# Relion® protection and control
Improved network reliability

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# Relion® protection and control

## Improved network reliability

**The Relion® product family offers a full range of native IEC 61850 products for the protection, control, measurement and supervision of power systems.**

To ensure interoperable and future-proof solutions, the Relion series products have been designed to implement the core values of the IEC 61850 standard. Using these products, you benefit from ABB's leading-edge technology, global application knowledge and experienced support network.

The Relion technology is a forerunner in the field of protection and control in power systems. Our products are continously improved to meet the market requirements and deeply rooted in our vast experience of developing successful protection and control relays.

The Relion products implement the core values of the IEC 61850 standard and operating with other equipment and systems that conform to this standard, they are capable of running multiple communication tasks, including horizontal GOOSE messaging. Communication also runs smoothly with other manufacturer's products, which comply with the IEC 61850 standard.

**ABB also offers a range of complementary products to facilitate power system automation in substations.**

**RIO600** is a remote unit to extend the number of input/output ports on the relays (IEC 61850 communication protocol).

















| | 605 series | REX610 | 611 series | 615 series | 620 series | 630 series | REX640 |
|---|---|---|---|---|---|---|---|
| **Applications** | | | | | | | |
| Feeder protection and control | | | | | | | |
| Motor protection and control | | | | | | | |
| Transformer protection and control | | | | | | | |
| Generator protection and control | | | | | | | |
| Voltage protection and control | | | | | | | |
| Line differential protection and control | | | | | | | |
| Line distance protection | | | | | | | |
| Busbar protection | | | | | | | |
| Self-powered feeder protection | | | | | | | |
| Capacitor bank protection and control | | | | | | | |
| **Key features** | | | | | | | |
| Auxiliary source | Self-powered or auxiliary source (AC/DC) | Auxiliary source (AC/DC) | Auxiliary source (AC/DC) | Auxiliary source (AC/DC) | Auxiliary source (AC/DC) | Auxiliary source (AC/DC) | Auxiliary source (AC/DC) |
| Analog input | Conventional or sensor | Conventional | Conventional | Conventional or sensor | Conventional or sensor | Conventional | Conventional or sensor |
| Case type | Fixed | Withdrawable plug-in unit | Withdrawable plug-in unit | Withdrawable plug-in unit | Withdrawable plug-in unit | Detachable display | Optional display |
| Display | | 4-line display<br>10 programmable LEDs | 4-line display<br>8 programmable LEDs | 4-line display (or option with 10 lines and customizable graphical display)<br>11 programmable LEDs<br>(2 colors) | 10-line display and customizable graphical display<br>11 programmable LEDs<br>(2 colors) | Display 320 x 240 pixels and customizable graphical display<br>15 programmable LEDs<br>(3 colors) | 7-inch color touch screen |
| Control - Command | | Open/close push button | Open/close push button | Open/close push button | Open/close push button<br>16 programmable buttons | Open/close push button<br>5 programmable buttons | Open/close from touch screen |
| Programming Interface | Display | Display<br>PCM600 software configuration | Display<br>PCM600 software configuration<br>Web browser | Display<br>PCM600 software configuration<br>Web browser | Display<br>PCM software configuration<br>Web browser | Display<br>PCM600 software configuration<br>Web browser | Display<br>PCM600 software configuration<br>Web browser |
| Communication protocols | Modbus serial | Modbus TCP/IP, serial<br>IEC 61850 | Modbus TCP/IP, serial<br>IEC 61850 | Modbus TCP/IP, serial<br>IEC 61850<br>Profibus DPV1 adapter<br>Ethernet redundancy PRP and HSR<br>DNP3 TCP/IP, serial<br>IEC 60870-5-103<br>Process bus (IEC 61850-9-2 LE) | Modbus TCP/IP, serial<br>IEC 61850<br>Ethernet redundancy PRP and HSR<br>DNP3 TCP/IP, serial<br>IEC 60870-5-103 | IEC 61850<br>DNP3 TCP/IP, serial<br>IEC 60870-5-103 | IEC 61850<br>Modbus TCP/IP, serial<br>IEC 60870-5-103<br>IEC 60870-5-104<br>DNP3 TCP/IP, serial<br>Ethernet redundancy PRP and HSR<br>Process bus (IEC 61850-9-2LE) |
| Additional functionality | | Arc fault protection (optional) | | Arc fault protection (optional) | Arc fault protection (optional) | | Arc fault protection (optional)<br>Petersen coil control |
| Additional input /output | | RIO600 | Optional I/O card depending on product version<br>RIO600 | Optional I/O card depending on product version<br>RIO600 | Optional I/O card depending on product version<br>RIO600 | Optional I/O cards depending on product version<br>RIO600 | Optional I/O card depending on product version |