

Memory Cards

Commercial Grade versus Industrial Grade

Introduction

For many years now Eurotherm products have supported removable storage media. The media supported ranges from PCMCIA cards utilising SRAM technology, through Type III hard cards, to the more popular Flash ATA card, and now Compact Flash and Secure Digital (SD) Technology.

As a supplier of industrial instrumentation it is necessary for Eurotherm to source removable storage media that is both suitable and reliable for the diverse environmental conditions that the products will be exposed to.

For this reason Eurotherm has always endeavoured to use Industrial Grade devices, which offer extended temperature ranges, serialisation and traceability over and above that of commercially available alternatives.

The following information is provided in order to give guidance on the differences between Commercial and Industrial Grade storage media.

Environmental Specification

| | | Commercial Grade | Industrial Grade |
|-------------|---------------------|---------------------------|------------------|
| Temperature | Operating | 0°C to 70°C | -40°C to 85°C |
| | Storage | -25°C to 85°C | -50 to 100°C |
| Humidity | Operating & Storage | 8% to 95%, non condensing | |
| Vibration | | 15 G peak to peak | |
| Altitude | | 80,000ft | |

Additional Benefits of Industrial Grade Cards

Unique Product Identification

Industrial grade cards are all identified by a unique serial number. These unique numbers allow individual cards to be traced back to the date of manufacture.

Advancements in Technology

Manufacturers of Industrial grade cards must provide notification to customers of any changes in the technology used in the production of the cards. These changes also result in a new part number for the card that will allow users to identify these build variants. As such when the technology changes it becomes necessary for Eurotherm to revalidate the cards for use in its range of products.

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Issues with Commercial Grade Cards

Static Discharge

Some of you may have experienced a product reset whilst inserting or removing a PC card. This is most likely to have been caused by static discharge through the PC Card during insertion/removal.

All cards approved by Eurotherm are subject to rigorous testing to ensure that they meet the necessary standards for use in Eurotherm Products.

PC card not recognised

One known affect of using commercial grade cards is variations in the product structure where the initial card purchased functions correctly, but subsequent cards purchased from a later batch appear to be unrecognisable by the product. This is most likely caused by a component or firmware change to the card.

As a user of Industrial grade cards Eurotherm would be informed of these changes and take the necessary corrective action.

Summary

Eurotherm use Industrial Grade removable media where possible in order that we remain informed of changes to integral devices, which could potentially affect product reliability. It is the supplier's responsibility to ensure that all users of Industrial grade cards are aware in advance of these changes, by doing so Eurotherm are able to evaluate the need and level of testing required to ensure that the cards remain compatible with its product range.