

Technical Bulletin

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Protection Codes on Hitachi Utopia and Set-Free units are commonly misinterpreted as Fault Codes.

The “P” Code or Protection Activation Code is a status output from the main PCB. Changes in temperature, ambient conditions, oil return, gas pressure and readings from all thermistors are constantly monitored to prevent abnormalities or faults occurring on the system.

When a system is initially commissioned or has been restarted after a period of failure it is common for these codes to appear until the system, in particular the operating pressures of the refrigerant cycle, has “settled down”.

When changes in the operating and external environments occur “P” codes appear on the system and these typically increase or decrease the inverter frequency to compensate for these changes.

If there is something wrong with the system the “P” code will repeat for a period of time, after which a fault code will appear if the condition has not corrected itself.

It is common to see these “P” codes whilst on site and is not a major concern although it is advisable to monitor the system, especially whilst commissioning to ensure that the “P” code does not keep appearing as this could *potentially* be a fault.

Examples of “P” Codes are shown on the next page. These will assist an engineer with understanding how the system is operating. This is especially useful when commissioning or following a breakdown.

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“P” Code	System Status Description
P01	Pressure Ratio Control
P02	High Pressure Rise Protection
P03	Current Protection
P04	Inverter Fan Temperature Rise Protection
P04.	Fan Motor Controller Fan Temperature Rise Protection
P05	Discharge Gas Temperature Rise Protection
P06	Low Pressure Fall Protection
P07	Four Way Valve Switching Control
P08	Oil Return Control
P09	High Pressure Fall Protection
P0A	Demand Current Control
P0C	Discharge Gas Superheat Protection
P0d	Low Pressure Increase Protection
P00	Low Pressure Rise Protection
P11	Pressure Ratio Falling Protection Retry
P12	Low Pressure Rising Retry
P13	High Pressure Rising Retry
P14	Overcurrent Retry of Constant Speed Compressor
P15	Vacuum/Discharge Gas Temperature Rising Protection Retry
P16	Discharge Gas Superheat Falling Retry
P17	Inverter Trip Retry
P17.	Fan Motor Controller Trip Retry
P18	Insufficient Voltage/Excessive Voltage Retry
P26	High Pressure Failing Retry