Sensors, Actuators & Instrumentation

TECHNICAL DATA SHEET | Industrial and commercial installations

Scope of works

Design, supply, installation, integration, inspection, testing and commissioning of industrial field devices and instrumentation for factories, manufacturing facilities and process equipment. Works may include new systems, machinery upgrades and integration with existing automation.

Equipment and integration

Equipment / system	Typical applications and installation considerations
Process instrumentation	Temperature, pressure, level and flow measurement; instrument range, process connection and environmental suitability selected for each application.
Discrete sensors	Proximity and photoelectric sensors, limit switches and position detection; mounting, alignment and target characteristics verified.
Actuators / controls	Industrial actuators and control devices; supply, operating duty, travel limits, feedback and safe-state behaviour considered.
Signal and power wiring	Instrumentation cabling, segregation, screening, earthing, termination and appropriate mechanical protection.
PLC / control interfaces	Digital and analogue I/O, control panel connections, HMI/SCADA interfaces and industrial communication networks.
Machinery integration	Connection to existing production lines, MCCs, automation controls and process monitoring systems.
Safety-related functions	Emergency shutdown and interlock interfaces designed and validated to the machinery risk assessment and required safety performance.

Installation and commissioning

Verify instrument specifications and wiring drawings; inspect device mounting and terminations; check power and signal integrity; confirm PLC I/O mapping and communications; perform functional testing, calibration support and process verification as applicable; document test results and handover information.

Applicable safety and compliance considerations

Electrical installation requirements may include BS 7671 and the Electricity at Work Regulations 1989. Machinery-related works may also require consideration of PUWER and BS EN 60204-1. Hazardous areas require appropriate DSEAR assessment, equipment selection and installation controls. Exact requirements depend on the site and system.

Technical note: This is a service capability sheet, not a product specification. Voltage, signal type (such as 4–20 mA, 0–10 V or digital), ingress protection, accuracy, operating temperature and communications protocol must be confirmed against the selected equipment and project design.