



CONTROL & MONITORING SIMPLIFIED...

**Proto
Control**



SENSING



SIGNAL CONDITIONING



CONVEYOR SAFETY



LEVEL CONTROL



JUNCTION BOX & PBS



PROTOCONTROL is leading manufacturer of Proximity Switches, Sensors, Indicators, Controllers, Monitors, Scanners and complete data acquisition system. Our expertise is available for specially designed custom packages, involving selection of sensors, designing complex data acquisition systems, with operating, control and automation. PROTO CONTROL is not only a proven national brand but now has also become a Global name with its products and automation systems installed in various industries. We have largest variety of sensors, Indicators and controllers for sensing Position, Oscillation, Rotational Speed, linear speed, Displacement, Direction, Level, Weight, Humidity, Temperature, Pressure & Vibration. Concerned authority approves our specialized sensors for use in hazardous area

Our expertise is in Instrumentation, Drives, SCADA, EMS, PLC based & software based automation projects. Our installed projects are in the areas of forging, Automobile, Cement, Power Generation, Chemical & Steel industry.

We believe in satisfying customer by offering quality product in specified time. We support customer and offer after sale service in time if required by customer. We thrive for offering products and services backed by latest technology to the customer.

We also represent many international companies in India for state of the art products.

Our safety and control products division manufactures safety switches and control instruments for material handling plants. We are the one who introduced product Pull Cord Trip Indicator first time in India.

Our name is approved and recommended by leading consultants and equipment manufacturers and preferred by end users.

This catalogue is just brief information about our product range and capabilities. Please ask for detailed catalogue and specification sheets of required product

on : protocontrol@eth.net
visit : www.protocontrol.com

or call us to get name of responsible engineer or dealer assigned for your region.

We welcome your enquiries.



POSITION - SPEED - DIRECTION REVOLUTION - LINEAR SPEED SENSORS

We offer Sensing solutions for all applications. You specify the requirement and we will help you to select suitable sensor from more than 2600 varieties we have. Every sensor is designed for industrial application.

Most of our proximity switches carries CE mark.

INDUCTIVE PROXIMITY SWITCH :

We have largest variety to offer you. Used to sense Position, Speed, Rotation and Oscillation of metallic objects.

Various Dimensions :

- Tubular
- Slot
- Custom Built
- Square Limit Switch Housing
- Ring Sensors

Wide Electrical Types

- 3 Wire D
- 2 Wire DC for PLC / Relay
- PNP / NPN
- 2 Wire DC, Namur
- AC-DC Universal Supply
- NO / NC / C/O Output

Special Models

- Analogue O/P
- High Pressure
- High Operating Speed
- High Temperature
- Reverse Rotation Sensor

CAPACITIVE PROXIMITY SWITCH :

Low cost reliable level sensor for dry powders & granules like cement, floor, plastic chips and food grains. Also used for liquid level sensing. Find application for liquid and powder level sensing in packaging machines.

PHOTOELECTRIC PROXIMITY SWITCH :

Versatile proximity switch used in almost SPMs and Packaging machines. High sensing distance, variety of applications and use.

- Tubular Housing
- Color Mark Sensor
- Fiber Cables
- Analogue O/P Sensors
- Fiber Optic Amplifier
- Slim Mini Square Housing
- Teach Amplifiers
- Laser Distance Sensors

MAGNETIC PROXIMITY SWITCH - PICK UPS :

Designed as a robust sensor for position and speed sensing.

- Reed Switch Sensors
- Cylinder Position Sensor
- Bi-stable / Latching Operation Sensors
- Magnetic Pick Ups
- Hall Effect Speed Sensors
- Gear Tooth Sensor

ULTRASONIC PROXIMITY SENSOR SWITCH :

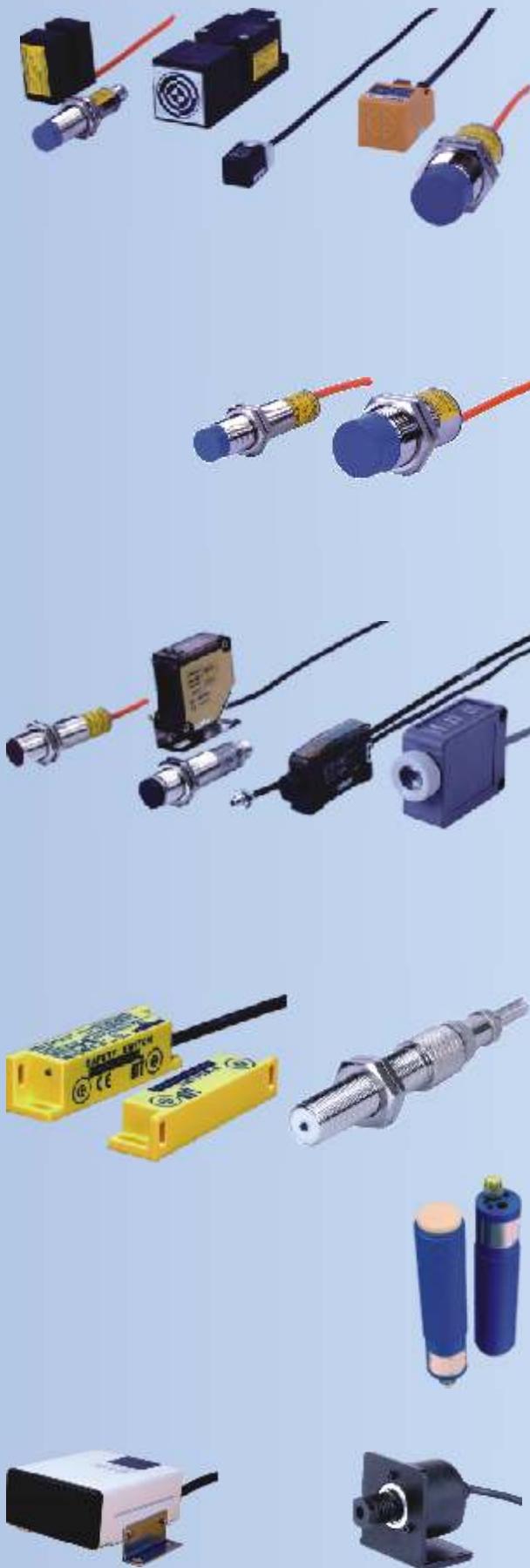
Ultrasonic sensor finds application on SPM machines where position sensing is required with analogue output. Useful for level sensing, positioning of object, loop control and wire break detection. The sensing is not effected by colour of object.

- Ultrasonic Sensor with Switching Output
- Ultrasonic Sensor with switching O/P as well as switching O/P

OTHER SENSING DEVICES

- Encoders
- Linear Potentiometers
- LVDT
- Vibration Switch

Ask for detailed catalogue with application examples.



SAFETY SWITCHES FOR MATERIAL HANDLING PLANTS :

Most rugged, reliable and dependable range of safety switches. A must for every conveyor and material handling plant. Thousands of switches are in use at cement, fertilizer, Steel, Mining and power plants. Specially developed field mounting enclosures with added safety features.

- Pull Cord Switch
- Belt Sway Switch
- Heavy Duty Limit Switch
- Zero Speed Switches
- Electronic Speed Switch with Extension Stand
- Speed Indicator Tachometers
- Belt Loading Monitor
- Belt Damage Detector
- Switches with PC Interface Facility
- Damaged Belt Detector / Belt Weir Monitor
- Material Flow Switch

- **Smart/Addressable Pull Cord Switches**

CONTROL INSTRUMENTS

- Anti Collision Switch for cranes
- De-Interlocking Switch
- Chute-Block Detector
- Boot Level Indicator

SPECIAL APPLICATION PRODUCTS

- Pull Cord Switches for automobile conveyor line
- Pull Cord Switches for small conveyors

ACCESSORIES

- Pull Cord Wire
- Tying Clips
- Hooks
- Mounting brackets

TRIP INDICATOR FOR PULL CORD / SAFETY SWITCHES - BELT WATCH PANEL

Unique, proven product for large material handling plants where number of switches are connected in series. Trip Indicator is developed to give exact indication of operated switch in control room

Advantages:

- Most advanced method of locating operated Switch
- Instant indication, instant tripping,
Time required to search for operated switch is eliminated.
- Communication through two core cable only
- Less cable cost and cable laying cost
- Interchangeable Communicating card
- Indication Cable fault on Trip Indicator.
- RS 232 / RS-485 MODBUS O/P , PLC interface for fault logging.
- Miniature size of communication cards
- Special models with :
a) Scrolling b) Adapter for hardware tripping
- ROLL CALL feature for additional safety
- Specially suitable for high length conveyors

INSTRUMENTS FOR HAZARDOUS AREA APPLICATION (FLAME PROOF INSTRUMENTS)

We offer CMRS certified intrinsically safe proximity sensors and indicators, controllers and scanners enclosed in certified flameproof enclosure. We have executed project orders from Indian Oil Corporation, IPCL many chemical plants and mining industries.

- Namur Type Proximity Switches
- Isolator Amplifiers / Power Supply Relay Units for Namur Switches
- Flame proof safety switch
- Flame Proof Temperature Sensors
- Flame Proof Temp. Indicator and Controllers
- Flame Proof Temperature Transmitters
- Loop Powered Indicators in Flameproof Housing

Ask for detailed catalogue with application examples.



LEVEL MANAGEMENT SOLUTIONS:

From simple, single point, low cost level sensors to specialized & complex level monitoring solutions for conducting & non conducting liquids, granules, powders and heavy solids.

- Cable End Float Switches
- Conductivity Type Level Measurement
- Float Type Level Switch
- Side Mounted Float Switch
- Level Sensors for granules & powders
- Tilt Type Level Switch for coal and lime stone
- RF Capacitance Type Level Sensor
- Material Level Switch Tilt Switch
- Vibrating Fork Type Level Switch
- Vibrating Rod Type level switch
- Paddle Type Level Switch
- Chute Block Detector
- Boot Level Switch
- Stock Pile Level Detector
- Diaphragm Type switch

LEVEL TRANSMITTER - INDICATOR

- Ultrasonic Type level sensor
- Ultrasonic Level Transmitter
- Radar level Transmitter

SIGNAL CONDITIONING : TRANSMITTERS & INTERFACING DEVICES

Protocontrol offers field sensors. We also bridge gap between field sensors and control room by offering variety of signal conditioning modules. These modules provide effective isolation, improve signal communication and hence improve plant performance. Fill the gap between sensors to control room by Protocontrol make signal conditioning modules.

- Head Mounting Temp. Transmitter
- Signal Transmitter / Signal Isolator
- Signal Converters
- Signal Repeater
- Loop powered, field mounted, temperature transmitter
- RS 232 to RS 485 Converter
- 4-20 mA to RS 232/RS 485 Converter
- P / I Converter
- Pressure Transmitter
- Wireless Signal Transmitters

POWER TRANSDUCER

- Voltage / current transducer
- Watt / Var / Watt & Var Transducer
- Watt-Hr / Var-Hr Transducer
- Power Factor / Phase Angle Transmitter.
- Mains Frequency Transducer
- Process Transmitters

JUNCTION BOXES & ENCLOSURES

- Weather Proof Junction Boxes
- Flame Proof Junction Boxes
- Push Button Station
- Local Control Stations
- De-interlocking Switch
- Pendant Control Station
- Junction box with Canopy
- Flame Proof junction Box



TIMERS & COUNTERS & INDICATORS

We offer basic blocks of systems automation. Simple Sleek, reliable & cost effective

From basic timer & counter to micro-controller based flow Integrator Totalizer, Batch counter & Pressure Transmitter.

- Process Indicator
- Production Counters
- Batch Counters
- Electronic Timers
- Cyclic Timer
- Digital Timers
- Time Totalizers
- Pressure Transmitter
- I to P Converter
- P to I Converter
- Alarm Annunciator
- Flow Integrator Totalizer

SEQUENTIAL TIMER JET PULSE SEQUENCER TIMER

PROCESS INDICATORS LARGE SIZE DISPLAY

- Electronic Counters- Batch Counters for Shop floor
- Cement Bag Counter
- Large Size Displays
- Speed Indicator

REVERSE ROTATION MONITOR

- For CW Pumps

Ask for detailed catalogue

VIBRATION MONITORING & MACHINE PROTECTION SYSTEM MACHINE CONDITION MONITORING

- Vibration Sensors
- Transmitters And Monitors
- Complete Monitoring System

TEMPERATURE & HUMIDITY MEASUREMENT :

Complete temperature monitoring solution. From sensor to indicators, controllers, scanners, records and complex furnace / process data acquisition system: prosoft. Stand alone controllers and scanners with retransmission output / RS 232 output for PC interface.

- Temperature Sensors with / without Thermo well
- Temperature Indicator and Controllers
- Process Temperature Scanners
- Winding & Bearing Temperature Scanner
- PID Controller
- Bar Graph Indicators
- Profile Controller
- Flame Proof Temperature Measuring Devices
- Data Acquisition System for On Line Temperature Measurement
- Non Contact Temperature Pyrometers
- Temperature Calibrators
- Humidity sensors, Transmitters and Controllers
- Wireless Temperature and Humidity Transmitters

TEMPERATURE SCANNER PROCESS- SCANNERS

We offer variety of models of Temperature Scanners to suit every need. Right from simple indicating scanner to microcontroller based scanner with PC interface and customer friendly data acquisition software.

- Winding Bearing Temperature Scanner
- WTI for Dry Cast Resin Transformers
- Thermistor Units with Thermistor
- Process Scanners
- Temperature Scanners with retransmission outputs
- Software for communication, SCADA / Ethernet an wireless communication.

Ask for detailed catalogue with application examples.

AGENCY PRODUCT RANGE

We believe in offering solution which will serve you best. We have specialized products to offer from our principles. Please talk to our application specialist with your requirement.

FUJI: Japan

Leading brand from JAPAN in process control offers most compact and reliable PID controllers with unmatched features

- PXZ Series: Auto turned with fuzzy logic Control Various types of alarms configurable I/P Sensor selectable
- PYX4 Series: Words first Fuzzy logic 48mmx48mm controller
- Universal I/P. Auto manual
- With communication function RS 485 interface

REER: Italy

We represent REER Italy for safety light Curtains. Applications on machines :

- Machines and plants for cutting and bending the plate
- Machining centers for the turning with motorized tools
- Grinding machines
- Robot for painting and glueing
- Welding robot
- Spot welders
- Machines for cutting, bending and following deformation of metallic pipes
- Machines Pipe bending machines
- Presses

COMMITRONICS : France

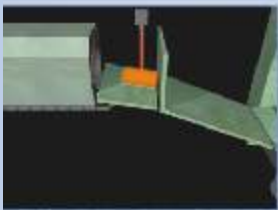
- Non Contact Coded Switches
- Non Contact Multi-code Safety Switch for Positioning of Doors and Crankcases
- Coded Non Contact Safety Switch for positioning for Doors of Dangerous Machines
- Multi Function Modules
- Emergency Stop Control Devices
- Two Hand Control Devices
- Safety Contact or With Locking Device Safety Interface

UNITED ELECTRIC CONTROLS : USA

- The World's Leading Manufacturer of Threshold Detection and Switching Devices, Transmitters and Temperature Sensors
- Mechanical & Electronic Pressure and Temperature Switches
- Designed for hazardous areas in Oil Gas industry and in Chemical Process
- Specially designed for critical applications
- Available with International Approvals for Hazardous Areas



Ask for detailed catalogue .



TURNKEY AUTOMATION PROJECTS

Our project division supported by our software Division is capable of doing design, engineering, procurement, installation and commissioning of turnkey automation projects. Right from selection of sensor to automatically printing daily production report for director. Our team of engineer with professional experience is eager to meet you. Just brief us about your application and will offer you complete solution.

Jobs recently executed:

- Cut to length Automation for steel, paper and rubber industry
- Mixing Mill Automation for Rubber Industry
- Humidity and Temperature Management
- Weighting and batching for cement, slurry and food industry
- Level management automation for powder and chemical industry
- Furnace automation for continues and batch furnaces Hot billet sensing with automation for forging plants Machine
- Tool Automation
- Bearing Analysis Data Acquisition
- Automation and data acquisition for refrigeration system
- Bag counting system



Our customer for project automation:

- Kalyani Forge Ltd.
- Precision seals Ltd.
- Rich Quality Ice Cream
- Nirma Ltd.
- Krosslink Chemicals Ltd.
- Hemnil Engineers
- CCI Ltd.
- Edag Eng.
- Bilcare Ltd.
- Ultratech Cement
- Camlin Ltd.
- Philips Ltd.
- Siemens Limited
- Kirloskar Brothers Ltd
- Synergetic



COMPLETE TURNKEY AUTOMATION PACKAGE FOR CONVEYOR

- Electrical Panels-MCCs
- Variable Frequency Drives and panels
- Logic and Automation Panels
- Wiring, Installation and commissioning

Ask for detailed catalogue



Protocontrol is an approved vendor for major project consultants. Many project orders are executed successfully. Following are some important names.

CONSULTANTS

- Mecon Ltd.
- CMPDI Ltd.
- Holtec Ltd.
- Jacob H & G
- Fichtner Consulting
- MITCON
- NTPC Ltd.
- Tata Consultancy Services
- Desein Pvt. Ltd.
- Hindustan Dorr-Oliver Ltd.
- M.N.Dastur & Co.Ltd.
- ACC Ltd.
- Avant - Garde Engineers
- PDIL Ltd.

We executed many project orders for following customers

CEMENT

- ACC Ltd.
- Grasim Industries Ltd.
- Maihar Cement
- Rajashree Cement
- Zuari Cement
- Orissa Cement
- Chettinad Cement
- Ambuja Cement
- Madras Cements Ltd
- Vasavdatta Cement
- Ultratech Cement Ltd
- Dalmia Cement
- Lhaki Cement
- Penna Cement

STEEL

- Essar Steel Ltd
- JSW Ltd.
- Steel Authority Of India Ltd
- NMDC Ltd.
- Adhunik Steel And Power
- ISSCO Steel Plant
- Jindal Steel and Power Ltd.
- Lloyds Steel Ltd.
- JSW Ispat Steel Ltd.
- Tata Steel
- Welspun Steel Ltd.

POWER

- NTPC Ltd.
- Rajasthan Raja Vidyut Utpadan Nigam Ltd.
- DVC Ltd.
- Costal Gujarat Power Ltd.
- APGENCO
- Hinduja Power
- Reliance Energy
- MAHAGENCO
- Chattisgarh State Electricity Board
- NPCIL Ltd.
- JSW Energy
- Gujarat State Electricity
- Neyveli Lignite Corporation

FERTILISER –CHEMICAL

- IOCL Ltd.
- Kribhco Ltd.
- RCF Ltd.
- GHCL Ltd.
- National Fertilizers Ltd.
- IFFCO
- Kanoria Chemicals
- GSFC Ltd.
- Coromandel Fertiliser
- Deepak Fertilisers

EPC CONTRACTORS – Turnkey Project Executor

- BHEL Ltd.
- Kirloskar Brothers Ltd.
- Siemens Ltd.
- HEC Ltd.
- Durgapur Projects Ltd.
- ABB Ltd.
- S K Samanta & Co (P) Ltd.
- Larsen And Toubro Ltd.
- Vinar Systems Pvt Ltd.
- FLSmidth Private Ltd.
- Alstom Projects India Ltd.
- Areva T & D India Ltd.
- McNally Bharat Engg Co. Ltd.

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