

PROCESS CONROL INSTRUMENTS & ANALYTICAL EQUIPMENT















NK Instruments Pvt. Ltd. excels in the field of manufacturing & supply of Process Control Instruments & Systems like:

- Pressure & Vacuum Digital Gauges / Switches / Transmitters. Differential Pressure Gauges / Switches / Transmitters. Temperature Digital Gauges / Switches / Transmitters. Flow Sensors / Switches / Indicators / Totalizers / Batchers / Transmitters / Flow Metering Systems.
- Level Switches / Indicators / Transmitters.
- Conductivity / TDS Electrodes / Indicators / Controllers / Transmitters.
- pH Electrodes / Indicators / Controllers / Transmitters.
- Vibration Switches.
- Customized Process Indicators / Controllers / Control Systems & Control Panels.

NK Instruments Pvt. Ltd. product range also includes Analytical Equipment like:

- Water Purification Systems.
- Laboratory Gas Generators.
- Peristaltic & Syringe Pumps. Mass Flow Controllers & Meters.
- Spectroscopy Systems









Pressure / Vacuum Transmitters & Digital Gauges

	Enclosure
0.25% ES	
0.2570 FS	IP 65
0.6% FS	IP65 / IP67
0.4%, 0.2%, 0.1%	IP65 / IP67
0.5% to 1%	IP65 / IP 67
0.04% to 0.25%	IP67
0.25% FS	IP 65
0.25 to 1% FS	IP 40, IP 54, IP 65 or, Ex-proof
	0.4%, 0.2%, 0.1% 0.5% to 1% 0.04% to 0.25% 0.25% FS

The Pressure, Vacuum & Compound Transmitters / Transducers are used for s, where any of those parameters are to be measured, display their reading d data to the remote unit for control action. These instruments are very various applications like : in Pharma and Food plants for sanitary oclaves, Water Treatment & Waste Water Treatment plants, Low pressure IU, various chemical and petrochemical processes etc.

ALS : ATEX, CCOE, HART, IP65/IP67.

Repeat Type of Accuracy Enclosure Category 0 to 250mmWc 2% IP54. IP65. IP66, Ex-proof Vacuum

Range

Pressure Switches & Vacuum Switches

	0 to 760mmHg Vacuum	2%	IP40, IP54, IP65, IP66, Ex-proof
Fixed Differential	0 to 150 up to 0 to 2500mmWc	1%	IP40, IP54, IP65, IP66, Ex-proof
	-1 to 0.213 up to -1 to 1000 bar	1% or 1.5%	Ex-proof
	0 to 1000 bar	2%	IP65, IP66, Ex-proof
	0 to 760mmHg Vacuum	2%	IP54, IP65, IP66, Ex-proof
Adjustable Differential	0 to 150 up to 0 to 2500mmWc	1%	IP54, IP65, IP66, Ex-proof
	-1 to 1 up to -1 to 700 bar	1% or 1.5%	IP54, IP65, IP66, Ex-proof
Adjustable Differential for Compressor	2 to 12 Bar	2%	IP44
Fixed Stage Differential	0 to 1 up to 0 to 400 bar	2%	IP54, IP65, Ex-proof
Adjustable Stage Differential	0 to 1 up to 0 to 400 bar	2%	IP54, IP65, Ex-proof
Dual Pressure	1 to 400 bar	2%	IP66, Ex-proof
Electronic Pressure Switch	-1 to 2500 bar	2%	IP40, IP65, Intrinsically Safe or Ex-proof
Air Relay Switch	0 to 25 bar	2%	IP66

APPLICATIONS: Pressure Switches are used for Safety Interlock or for pressure Control between 2 Set Points. In applications like Pressure Vessels, Plasma cutting & welding machines, Sterilizers, SPM's, Vacuum base systems, etc. These switches are used as Safety Devices. In applications like Compressors, Fire Fighting Systems, Pressure Chambers, Boilers, Water Treatment Plants, etc.

APPROVALS : CE, ATEX, Ex & IECEX by BASEEFA.

Unit selection & 1
APPLICATIONS: T various applications or, transfer the read commonly used for applications, in Auto applications like AH
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					Te	emperature Inst	rument
					Temperature Sensors Type	Specifications	Enclosure
	0			0-Z	RTD's Thermocouples,Leaftype Thermocouples	Range : -50° to 2000°C	IP 65, Ex-proo
	TO T				Head Mounted Transmitter	l/p: RTD, RTD, T/C, mV O/p: 4 to 20 mA, HART	IP 65, Ex-proo
					Temperature Switch	Range: -10° to 150°C	IP 66, IP 67
					Digital Temperature Switch	Range: 200° to 400°C	IP 65
		2			Digital Temperature Gauge 0 to 400°C	5 V Battery operated 8x1 LCD display Auto shut off facility Integral/Remote Sensor Probe	IP 65
		1.)			Digital Temperature Gauge 0 to 400°C	Externally powered Panel mounted/wall mounted	IP 40, IP 54, IP 65 or, Ex-proof
Pressure Difference S Gauge / Switches & Ti	witches, Gaug	es,			APPLICATIONS: Temperature Measu Temperature in the Process, to indicat data in 4 to 20mA or, RS485, Tempera process. Commonly used in Food & P	e the same in Digital form or to to ture Switches are used as safety	ansfer the same
Types	Ranges	Enclosure			APPROVALS : IP65/IP67, Flamepr	oof-to-group IIA, IIB, IIC, ATI	EX, HART
Piston type DP Gauge / Switch	0 to 15 mmWc up to 0 to 70 bar	IP 40, IP 54, IP 65, Ex-proof			6 📕 🥅		
Diaphragm type DP Gauge / Switch	0 to 0.6 mmWc up to 0 to 25 bar	IP 40, IP 54, IP 65, Ex-proof					
Diaphragm type DP Switch	0 to 2 mmWc up to 0 to 25 bar	IP 40, IP 54, IP 65, Ex-proof	10				
Compact DP Transmitter	0 to 4 mbar up to 0 to 20 bar	IP 65		11		U P	
Digital Differential Pressure Gauge 0 to 200 ar, 3.6V Battery operated Gauge. 8x1 LCD lisplay auto shut off facility.Unit Conversion Tare facility	0.25% FS	IP 65).4		F
Digital Differential Pressure Gauge 0 to 700 oar externally powered Gauge. Panel mounted or, wall mounted. Unit selection & Tare facility	0.25 to 1% FS	IP 40, IP 54, IP 65 or, Ex-proof	(-		· 💽 ` 🖡	
0 to 200 bar, 3.6V Battery operated Gauge. 8x1 LCD display auto shut off facility. Unit Conversion & Tare facility	0.25% FS	IP 65		//	Or gur		THE IS
) to 700 bar externally powered Gauge. Panel mounted or, wall mounted. Jnit selection & Tare facility	0.25 to 1% FS	IP 40, IP 54, IP 65 or, Ex-proof					10
APPLICATIONS: These DP Instruments are pressure difference between two points are t control action, Indication or, to communicate are used for various applications at Filtration Dispensing Booths, Across Blowers / Valves Pre-Filters / Strainers / Heat Exchangers, ori Measurement in pressurized tanks, Reverse APPROVALS : Flameproof to ATEX & IECEX by BASEEFA	o be measured for the purpo with another device. These i Plants, Self Cleaning Filters / Pumps / Bag Filters / Colle ice for DP Indications or, Co flow condition monitoring etc	se of safety, nstruments , AHU's, ctor Filters / ntrol Level 5,.					PG

Types	Range	Options	Accuracy
Insertion Paddle Wheel			1% to 2% FSR
Electromagnetic Full Bore	0.8 to 346 M3/Hr for conductive liquids only	Flow Rate Flow Rate + Total Flow Rate + Total + Transmitter Flow Meter with IBR Certification	0.5% FSR
Electromagnetic Insertion Rod type	113 to 11308 M3/Hr for conductive liquids only	Flow Rate + Total Flow Rate + Total + Transmitter	1% FSR
Oval Gear Flow Meter	0.2 to 150000 LPH for viscous liquids only	Flow Sensor Flow Meter Battery Operated Flow Meter with 4-20 mA or, Rs485 Flow Meter with HARTFlow Sensor	0.15% FSR
Oval Gear Flow Meter with Mechanical Counter	0.15 to 340 M3/Hr for viscous liquids only	Only Comulative Total Comulative Total and Restable Batch Comulative Total with 4-20mA output Comulative Total and Restable Batch - with 4-20mA output	0.5% to 0.2% FSR
Turbine Flow Meter	0.6 to 15500 LPH for clear liquids only	Flow Sensor Flow Meter Battery Operated Flow Meter with 4-20 mA or, RS485 Flow Meter with HART	0.5% to 1% FSR
Turbine Flow meter Battery version	0.06 to 14130 M3/Hr for clear liquids only	Flow Rate + Total	2.5% FSR
SS Helical Rotor Flow Meter	40 upto 800000 LPM for slurry and liquids with suspended particles	Flow Sensor Flow Meter Battery Operated Flow Meter with 4-20 mA or, RS485 Flow Meter with HART	0.25% to 1% FSR
Plastic Helical Rotor Flow Meter			1% FSR
Ultrasonic Flow Meter Wafer type	0.71 up to M3/Hr for ground water only	Flow Rate + Total Flow Rate + Total + Transmitter (Battery power or, external power)	1% FSR
Ultrasonic Flow Meter Non-Contact type			1% FSR
Wheel Flow Indicator (Mechanical)	0.5 to 190 LPM for clear liquids only	y Visual indication through motion of rotor	
Pelton Wheel Flow Indicator (Mechanical)	0.5 to 190 LPM for clear liquids only	Visual indication through motion of rotor	
Flow Metering Systems (Digital Readout)	Diesel Dispenser, Fuel Cons Systems,Genset Efficiency M Tanker Unloading Systems	umption Monitors, Batching Ionitors, Liquid Filling Machines,	0.5% of Reading

APPLICATION: These metres are suitable for clear liquids, liquids containing small solid particles, crude oil, furnace oil, various type of fuels like diesel, gasoline, kerosene, petrol, etc.

APPROVALS : Flameproof to group IIA, IIB or, IIC, IBR Certification.





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Flow Sensors, Meters and Transmitters (For Air and Gas)

Types	Range	Options	Accuracy
SWIRL Flow Meter (Temperature & Pressure Compensations)	1.0 to 3600 M3/Hr	Flow Meter Battery Operated Flow Meter with 4-20 mA or, RS 485	1% FSR
Thermal Mass Flow Meter (Full-bore or, Insertion type)	65 NM3/Hr to 7,00,000 NM3/Hr	Flow Meter Battery Operated Flow Meter with 4-20 mA or, RS 485 Flow Meter with HART	1% FSR

APPLICATION:

Swirl Flow Meters:

These metres are best for air and gas applications where the flow is low. These are best suitable for volume measurement of coal gas, natural gas, N2, O2, other gases, etc.

Thermal Mass Flow Metres:

Best for bulk-transfer of compressed air and various type of gases like chlorine, methane, ethane, ammonia, helium, hydrogen, CO2, N2, Argon, biogas, etc.

APPROVALS : Flameproof to group IIA, IIB or, IIC.



Flow Sensors, Meters and Transmitters (For Steam)

Types	Range	Options	Accuracy
Vortex Flow Meter	5 to 123500 M3/Hr	Flow Meter Battery Operated Flow Meter with 4-20 mA or, Rs485 Flow Meter with HART Flow Meter with Data Logger	1% FSR

APPLICATION: Vortex Flow Metres:

These flow meters are used for steam consumption monitoring in steam generators & boilers. Mainly used for saturated as well as superheated steam (IBR certified). These are commonly used also for compressed air, coal gas, natural gas, chemicals, etc.

APPROVALS : Flameproof to group IIA, IIB or, IIC. IBR Certification.





Types	Ranges	Options
Blind/Compact type	From - 0.4 to 4 Upto - 8 to 80 LPM	With Terminal Strip, with DIN plug (Adjustable set point)
Indicating type (through transparent tube)	From - 0.5 to 1 Upto - 75 to 100 LPM	With 1 or 2 Reed Switches (Adjustable set point)
Paddle type: Magnetic coupling type	3 to 1000 LPM	With 1 or 2 Reed Switches (Adjustable set point)
Paddle type: Bellow or, Magnetic coupling type	5 to 8000 LPM (adjustable ranges 20 to 1500 LPM)	With 1 or 2 Micro Switches (Adjustable set point)
Indicating Pointer type	2 to 60 LPM	With 1 Reed Switch (Adjustable set point)
Digital Indicating type	(in percentage)	With 1 Relay (Adjustable set point)

APPLICATIONS: The flow switches are used as safety devices for liquids or gases. If the flow rate of medium crosses set limit, flow switch will operate. These are commonly used for critical application where flow of Coolants, Lubricants, Fuels is ensured in Burners, Turbines, Engines, Compressors, Cooling Towers, Lubrication Systems, Heating Systems, Heat Exchangers & Heavy Duty Machineries. Air/Gas Flow switches are used for the similar application like Air cooling systems to ensure the availability of sufficient flow of Air.

APPROVALS : Flameproof to group IIA, IIB or, IIC & EXD, SIL-3

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Flow Switches

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Level Switches

PG 06

Types SS/PP Magn Float Displacer PP Cable Flo Conductivity Vibrating For for Solids Vibrating For for Solids Vibrating Roo Rotating Pace RF Admittant Hydrostatic/ Diaphragm ty Microwave ty APPLICAT medium can e.g. Conduct Solvents, See Powders, Pla Lime. Pastes

States.

Types	Range	Suitability
SS/PP Magnetic Float	40 mm up to 3000 mm	For Clear & non sticky Liquids only
Displacer	1 - 10 meters	For all types of Clear Liquids
PP Cable Float	1 - 25 meters	For water and water based liquids
Conductivity	25 mm up to 3000 mm	For Conductive Liquids only
Vibrating Fork for Liquids	70 mm up to 1500 mm	For Clear Liquids only
Vibrating Fork for Solids	150 mm up to 3000 mm	For Dry Powders, Granules, Grains, Pellets, Steel Balls etc.
Vibrating Rod	250 mm up to 1000 mm	For Dry Powders, Granules, Grains, Pellets, etc.
Rotating Paddle	125 mm up to 3000 mm	For Dry Powders, Granules, Grains, Pellets, etc.
RF Admittance	250 mm up to 3000 mm	For Fly Ash, Dry Powders, Granules, Grains, Pellets, Steel Balls, Construction Material, Slurries, Sewages, Slug, Paper Pulp, Sugar cane bagasse etc.
Hydrostatic/ Diaphragm type	300 mm up to 500 mm	Suitable for any Non Sticky, Conductive or, Non-Conductive Liquids or, Solids
Microwave type	15 mm up to 285 mm	Suitable for Conductive/Non Conductive Liquids, Paste & Slurries

APPLICATIONS: Level has to be interlocked or, controlled in various industrial applications. The medium can be Liquids, Solids or, Viscous Slurries – Conductive or, Non-conductive. e.g. Conducting Liquids like water, Treated & Non Treated Effluent, Corrosive Chemicals, Acids, Brines, Paints, Solvents, Sewage, Beverages, Juices, Syrups, etc. Non-conducting Liquids like various type of oils. Solids like Powders, Plastic Granules, Grains, Pallets, Steel Balls, Construction Materials like Cement, Sand, Fly Ash & Lime. Pastes & Slurries like Effluent, Paper Pulp, Chocolates, Creams, Fruit Juice, Oitments, etc.

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APPROVALS : IP65/IP67, ATEX, CCOE.



Level Gauges, Indicators and Transmitter

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Types	Range	Accuracy	Specification
Tubular Glass	0-300 mm up to 0-3000 mm	—	Side Mounted Transparent Glass Tube for liquid
Reflex	150mm up to1500 mm		Side Mounted Transparent Glass for high pressure application
Pointer type Mechanical 0 to 1.5 meters & 0 to 2.5 meter			Top Mounted Mechanical Level Indication with ease in mounting (in PP construction)
Follower Magnetic Float 0 to 500 mm up to 0- 1500 mm		Approx. 2%	Side or, Top mounted Mechanical Indicator having Magnetic Float
Bi-color Magnetic Float	0 to 500 mm up to 0- 1500 mm	Approx. 4 mm	Side or, top mounted Mechanical Level Indication for liquids using Rolling Magnets & Magnetic Float
Float & Board (guided and non-guided)	0-2 meters up to 0-25 meters	Approx. 5%	Float operated Mechanical Level Indicators for liquids in storage tanks
Float Type (Analogue Output)	0-300 mm up to 0-3000 mm	Approx. 3 mm	Magnetic Float Operated Liquid Level Indicator using Bypass assembly or, Top-mounting type
Capacitance Type (Analogue Output)	0-150 mm up to 0-15 meters	Approx. 1%	Rod type, or Rope type Sensor for Conductive or non-conductive liquids only.
Flush Diaphragm type / Submersible Type (Analogue Output)	Gravity pressure from 1 meter up to 20 meters	Approx. 1%	SS Sensors and PP Cable - suitable for clear Liquids only.
Ultrasonic (Analogue Output)	1 meter up to 25 meters	Approx. 1%	Non Contact Level Sensor is not suitable for tanks having Vacuum, Foam, Fumes, High Temperature & high pressure. Compact instruments & available with Hygienic design & On-field configurable measuring range.
Radar / Micro Wave (Analogue Output)	1 meter up to 50 meters	Approx. 0.5%	Non Contact Level Sensor is suitable for high temperatures or applications having Foam and Fumes. The instrument is compact in design and on-field configurable.

APPLICATIONS: There are 4 typical applications for the Level Measuring Instruments
1) For Level Indication Mechanically, where any Electrical or, battery supply won't be required.
2) For Level Sensing & Digital Indication of available Level in the tank
3) For Level Indication & Transmitter for Remote Indication or, Control application. Level Measuring Instruments are used very commonly in industries like Chemical & Petrochemical, Paper & Pulp, Food & Drugs , Water Transport & Beverage, Construction Industries, Cement Plants etc.

APPROVALS : IP65, IP67, Flameproof-to-group IIA, IIB or, IIC, ATEX



ypes 🛛	Ranges	Accuracy	
Conductivity Sensor	Cell constant 0.01 or 10	1% to 2%	
Conductivity/TDS ndicator	1 to 10000 micro S/cm	2%	
Conductivity/TDS ndicator with relay	1 to 10000 micro S/cm	2%	un un un un un un
Conductivity/TDS ndicator/Transmitter vith relay	1 to 20000 micro S/cm	1%	Conductivity Meter

Water Treatment Plants.

APPROVALS : IP65 & Flameproof-to-group IIA, IIB or, IIC





Vibration Switches		
Types	Type of Switch	Enclosure
Vibration switch with Manual reset	SPCO, DPCO, DPDT Silver or, Gold contact	IP 67 or, Exproof
Vibration switch with Remote reset	DPST Silver contacts	IP 67

APPLICATIONS: Vibration Switches are used for protection of rotating plants reciprocating machinery. It can be set in such a way that it will operate above the normal running level of vibration, by activating alarm or shutting down machine/circuits. Once the switch is operated internal micro-switch remains latched until re-seted. It is used at various applications like Forced Drought Cooling Tower Fans, Heat Exchanger Fans, Axial-flow Booster Fans, Industrial Extractor Fans, Ventilation Systems, Deep-well Pump sets, Centrifuges or, Rock Grinding Machines, Vibrating conveyors and Industrial Grinding Machines.

APPROVALS : CE, ATEX, RoHS





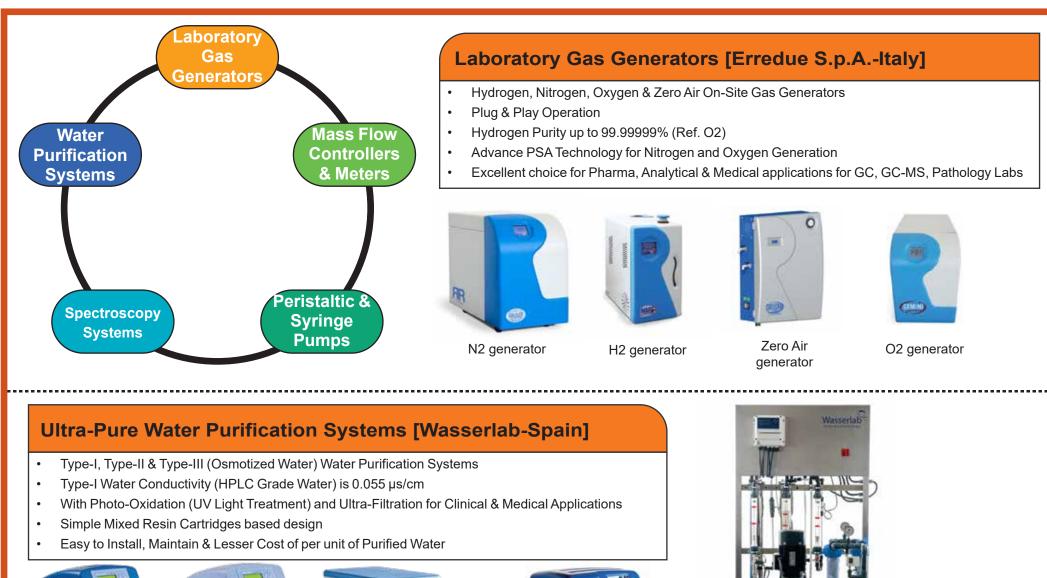
Tailor made Instruments & Systems

There are real needs of various instruments for very specific applications in industries, where customization is required in the instruments or, control systems. Those requirements may not be in a volume. In such a case those type of instruments are not readily available in the market or, with any manufacturers. NK Instruments undertake such jobs also. Few of them are as listed below: Programmable Process Indicators & Controllers as per specific requirements, Bar Graph Indicators, Square Root Extractors, Multi-Channel Indicators / Controllers, Earth Open Controllers, Loop Powered Indicators, Level Control systems for multiple tanks, Data Scanners, Data Logger, Programmable Timers, Sequential Timers, Batch Controllers, Dosing Controllers, P1/P2 & DP Indicators, Temperature & Humidity Controller, RF communication systems with data encryption facility, Water distribution systems, Large Sized Digital Indicators, Scrolling Displays, Data Acquisition Systems, RS 232, to RS 485 Convertors, RS 422 to RS 232 Converters, etc.



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OUR MISSION

Become a Buddy of all our clients to enhance their business by providing them Reliable & Cost effective solutions.

OUR VALUES

Reliable(Follow your commitments)Resourceful(Supreme importance for acquiring knowledge & eagerness to apply the same)Respect(Find the jewel in everybody)Elegance(Graceful presence)Happy Environment

NK Instruments Pvt. Ltd. not only supplies Process Control & Analytical instruments but also serves as a trusted technology partner for our valued clients. We offer a variety of product combinations and tailored solutions to meet specific customer requirements, ensuring added value. Our enduring business relationships stem from a dedicated team of experienced, responsive, and knowledgeable professionals committed to meeting each customer's unique application needs. NK Instruments Pvt. Ltd. specializes in delivering reliable, high-quality solutions at competitive prices, earning the trust of our clients for over two decades.

In our Process Instrumentation division, we provide precision products such as Pressure, Differential Pressure, Vacuum, Temperature, Level, Flow, Velocity, Vibration, Conductivity, TDS, ORP, DO, pH, and more, catering to various industries including pharmaceutical, chemical, petrochemical, fertilizers, R&D labs, hospitals, defense research, and more. Additionally, we serve a wide range of applications including water treatment, reverse osmosis plants, gas mixing systems, filtration systems, heating/cooling/lubrication systems, and medical equipment manufacturing, among others.

Expanding our offerings, we have incorporated leading Global Brands of Analytical Equipment into our portfolio, enabling us to venture into Analytical and Laboratory Instrumentation. Our high-performance products and solutions cater to industries such as pharmaceuticals, bio-pharmaceuticals, laboratories, medical facilities, clinical settings, food production, cosmetics, paints, and pigments. With top-notch Laboratory Gas Generators from Italy, Ultra-High Pure Water Purification Systems from Spain, Mass Flow Controllers and Meters from Japan, Peristaltic Pumps from China, and Advanced Spectroscopy Solutions from the USA, we are confident in meeting our customers' needs with cutting-edge solutions in Analytical and Laboratory applications.

MK Instruments Pot. Ltd.

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