

## Retrofit/Replacement

In order to provide **ongoing equipment support** for our older products, we have designed replacement relays using the **Vision hardware**.



This means we can provide a **direct replacement** for the majority of our older products offering the same or improved functionality, pin for pin compatibility, improving both the serviceability and reliability by using **our newer technology**.





## MPR3E5 FF SS

The new MPR3E5 relay, for motor overload and earth fault protection of LV and MV motors, uses the same pin out as the original relay providing a direct and immediate replacement.

The fixed case provides self shorting ct contacts when the relay body is withdrawn.

As the pin out is uniform across the 100 series case format, we can provide other protective functions within this same relay size. Refer to 100 series relays within the Vision range for further information.



### MPR3E5

#### Replacement Protection Relay

A replacement relay body which is directly compatible with the existing terminals of the older MPR3E5.

100x150mm Drawout Case.  
2 line, 16 Char LCD with 2x Tri-Colour LEDs, 2x DIs, 4x DOs, 4x CTs, (or 4x VTs : function dependent)

ANSI, 37, 46, 47, 49, 50, 50n, 50BF, 51, 51n, 66, 74



## VISION

### PBSJ Retrofit

(PBSJ3E5N11, PBSJ3E5N12, PBSJ120, PBSJ122, PBSJ140c, PBSJ3E5c, PBSM20)

FF SS GD

The PBSJ retrofit uses a vertical Motorvision (MV2) or Feeder Protection Control (FPC) relay mounted

within a pre-wired chassis which provides the same terminations in the same position as the existing relay.

The replacement is therefore extremely quick, involving the removal of the older relay and the installation of the new relay without panel aperture adjustment or any wiring changes.



### PBSJ RETROFIT

#### Replacement Protection Relay

A direct replacement for the PBSJ range of relays and the ABB spam and spaj range of relays, suitable for motor overload or overcurrent and earth fault protection applications using a vertically mounted vision relay.

144x96mm DIN Case mounted within a prewired chassis of the same aperture size of the original PBSJ relay.  
50x50mm Graphical LCD, 2x Tri-Colour LEDs, 12x DIs, 4x DOs, 4x CTs, 1x VT

ANSI: 37, 46, 47, 49, 50, 50n, 50BF, 51, 51n, 66, 74

All our retrofit relays can be easily programmed via the relay keypad or with our **Vision Control software**.

FF Fast Fit SS Same Schematic GD Graphical Display

## Golds Retrofit FF SS GD

The P&B Golds was regarded by many as the finest motor protection relay ever made, this direct replacement provides motor overload or overcurrent and earth fault protection using a vertically mounted vision relay. The flag reset plunger now makes contact with a convenient reset switch.

The existing relay chassis is removed of its electromechanical contents and the vertical vision relay is mounted to newly fitted stirrups, the terminals are then wired directly to the existing contacts of the Golds chassis. The whole process is fast and could easily be carried out as a site work-scope.



### Golds Retrofit

#### Replacement Protection Relay

Direct replacement providing motor overload or overcurrent and earth fault protection using a vertically mounted vision relay housed within the Gold relay's withdrawable chassis.

144x96mm DIN Case mounted within a prewired withdrawable chassis  
50x50mm Graphical LCD, 2x Tri-Colour LEDs, 12x DIs, 4x DOs, 4x CTs, 1x VT

ANSI: 37, 46, 47, 49, 50, 50n, 50BF, 51, 51n, 66, 74

## Vision3000 SS GD

Designed as a replacement for the original MPC2000 relay available in either a vertical or horizontal mounting.

This relay is mounted within a 192x96mm case and comes complete with an adaptor plate to mount neatly within the original relay cut-out.

The new terminals replicate that of the existing relay, although by the very nature that the terminals were a mix of both screw and plug in type, there are some reconnections to be made to the new relay.

### Vision3000

#### Intelligent Protection & Control

A replacement relay for the original and very successful MPC2000 either vertically or horizontally mounted.

192x96mm DIN Case mounted within a dished adaptor plate to the original cutout size.  
50x50mm Graphical LCD with 9x Status LEDs, 19x DIs, 4x DOs, 4x CTs, 3x VTs, 5x RTDs

ANSI: 9, 19, 27, 34, 37, 46, 47, 48, 49, 50, 50n, 51, 51n, 59, 66, 69, 74, 86



## MPR/MPC3000 FF SS GD

The MPR2000 or MPC2000D has been used extensively for protection of large motors in many industries.

The 3000 is a replacement module, meaning the wired 2000 blue casing remains in place within the switchgear panel and the new relay module fits directly without the need for any wiring alterations.

Those familiar with the 2000 will recognise the LED status bank and the intuitive graphical display adds a further dimension of relay operability.

The bezel mounted push button will even align with the fault reset/display scroll prompt key of the new relay.

The 3000 can be provided with its casing for use in new projects or extensions.



### MPR / MPC3000

#### Intelligent Protection & Control

Replacement module using the Vision relay hardware which is directly compatible with the withdrawable MPR2000, MPC2000D.

200x150mm Drawout Case  
50x50mm Graphical LCD with 9x Status LEDs, 5x DIs (19x DIs MPC), 4x DOs, 4x CTs, 3x VTs, 5x RTDs

ANSI: 9, 19, 27, 34, 37, 46, 47, 48, 49, 50, 50n, 51, 51n, 59, 66, 69, 74, 86



**Vision** is a comprehensive range of **Intelligent Protection and Control Relays** embodying our ethos of providing flexible, cost effective and leading technology solutions for electrical equipment.

When used as a retrofit device we offer the following advantages:

#### Same Form, Function, Fit

- Functionally equivalent relays
- Pin for pin compatibility
- Identical dimensions
- Direct replacement

#### Reduce Replacement Time & Cost

- No aperture cutting
- No wiring changes
- Minimal downtime
- No schematic updates

#### Improved Functionality & Reliability

- Inherit modern relay technology
- Graphical LCD, inrush current trace
- Events history aiding fault finding
- Integrated communications and control

#### Improved Support and Serviceability

- Compatibility of hardware across range
- Designed for 20+ year life
- Designed for high ambient conditions
- Improved MTTR and MTBF figures



We understand the challenges faced today by many operators in maintaining equipment beyond the intended design life. In addition, often tasked with seeking energy efficiencies, exploit asset operability and reducing environmental impact and financial expenditure.

Retrofitting is a legitimate, most practical, cost effective and least disruptive way to address both planned and unplanned outages, improving equipment operation for the short and long term.

**We have replaced many protection devices with our relays, not just our own, many other manufacturers' too. If you need a solution we are sure we can help you.**

## Contact Details

**P&B  
Protection Relays**

Belle Vue Works, Boundary Street, Manchester, M12 5NG, UK  
T: 0044 (0)161 230 6363 F: 0044 (0)161 230 6464 E: [relays@pbsigroup.com](mailto:relays@pbsigroup.com)