1993 ABB launched the protection and control device SCU (later REF542) on the market which combined the functions of a protection relay and of a control device. Since the introduction of the device it has been used in a lot of switchgear for power distribution worldwide.

As ABB products are designed for continuous evolution, it is ABB’s goal to protect our customers' investment beyond the life-cycles of the underlying platform products.

Findings and advanced requirements, e.g. in the area of the connection to the SCADA system, resulted in a revised and improved type of protection and control device, the REF542plus. Despite a significant increase in functionality and a more modern design, it is functional compatible to its predecessor in nearly all aspects. Therefore ABB has defined REF542plus as a recommended replacement solution for SCU/REF542.

Smooth exchange process
Even though the mechanical design of the REF542plus is different, there is a replacement kit available for the SCU/REF542. This kit makes it possible to mount the REF542plus at the same place where the SCU/REF542 has been without the need for changes at the panel door. Furthermore the connection of the SCU/REF542 and REF542plus are largely the same, so the existing wiring harness can be continued to use with only minor adaptations. Thus, the exchange is feasible with only a short downtime.

The operational concept of the REF542plus is based on the SCU/REF542 and represents a consistent further development. This will facilitate the operating and maintenance personnel the change to the new generation of protection and control devices.

REF542plus
The feeder terminal REF542plus is a compact protection, control, measurement and supervision terminal for the power distribution system. The same terminal can be used for feeder, transformer and motor protection and control, or solely for switchgear control.

The terminal features an impressive range of protection and management functions readily available for adapting the unit to the intended application. The versatility of the REF542plus terminal makes it a given solution for any air or gas insulated distribution substation switchgear.
Advantages

- REF542plus control and protection device is based on same base design as the SCU/REF542 and therefore it will enable a comprehensive solution because of similarities in hardware and software.
- REF542plus is having most comprehensive functional hardware and software coverage for replacement of SCU/REF542 on the market.
- REF542plus is in active life-cycle phase and under active development. New functionality is developed for customer projects and design activities for securing life-cycle care are continuously done.
- As SCU/REF542 units have been delivered in ABB switchgear, best capabilities to design and deliver the replacement solution is therefore in ABB Service units closely related to ABB.

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