ASSET MAINTENANCE

HV Maintenance Asset Guide
PROTECTION RELAYS

Understanding the condition of your Protection Relays is essential to maintaining a safe and reliable electrical network. Designed to detect abnormal operating conditions and automatically initiate protective actions, Protection Relays play a vital role in safeguarding personnel, equipment and power systems. This guide outlines maintenance requirements, recommended servicing intervals and the risks associated with deferred maintenance, helping asset owners maintain reliability, safety and operational performance.

RECOMMENDED MAINTENANCE TIMESCALES

Every 12 Months

- Visual inspection and condition assessment
- Corrosion checks
- Settings verification
- Documentation updates
- Trip circuit testing

Every 1-5 Years

- Secondary injection testing
- Calibration checks
- Mechanical interlock and block checks
- End-to-end protection testing

As Required

- Relay replacement or upgrades
- Firmware updates
- Asset lifespan verification

WHY DO PROTECTION RELAYS REQUIRE MAINTENANCE?

- Maintain protection system performance and reliability throughout its operational life.
- Identify developing faults early and reduce the risk of equipment damage and network disruption.
- Support asset longevity and ensure protection settings remain suitable for operational requirements.
- Support compliance with the Electricity at Work Regulations 1989 and relevant industry standards.

EAWR 1989 | HSG 230

WHAT HAPPENS IF MAINTENANCE IS NEGLECTED?

- Increase the risk of minor issues developing into major failures.
- Reduce protection system effectiveness, increasing the likelihood of equipment damage and network disruption.
- Increase the risk of contact deterioration, overheating, arcing and costly repairs.
- Expose organisations to operational, legal and financial risks through inadequate asset performance and protection.

WHAT MAINTENANCE IS REQUIRED?

- Device housing inspection and condition assessment
- Current transformer (CT) inspection and testing
- Voltage transformer (VT) inspection and testing
- Protection logic and settings verification
- Protection settings validation
- Trip circuit testing
- Communication and monitoring checks
- Documentation and record reviews

HOW QUARTZELEC CAN HELP

- Deliver one-off asset assessments or planned maintenance programmes.
- Provide specialist LV and HV inspection, testing, maintenance, refurbishment and replacement services.
- Help reduce downtime, extend asset life and maintain network reliability.

Contact Us

Manchester
+44 (0)161 877 6666
manchester@quartzelec.com

Aberdeen
+44 (0)1224 593008
aberdeen@quartzelec.com

Ossett
+44 (0)1924 925500
ossett@quartzelec.com

Hamilton
+44 (0)1698 492000
hamilton@quartzelec.com

Wrexham
+44 (0)1978 664000
wrexham@quartzelec.com

T: +44 (0)1788 512512 | E: info@quartzelec.com | www.quartzelec.com