



SECURITY & DEFENCE

Delivering sensing and measurement solutions for security and defence applications.

 **VARIOHM**
GROUP

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ABOUT VARIOHM GROUP

Variohm Group is a collective of companies dedicated to delivering high-quality engineering solutions across a wide range of industries.

We combine our expertise to develop innovative sensing, switching, measurement and motion control solutions for customers worldwide. Our work supports sectors including renewable energy, healthcare, transportation, industrial and security.

Our Businesses

Each company within the Group contributes unique skills, knowledge and experience. This collaborative approach enables us to partner with our customers and create customised solutions that exceed expectations.

With in-house engineering and manufacturing capabilities and a strong customer-focused mindset, we blend specialist knowledge with fresh thinking to respond quickly to evolving needs. Our extensive portfolio of complementary products and services enables us to provide expert guidance and deliver solutions tailored to each project.



● Distributor Network

SECURITY & DEFENCE SECTOR

Global sensor and measurement solutions

We deliver engineered sensing, switching and measurement solutions for security and defence applications. Our components monitor, measure and manage key parameters in land systems, naval vessels, aerospace systems, unmanned platforms and security infrastructure.

Designed for harsh operating environments, these robust, high-performance solutions stand up to extreme temperature, shock, vibration, moisture, contamination and electromagnetic interference. Every product is engineered to maintain function when failure is not an option.

Our capability is strengthened by recognised industry accreditations, certifications and memberships that support work in security and defence-related applications. These include JOSCAR, Cyber Essentials Plus and membership of ADS UK, reflecting our commitment to quality, security, compliance and trusted supply partnerships.

Application Areas:

- Military vehicles and platforms
- Naval and maritime systems
- Aerospace and air operations
- Security and infrastructure protection
- Autonomous and unmanned platforms





Cabin position detection

Optical and surveillance pa

Suspension performance measurement

MILITARY VEHICLES

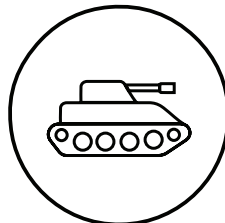
Military vehicles operate in punishing environments, so every component must endure shock, dust, thermal extremes and continuous load cycles. Our technology supports mobility, safety, control and onboard system management

an-tilt control

Variohm Group solutions include:

- ▶ Cabin and turret position feedback
- ▶ Hatch and door lock monitoring
- ▶ Active suspension measurement
- ▶ Transmission and drivetrain status sensing
- ▶ Brake and hydraulic pressure monitoring
- ▶ Coolant monitoring on personnel carriers
- ▶ Tilt/roll detection for tactical vehicles
- ▶ Optical and surveillance pan-tilt control
- ▶ Monitoring supporting force on utility vehicles
- ▶ Measurement of actuation forces on pedals

We provide a greater range of solutions to the defence market, please speak to us about your sensing and measurement requirements.



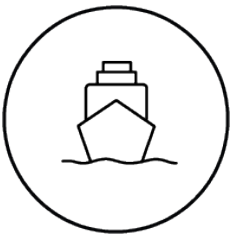
NAVAL AND MARITIME DEFENCE

Marine defence systems face saltwater corrosion, humidity, vibration and continuous mission demand. Our sensing, switching and motion control components are engineered to deliver stable, long term performance in these conditions.

Variohm Group solutions include:

- ▶ Life raft ejection actuation feedback
- ▶ Position sensing for launch, recovery and deck handling systems
- ▶ Pressure and temperature monitoring for propulsion and auxiliary systems
- ▶ Valve and pump control feedback
- ▶ Rudder and steering system position measurement
- ▶ Vibration monitoring for predictive maintenance
- ▶ Motion controllers for submarine steam valves and thrusters

We provide a greater range of solutions to the naval and maritime defence market, please speak to us about your sensing and measurement requirements.



Steering system feedback

Propulsion system monitoring

Deck operations position sensing





Control surface feedback

Aircraft environmental monitoring

Winch control technology

AEROSPACE AND AIR DEFENCE

Aerospace environments demand precision and absolute reliability. We support both manned and unmanned platforms with components that handle extreme temperatures, altitude, load cycles and regulatory constraints.

Variohm Group solutions include:

- ▶ Actuator and control surface position feedback
- ▶ Temperature and pressure monitoring for engine and APU systems
- ▶ Avionics environmental sensing
- ▶ Tracking system alignment feedback
- ▶ Motion control for training simulators
- ▶ Servo motors and actuators for winch control
- ▶ Bridge positioning in fuelling and boarding systems
- ▶ Automatic haptic testing of control elements
- ▶ Monitoring fastening elements in flight simulators
- ▶ Torque and angle sensing for cockpit control inputs



We provide a greater range of solutions to the aerospace and air defence market, please speak to us about your sensing and measurement requirements.

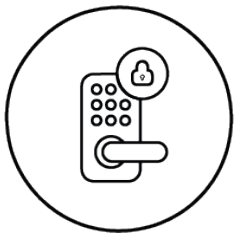
SECURITY SYSTEMS AND INFRASTRUCTURE

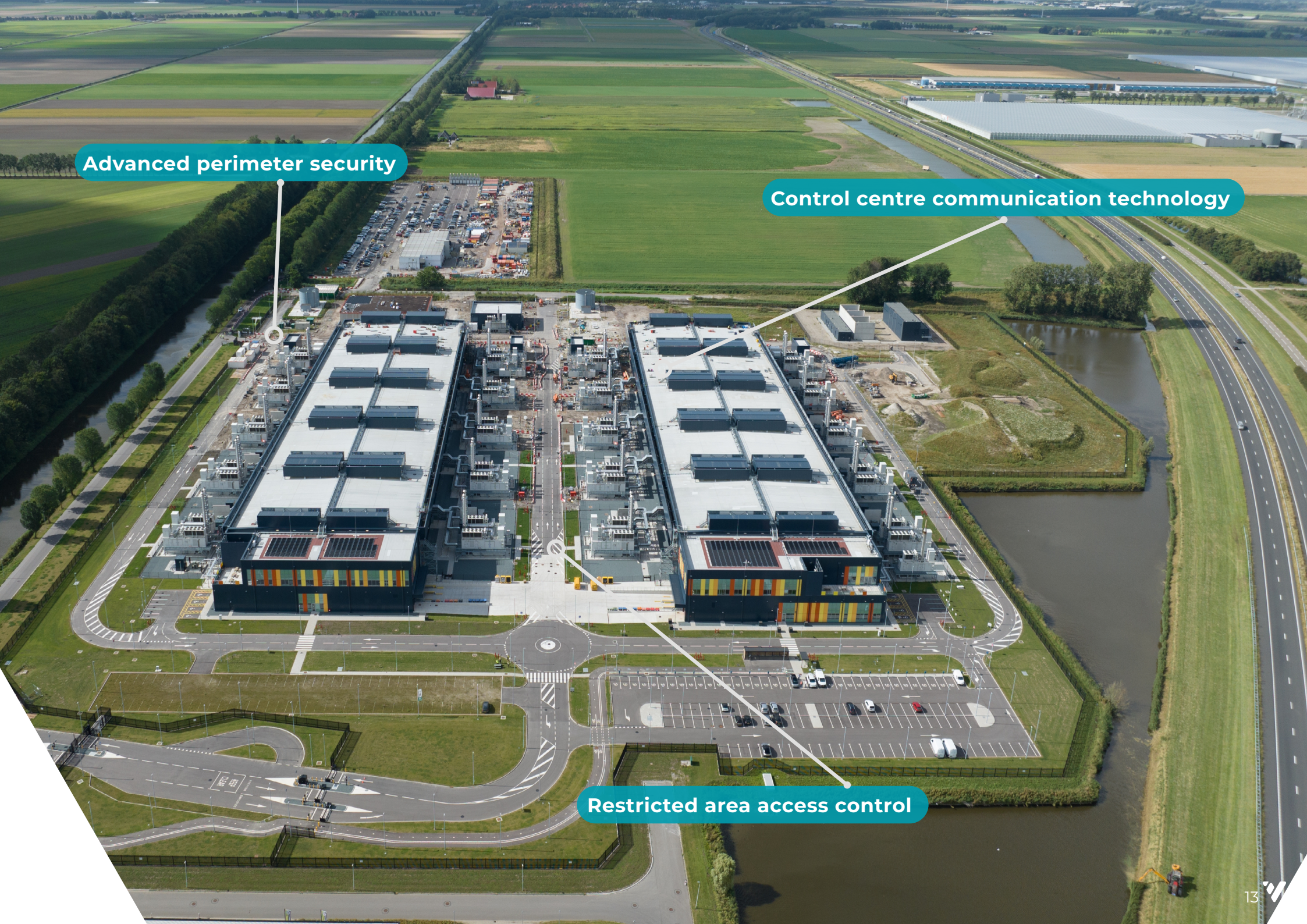
Security applications require reliable monitoring and control to protect sensitive environments. We supply rugged sensors and switches used in detection systems, access control, and perimeter safety.

Variohm Group solutions include:

- Position sensing for gates, barriers and blast doors
- Pressure and limit detection for mechanical security devices
- Environmental monitoring (temperature, movement, vibration)
- Controlling access to restricted or classified areas
- Motion detection and perimeter security
- Hands-free communication in control centres

We provide a greater range of solutions to the security and infrastructure market, please speak to us about your sensing and measurement requirements.





Advanced perimeter security

Control centre communication technology

Restricted area access control



Navigation position feedback



Motor speed monitoring

Payload measurement

UNMANNED AND ROBOTIC SYSTEMS

Autonomous and remotely operated platforms demand compact, lightweight, and durable components. Our sensors support precise control and high-integrity data feedback, ensuring reliable performance even in challenging environments.

Variohm Group solutions include:

- ▶ Monitoring the speed of drone motors
- ▶ Tilt sensing for platform stability on unmanned ground vehicles
- ▶ Navigation and steering position sensors
- ▶ Load and torque measurement
- ▶ Temperature and pressure sensing in drone motors
- ▶ Fire detection in drone engines
- ▶ Control of drone movement
- ▶ Hands-free voice control for operators

We provide a greater range of solutions to the robotic market, please speak to us about your sensing and measurement requirements.



VARIOHM GROUP SERVICES



In-House Engineering - Our engineering team develop solutions to complex sensing and switching challenges. Rigorous testing and compliance with applicable industry standards means we can create and refine custom solutions, taking them from concept to full implementation.



New Product Development - We are a strategic partner for many of our customers, acting as an extension to their in-house engineering team. Whether it's detailed product designs, prototypes or finished components, we offer a complete new product development solution that helps our customers maintain their competitive edge.



Product Customisation - Working together with our customers ensures we understand what they need and allows us to create customised solutions that are a perfect fit for their application.



On-Site Manufacturing - We have manufacturing facilities in the UK, Germany, Hungary and the USA which gives us control over production. Strict quality controls and the flexibility to adjust products and production timescales means we reduce waste and build long-term relationships with our customers.



Industry-Leading Supply Partners - By working with trusted suppliers who meet strict standards, we can consistently offer top-quality products and services that are often leading the way in innovation. Our close and collaborative partnerships enable us to create the best solution for your needs.



Defence and Security Credentials - Recognised industry accreditations, certifications and memberships, including JOSCAR registration, Cyber Essentials Plus certification and membership of ADS, support our work in security and defence-related applications.



 | BURSTER

 | CPI

 | EUROSENSOR

 | HEASON

 | HERGA

 | IXTHUS

 | LIMITOR

 | MAGNASPHERE

 | PHOENIX
A M E R I C A

 | POSITEK

SECURITY & DEFENCE SENSORS



LINEAR POTENTIOMETER

- ▶ High-performance and industrial versions
- ▶ Small, robust and long life
- ▶ Shock and vibration resistant
- ▶ Voltage divider principle
- ▶ Sealing up to IP67



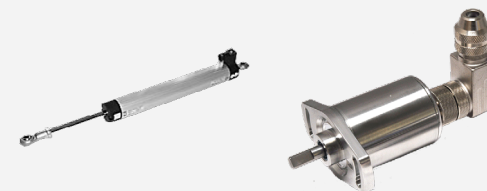
ROTARY HALL EFFECT SENSORS

- ▶ 0 to 360° position sensing
- ▶ Temperature operation from -40...125 °C
- ▶ Programmable angles from 30...360°
- ▶ IP67/IP68 protection



MAGNETIC ENCODERS

- ▶ High and low resolution modules
- ▶ Excellent speed, direction and relative position feedback
- ▶ Operating temperature -40...+125 °C
- ▶ Operating range 4 - 24 V



LINEAR/ROTARY/TILT INDUCTIVE SENSORS

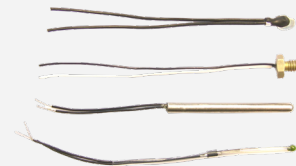
- ▶ Non-contacting inductive technology
- ▶ Angle set to customer's requirement
- ▶ Compact, durable and reliable
- ▶ High accuracy and stability
- ▶ Sealing to IP67/IP69K as required

SECURITY & DEFENCE SENSORS



SPEED SENSORS

- ▶ Digital output signal
- ▶ Gear Tooth sensing capability
- ▶ Operates from -40...125 °C
- ▶ Zero speed operation
- ▶ High speed (15kHz) operation



TEMPERATURE PROBES

- ▶ Temperature ranges from -96...350 °C
- ▶ RTD or NTC based probes
- ▶ Screw type, ring terminal, tubular probes
- ▶ Custom housings & connectors
- ▶ High voltage and Hydrogen compatible versions



COMBINED PRESSURE- / TEMPERATURE TRANSDUCERS

- ▶ 0-0.6 bar up to 1000 bar measurement range
- ▶ Temperature range -55...150 °C
- ▶ Analogue output signal
- ▶ PT1000 or analogue output
- ▶ Integrated or exposed temperature probe



TEMPERATURE TRANSDUCERS

- ▶ Temperature range -40...150 °C
- ▶ Analogue output signals
- ▶ Wide range of process connections
- ▶ Wide range of connector options
- ▶ Hydrogen compatible version available

SECURITY & DEFENCE SENSORS



LOAD CELLS

- Precise compression/tension measuring
- High overload versions available
- Excellent price/performance ratio
- Hermetically sealed IP68 versions



PRESSURE SWITCHES

- Ultra-sensitive patented dual-diaphragm/ dual contact
- Switch range 0.25 - 124.59 mbar
- Extended temperature range
- Fitted with an AMP superseal connector



BALL & PLUNGER SWITCHES

- Plated steel, brass, or stainless steel
- SPST momentary, NO and NC available
- Temperature resistance range -40...200 °C
- Environmental resistance: acids, alkalies, salt spray, sand, dust, and fungus
- Military and industrial grade



HMI / FOOT SWITCHES

- CANopen and CANJ1939 keypads
- LED state & status configurable
- Customisable inserts/icons
- Plastic and metal housing IP67
- USB option + customised cables & plugs on request

SECURITY & DEFENCE SENSORS



WATERPROOF SWITCHES

- ▶ Normally open, closed, SPDT
- ▶ Truly waterproof IP68
- ▶ Stainless steel mounting limit switches
- ▶ Switch panels
- ▶ Military and industrial grade



MAGNETS

- ▶ Cost effective design
- ▶ High resistance to demagnetisation
- ▶ Tough environmental endurance
- ▶ Very resistant to chipping
- ▶ Wide range of pole counts



PRESSURE TRANSDUCERS

- ▶ 0-20 mbar up to 5000 bar measurement range
- ▶ Analogue and digital output signals, incl. low energy
- ▶ Wide range of process connections
- ▶ Wide range of electrical connections
- ▶ For use with Hydrogen EC79 and EC406 approved



CABLE EXTENSION TRANSDUCERS

- ▶ 0-38mm...43m measurement range
- ▶ Sealing up to IP67
- ▶ Intrinsically safe versions with ATEX/IECEX/SIL2 ratings approval

SECURITY & DEFENCE SENSORS



SECURITY SWITCHES

- ▶ Highest security ratings (UL634 Levels 1 and 20)
- ▶ Armored surface-mount or concealed forms
- ▶ Fire-door rated (UL10c) door position switches



ANTI CLIMBING SYSTEM FOR FENCES

- ▶ Suitable for any metal fence types
- ▶ Accommodates environmental disturbances
- ▶ 3-axis MEMS technology



MOTION DETECTORS

- ▶ Intelligent FMCW Radar
- ▶ Filters out motion nuisances
- ▶ Relay or POE (open API) output



TEMPERATURE SWITCHES FOR HARSH ENVIRONMENT

- ▶ Set point ranges from 0 °F – 650 °F (-17.8 °C – 954 °C)
- ▶ RTCA DO-160C environmental qualification
- ▶ Hermetically sealed

SECURITY & DEFENCE SENSORS



SERVO DRIVES

- Communication: EtherCAT, CANopen, RS232, RS422, USB, Ethernet
- Complies with strict safety & EMC standards
- Delivers 550A from 10 V – 95 VDC bus



TORQUE SENSORS

- 0,01-5000 Nm measurement range
- Rotating and non-rotating sensors
- Relative non-linearity $\leq \pm 0,05$ % F.S.



MOTORS

- 60 – 330 mm frame size (OD)
- 8 – 101 stack length (mm)
- 0.3 – 181 continuous stall torque (Nm)

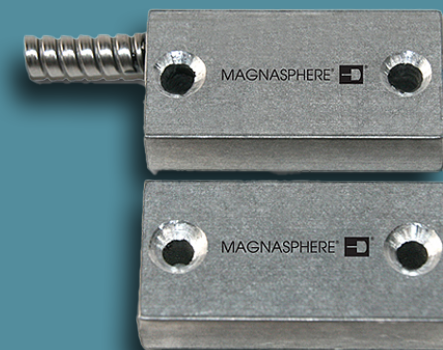


COMPRESSION LOAD CELLS & FORCE SENSORS

- 0-1 kg up to 200 t
- Miniature design options
- Stainless-steel construction

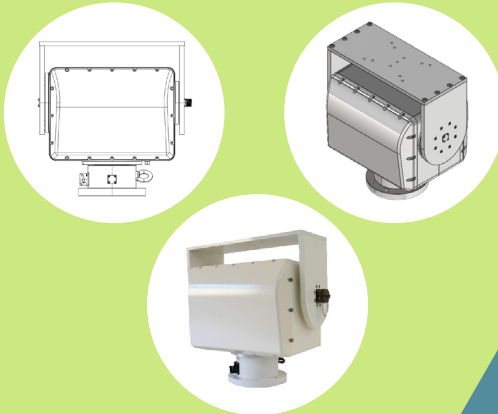
PROTECTION OF SENSITIVE DATA

Our high security door position switches are used on server rack access panels to detect unauthorised openings.



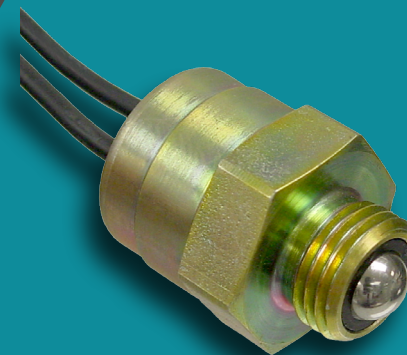
SUBMERGE YOURSELF INTO INTEGRATED SOLUTIONS

Custom-engineered systems designed around
your exact requirements. More than just
component sales.



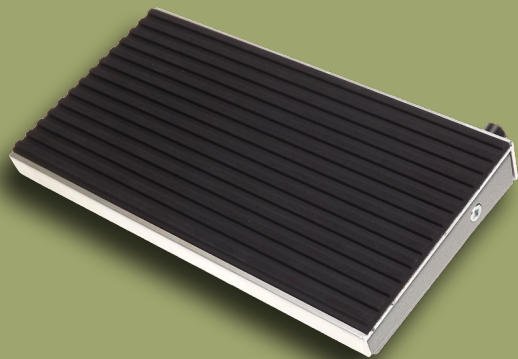
KEEPING OUR SKIES SAFE

Our customised ball switch operates in harsh environments where reliability is essential.



HANDS-FREE CONTROL WHEN SECONDS MATTER

Footswitches allow control room staff to use their feet to operate 'push to talk'. This keeps their hands free to maximise their effectiveness in dealing with emergencies.





ACCURATE GEARBOX CONTROL AND FEEDBACK

Reliable rotary position feedback supports system reliability in harsh operating conditions.



PRECISION LAUNCH PAD POSITIONING

Robust inductive linear position sensing for precise launch pad alignment and reliable operational feedback.





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