The increasing demands for a higher continuity of energy supplies will require distribution network to be controlled more intelligently.

Using directional short circuit indicators and motor operated Ring Main Units will make the MV loop self-restoring in less than one minute in case of cable fault. This requires the presence of a local intelligence system in the CSS which also controls the Arc Eliminator inside the RMU. In case of an arc inside CSS the Arc Eliminator extinguishes it within milliseconds preventing damages to equipment inside the CSS.

This will only be possible with a fast and reliable communication throughout the MV loop and the primary circuit breakers.

The local intelligence system is comparing information from sensors in the CSS, like voltage, current, frequency, noise, pollution level, humidity, temperature, etc., with preset service values. Deviations outside the service window will be communicated to the SCADA system. Local and downstream incidents will be cleared immediately by the local intelligence system and communicated to the SCADA system.

By using motor operated breakers on both LV and MV side remote control is available.