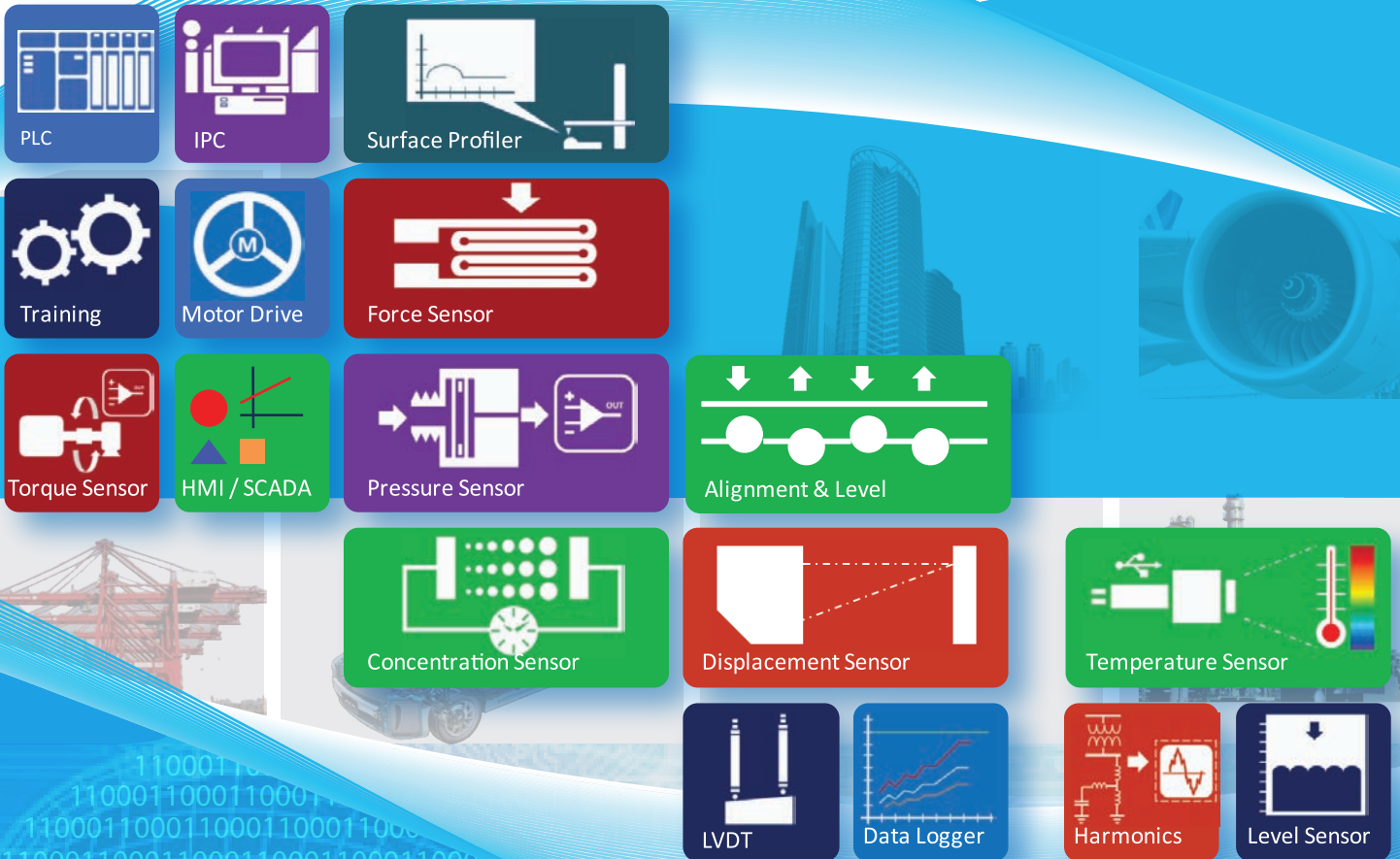


Product Guide VIII



we measure
display
control



Meeting Customer Satisfaction As a Total Solution Supplier



OUR CUSTOMER OUR MISSION

Endless Automation Systems, Wide Range Solutions, Advance Technology,
Cost effective, Free Application Consultation,
Well-trained and delicate engineers,
Satisfaction Guaranteed, Free Demonstration.



*For more information, please log on to <http://www.scigate.com.sg>

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01

HMI & SCADA

Graphic Touch Panel
Graphic Logic Controller
Industrial Computer & Flat Panel
Data Logger
SCADA Solution
Energy, Facility & OEE Solution
Industrial Computer & Flat Panel
Marine Computer
Graphic Touch Panel (CE)
Graphic Logic Controller (CE)
Programmable Logic Controller

04-09

02

IoT

Wireless Sensor
Wireless Telemetry

10-11

03

DRIVE & CONTROL

AC Drive / DC Drive
Soft Starter
AC Servo Drive / Motor
Wide Spectrum Passive Harmonic Filter

12-14

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04

SENSORS

Force Sensor / Weighing Solutions
Force /
Displacement Measurement Solutions
Torque Sensor
In-line Concentration / Density Monitor
Level Transmitter
Pressure Transmitter
Pressure Switch
Level Float Switch
Flow Sensor
Digital Panel Meter

21-26

05

METROLOGY

Contact Displacement Probes
Analogue & Digital Probe
Non-Contact Measurement System
Laser Scan Micrometer
IR Thermo-sensor / Thermo Imager
Color Sensor
High precision roundness, roughness
and contour measurement

The GP4000 Series



Pro-face
for the best interface



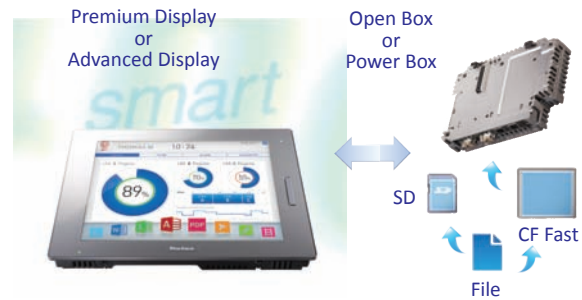
Touchscreen HMI with extensive simultaneous multi-control connectivity

SP5000

The New Pro-Face Standard

Bring your factory closer to your office

By segmenting the network, Smart Portal makes it possible to connect factories and offices while ensuring the highest security.



Pro-Face LT4000M – HMI + PLC

DIO/AIO	Built-in DIO: Max. 20 inputs (include 2 fast inputs), Max. 10 outputs, Max. 2 fast outputs Built-in AIO: Max. 2 inputs, Max. 2 outputs, Max. 2 temperature inputs		Sensor, Motor, Lamp, Inverter, Switch, and etc...
CANopen (Master)	CANopen supported as Master: Max. 63 CANopen slave devices		Pro-face EX Module General CANopen devices
Ethernet Serial	Ethernet port and SIO (RS-232C / RS422 / RS485) port integrated		Actuator, Robot, Inverter, Motion Controller, PLC, etc...
USB	USB Type A available		EZ Series USB Devices

Pro-face Remote HMI

Remote Monitoring Software For Mobile



Pro-Face Remote HMI can monitor and control Pro-Face HMI screen on a smart phone or tablet.



SLIO

SLIO – the intelligent, decentral I/O system. During development we paid particular attention to the highest cost-effectiveness and long term efficiency for end user and service providers.

Pro-face USB Solution EZ SERIES

New efficiency USB devices allow user benefit from the flexible and user friendly solution.



Direct connection via our products to various devices enabled with our all-in-one software



Available a wide variety of high-quality sample screens of connecting devices for reduction of editing time.

PS4000 Series (Rugged, High Performance IPC)

Pro-face

for the best interface



Dependable:

- Longer part life
- UPS Supported
- Corrosion resistant
- HDD mirroring

Maintainable:

- Expandable
- Replaceable HDD
- Replaceable Fan

Compatible:

- Rear mounting available
- Reuse HMI resources
- Industrial Monitor

Reassurance:

- OS Long-Term Supply
- Safety Standard



UPS Available



Large Heatsink + Smart fan control



Sliding expansion Slot (Slide-in Slot)

HDD/SSD Slot (Slide-in Disk)

Easily Replaceable HDD Drive

FP5000 Series (Flat Panel Monitors)

- ▶ Available in 12.1" ~ 15"
- ▶ Analog Resistive Touch Panel
- ▶ DVI-D
- ▶ IP67F
- ▶ Front USB2.0 port
- ▶ Flexibility in connection to CPUs

Flat Panel Monitor

FP5000 SERIES

Industrial grade TFT display supporting gesture operation



Scroll

Swipe

Pinch

Two-point touch

Supporting latest gesture operations is key to more intuitive user guidance and also promotes less unintended operations. Applying proven resistive touch technology, compromises like choice of gloves or installation environment have not to be made

PE4000B Series



ECONOMIC, EFFICIENT, EMPOWERING

Specification:

- ▶ Serial COM x 06
- ▶ Ethernet x 03
- ▶ USB x 05
- ▶ 8 Points (Selectable I/O)
- ▶ Connect to multiple devices at the same time.

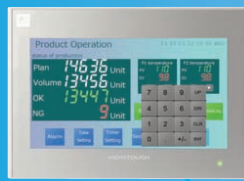
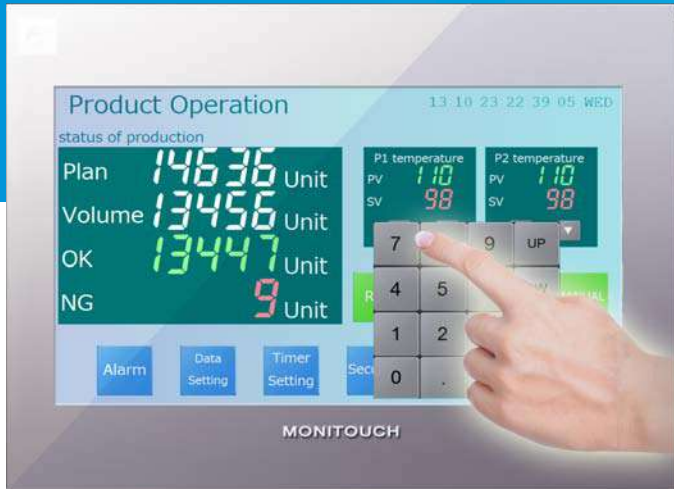
*For more information, please log on to <http://www.scigate.com.sg>

Powerful, Innovative, Intuitive (5.7" to 15")

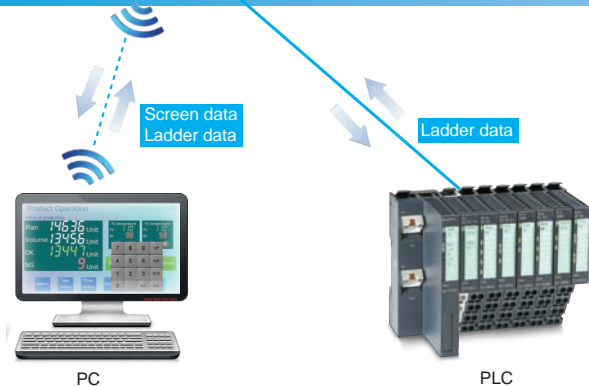
V9 Series



Wireless Data Transfer



By connecting a PC to a V9 via wireless LAN, screen data can be shared and ladder programs transferred to the PLC. With no need to physically connect the units, it is easy to debug programs on site.



Remote Connection from Tablet PCs

All types of the V9 series are equipped with VNC server function for remote monitoring and control of production from your table PC.



Direct communication with your tablet PC

V9 Advanced

V9 Advance model incorporates an access point, which enables direct communication with a wireless device without an internal access terminal



Zooming In and Out with Two Fingers **V9 Advanced**

The displayed image can be magnified up to 200% by pinching out the screen, and reduced to the original size by pinching it in.



Pinching in



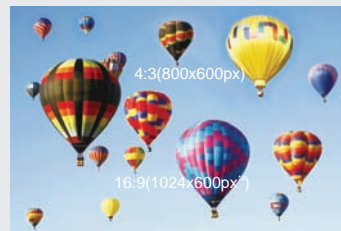
Pinching out

Zoom up to 200%

*2: the image can be scaled up and down by double tapping for V9 Standard /Lite.

Widescreen LCD **V9 Advanced**

V9 Advanced models is equipped with a high-precision, high-resolution widescreen (16:9). Greater volume and variety of information can be displayed on the screen.



TECHNOSHOT Series – Simple, Economical, Efficient (7.0" and 10.2")

Compact yet highly functional

TS1070 series 7 inches

- WVGA
- 64K colors
- TFT
- LED Backlight
- 3ch Serial (P-serial)
- USB Master/Slave
- Ethernet

Wide screen to display more information

TS1100 series 10.2 inches

- WVGA
- 64K colors
- TFT
- LED Backlight
- 3ch Serial (P-serial)
- USB Master/Slave
- Ethernet



TS1070



TS1100



Delphin with intelligent, universal data acquisition hardware and intuitive measurement software



Overview of software modules:

ProfiSignalGo :

ProfiSignal Go is a runtime system enabling measurement data to be displayed and analyzed in just three steps.

- ▶ Data acquisition and recording
- ▶ Data analysis and calculations
- ▶ Online and offline trending
- ▶ Data export

ProfiSignal Basic :

ProfiSignal Basic is a developmental system for generating custom systems with visualization and trend functions.

- ▶ Operation and observation
- ▶ Process visualization
- ▶ Report generation

ProfiSignal Klicks :

ProfiSignal Klicks is software for test automation and the programming of control systems.

- ▶ Automating test stands and process control system
- ▶ Automating evaluation and analysis functions
- ▶ Generating parameter graphs
- ▶ Selective frequency band evaluation

Delphin Trend-App



A Trend-App is available for the remote monitoring systems, experiments, trial and testing.



The universal measurement case is made of an extremely robust synthetic material and can cope with any bumps or knocks during transport or operation.

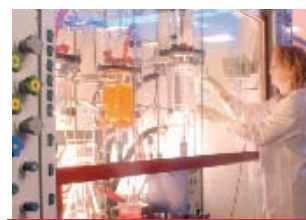
Mobile Case



Monitoring & process control



Vibration measurement



Data Acquisition & data logger



Test, trial & automation

SLIO

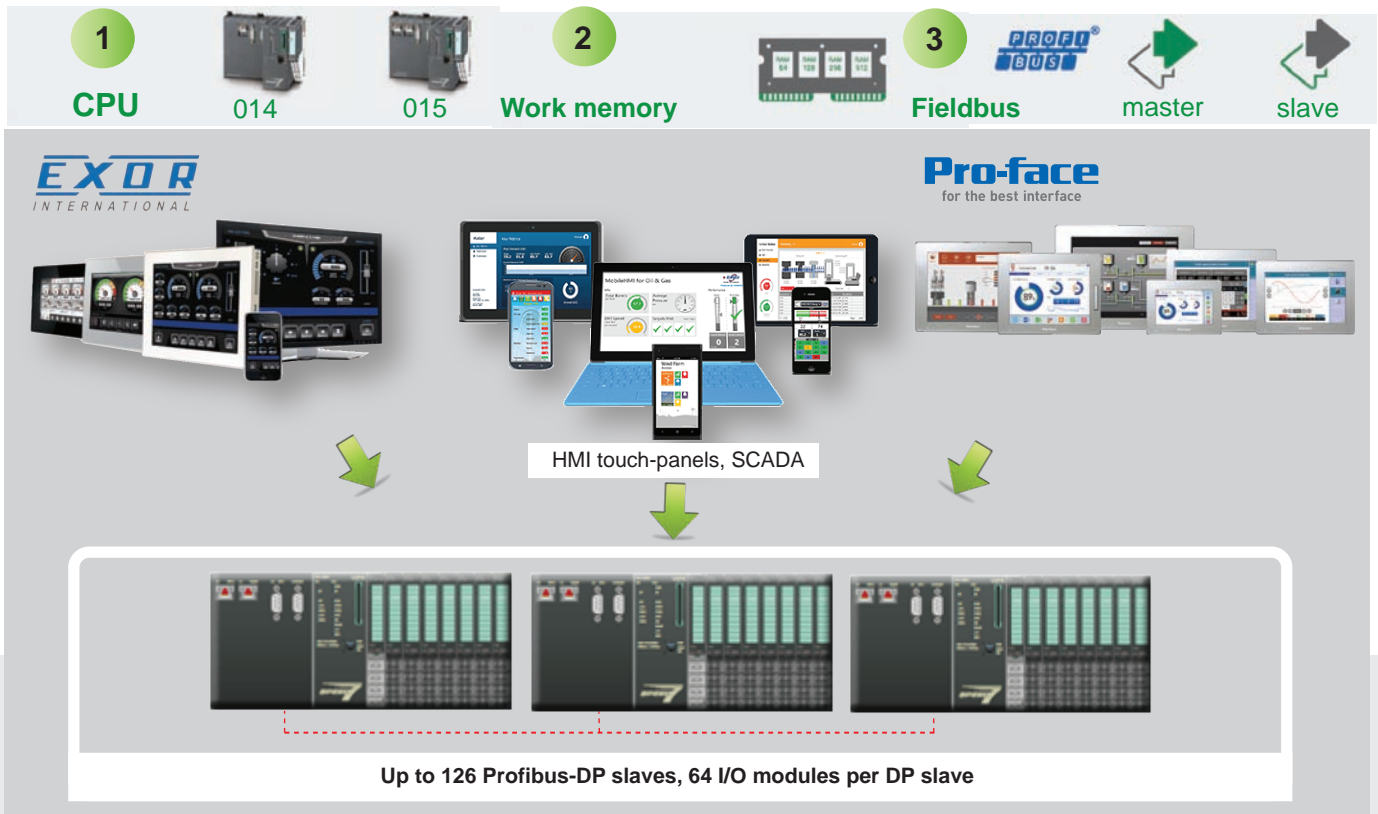
The smart control and I/O system



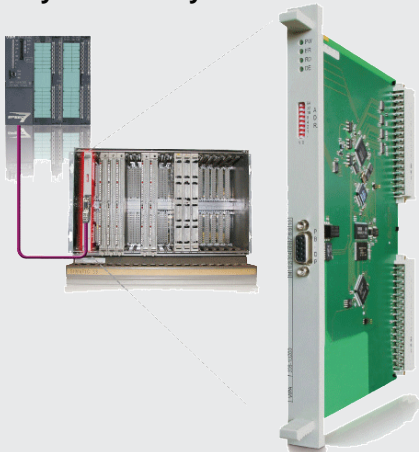
1. Programmable with Speed7 Studio or Simatic Manager (Step7) and TIA Portal.
2. Ethernet interface for easy programming and communicating with touch panels and SCADA system.
3. Expandable work memory
4. Program and data storage using SD card
5. Configurable serial interface are Modbus RTU master / slave, MPI, ASCII etc.



- ▶ 2 types of CPU (014 and 015).
- ▶ Use the same set of I/O modules. Interchangeable with VIPA SLIO CPU or VIPA SLIO remote coupler.



S5 Conversion - Upgrade existing Simatic S5 to SPEED7 solution 'Greatly reduced system shut down time for conversion!'



- ▶ From continuous 2 months period of shut down to several shut down, with each period of only 1~3 days.
- ▶ Successive conversion at minimum downtime.
- ▶ System roll-back is possible.

1. Use VIPA IM 306 DP slave for integrating S5 racks into S7 environment via Profibus-DP.
2. Compatible for 115U, 135U and 155U series.
3. Power supply replacement for 115U

*For more information, please log on to <http://www.scigate.com.sg>

JMobile Studio

the human machine interface



EXOR
INTERNATIONAL



HMI + PLC Solution for eTOP 500/600 series



Available in Profibus, Can-Bus Expansion
Multifunction I/O: :20DI, 10DO, 8AI and 4AO and PT100
Compact I/O: :8DI, 6DO, 1 Relay
CODESYS Module for ladder programming



- ▶ From 4.3" inch to 15" inch
- ▶ 64K LED Color Display
- ▶ Ethernet, USB, serial ports and MPI Integrated
- ▶ Support SD Card
- ▶ PLC (CODESYS) Optional Integrated
- ▶ SD Card Slot
- ▶ Protection class IP66 (Front)
- ▶ DNV, Class 1 Div 2

Application in Marine, Oil & Gas and Hazardous Industry

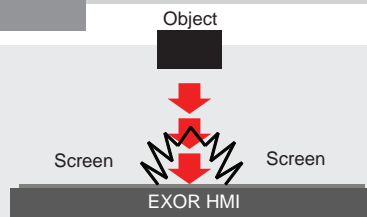


SERIES **500** GLASS
NO LIMITS HMI

HEAVY DUTY

Force: 69 to 100 Kgcm-2

- ▶ 7" inch and 15" inch
- ▶ 64K LED Color Display
- ▶ True Glass Projected Capacitive
- ▶ Protection class IP69K (Front)
- ▶ DNV, ATEX, Class 1. Div 2
- ▶ Ideal solution for extreme, outdoor, marine
- ▶ UV resistant
- ▶ Temperature range -20 °C to +60 °C



600 SERIES TRUE GLASS HMI

True Glass Technology

NEW
PRODUCT



coming soon..!

eTOP 21.5"

eTOP 610

eTOP 607M

eTOP 605

- ▶ Projected Capacitive: " True Glass " Touch screen
- ▶ From 5" inch to 21.5" inch
- ▶ Scratch & Harsh Chemical Resistant Surface
- ▶ UV Resistant
- ▶ Coating on all Electronic Boards
- ▶ Protection class IP66 (Front)
- ▶ DNV, ATEX, Class 1. Div 2



*For more information, please log on to <http://www.scigate.com.sg>



AX-3D

Ultra Low Power
Wifi accelerometer with
built-in data logger



AX-3DS

Ultra Low Power
Wifi shock sensor with
built-in data logger



Hi-Inc

Ultra Low Power
Wifi accelerometer with
built-in data logger



X-Inc

Ultra Low Power
Wifi combo sensors
(accelerometer, inclinometer
and shock) with built-in
data logger



ULP (Ultra Low Power)
Wifi Technology - IEEE 802.11 b/g/n
(2.4 GHz frequency band)



Store and Forward+:
Lossless data transmission
with hard real-time



Rugged aluminum casing
Waterproof IP67 | NEMA 6



USB 2.0 for device configuration
(including firmware update)



Smart and flexible power supply,
compatible with USB and Solar
power sources.



Industrial temperature range -40 °C to +65 °C



SSD (Smart Shock Detection), WILOW®
sensor can wakeup on shock detection
(software configurable)



IIOT Ready: Integrated MQTT data
exchange, lightweight and open-source
Industrial Internet of Things (IIOT)
protocol



Embedded Data Logger:
up to 5 million data points (with events
dating)



Precision Time Protocol
over Wifi Network (±30ms of precision)



Onboard SNTP (Simple Net Time
Protocol) Client



The BeanScope® is a real time WSN supervision and control monitor. It allows the users to monitor and operate in real time BeanAir® WSN. The BeanScope® is also equipped with a smart expert system that allows users to interpret elements such as data acquisition or alarms related to the sensor network.

Ethernet IEEE802.15.4



Modbus



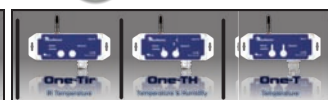
SmartSensor



ProcessSensor



EcoSensor

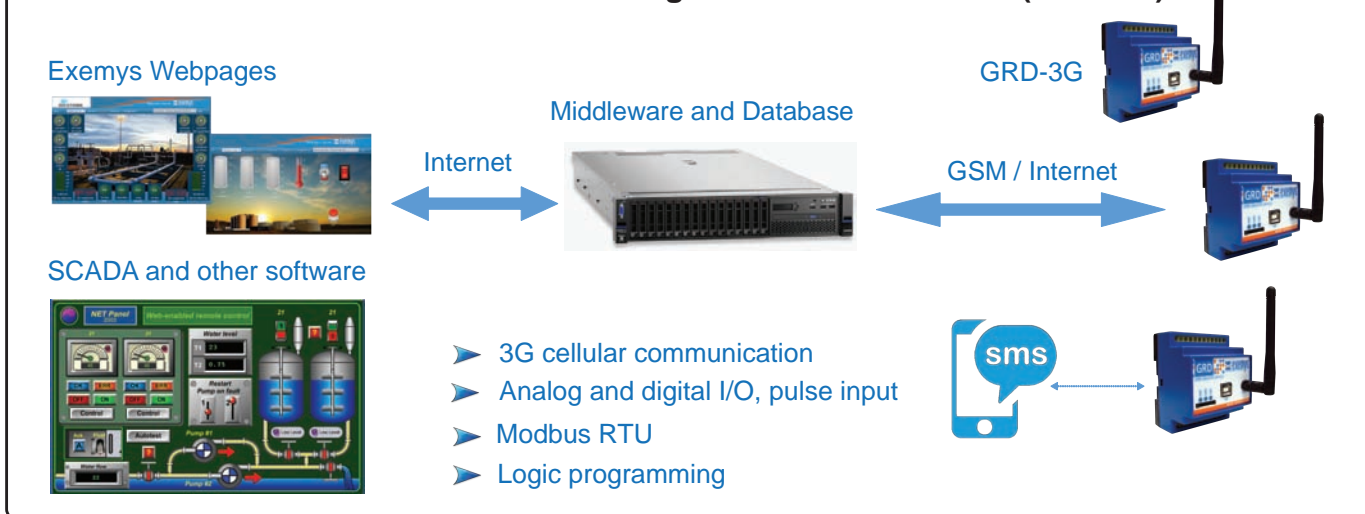


X-Solar

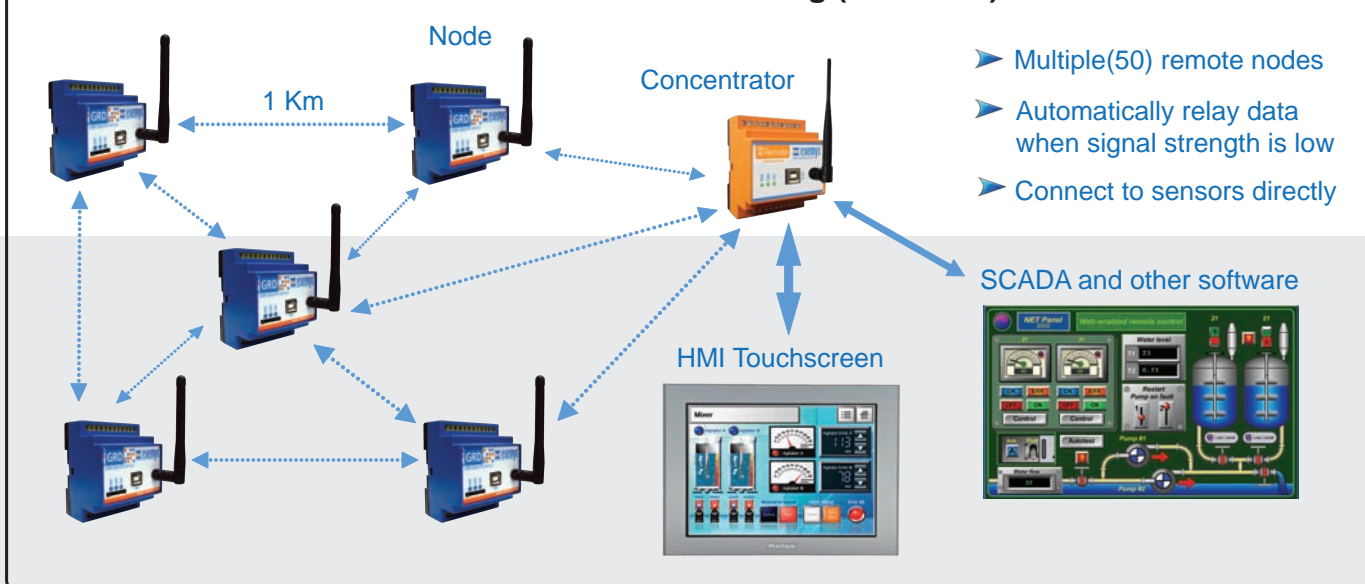




Miniature 3G PLC with Integrated I/O and Modbus (GRD-3G)



Wireless Remote Monitoring (wRemote)



Protocol Converters



Analog & Digital Acquisition



Fiber Media Converters



IoT Web Server



UNIDRIVE M

AC and Servo Drive Family for Manufacturing Automation
 0.25 kW - 1.2 MW Heavy Duty
 100 V | 200 V | 400 V | 575 V | 690 V



www.controltechniques.com



M100



M200



M300



M400



M600



M700

Up to 7.5 kW (10 hp)

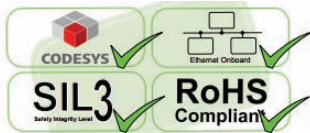
Up to 22 kW (30 hp)

Up to 110 kW (150 hp)

Up to 1.2 MW (1600 hp)

Open loop vector or V/Hz induction motor control

Enhanced open loop Rotor Flux Control for induction motors (RFC-A)



Open loop permanent magnet motor control (RFC-S)

Active Front End (AFE) power quality converter

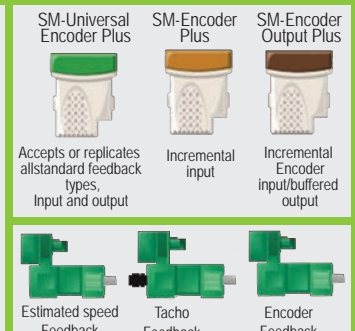
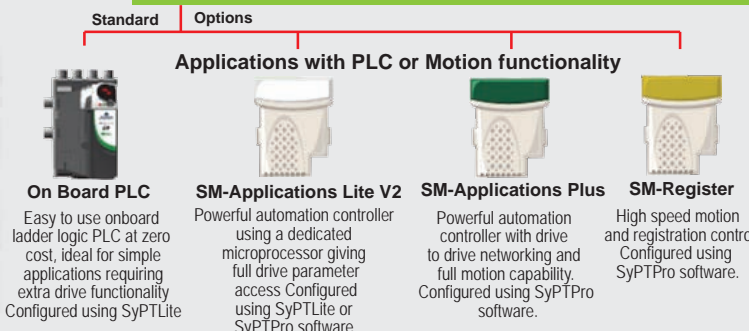
Closed loop Rotor Flux Control for induction motors (RFC-A)
 (M600 requires SI-Encoder option)

Closed loop permanent magnet/servo motor control (RFC-S)

Mentor MP High Performance DC Drive

25A to 7400A
 400V/575V/690V

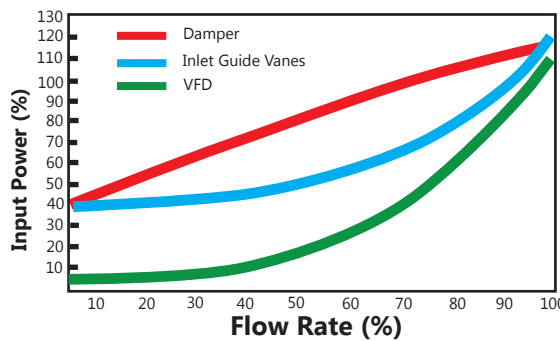
Two or four quadrant operation



*For more information, please log on to <http://www.scigate.com.sg>

HVAC/ACMV OPTIMUM COMBINATION

Reduces
Harmonics
to 5%



Affinity Law states flow, pressure and power proportionality to speed. VSD adjust fan speed to control flow and pressure. Reducing speed dramatically reduces power consumption and noise.



U SERIES MATRIX CONVERTOR DRIVE

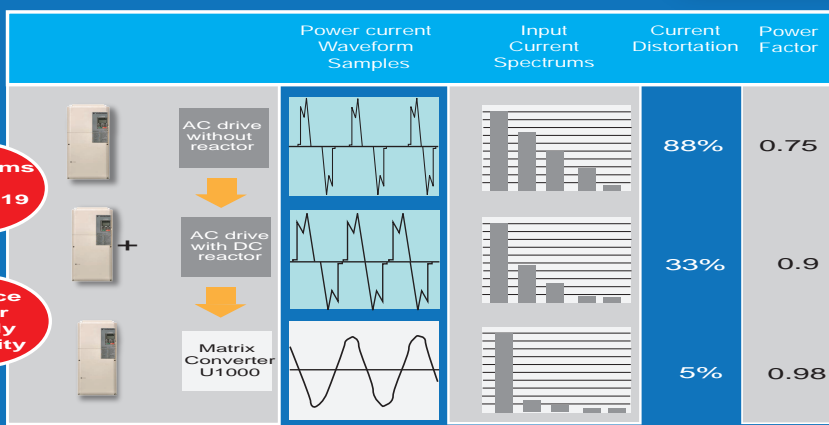
- ▶ Conforms to IEEE519
- ▶ Achieving 0.98 Power Factor
Efficient Energy Usage by regenerating energy to Mains supply
- ▶ Foot Prints downsized without the needs for Harmonic filters, AC reactors to save panel size
- ▶ Switching to and from commercial power without contactors, phase detectors etc



E SERIES HVAC DRIVE

Setting	Application
00	General-purpose
01	Water Supply Pump
03	Euhoud Fan
04	HVAc Fan

3.7-630 KW



Confirms to IEEE519

Reduce power supply capacity

- ▶ Application preset function for easy setup
- ▶ 400V class 3.7KW-630KW
- ▶ Monitor power consumption via 4-20mA output
- ▶ Components carefully selected and designed for 10 years life expectancy
- ▶ Products compiled to CE,UL,cUL & EU's RoHS directive
- ▶ Power ride through of 2s possible
- ▶ Removable Terminal Block for parameter Transfer

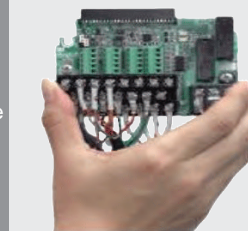
POWER REGENERATIVE UNIT

R1000



- ▶ 200V(3.5-105KW), 400V(3.5-300KW)
- ▶ Reuse waste energy to save energy
- ▶ Suitable for Crane, Lifters, Lifts, etc
- ▶ Reliable for ten years of durable performance due to careful selection of electronic components.
- ▶ More Braking Power
- ▶ 54% Energy Savings applicable to Lifts

E1000 Terminal Block



Wide Spectrum Harmonic Filter



Frees up system capacity by restoring VSD to near unity power factor

The most energy efficient harmonic solution for VSD's

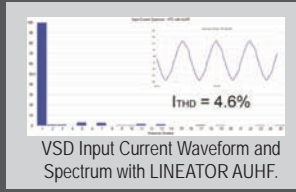
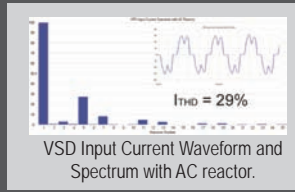
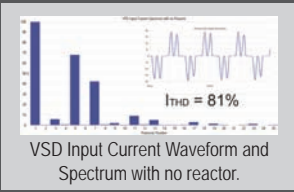
Low capacitive reactance ensures generator compatibility

Meets harmonic limits for both land and marine VSD applications

Apply LINEATOR anywhere Variable Speed Drives and 6-Pulse Rectifiers are used

- Oil and Gas industry
- Water and Waste Water
- Irrigation systems
- HVAC systems
- Mining operations
- Marine vessels
- Printing presses
- Elevators and escalators
- Pulp and paper processing

Improves VSD Performance



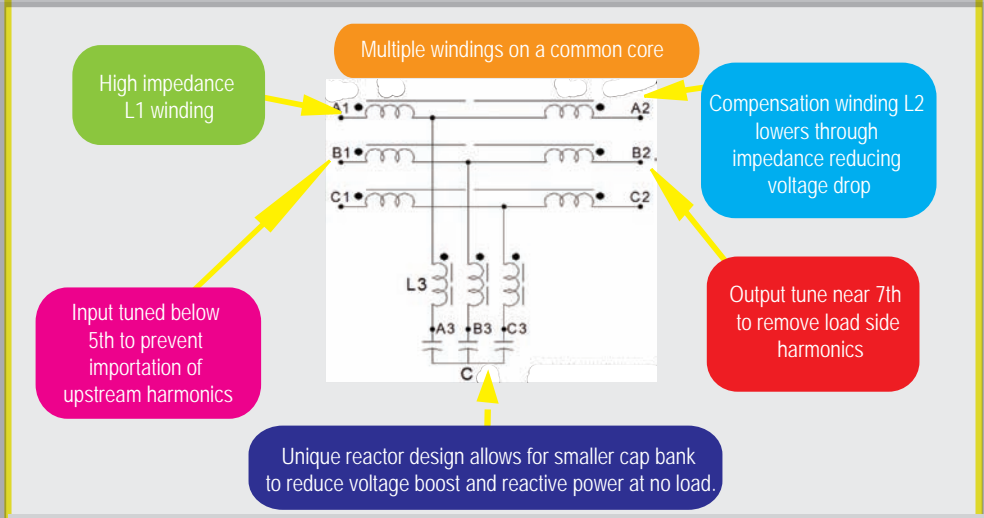
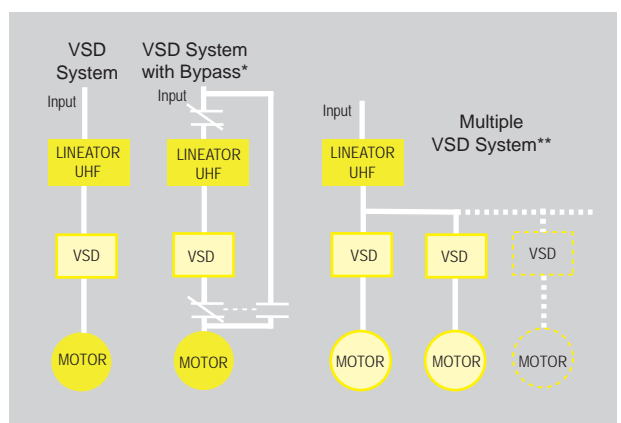
Other applications include:

- Induction furnaces
- Industrial rectifiers
- Welding operations

Performance Comparison on 60 HP PWM VSD LINEATOR™ vs Other Passive Treatments

	Input Current			Power Factor
	Waveform	Spectrum	THID	
6-Pulse Rectifier, PWM VSD			72.9%	.79 lag
With 3% AC Line reactor			35.6%	.90 lag
12-Pulse VSD			9.3%	.98 lag
With MIRUS LINEATOR™			5.8%	.99 lag

LINEATOR™ Application



Factory



Data Centre



Vessel

Installations



*For more information, please log on to <http://www.scigate.com.sg>

Load Cell, Torque, Pressure,
Force & Instrumentation



FUTEK
ADVANCED SENSOR TECHNOLOGY

LOAD CELL FAMILY



Miniature Family



Load Button Family



S-Beam Jr. (LSB200)



Thru-Hole Family



ISO 17025



In-Line Load Cell Family



S-Beam Load Cell Family



Rotary Torque Family



OEM Solutions



ANSI Z540-1

Samples in Seconds

USB Load Cells

Load Cells



LCA Series (Compression)
Canister
USB Load Cell



LCB Series (Tension/Compression)
Rod End
USB Load Cell



LLB Series (Compression)
Load Button
USB Load Cell



LCF Series (Tension/Compression)
Pancake
USB Load Cell



LSB Series (Tension/Compression)
S-Beam
USB Load Cell



TAT Series (Reaction)
Screw Driver
USB Torque Sensor



TAT Series (Reaction)
Socket Extension
USB Torque Sensor



TDF Series (Reaction)
With Flange
USB Torque Sensor



TFF Series (Reaction)
Thru hole
USB Torque Sensor



TRD Series (Rotary)
Rotary
USB Torque Sensor

Torque Sensors

test and measurement software
SENSIT



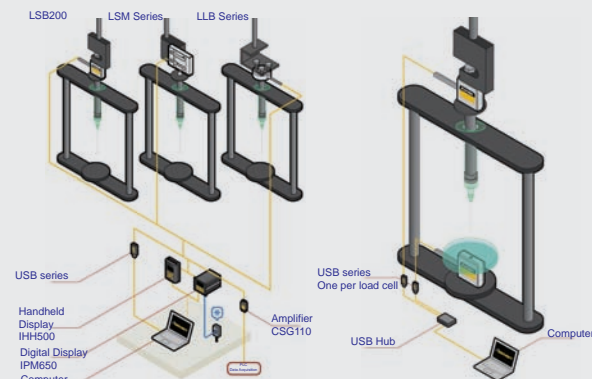
IPM650
Intelligent Panel



CSG110
Strain Gage Amplifier
Enclosed w/ Din Rail Mount

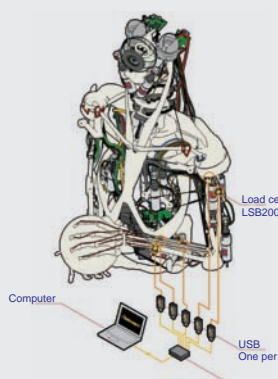


IHH500
Intelligent Digital
Hand Held Display

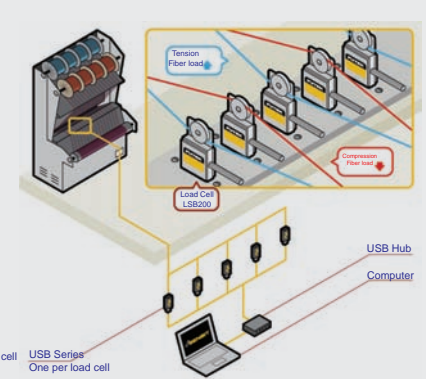


OEM Test Stand

Syringe Test Stand



Humanoid Robot Load Cell



Wire Tension Measurement

*For more information, please log on to <http://www.scigate.com.sg>

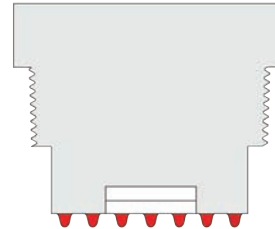
We Do Your Level Best Measurement, Automation & Safety



Reflective Technology™

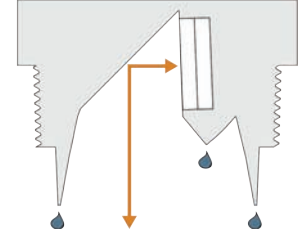
Condensation is the most common variable in liquid level applications. Condensation attenuates the acoustic signal of ultrasonic sensors with horizontal transducers, weakening their signal strength and signal to noise ratio by up to 50% and substantially reducing their measurement reliability. At the core of Reflective Technology™ is a simple fact. Unlike flat horizontal surfaces, significant water droplets cannot adhere to smooth vertical surfaces. By orienting the transducer vertically, condensation runs off the transducer and does not affect sensor performance. The unimpeded transmit and receive signals are redirected to and from the liquid off a 45° reflector, delivering reliable level measurement.

Horizontal Transducer



Signal Attenuation

Reflective Transducer



Reliable Measurement

Reflective Ultrasonic



FOB

	UG01-03	UG06-12	US01-03	US06-12
Classification	General Purpose		Intrinsically Safe	
Measuring Range	1.5m and 3.0m	6.0m and 12.0m	1.5m and 3.0m	6.0m and 12.0m
Output	4-20 mA + (4) SPST relays	4-20 mA	4-20 mA	4-20 mA + HART
Transducer Type	Reflective Technology™			
Transducer Material	PVDF			
Configuration	WebCal Software	Push-Button + WebCal Software	WebCal Software	Push-Button + WebCal Software + HART



WebCal Software

Pulse Radar



Classification	General Purpose				
Measuring Range	10m	30m	20m	35m	30m
Output	4-20 mA				
Antenna Material	PTFE	316L	316L & PTFE		Nylon
Configuration	Push-Button				

Guided Wave Radar



Rod



Coaxial



Cable

Intrinsically Safe Version



We Do Your Level Best®

Measurement, Automation & Safety

FLOWLINE
We Do Your Level Best



Corrosive Level Measurement

- 0.2% accuracy with little or no degradation over the range
- Auto-adaptive signal output filtering smooth liquid agitation
- Narrow 2" beam width for installation near walls or obstacles
- Tight 2" dead band optimizes the filling capacity of small tanks

Ultrasonic Level Transmitters



EchoSafe	EchoTouch	Echospan	EchoSonic	EchoPod
	<ul style="list-style-type: none"> ● Level measurement range: 1.25...10m ● Output signal: 4~20mA ● Pressure up to 2bar ● Material: PVDF 			Application:- <ul style="list-style-type: none"> ○ Bulk storage ○ Chemical feed ○ Cooling tower ○ Day tank ○ RO/DI water ○ Waste sump ○ Life science ○ Lift station

Level Switch Sensors - Ultrasonic, Vibration, Capacitance, Optic & Buoyancy



EchoPulse	
<ul style="list-style-type: none"> ● Level measurement range: 10...35m ● Output signal: 4~20mA ● Pressure: 3...40bar ● Material: 316L and PTFE 	Application:- <ul style="list-style-type: none"> ○ Storage ○ Process ○ Lift station

Level Switch Packages - Ultrasonic, Vibration, Capacitance & Buoyancy



- Level measurement range: up to 3m
- Function: Auto fill, Empty, Hi & Lo Alarm
- Contact: 1...5 SPST
- Material: PP, 316SS, PFA
- Points: Fixed & Adjustable

Smart Trak	Switch-Pak	Fluid-Point	Switch-Pro
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Display & Relay Controllers



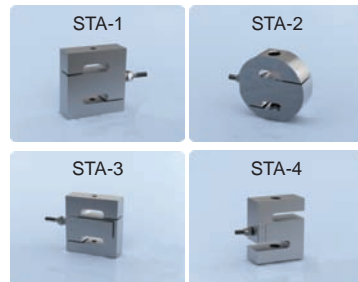
- Display: LCD & LED
- Function: Hi & Lo Alarm
- With repeater
- Relays output
- Input: 4~20mA

PodView	DataLoop	Commander	DataPoint	DataView
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*For more information, please log on to <http://www.scigate.com.sg>

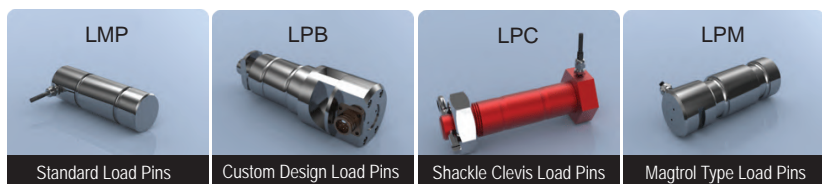
Compression Load Cell



Application :

- Hanging Scales
- Material/ Tensile test
- Engine Dynamometer
- Process Weight
- General force measurement

	Wireless Output (120m)			
	Strain Gauge Output			
	Dual Strain Gauge Output			
	In-Cell Amplifier (4-20mA)			
	4-20mA Output			
	Digital Load Cell (18Bits ADC)			



Standard Load Pins Custom Design Load Pins Shackle Clevis Load Pins Magtrol Type Load Pins

- 500kg to 1500te
- Stainless steel
- IP67
- Simple to install
- 100kg to 1500+ te
- Stainless steel
- Many design options
- ATEX version
- 1te to 1500 te
- Stainless steel
- IP67
- Special version available
- Magtrol 210 alternative
- 2.5 to 1250KN
- Stainless steel
- IP67



Ex IECEx, ATEX Approval for Exd Zone 1
Ups to 1500 ton, with free design.

				Tension Compression
				Load Links



Load cells for all applications & environments

Innovation in load cell technology

30 years of load cell expertise

Marine Winches

Crane safety work load monitoring

Lifting Hoist load monitoring



Automation

Crane

Oil & Gas

Civil

Aviation

Process

Yachting

Automobile



Pressure Transmitters

Your partner in
Water Management

Pressure and Temperature Transmitters	Submersible & temp transmitters
<ul style="list-style-type: none"> ATM.1ST/T ATM.1ST ATM.1ST/Ex 	<ul style="list-style-type: none"> ATM.1ST/N ATM.1ST/N/Ex
<ul style="list-style-type: none"> ATM.ECO ATM.ECO/Ex 	<ul style="list-style-type: none"> ATM.ECO/N ATM.ECO/N/Ex
<ul style="list-style-type: none"> ATM ATM/Ex ATM/F ATM/F/Ex ATM/GR ATM/K ATM/T 	<ul style="list-style-type: none"> ATM/N ATM/N/Ex ATM/N/T ATM/N 19 ATM/K/N ATM/NC ATM/NC/Ex
<ul style="list-style-type: none"> DTM 	<ul style="list-style-type: none"> DTM/N
<ul style="list-style-type: none"> PTM PTM/Ex PTM/RS485 	<ul style="list-style-type: none"> PTM/N PTM/N/Ex PTM/N/RS485 PTM/N/SDI-12
<ul style="list-style-type: none"> TM TM/Ex 	<ul style="list-style-type: none"> MTM/N 10
<ul style="list-style-type: none"> TS 100 	<ul style="list-style-type: none"> TM/N TM/N/Ex

Able to customize according to your needs.

- Pressure type
- Pressure range
- Process connection
- Electrical connection
- Signal output
- Accuracy
- Temperature range

Available Option

Pressure measuring range: 100mbar...1000bar

Accuracy: 0.05%, 0.1%, 0.25% FS

Output: 0...5VDC, 0...10VDC, 4~20mA

Operation temperature: -40°C...85°C

Process temperature: -25°C...150°C

Special calibration range available upon request

Material: Stainless steel, Titanium, Hastelloy

Type: Gauge, Absolute (Vacuum), Sealed gauge

DL.OCS/N/RS485

- Battery operated
- Data transferred via RS485
- Modbus RTU

Data Logger



Water Treatment



Desalination



PTM/N/RS485
Programmable submersible level and temperature transmitters

PC Configuration Software
High Accuracy
Lightning Surge Protection
Modbus RTU



Aviation



Shipbuilding & Marine

Universal Panel Meter



Data Track
Process Instruments

Budget Indicator & High Accuracy

Input

Encoder

Vibration

Resistance

Pressure

Strain Gauge

Thermocouple

RTD

LVDT



Data Track
Process Instruments

Output

TTL Logic

PWM

Voltage

24 Linearization

Current (mA)

Serial Modbus

Alarms Output

Contact Closure



Tracker 211
Universal Input, 0.05% Accuracy
4 Digit Display



Tracker 212
24 points user linearization, 0.05% Accuracy
5 Digit Display



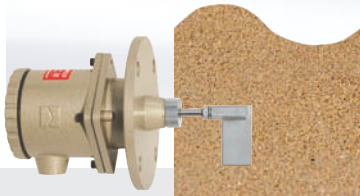
Tracker 220
Universal Input, 0.02% Accuracy
Modbus communications

KANSAI
Automation



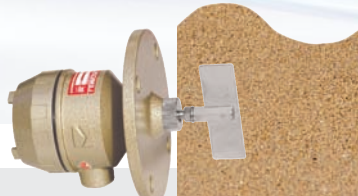
KANSAI Automation Co.Ltd.

Rotary



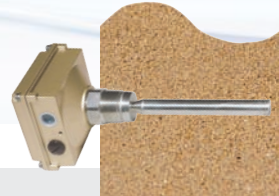
SWN-8B Standard
Flange Type

Rotary



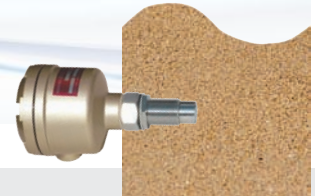
NL-8B Standard
Flange Type

Vibration



KVK-111 High
Sensitivity Type
Screwed Joint Type

Vibration



KVK-111
Standard Type

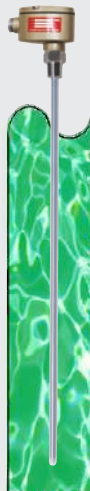
Diaphragm

KF-500
Flange Type * Detection Pipe Type



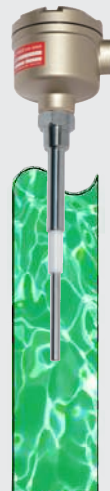
Capacitance

P2-17
Teflon coating Type,
Flared Straight Electrode



Capacitance

B1
Standard Type, Straight Electrode



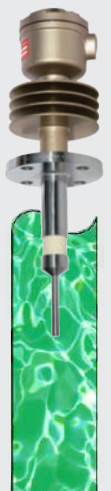
Capacitance

B440
Super-sensitivity Type,
Straight Electrode



Capacitance

B410.H3
Ultra Heatproof Type,
Straight Electrode





Contact / Non-contact displacement measurement

orbit3

Solartron Metrology have a wide range of gauging "pencil" probes and instruments, each designed with specific, customer driven advantages.

- ▶ Pneumatic and Spring available from 0.5mm to 20mm range
- ▶ Up to 0.05% F.S accuracy, 0.15um repeatability, 0.01um resolution
- ▶ 8mm and 6mm diameter probes available
- ▶ Smaller size and range probes for tight space
- ▶ Down to 3 gram tips force

Standard DP Spring Push

- 0.5, 1, 2.5, 10 and 20mm measuring ranges
- 0.7 N Tip Force
- IP 65 Rating

DT Feather Touch

- As low as 0.18 N Tip Force
- Ideal for glass, electronics and delicate surfaces
- 2, 5, 10 and 20mm measuring ranges
- Available in both spring and pneumatic

DW Ultra Feather Touch

- Low 0.03 to 0.06 N of tip force
- Idea for delicate surfaces
- 10mm measuring range
- Available in both spring and pneumatic
- Not ideal for sideload applications



orbitACS

A modular systems based on modbus protocol for easy low cost connections into PLC or Automation. You can combine gauging probes, Orbit LT, Orbit LTH on the same stack of modules.



orbit3

Wireless interface module .The Wireless Interface Module (WIM) allows communication between any PC with a Bluetooth® connection and the Orbit® sensor network. It is possible to connect up to 150 sensors to the WIM. It can take up to 25 static readings per second for up to 8 modules and is the best way to optimize readings using the read burst command.



Orbit® 3 Digital Measurement System

orbit3 Digital Network

Connect To Third Party Sensors



USBIM

ETHIM

RS232IM
RS485IM

MODIM

WIM-Wireless
interface module

SGIM-strain gauge
interface module

AIM

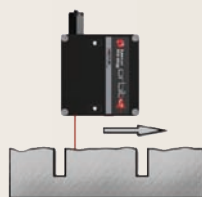
EIM

DIOM

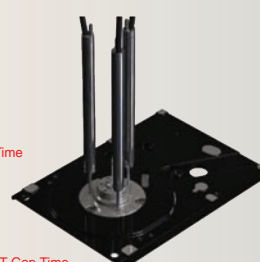
DIM



UFT checking a cell phone screen



Gap Time Feature



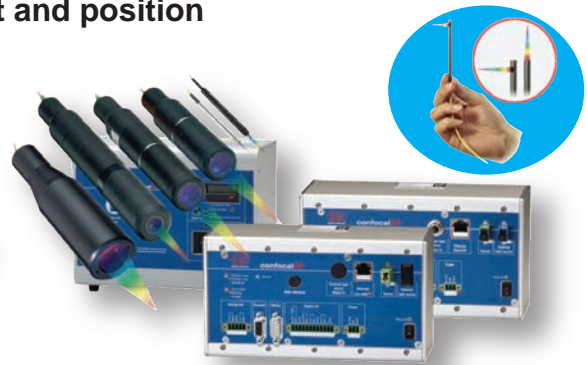
UFT checking Hard Disk Drive casing



UFT checking semi-conductor water

More Precision

Non-contact sensors for displacement and position



Laser Triangulation sensor

- ▶ Suitable for most material
- ▶ Varies models for selection
- ▶ Special model for long standoff applications
- ▶ Patented technology for surface compensation

Chromatic Confocal Sensor

- ▶ Possible to measure multi-layer coating thickness
- ▶ Miniature probe, \varnothing 4mm
- ▶ High speed sampling up to 70kHz
- ▶ Resolution, 16nm

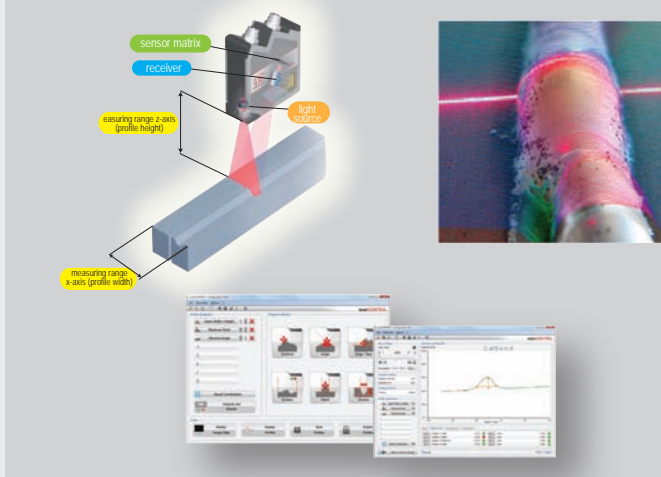


Capacitive Sensor

- ▶ Single or multiple channel models available
- ▶ Up to $\pm 0.05\%$ Linearity, 0.000075% resolution
- ▶ Operation temperature up to $+200\text{ }^{\circ}\text{C}$
- ▶ Suitable for both laboratory and factory operation

Eddy Current Sensor

- ▶ Up to 400 sensors for selection
- ▶ Immunity to oil and dirt, moisture etc
- ▶ Excellent temperature range and stability
- ▶ Suitable for industrial applications



2D/3D Profile Laser Scanner

- ▶ High accuracy and profile frequency
- ▶ High performance signal processor
- ▶ Different types of output for integration
- ▶ Suitable for gap, step height profile measurement



Optical Micrometers

- ▶ Models with Laser or LED light source
- ▶ High speed model available
- ▶ Suitable for gap, diameter, edge and presence

optoNCDT ILR:

Compact laser distance sensors



Compact and reliable

- 200 - 50000mm
- ± 20mm
- 10ms



State of the art sensor with high precision

- 100-150000mm
- ±2mm
- 20ms



Compact and fast distance sensors (no reflector)

- 200-10000mm
- ±8mm
- 12ms



High-performance distance sensor

- 0.5-3000m
- ±20mm
- 0.5ms

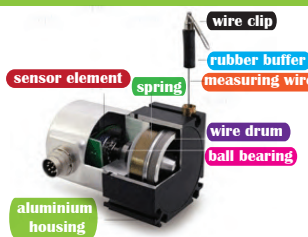
● Measuring Ranges
○ Linearity
○ Response Time

Draw-wire

displacement and position sensors



Example of draw-wire sensor



- ▶ Measuring ranges to 50,000mm
- ▶ Resolution quasi infinite
- ▶ Compact overall design
- ▶ Easy mounting for any application
- ▶ High reliability and long life cycle
- ▶ Analog and digital outputs

thermoMETER

Non-contact IR temperatures sensors



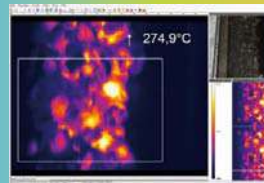
- 1 High-Performance IR sensor with double laser aiming
- 2 Infrared sensor for general purpose applications
- 3 Compact infrared temperature sensor for OEM applications
- 4 Handheld devices

thermoIMAGER TIM

Compact Thermal Imager



- ▶ Automatic hot spot detection
- ▶ Fast measurements
- ▶ Easy process integration
- ▶ Software Features
- ▶ BI-SPECTRAL technology



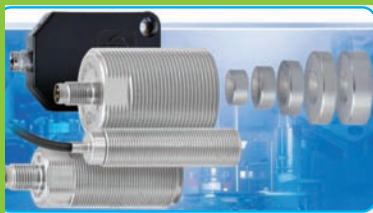
TIM Cooling jacket (length 228mm, ø89mm) with adjustable mounting bracket TM-JAB-TIM; recommended high temperature cable TM-USBC5H-TIM (up to 180°C)

colorSENSOR // Colour Sensors, LED Analyzers



- ▶ Compact color sensors
- ▶ Standard color sensors
- ▶ High-end color sensors
- ▶ Optical fibers

Magneto-inductive sensors for non-contact linear displacement measurement



Benefits of the measuring principle

- ▶ Selectable measuring ranges up to 55mm
- ▶ Linear output signal
- ▶ High basic sensitivity and temperature stability
- ▶ Completely non-contact
- ▶ Wear-free
- ▶ High dynamics



Measuring through non-ferromagnetic materials

Industrial endoscopes for defect detection and quality assurance



Rigid endoscopes – ELTROTEC borescopes



Flexible Endoscopes - ELTROTEC Flex



Video Endoscopes - ELTROTEC Video



Endoscopy accessories

Application examples:



Oil filter



Inspecting a weld seam



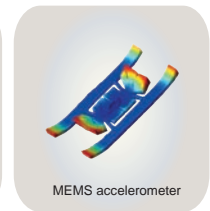
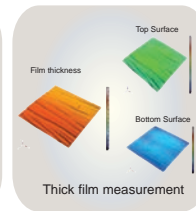
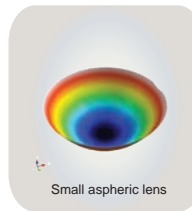
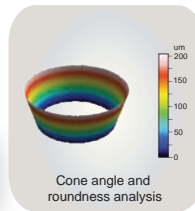
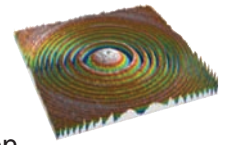
Checking brake cylinder for burns

*For more information, please log on to <http://www.scigate.com.sg>

CCI—Coherence Correlation Interferometry 3D Non-contact Surface Optical Profiler



- ▶ Breakthrough traditionally method, can now measure smooth and rough single surface
- ▶ Low noise level < 0.02nm
- ▶ Single scan range of 2.2mm
- ▶ Stitching of 3D part up to 25mm
- ▶ Optional software to do film thickness application
- ▶ Selectable model with high measurement points of up to 2048 X 2048
- ▶ High speed model available

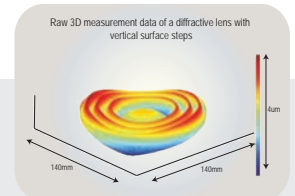
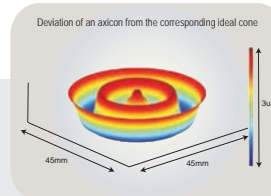
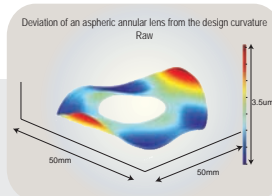
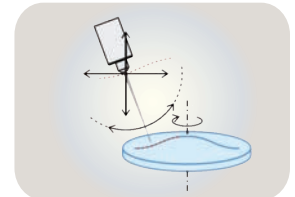


LUPHOScan

Multi-WaveLength Interferometer (MWLI) Fast Non-Contact 3D Form measurement of Aspheric Optics



- ▶ Very fast 3D measurement
- ▶ Ultra high, reproducible accuracy, +/-50nm
- ▶ Works for almost every material
- ▶ Measure up to 90° slope
- ▶ Measure up 120mm, 160mm or 240mm



Alignments and Autocollimators

Clinometers



For Precision angle measurement

Talyvel 6



For precise level flatness measurement

Alignment Systems



For Straightness, Alignment, Verticality, Parallelism, Squareness and Level

Ultra Dual Axis Digital Autocollimator



For measuring angle, straightness, flatness, squareness and parallelism

Surtronic product range



Portable Roughness Tester

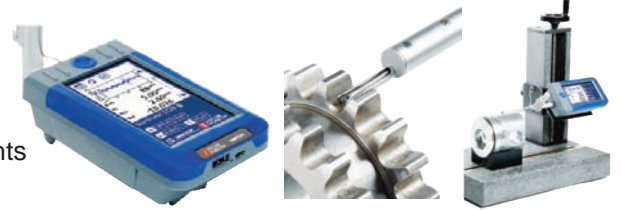
- ▶ 5 or 9 roughness parameters to choose from
- ▶ Diamond stylus and piezoelectric pick up
- ▶ Repeatability of 2%, Accuracy of 5% + noise
- ▶ Easy to use

DUO/Mono

Portable Roughness Tester

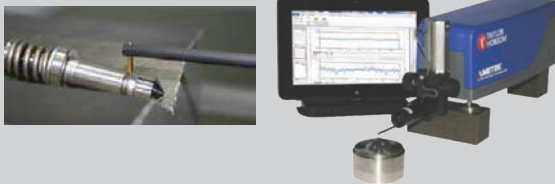
S100 series

- ▶ Evaluation length up to 25mm
- ▶ Up to 360um gauge range
- ▶ Heavy-duty Li-poly battery up to 2000 measurements
- ▶ Able to measure at right angle



Surface finish and contour

INTRA Touch

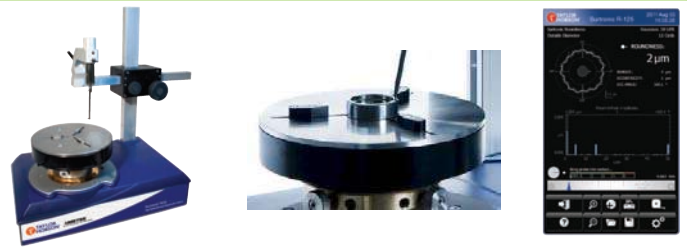


- ▶ 50mm traverse length with 0.5um data spacing
- ▶ 6nm gauge resolution at 1mm full range, 3nm at 0.2mm
- ▶ Straightness error of 0.4um over 50mm
- ▶ Patented Ball calibration to ensure integrity of data

Roundness

Surtronic R-Series

- ▶ Robust, fast & easy-to-use
- ▶ Max Diameter 300mm, Max weight 20kg
- ▶ 2mm Gauge range
- ▶ Up to 6nm resolution



Form Talysurf

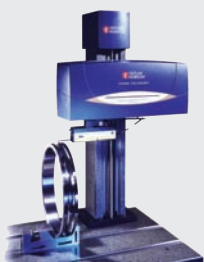
- ▶ Up to 5mm gauge range
- ▶ Less than 8nm noise, Rq
- ▶ Pt error less than 0.25um
- ▶ Resolution of 4nm



1	2	5	✓	⤵	⬇️
Gauge	Roughness	Contour	Temperature		
Gauge Range Up to 5 mm Resolution Down to 0.4 nm	Noise Less than 6 nm Rq	LS Arc Measurement Less than 3.3 µm Pt Less than 0.25 µm	Temperature compensation ensures consistent system performance		

Form Talysurf PGI

- ▶ Ultra precision surface form and finish system
- ▶ Varies model customized for different industries
- ▶ Selectable resolution based on requirement

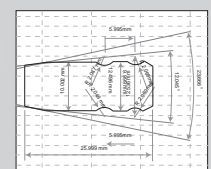
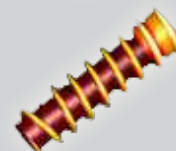
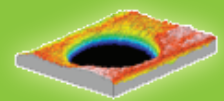


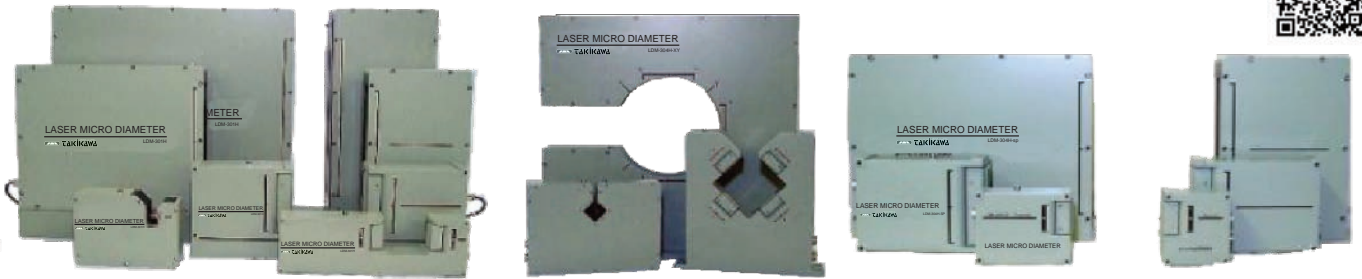
Talyrond

The Talyrond 500H
A new concept in
roundness
measurement

Measurement System
All in one

1. Roughness
2. Roundness
3. Contour
4. 3D Mapping





STANDARD TYPE		
Model	Range (mm)	Accuracy
LDM-301H	0.02-1	± 1 μm
LDM-302H	0.05-5	± 1 μm
LDM-303H	0.3-30	± 2 μm
LDM-304H	0.5-90	± 5 μm
LDM-305H	1-180	± 10 μm
LDM-306H	2-300	± 30 μm

DUAL AXIS		
Model	Range (mm)	Accuracy
—	—	—
LDM-302H-XY	0.05-5	± 1 μm
LDM-303H-XY	0.3-30	± 2 μm
LDM-304H-XY	0.5-90	± 5 μm
LDM-305H-XY	1-180	± 10 μm
LDM-306H-XY	2-300	± 30 μm

SEPARATE SCANNER		
Model	Range (mm)	Accuracy
—	—	—
—	—	—
LDM-303H-SP	0.3-30	± 2 μm
LDM-304H-SP	0.5-90	± 5 μm
LDM-305H-SP	1-180	± 10 μm
LDM-306H-SP	2-300	± 30 μm

LENGTH

WIDTH

HEIGHT

POSITION

LARGE DIAMETER MEASUREMENT

THICKNESS

GAP

INSIDE DIA.

OUTSIDE DIA.

ROUNDNESS MEASUREMENT

Applications

LDM-110

LDM-110EX

LDM-210

LDM-1000

	LDM-110	LDM-110EX	LDM-1000	LDM-1000EX	LDM-210
No.Axes	For Single	Max. 2	Max. 5	Max. 3	For Single
Scanning cycle	400 time / sec	400 time / sec	400 time / sec	400 time / sec	2000 time / sec
No. of Averaging time	1 - 2048 (16 steps)	1 - 2048 (8 steps)	1 - 2048 (22 steps) LDM-1000LS 1 - 1024 (19 steps) LDM-1000XY		1 - 2048 (12 steps)

LDM-1000EX

Product Training Facility

Professional Training

Costs reduction
and improved system designs through training

Hands-on,
in-depth interaction with products in training class

Training availability in training centers across Malaysia & Singapore



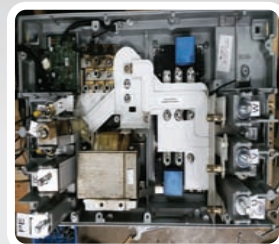
Product Repairs & Services

Providing local repairs and servicing for our customers

Helping customers to reduce cost and machine down time

Works are carried out by trained
and experienced technicians

Quick Services & Affordable!





Singapore Office

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Fax: (60) 03 7804 7422



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Email us at : sales@scigate.com.sg*