (discontinue SV override when Td < 213F)
*SV – Motor Cooling Temp (Tm)	245 < Tm < 260 (discontinue SV override when Tm < 243F)	Tm > 260F (discontinue SV override when Tm < 258F)

*SV – Slide Valve