

Product Line for Process Instrumentation and Product Testing

Single-Component Sensors

Piezoelectric Force Sensors

- Direct force measurement
- Wide measuring range
- High rigidity, fast response
- Easy installation
- High sensitivity
- Compact design



9001A ... 9091B
9101A ... 9107A
0 ... 7,5 to 0 ... 1 200 kN



9130B ... 9137B
0 ... 2,5 to 0 ... 80 kN



9323AA ... 9393A
0 ... 0,1 to 0 ... 700 kN



9313AA1 ... 9313AA2
0 ... 0,05 to 0 ... 20 kN



9203 ... 9207
-0,5 ... 0,5 to
-500 ... 500 N



9215, 9217
0 ... 2 to
-500 ... 500 N



9301B ... 9371B
-2,5 ... 2,5 to
-120 ... 120 kN



9337A40
0 ... 70 kN
programmable transmitter

Piezoelectric Strain Sensors

- Indirect force measurement
- High sensitivity
- Easy installation
- Excellent retro-fit solution



Surface
9237B...
-800 ... 800 $\mu\epsilon$



Transverse
9241C, 9240A
0 ... 500 $\mu\epsilon$



Longitudinal
9243B
-1 500 ... 1 500 $\mu\epsilon$



Programmable transmitter
9238A10
-800 ... 800 $\mu\epsilon$

Strain Gage Load Cells

- Static loads



4576A...
-0,5 ... 0,5 to
-200 ... 200 kN



4577A...
0 ... 0,1 to
0 ... 200 kN



4578A...
-0,1 ... 0,1 to
-10 ... 10 kN



4579A...
-20 ... 20 to
-500 ... 500 kN

Application Areas: Press fitting, crimping, clinching, stamping, punching, staking, bonding, material testing, impact testing and welding force monitoring, product testing

Multicomponent Force Sensors and Measuring Platforms

- Wide measuring range
- High rigidity
- Low crosstalk
- High sensitivity
- Compact design
- F_z , F_y , F_x
- Welding Force Measurement



9831C...



9017C, 9027C, 9047C, 9067C, 9077C
 F_x, F_y : -1,5 ... 1,5 kN to -75 ... 75 kN
 F_z : -2 ... 2 kN to -150 ... 150 kN



9317C, 9327C, 9347C,
9367C, 9377C
 F_x, F_y : -0,5 ... 0,5 kN to -75 ... 75 kN
 F_z : -2 ... 2 kN to -150 ... 150 kN



9256C...
 F_x, F_y, F_z : -250 ... 250 kN

Application Areas: Product testing, process development machining forces and Welding Force Measurement

NC Joining Systems

- High measuring accuracy dual range piezo sensor resp. strain gage force sensor for Type 2153A...
- Force or Force-Distance control
- Repeatability, <0,01 mm
- High velocity, up to 300 mm/s
- Low maintenance



2151B... NCFH
1 ... 60 kN



2152B... NCF5
15 ... 25 kN



2153A... NCFN
5 ... 600 kN



2157B... NCF7
0,05 ... 1,5 kN



2160A... NCFB
5 ... 50 kN

Application Areas: Precision assembly and joining tasks in automated production plants

Torque Sensors

Rotating Torque Sensors

- Strain gage system
- Integrated electronics
- Non-contact signal transmission (except Type 4501A...)
- Optional rotational angle or speed measurement



4501A...
0 ... 2 N-m to
0 ... 1 000 N-m



4502A...
0 ... 0,5 N-m to
0 ... 1 000 N-m



4520A...
0 ... 1 N-m to
0 ... 1 000 N-m



4503B...
0 ... 0,2 N-m to
0 ... 5 000 N-m



4550A.../4551A...
0 ... 100 N-m to
0 ... 5 000 N-m

Reaction Torque Sensors

- Piezoelectric system
- Compact with wide measuring range
- High sensitivity, fast response
- High interference immunity
- Central bore to accept shafts



9329A ... 9389A
-1 N-m ... 1 kN-m

available also as 2-component sensor
 F_z , M_z (Type 9345B, 9365B)

Application Areas: Engine and electric motor testing, torque to turn, nut runners, drag torque, calibration, product testing and test stands

Process Monitoring & Visualization

- In-process monitoring
- X-Y monitoring $F(x)$, $M(a)$, $F(t)$, $M(t)$
resp. $y(x)$, $y(t)$, $x(t)$, $y(x,t)$
- Digital I/O
- TCP/IP Ethernet interface
- Data exporting via Fieldbus
- Multiple input signal types



maXYmos BL
5867B...



maXYmos TL/NC
5877A..., 5847A



4700B...

Application Areas: Press fitting, component insertions, riveting, crimping, clinching, forming, bonding, material testing and torque/angle, product testing

Other Sensors and Accessories

- Pressure
- Acceleration
- Displacement electronics and cables
- Calibration equipment
- Force and welding verification kits
- Data collection and analysis software



Pressure



Acceleration



Laboratory
electronics



Industrial
electronics

Support and Services

- Consulting and engineering
- Commissioning and configuration
- Customer training and instruction
- Modification, repair and spare parts
- Kistler calibration services
- Web services



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