

S2Tech srl

S m a r t S o l u t i o n s



TRANSDUCERS AND MEASURING SYSTEMS FOR INDUSTRIAL AND SCIENTIFIC APPLICATIONS

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ISO 9001:2015 - Cert. n.6687

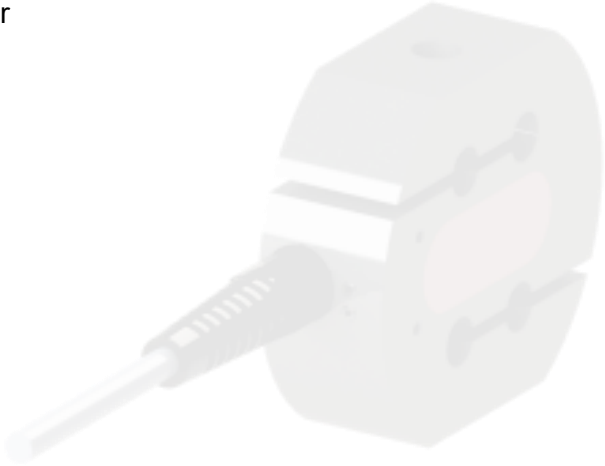
S2Tech is an Italian company that designs, produces and sells transducers, instruments and measuring systems for industrial and scientific applications.

Mechanical, technological and electronics know how, together with a long experience of S2Tech team, allow us to evaluate needs of our customers to define the best solution for their applications.

Use of special tools and continuous discussions with technical departments, allow us to develop customized products according to market requests.

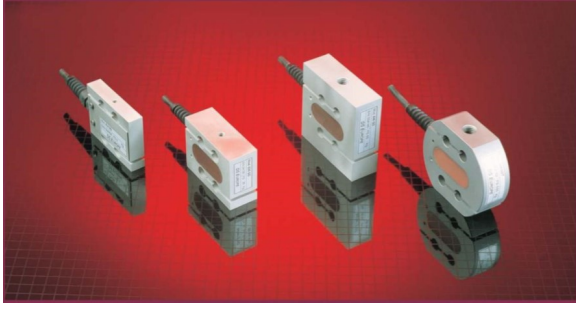
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LOAD CELLS

500QD/QDT universal "S"



Measuring range FS (tens/comp):

514QD: 0 ÷ 2-3 Kg
535QD: 0 ÷ 6-12-25 Kg
560QDT: 0 ÷ 350-500-1000-2000-3000-4000-5000 Kg

546QDT: 0 ÷ 220-330-550-1000-2000 Kg
546QD (aluminium): 0 ÷ 60-110 Kg

Total error: $\leq \pm 0,023\% \text{ FS}$; $\leq \pm 0,046\% \text{ FS}$; $\leq \pm 0,1\% \text{ FS}$ (according to the model)

Available output:

Non-amplified: mV/V
Analog: 0-10 V; 4-20 mA (not for 560QDT model)
Digital: RS485 (Modbus protocol), CANopen

Applications: for general use; for industrial static and dynamic applications; for automatic weighing and scales

Miniaturized BC3xx

Measuring range (FS):

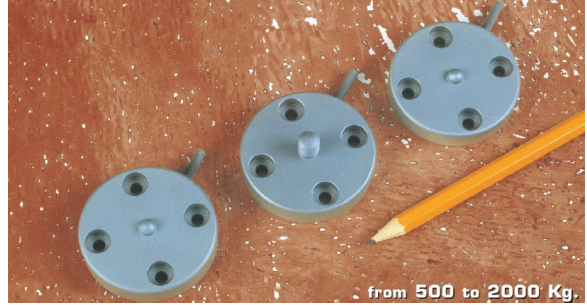
BC301 (tens/comp): 0 ÷ ± 3 -6-12-20-30-60 (Al)-100-150 (Ss) Kg
BC302 (comp): 0 ÷ 3-6-12-20-30(Al)-60-100(Ss) Kg
BC303 (comp): 0 ÷ 150-350-500(Ss) Kg
BC304 (comp): 0 ÷ 500-1000-2000 Kg BC304K1500 (comp): 0 ÷ 15 kN
BC305 (tens/comp): 0 ÷ ± 100 (Al)-300-500-1000 Kg

Total error: $\leq \pm 0,5\% \text{ FS}$

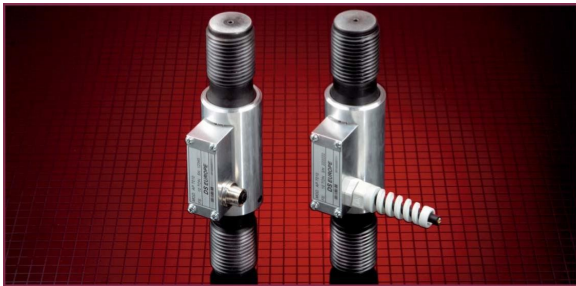
Available output:

Non-amplified: mV/V

Applications: for general use, for industrial weighing platforms



AP7xxx Pins



Measuring range FS (tens/comp):

AP7001S: 0 ÷ 250-500 Kg
AP7001: 0 ÷ 1 Ton
AP7003: 0 ÷ 3 Ton
AP7005: 0 ÷ 5 Ton

AP7010: 0 ÷ 10 Ton
AP7025: 0 ÷ 25 Ton
AP7050: 0 ÷ 50 Ton
AP7100: 0 ÷ 100 Ton

Total error: $\leq \pm 0,2\% \text{ FS}$

Available output:

Non-amplified: mV/V (from 250 Kg to 5 Ton FS)
Analog: 0-5 V; 0-10 V; 4-20 mA
Digital: RS485 (Modbus protocol); CANopen

Applications: for mobile or fixed weighing plants, for hooks and cranes

HC/RC washer

Measuring range (FS):

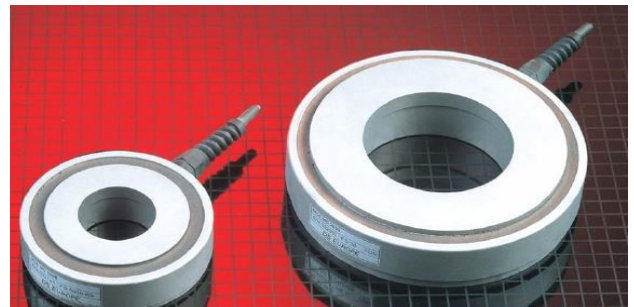
HC2001 (Al): 0 ÷ (20)-50-100-200-300 Kg RC10: 0 ÷ 10-15 Ton
HC2001 (Fe): 0 ÷ 500-1000 Kg RC30: 0 ÷ 30 Ton
HC2002 (Fe): 0 ÷ 2 Ton HC7050: 0 ÷ 50 Ton
RC5: 0 ÷ 5 Ton

Total error: $\leq \pm 0,6\% \text{ FS}$

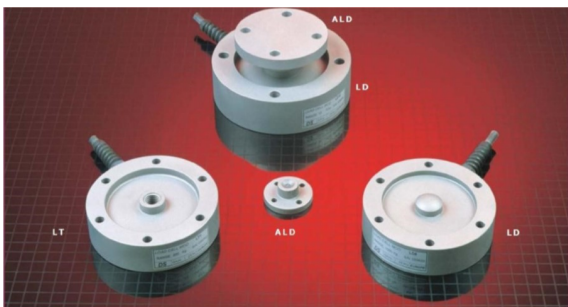
Available output:

Non-amplified: mV/V

Applications: for automatic machines, machine tools, presses, power hammers



LD/LT low profile



Measuring range (FS):

LD1: 0 ÷ 50-100-200-500-1000 Kg
LD5: 0 ÷ 1-2-5 Ton
LD10: 0 ÷ 5-10 Ton
LD100: 0 ÷ 20-50-100 Ton

LT05: 0 ÷ ± 50 -100-200-500 Kg
LT1: 0 ÷ ± 200 -500-1000 Kg
LT5: 0 ÷ ± 1 -2-3-5-6,5 Ton
LT50: 0 ÷ ± 5 -10-20-30-50 Ton

Total error: $\leq \pm 0,2\% \text{ FS}$

Available output:

Non-amplified: mV/V
Analog: 0-5 V; 0-10 V; 4-20 mA
Digital: RS485 (Modbus protocol); CANopen

Applications: mechanical machines, actuators, weighing systems, reservoirs

Instrumented pins MD (standard and custom)

Measuring range FS (tens/comp):

MD4000: 0 ÷ ±1; ±3; ±5; ±10; ±20; ±50; ±100 Ton
MD5000: 0 ÷ ±1; ±3; ±5; ±10; ±15; ±25; ±40; ±60 Ton



Total error: <±0,2% FS

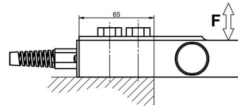
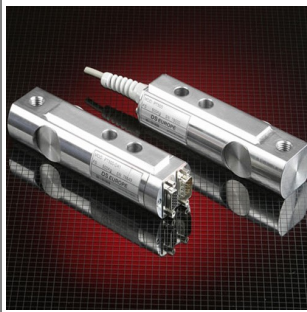
Available output:

Non-amplified: mV/V

Analog: 0-5 V; 0-10 V; 4-20 mA

Digital: RS485 (Modbus protocol); CANopen

Applications: pulleys, cranes, hydraulic actuators, measure of fix and mobile plants, reservoirs



PT beam

Measuring range (FS):

PT500: 0 ÷ 100-200-500-1000 Kg

Total error: ≤±0,05% FS

Available output:

Non-amplified: mV/V

Analog: 0-5 V; 0-10 V

Digital: RS485 (Modbus protocol); CANopen

Applications: automation, industrial weighing, test machines, tanks, cranes, winches, lifts, vehicle test machines, medical scales, packaging machines, converting machines, presses, machine tools, marble machines



KC cantilever

Measuring range (FS):

KC2500: 0 ÷ 2500 Kg

KC6800: 0 ÷ 6800 Kg

Total error: <±0,2% FS

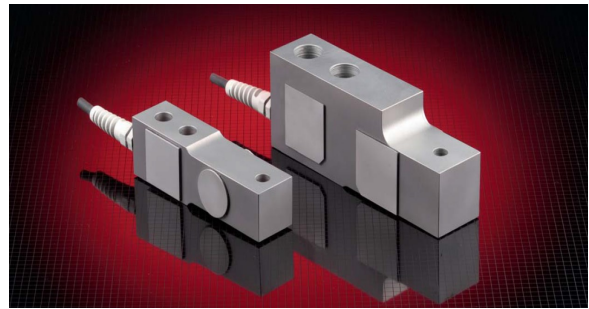
Available output:

Analog: ±5 V; ±10 V; ±4-20 mA

Sensitivity: 2 mV/V

Environmental protection: IP65

Applications: automation, industrial weighing, test machines, textile machines, tanks, vehicles, machine tools, packaging machines



AP8xxx column

Measuring range FS (comp):

AP8005: 0 ÷ 5 Ton

AP8050: 0 ÷ 50 Ton

AP8010: 0 ÷ 10 Ton

AP8100: 0 ÷ 100 Ton

AP8025: 0 ÷ 25 Ton

Total error: <±0,1% FS

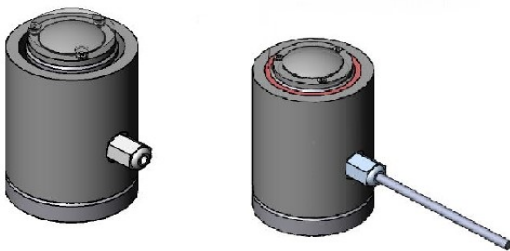
Available output:

Non-amplified: mV/V

Analog: 0-5 V; 0-10 V; 4-20 mA

Digital: RS485 (Modbus protocol); CANopen

Applications: weighing systems, load platforms, tanks



EG single point

Measuring range (FS):

0 ÷ ±3; ±6; ±12; ±25 Kg

Total error: ≤±0,03% FS

Available output:

Analog: ±5 V; ±10 V; ±4-20 mA

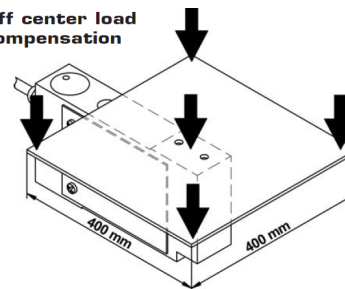
Digital: RS485 (Modbus protocol); CANopen

Non-linearity: ≤±0,03% FS

Applications: industrial weighing, automation, test machines, textile machines, medical scales, machine tools, ceramic machines, converting machines, vehicles



Off center load compensation





RL for rolls



Measuring range FS (tens/comp):

0 ÷ ±5; ±10; ±20; ±50; ±80; ±100; ±200; ±500; ±1000; ±1500 Kg

Total error: <±0,2% FS

Environmental protection: IP65

Available output:

Non-amplified: mV/V

Analog: ±5 V; ±10 V; ±4-20 mA

Digital: RS485 (Modbus protocol); CANopen

Applications: textile machines, packaging machines, flexographic printing machines, machines for working plastic, paper, rubber and belts

MP washer

Measuring range FS (comp):

0 ÷ 500-1000-1500-2000-2500 Kg

Total error: ≤±1% FS

Sensitivity: 2 mV/V

Environmental protection: IP54

Repeatability error: ≤±0,1% FS

Available output:

Non-amplified: mV/V

Applications: weighing systems, automation, force measure on linear actuators, textile machines, plastic machines, paper machines



LOAD WEIGHING DEVICES FOR ELEVATORS



MULTIROPE SENSOR MRL



Measuring range (FS):

MRL100: 0 ÷ 4000 Kg

MRL150: 0 ÷ 4000 Kg

MRL200: 0 ÷ 2000 Kg

Space for ropes:

MRL100: 72 mm

MRL150: 122 mm

MRL200: 200 mm

Available output:

Non-amplified: mV/V

Digital: CANopen

Type of ropes: wire or plastic ropes, belts

Applications: lifts and elevators, lifting of equipment in theatre setting, for industrial lifting applications, cable cars

MULTIROPE SENSOR FOR HIGH LOAD MRB HL

Measuring range (FS):

0 ÷ 7.300-11.000-25.000

Available output:

Non-amplified: mV/V

Digital: RS485 (Modbus protocol); CANopen

Applications: lifts and elevators, Machine Roomless, goods lift freight elevators, lift in the theatrical field, industrial automation, funicular railway, naval applications



SINGLE ROPE SENSOR SR

Measuring range (FS):

0 ÷ 450 Kg

Rope diameter: da 6 a 16 mm

Space for the ropes: 10 cm

Type of ropes: wire, plastic and flat

Available output:

Non-amplified: mV/V

Applications: modern traction elevators, civil engineering applications, industrial weighing systems, naval applications



ROPE TENSIONING EQUALIZATION SYSTEM (EQF)

Number and type of ropes: from 1 to 12; plastic ropes
Ropes diameter: 6,5 mm or 8,1 mm
Digital output: USB or Bluetooth

Available functions: individual tensions identified on single rope; indication of the total weight instantly measured; defining of a tolerance band; displaying of up-to-date statistical indicators

Applications: lift, control of tensioning in industrial systems, automation and research field



STRAIN LINK 942 (deformation measurement)

Measuring range FS:
0 ÷ ±500 µε (as standard)

CANopen

Available output:
Non-amplified: mV/V
Digital: CANopen

Available versions:
942 Standard
942 DBCAN: with built-in electronics
962 for a more flexible installation

Applications: metal structure deformation measurement, engine support

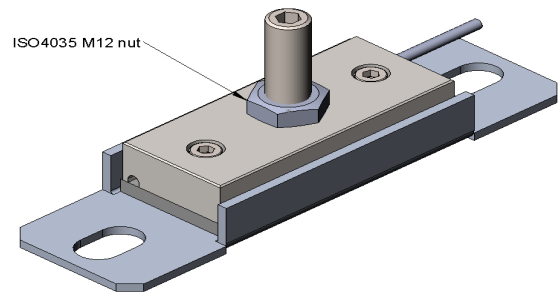


UNDERFLOOR SENSOR TSP

Measuring range (FS):
0 ÷ 800 Kg

Available output:
Analog: ±5 V; ±10 V; ±4-20 mA
Digital: RS485 (Modbus protocol); CANopen
Fast and secure installation
Dummy versions available

Applications: load control on new lifts or modernization, load platforms, industrial weighing systems, naval applications



DIGITAL LOAD WEIGHING DEVICE 699Plus

Modbus

CANopen

Display: 4 digit LED
Analog output: +5 V; +10 V; 4-20 mA
Digital output: RS485; CANopen
AD converter resolution: up to 20 bit
Power supply: +24 Vcc
Input signal: from 0 to ±19,5 mV; from 0 to ±39 mV differential
Digital I/O input: opto-insulated +12/24 Vcc
Relays: for resistive load from 1 to 24 Vdc/125 Vac

Available functions: easy calibration procedure, chain compensation, relays block function while cabin on movement, relays procedure test and other diagnostic functions



LOAD CELL BC304K1500

Measuring range:
0 ÷ 1500 Kg

Compact dimensions
High reliability
Simple mechanical assembly

With load adapter for load transfer on the sensor



INCLINOMETERS / ACCELEROMETERS



ES270 biaxial



Measuring range (FS):
Accelerometer: $0 \div \pm 1700$ mg
Inclinometer: $0 \div \pm 90^\circ$

Relative accuracy: 0,2% FS (accelerometer); $\pm 0,1^\circ$ o $\pm 0,25^\circ$ (inclinometer)

Available output:
Analog: 0-5 V
Digital: RS485 (Modbus protocol); CANopen

Applications: geophysics; control of building structure; odometric measurement systems; naval and military applications

ES291 digital biaxial

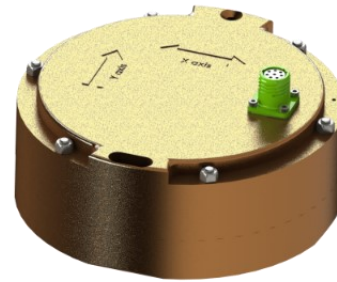


Measuring range (FS):
Inclinometer: $0 \div \pm 14,5^\circ$; $\pm 30^\circ$; $\pm 45^\circ$

Relative accuracy: $\pm 0,1^\circ$; $\pm 0,25^\circ$
Sensitivity: 0,025°

Available output:
Analog: +5 V; 4-20 mA
Digital: RS485 (Modbus protocol); CANopen; PROFIBUS
Response rate: 50 Hz max

Applications: industrial machinery, on industrial vehicles, on boats, civil engineering applications, geotechnical applications, inertial platforms etc.



ES280 accelerometric system



Measuring range (FS):
 $\pm 2,5$ g (programmable and common to the 3 axis)

Measuring resolution: ± 0.076 mg/digit
Non-linearity (Bsl): 2% FS max
Power supply: 24 VDC (accepted from 12 V to 28 Vdc)
Output data rate: 100 Hz (up to 1.1 kHz)
Max shock: 10.000 g (for 2 msec)
Available output:
Digital: RS485 (Modbus); CANopen

Applications: structural control of towers and trellis

73xZT TRIAXIAL ACCELEROMETER

Measuring range (FS):
730ZT: $0 \div \pm 5000$ m/s² (± 510 g)
731ZT: $0 \div \pm 450$ m/s² (± 46 g)

Sensitivity: 1.0 \pm 10%; 10.0 \pm 10%
Response rate: from 0.5 Hz to 20 kHz
Maximum shock: <30.000 m/s²
Resonance frequency: <55 kHz

Applications: test benches; automotive; monitoring on machines with rotating parts



SUITE OF VIBRATION ANALYSIS



Measuring range (FS):
 $0 \div \pm 6$ g

Sensitivity: 312 mV/g
Sample rate: 5 kHz
Type of sensor: MEMS
Available connection: USB or WiFi

Available functions: setting of alarms; feedback to the sensor; monitoring, upload and memory of measurements coming from the sensor

INERTIAL MEASURING SYSTEM

Measuring range (FS):

Gyroscope: $0 \pm \pm 75^\circ/s$; $\pm 150^\circ/s$; $\pm 300^\circ/s$; $\pm 900^\circ/s$
Accelerometer: $0 \pm \pm 2 g$; $\pm 6 g$

Total error: $<0,2^\circ/s$ (gyroscope); $\pm 16 mg$ (accelerometer)

Available output:

Digital: RS232

Resolution: 0,5%

Power supply: 5-18 Vdc

Applications: autonomous vehicle and ROVs; machine control; precision agriculture; platform stabilization; antenna pointing



DISPLACEMENT AND LEVEL SENSORS

PCS III / PCR III magnetostrictive



Measuring range (FS):

PCS III: from 100 to 3000 mm (in +50 mm steps)
PCR III: from 100 to 3000 mm (in +50 mm steps)

Accuracy: $\pm 0,06 mm$ (up to 500 mm); $\pm 0,3 mm$ (from 500 to 3000 mm)

Available output:

Analog: 0-10 V or 10-0 V; 4-20 mA or 0-20 mA

Digital: RS485 (Modbus protocol) as standard; CANopen

Applications: oil&gas; automation; test machines; injection presses



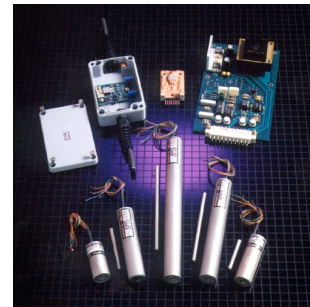
SP LVDT inductive transducers

Measuring range (FS):

$0 \pm 2,5-5-12,5-25-50-100 mm$

Sensitivity: 5-10-20-40-100-200 mV/V/mm

Applications: high accuracy measurement; control on actuators; machine tool; position control of locks of proportional valves



LINEAR/ANGULAR ENCODER

Measuring range (FS):

$50 \pm 12.000 mm$

Resolution: up to $1 \mu m$ (linear); up to 20.000 impulse (angular)

Rotation speed (angular): 6000 rpm

Translation speed (linear): up to 60 m/min

Applications: on test machines; presses; industrial automation field; oil&gas



CA109 LASER with good price/performance ratio



Measuring range (FS):

CA109A: $0.05 m \pm 30 m$

CA109B: $0.05 m \pm 50 m$

CA109C: $0.05 m \pm 70 m$

Accuracy: $\pm 2 mm$

Available output:

Digital: RS485 (Modbus protocol); RS232

Applications: positioning and monitoring of objects; motion detection; level measurement





DD10 LASER high accuracy



Measuring range (FS):
0.005 m ÷ 100 m

Accuracy: ±1 mm

Available output:

Analog: 4-20 mA

Digital: RS485 (Modbus protocol); RS232

Applications: logistics industry; metallurgical industry; definition of liquid level in ovens or other machines; hydrogeological industry

PRESSURE AND TEMPERATURE TRANSDUCERS

STRAIN GAUGE LP650



Measuring range (FS):

0 ÷ 10-20-50-100-200-250-350-500-700 bar

Total error: ≤± 0,5 FS (up to 10 bar); ≤±0,2% FS (from 20 to 700 bar)

Sensitivity: 2 mV/V

Hydraulic connection: 1/4" BSP

Environmental protection: IP65

Available output:

Analog: ±5 V; ±10 V; ±4-20 mA

Digital: RS485 (Modbus protocol); CANopen

Applications: industrial field and difficult environments



CERAMIC LP660



Measuring range (FS):

0 ÷ 5-10-20-50-100-200-400 bar

Total error: <±0,3% FS (up to 20 bar); <±0,5% FS (from 50 up to 400 bar)

Hydraulic connection: 1/2-UNF; 1/4" BSP

Environmental protection: IP65

Sensitivity: 2 mV/V

Available output:

Analog: ±5 V; ±10 V; ±4-20 mA

Digital: RS485 (Modbus protocol); CANopen

Applications: industrial field and difficult environments

CDA / CDAI pressure MELT

Measuring range (FS):

0 ÷ 100-200-350-500-600-700-1000 bar

Total error: <±0,5% FS

Available output:

Non-amplified: 2 mV/V; 3,33 mV/V

Environmental protection: IP65

Tightening torque: 1/2"-20UNF-2A = 5 Nm M18 x 1.5 = 10 Nm

Applications: measurement of hot fluids pressure in plastic, rubber or medical field



CDTA / CDTAI pressure and temperature

Measuring range (FS):

0 ÷ 100-200-350-500-600-700-1000 bar

Total error: <±0,5% FS

Available output:

Non-amplified: 2 mV/V; 3,33 mV/V

Environmental protection: IP65

Operating temperature: from +30°C to +390°C

Applications: measurement of hot fluids pressure and temperature in plastic, rubber and medical field



OTHER PRESSURE TRANSDUCERS

Available versions:

- **High pressure:** with measuring range up to 6895 bar
- **Low pressure:** with measuring range from 0 to 50 mbar, up to 1000 bar
- **Differential**
- **Flush diaphragm**
- **For cryogenic applications**
- **Digital**



TFC / TFL temperature



Measuring range (FS):
0 ÷ 400°C (up to 500°C)

Max pressure: 2000 bar

Available output:

Analog: 0-10 V; 4-20 mA

Type of sensor: thermocouple; PT100 sensor

Isolation: 200 Mohm at 100 V (20°C); 2040 Mohm at 100 V (400°C)

Applications: measurement of melted plastic temperature (or other materials)

FORCE AND DEFLECTION SENSORS

STRAIN LINK X-103

Measuring range (FS):
0 ÷ 50-250-360 µm/m

Resolution: 1/5000

Linearity: <0,3% FS

Cut frequency: 1,5 kHz

Available output:

Analog: ±10 V; 4-20 mA

Applications: automatic machines (presses, packaging machines); plastic injection machines; monitoring of process parameters; civil engineering



STRAIN LINK X-109

Measuring range (FS):
0 ÷ 50-250-500-775 µm/m

Resolution: <0,1 µm/m

Linearity: <0,3% FS; <0,5% FS

Cut frequency: 2 kHz

Available output:

Analog: ±10 V; 4-20 mA

Applications: automatic machines (presses, packaging machines); plastic injection machines; monitoring of process parameters; civil engineering



STRAIN LINK X-113

Measuring range (FS):
0 ÷ 250-360 µm/m

Resolution: 1/5000

Linearity: <0,3% FS

Cut frequency: 1,5 kHz

Available output:

Analog: ±10 V; 4-20 mA

Applications: automatic machines (presses, packaging machines); plastic injection machines; monitoring of process parameters; civil engineering



DISPLAYS



DIGITAL LOAD WEIGHING DEVICE 699Plus



Display: 4 digit LED
Analog output: +5 V; +10 V; 4-20 mA
Digital output: RS485; CANopen
AD converter resolution: up to 20 bit
Power supply: +24 Vcc
Input signal: from 0 to $\pm 19,5$ mV; from 0 to ± 39 mV differential
Digital I/O input: opto-insulated +12/24 Vcc
Relays: for resistive load from 1 to 24 Vdc/125 Vac

Available functions: easy calibration procedure, chain compensation, relays block function while cabin in movement, relays procedure test and other diagnostic functions

MULTICHANNEL DISPLAY PITAGORA



Input signal: from 0 to ± 80 mV; +5 V; +10 V; 4-20 mA; 0-20 mA; Start Stop
Sample frequency: max 3,8 kHz/channel
Resolution: max 24 bit

Analog output: +5 V; +10 V; 0-20 mA; 4-20 mA

Digital output: RS485; CANopen; USB

Power supply: 10-35 Vcc; 9-15 Vca

Contacts: 4 opto-insulated to activate software functions

Operating temperature: from 0 to +70°C

Setting and calibration: through buttons on faceplate or digital data transmission

Available functions: gross; net; tare; piece counting; positive or negative peak memory; hold; digital filtering; sum of up to 8 transducer signal



PORTABLE AND VERSATILE DISPLAY TD01

Input channel: up to 8 channels (mV, mA, Ohm)

Power supply: 10-35 Vdc; 9-15 Vac

Digital output

Analog output (optional)

Levels: 2-8 relays; 4-16 opto-insulated

Display: LCD with 7 digits

TEDS function: for a fast and secure calibration

Battery: with long autonomy

Available functions: filtering; zero tracking; tare zeroing; recorder of peak measurement data; amplified analog signal; configurable alarm thresholds; display of measure as graph or histogram

SINGLE CHANNEL DISPLAY AN401



Input signal: from 0 to ± 80 mV; +5 V; +10 V; 4-20 mA; 0-20 mA; Start Stop

Sample frequency: max 3,8 kHz/channel

Resolution: max 24 bit

Analog output: +5 V; +10 V; 0-20 mA; 4-20 mA

Digital output: RS485; CANopen; USB

Contacts: 4 opto-insulated to activate software function

Power supply: from 0 to 10,5+40 Vcc and from 0 to 9+28 Vac

Operating temperature: from -20°C to +70°C

Available function: gross, net, piece counting, positive or negative peak memory, hold



PORTABLE SINGLE CHANNEL DISPLAY AN601

Input signal: from 0 to ± 80 mV

Resolution: 24 bit

Battery: 4 batteries 1,5 V AA, with 16 hours of autonomy

Operating temperature: from -30°C to +70°C

Sample frequency: from 7.5 Hz to 3840 kHz

Available function: calibration with displaying of measure in engineering units; zeroing-hold-peak memory

WIRELESS AND mV/V DISPLAY



Battery: 1 x PP3 9V alkaline; 2 x AA
Battery lifetime: 60/80 hours
Operating temperature: from -10°C to +50°C
Environmental protection: IP65
Connection: Wireless 2.4 GHz
Update rate: 3 Hz
ATEX version available

Available functions: overload alarm, maintaining of peak; pre-set tare; measure of peaks and audible alarms



FOR TORQUE METERS



Display: graphic and illuminated
Power supply: from 15 to 30 Vcc
Input: tension, from 0 to 10 Vcc
Relays: 2 with configurable thresholds
Opto-insulated inputs: 2 for trigger signals
FLASH memory card: to store measurements
Environmental protection: IP40
Inside clock: to store information with time connection
Available functions: displaying of instant value and maximum/minimum; programmable recording of measurements; internal clock to store information; USB interface for connection to PC

DATA RECORDERS

VR24 VIDEO DATALOGGER

Display: LCD 7 digits
Power supply: 10-35 Vdc; 9-15 Vac
Resolution: 24 bit
Sample frequency: 40 kHz
Input channels: up to 8
2 video channels
Up to 4 analog channels
GPS available

Available functions: graphic reproduction and representation of analog channel measures; synchronous acquisition of data; displaying of unit state and memory time



LX1000 for data acquisition and recording



Power supply: from 8 V to 36 V (DC)
Available channels: up to 64
Update frequency: from 1 Hz to 102.4 kHz
Recording support: SDHC/SDXC card (class 10 or more)
Maximum recording frequency: 3.2 Mbyte/s
Resolution: from 16 to 24 bit (selectable)

Available functions: remote control via Ethernet through a PC; displaying of values; possibility to integrate up to 4 amplifiers; very accurate recording

PORTABLE DATA RECORDER WX7000

Power supply: 4 alkaline batteries NiMH AA; USB
Available channels: 16
Update frequency: 20 kHz
Accuracy: ±2%

Available output:
Analog: ±2.0 V
Digital: USB

Available functions: reliable recording supports; recording up to 128 channels; fast data transfer; remote control software; recording of vocal memo



DATA LOGGER (IIoT) DYDAQLOG



Sample frequency: 10 Hz
Resolution: 24 bit
Interface: WLAN/LAN
Input channels: 16 differential
Memory: internal MicroSD

Available functions: remote control; functions management through browser; access to collected data in every moment

MULTIGATEWAY USR-W630 Serial Ethernet Wi-Fi

Input power supply: 5-36 V (DC)
Digital interface: RS232; RS485
Available ports: 2 Ethernet ports; 1 WAN; 1 WAN/LAN

Available functions: ModbusRTU-ModbusTCP conversion, TCP-Client & TCP-Server connection, VirtualCom, built-in Web Server, DHCP, WiFi mode Access Point and WiFi client

Applications: integration on TCP/IP network of devices with one single serial port, both in transparent and Modbus mode; WiFi interface (2.4 GHz 802.11 b/g) for devices with LAN port; integration on SCADA and IoT applications



AMPLIFIERS

SIGNAL CONDITIONING CARDS



Connectable to strain gauges and LVDT transducers
Operating temperature: from -40° to +85°C
Available functions: amplification of transducers signal and transmission of the signal even in environments with electrical noise
Available versions:

- EL600: with 4 through fixing holes
- EL600EA: with plastic box and two plastic glands for connection cables
- EL600DIN: on DIN rail according to DIN EN50022 e EN50035

Applications: automation; packaging; dosing; machine tool

DIGITAL TRANSMITTER FOR LOAD CELLS

Measuring range (FS): from -2,6 mV/V to +2,6 mV/V

Recommended power supply: 24 Vdc (±10%, protect against polarity inversion)

Linearity: <0,01% FS

Sample frequency: from 4 Hz to 123 Hz

Available versions:

- CANopen
- Ethercat
- Ethernet
- Ethernet/IP
- Devicenet
- PROFIBUS
- PROFINET



SIGNAL AMPLIFIER X.201



Sensitivity: from 0,5 to 1,5 mV/V; from 1,5 to 4,0 mV/V
Linearity: ±0,2% FS
Signal type: analog
Environmental protection: IP65
Operating temperature: from -20°C to +60°C

Available versions:

- X.201.IP04: external zeroing signal of measure, suitable for dynamic applications
- X.201.IP03: designed for static applications

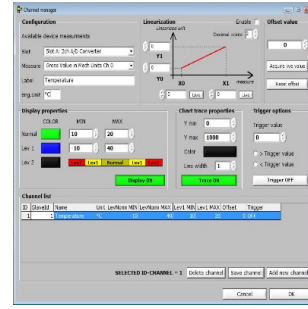
SOFTWARE

Data acquisition DSLAB

Input channels: up to 8
Resolution: 24 bit max
Sample frequency: up to 1 kHz

Available functions: measures acquisition from CAN networks on machines and vehicles; linearization of acquired values for each channel

Applications: laboratory measurements; quality control; machines processes control; weighing for long time tests; test of tanks leakage; assembly machines; industrial automation



SW.MWLC wireless multi-cell control

Input channels: up to 100
Update rate: 2.4 GHz
Free
Operating system: Windows XP; Windows Vista; Windows 7, 8, 10

Available functions: control and monitoring of up to 100 load cells; control and display of measures; configuration of additional virtual channels; set of system with monitoring of graphic and audible indications; storage of interesting data; web server to display data from portable devices; creation of graphic pages for representation of data in different formats



FOR TORQUE METERS

- Available functions:**
- Calibration of measuring system (torque meter + display)
 - Calibration of operating parameter of the built-in encoder for measure of angular position and rotational speed
 - Real time display of acquired measures
 - Graphic format representation (Strip Chart)
 - Storage of measures on data files (csv format)



SOFTWARE FOR WIRELESS TRANSMITTERS AND RECEIVERS

Available functions: display and recording of up to 100 channels; creation of graphic representation of the system; real-time data read; calculation and display of centre of gravity; built-in web server; set of audible and graphic alarms to indicate passing of a threshold; storage of data in csv format



VR-24 RT View

Available displays: 1/2
Display update: single or continuous
Available channels: up to 4 analog channels
Average definition: linear or peak hold
Integration time of the digital multimeter: 0.3/1/3 seconds

Available functions: frequency spectrum; power spectrum; frequency response; density parameters; autocorrelation; cross correlation; spectrogram; digital multimeter for numerical display



APP HHP for Bluetooth load cells



Interface: simple, user-friendly and efficient

Available functions: management of data collection; display of measure in four different engineering units (kN, Ton, Kg, lb); monitoring of peak load; audible alarm for thresholds exceeding; registered data export and possibility to send them to a smartphone or email address

Applications: heavy load; tests and aerial weighing

TORQUE METERS

SERIES 2000

Nominal torque @ FS:
0 ÷ ±2,5; ±5; ±7,5; ±17,5; ±75; ±175; ±250; ±500 Nm

Maximum rotational speed: ≤5.000 rpm
Mechanical coupling: 1/2" square, 1/4" square, 3/4" square, 3/8" square, Ø 14 mm, Ø 19 mm, Ø 25 mm, Ø 9 mm
Accuracy: ≤±1% FS
Available output:
Analog: 0-5 V

Applications: test benches; process automation; productive quality test; research and development



SERIES 2300

Nominal torque @ FS:
0 ÷ ±1; ±2,5; ±5; ±10; ±50; ±100 Nm

Maximum rotational speed: ≤10.000 rpm
Mechanical coupling: 1" 3/8 round; 1/4" square; Ø 8; Ø 9; Ø 15
Accuracy: ≤±0,5% FS
Available output:
Analog: 0-10 V; 4-20 mA
Digital: CANopen, USB

Applications: test benches for automotive field; process automation; productive test quality; research and development; medical field



SERIES 3000-4000

Nominal torque @ FS:
0 ÷ ±50; ±100; ±250; ±500; ±1000; ±2000 Nm

Maximum rotational speed: ≤10.000 rpm
Mechanical coupling: 1" square, 3/4" square, 3/8" square, Ø 15 mm, Ø 25 mm, Ø 40 mm
Accuracy: ≤±0,1% FS; ≤±0,2% FS
Available output:
Analog: 0-10 V; 4-20 mA

Applications: test benches for automotive field; process automation; productive test quality; research and development; medical field



SERIES 5000-7000

Nominal torque @ FS:
0 ÷ ±3.000; ±5.000; 10.000; 15.000; 20.000; 25.000 Nm

Maximum rotational speed: ≤8.000 rpm (s. 5000); ≤3.600 rpm (s. 7000)
Mechanical coupling: flange
Accuracy: ≤±0,5% FS
Available output:
Analog: 0-10 V; 4-20 mA
Digital: CANopen; USB (only for series 5000)

Applications: test benches for automotive field; process automation; productive test quality; research and development



FOR PEDELEC

CANopen

Nominal torque @ FS:
0 ÷ ±200 Nm

Update rate: 250 Hz
Accuracy: ≤±2,5% FS
Available output: analog / digital
Environmental protection: IP66
Mechanical coupling: square

Applications: electric bikes; electrical assisted bicycles



TRANSDUCERS FOR HEAVY LOADS

DIGITAL LOAD CELLS

CANopen
Modbus
Wi-Fi
Ex



Measuring range (FS):
0 ÷ 5-10-25-50-100-150-300-500-1000 Ton

Total error: <±0,2% FS
Available output:
Analog: ±5 V; ±10 V; 4-20 mA
Digital: CANopen (optional); RS485 (optional)
Operating temperature: from -25°C to +75°C
ATEX version available

Applications: heavy lift; energy; special transports and deliveries; structural weighing

DYNAMOMETERS

Wi-Fi
Ex
Bluetooth
CANopen
Modbus

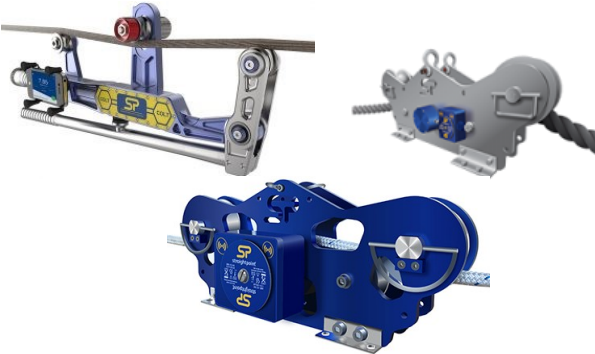
Measuring range (FS):
RLP (wireless): 0 ÷ 1-2,5-6,5-12-25-35-55-75-100-150-200-250-300-500 Ton
WLP (without display): 0 ÷ 1-2,5-6,5-12-25-35-55-75-100-150-200-250-300 Ton
LLP (with built-in display): 0 ÷ 1-2,5-5-12-25-35-50-75-100-150-200-250-300 Ton
BLD (Bluetooth version): 0 ÷ 6,5 Ton
SL (for submarine applications): 0 ÷ 6,5-12-25-35-55-85-120 Ton

Available output:
Analog: ±5 V; ±10 V; 4-20 mA
Digital: CANopen (optional); RS485 (optional)

Applications: heavy lift; rope tensioning; test of structural load



TENSIOMETERS



Measuring range (FS):
CS (for electrical wires): 0 ÷ 10 Ton
TIMH (for movable ropes): 0 ÷ 10-25-56-80-150 Ton
COLT (for static ropes): 0 ÷ 5 Ton

Available output:
Analog: ±5 V; ±10 V; 4-20 mA

Applications: heavy lift; tensioning ropes; test of structural load; electrical wires; optical fibre; marine applications; offshore

COMPACT MINI CRANE WEIGHER SCALE

Measuring range (FS):
0 ÷ 100-250-500-1000-2000-5000 Kg

Total error: ±0,1% FS
Power supply: battery (9v PP3)
Environmental protection: IP65
Battery lifetime: up to 80 hours

Available functions: tare; peak hold; alarm signal setting

Applications: weighing; heavy lift



LOADSHACKLES



Measuring range (FS):
0 + 3, 2,5-6, 5-12-25-55-85-120-200-300-400 Ton

Total error: $\leq \pm 1\%$ FS
Available output:
Digital: Wireless 2.4 GHz; Bluetooth (optional)
Environmental protection: IP67
Batteries: 4 x AA alkaline
Battery lifetime: 1200 hours

Applications: industrial; oil&gas; marine and submarine; building construction; military; heavy lift; weighing

HEAVY LOAD LOADPINS



Measuring range (FS): $\pm 0,5$; 1; 2,5; 3,5; 6,5; 15; 25; 50; 100; 250; 500; 750; 1000; 1500 Ton

Total error: $\leq \pm 1\%$ FS
Available output:
Analog: 0-5 V (optional); 0-10 V (optional); 4-20 mA (optional)
Digital: CANopen; RS485 (Modbus protocol)
Environmental protection: IP67; IP68 (optional)
ATEX version available

Applications: marine, offshore, oil&gas; brake anchors; bridge support cables; pulleys and sheaves; crane cables; winches



WIRELESS TRANSMITTERS AND RECEIVERS

TRANSMITTERS for analog transducers



Power supply: 8-19 Vdc or batteries (D-AA-AAA)
Bandwidth: 2,4GHz @10mW (802.11.5)
Coverage: 800 m LOS

Versions available for:
Strain gauge transducers
High frequency strain gauge transducers
Potentiometer transducers
0-10 V or 4-20 mA transducers
Temperature transducers
Impulse transducers

Applications: remote data collection and monitoring indoor&outdoor

Bluetooth TRANSMITTERS for strain gauge transducers

Power supply: Batteries (2xAA)
Bandwidth: 2,4GHz @100mW (BLE 4.1)
Coverage: 90 m LOS
Free App: Android & IOS
Mode: point-point, point-multipoint, multipoint

Applications: data display and collection on Smartphone and Tablet



RECEIVERS for analog sensors



Power supply: 9-32 Vdc, USB or batteries
Bandwidth: 2,4GHz @10mW (802.11.5)
Coverage: 800 m LOS

Available in different versions
With USB output
With RS232-485 (Modbus) output
With relays output
With analog output (0-5 V, 0-10 V, 4-20 mA)

Applications: remote data collection and monitoring indoor&outdoor

RECEIVER DISPLAY FOR WIRELESS TRANSMITTERS

Measuring range: up to 800 m

Power supply: from 2,5 to 3,6 Vdc

Radio frequency: 2.4 GHz

Environmental protection: IP67

Operating temperature: from -10°C to +50°C

ATEX version available

Applications: measure detection from wireless or strain gauge transducers



WIRELESS WIND SPEED SENSOR SYSTEM



Accuracy: from 5 to 125 mph

Wireless measuring range: 800 m

Power supply: from 8 to 36 Vdc or internal batteries (2 x D)

Environmental protections: IP67

Operating temperature: from -10°C to +50°C

Applications: constant monitoring of wind speed average

IMPACT and SHOCK RECORDERS

DIGISHOCK

Measuring range: ± 25 G; ± 100 G

Power supply: 1 battery C lithium ion

Battery lifetime: min 30 days - max 60 days

Sample frequency: 250 Hz

Operating temperature: from -40°C to +60°C

Environmental protection: IP67

Memory: Flash, it records more than 1 million events

Applications: monitoring of fragile goods transport; detection of damages; transport of medical goods and other sensitive materials; control on packaging systems; control of vehicles and movements of goods



SMARTSHIP LIVE

Rechargeable battery: Ion-lithium polymer, rechargeable 3,7V 5.200 mAh

Operating temperature: from -21°C to +60°C

Network: GSM; GPS; SMS

Real-time monitoring of:

- Load position with GPS accuracy
- Packaging condition
- Impacts and possible damages of the load
- Temperature over set thresholds



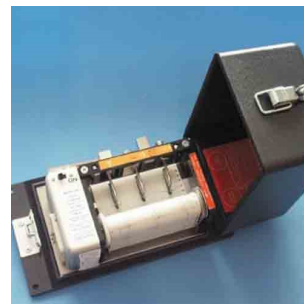
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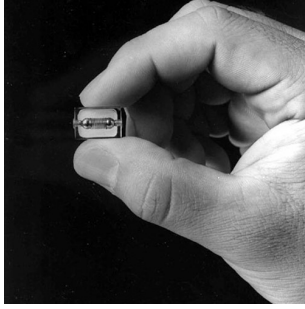
Measuring range:
0 + 20-30-50-70-100-300 g

Operating temperature: from -29°C to +104°C

Accuracy: $\pm 10\%$ FS

Applications: monitoring of fragile goods; detection of damages; evaluation of products fragility; control of packaging system; control of vehicles and movements of goods; shock measurement system





SHOCK FUSE

Advantages:

- Compact dimensions
- Easy to install
- Better service for the shipper
- Less objections for possible damages

PROTECT A PACK

Advantages:

- Easy to install
- Better service for the shipper
- Less objections for possible damages

The shock indicator can be used only once



TRANS MONITOR IMPACT SWITCH

Measuring range (FS):

20 ÷ 100 g (in increments of 10 g); available also in 15-25-300 g

Accuracy: ±15%

Operating temperature: from -73°C to +68°C

Power cable: 28 Gauge AWG

Available functions: Recording of impact from any angle with high accuracy; only one of the two ball/spring sets must trip to activate the device and close the circuit

Applications: quality control; operational equipment alerts or warning; damage to equipment; equipment misuse

TRANS MONITOR SHOCK INDICATOR

Measuring range (FS):

20 ÷ 100 g (in increments of 10 g); available also in 15-25-300 g

Accuracy: ±15%

Operating temperature: from -73°C to +68°C

Power supply: battery (1.5 V LR44) with lifetime of up to 180 days

Available functions: if impacts of a greater value are imposed, the balls will dislodge from their set position and the clock will freeze to record date and time

Applications: computer/IT services; medical devices and supplies; consumer electronics; industrial equipment; aerospace and defence



OMNI-G / OMNI-GWS SHOCK INDICATOR

Measuring range (FS):

2 ÷ 10 g (in increments of 1 g)

15 ÷ 40 g (in increments of 5 g)

50 ÷ 100 g (in increments of 10 g)

Also available 125-150-175-200-250-300-400-500 g

Accuracy: ±10%

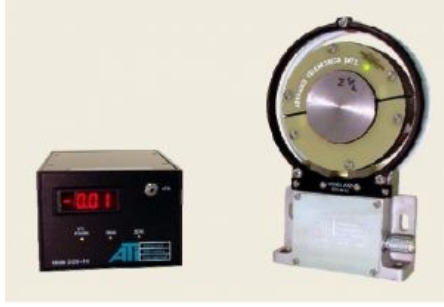
Operating temperature: from -73°C to +135°C

Shock duration: 8,4 ms

Applications: industrial equipment; medical devices and supplies; consumer electronics; building construction



TELEMETRY SYSTEMS



ROTATING TORSIONAL ACCELERATION MONITORING SYSTEM

Sample frequency: up to 6500 Hz
Maximum error: <0,25% FS
Repeatability: $\pm 0,05\%$
Available output:
Analog: 0-2 V; 5 V; 10 V; 0-20 mA (optional); 4-20 mA (optional)

Applications: automotive; mechanical and manufacturing industry

LOW POWER DIGITAL TELEMETRY SYSTEM

Sample frequency: from 400 to 2083 Hz
Maximum error: <0,15% FS
Resolution: 14 bit
Available output:
Analog: 0-2 V; 5 V; 10 V; 0-20 mA (optional); 4-20 mA (optional)
Power supply: lithium batteries 3.6 V
Battery lifetime: up to one year

Applications: direct torque measurements on vehicles and machine tool



INDUCTION POWERED, DIGITAL ROTATING TELEMETRY SYSTEM



Accuracy: 0,02% FS
Maximum error: <0,15% FS
Repeatability: $\pm 0,025\%$
Non-linearity: $\pm 0,10\%$
Available output:
Analog: 0-2 V; 5 V; 10 V; 0-20 mA (optional); 4-20 mA (optional)

Applications: automotive; aerospace; industrial and manufacturing; marine; military; oil&gas; civil engineering

WIRELESS DIGITAL TORQUE SENSING SYSTEM

Update rate: up to 6400 samples/sec
Resolution: 14 bit
Accuracy: 0,02% FS
Repeatability: $\pm 0,05\%$ FS
Available output:
Analog: 0-2, 5, 10 VDC; ± 2 , ± 5 , ± 10 VDC (4-20 mA Optional)

Applications: automotive; aerospace; aviation; industrial and manufacturing



DIGITAL STEERING EFFORT SENSOR



Sample frequency: up to 6400 samples/sec
Accuracy: <0,15% FS
Resolution: 14 bit
Non-linearity: $\pm 0,10\%$
Repeatability: $\pm 0,025\%$
Available output:
Analog: ± 2 ; ± 5 ; ± 10 V

Applications: on vehicles and for test benches

MULTI-CHANNEL, WHEEL-MOUNTED, DIGITAL TELEMETRY SYSTEM

Sample frequency: 1600 samples/sec/channel (4 strain gauge channel); 40 samples/sec/channel (4 thermocouple channel)

Resolution: 14 bit

Repeatability: $\pm 0,025\%$

Maximum error: $< 0,15\%$ FS


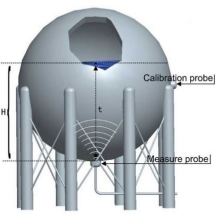
Available output:

Analog: ± 2 V; ± 5 V; ± 10 V; 4-20 mA (optional)

Applications: to provide data on tire characteristics, suspension systems, brake performance, drive train and more



LEVEL MEASURING FOR TANKS

NON INTRUSIVE ULTRASONIC LEVEL GAUGE

Measuring range (FS): 30 m

Accuracy: $\leq \pm 1\%$ FS

Used technology: ultrasonic

Available output:

Analog: 4-20 mA (2 wires)

Digital: RS485 (Modbus protocol); HART protocol

Applications: Sewage treatment plants and water purification plants; other environmental engineering facilities; power generating stations

RADAR LEVEL TRANSMITTER

Measuring range (FS): 100 m

Frequency: 80 GHz

Accuracy: ± 1 mm

Certifications: ATEX; SIL

Available output:

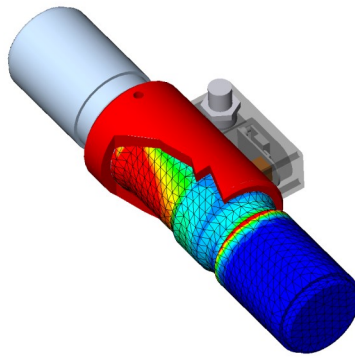
Analog: 4-20 mA (2 wires)

Digital: RS485 (Modbus protocol)

Applications: measure liquid level; measure solid level; process tanks; reaction tanks; static tanks; guide tubes; agitator tanks; spherical tanks; horizontal tanks



DEVELOPMENT AND MANUFACTURING OF CUSTOM PRODUCTS



S2Tech technical department, with 30 years experience acquired with DS Europe, can develop products accordingly to customers specifications with the following tools:

- **3D** mechanical design CAD software stations
- Finite Element Analysis **FEA** software stations
- **Digital and analog electronic development** accordingly to EMC (=CE) stricter industrial marking regulations (with tests in anechoic room at Competent Body third party laboratory)
- **Software and embedded firmware development** accordingly to most popular industrial bus systems (CANopen, Modbus, PROFIBUS...)
- Fast prototyping

S2Tech develops new products or modifies existing ones, in order to realize the fittest and more convenient product.

APPLICATION FIELDS

S2Tech products are suitable for different application fields:

- Food industry
- Industrial automation
- Quality control
- Weighing and dosing
- Presses/ injection moulding machines
- Medical industry
- Building construction
- Naval
- Chemical/Pharmaceutical
- Power plants
- Lift/elevators
- Oil&Gas
- Industrial heavy lift
- Textile industry
- Transports
- Production of machines and transformers
- Military
- Packaging
- Hydraulic
- Geotechnical



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