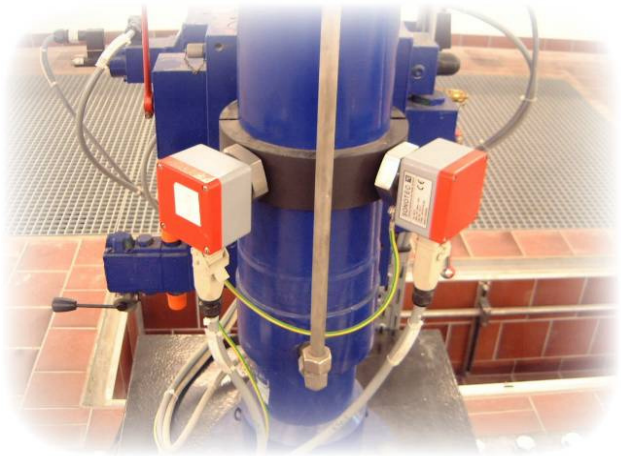
POSITION IDENTIFICATION OF PISTONS IN HYDRAULIC CYLINDERS

from the outside
contactless
with ultrasound

THROUGH THE WALL



SONOCONTROL 14

fast
safe
cost-effective

SONOTEC

SONOCONTROL 14

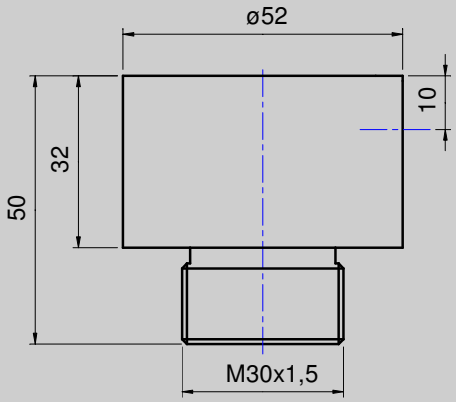
POSITION IDENTIFICATION OF PISTONS IN HYDRAULIC CYLINDERS

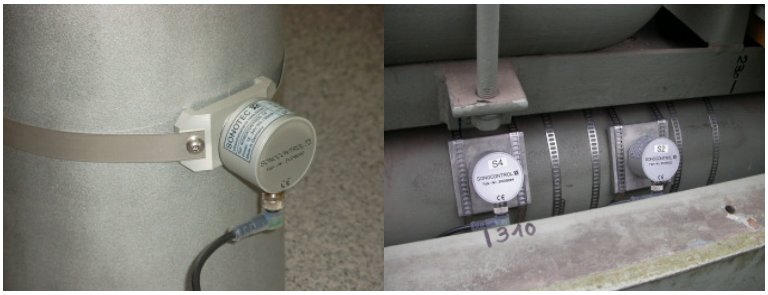
The new ultrasonic sensor SONOCONTROL 14 identifies the position of pistons in hydraulic cylinders. The ultrasonic procedure is harmless compared to methods based on radiation sources.

- The retrofitting of cylinders can be carried out even in mounted condition.
- The integration of the system is feasible without interruption of ongoing operations.
- The installation of the SONOCONTROL 14 is easy.
  No mechanical extension at pistons needed. No sealing problems due to holes in the cylinder wall.
- High safety of the system is guaranteed through a permanent couple and function control.
- A signal is always available.

Application Example

Using compact sensors with active sensor electronics leads to a very high interference resistance and allows a reliable operation in rough industrial environments.





TECHNICAL DATA

Measurement principle:	contact less ultrasound-pulse-echo-system no contact between sensor and piston no constructional changes at the cylinder
Fastening at the cylinder:	installation at the desired position with fastening clamp with fitting panel and thread M30x1.5
Accuracy:	static ± 1 mm, from the middle of sensor
Cylinder dimension:	inner diameter [mm]: 70 – 800 outer diameter [mm]: 95 – 950
Hydraulic fluid:	mineral oil (HL, HLP), HFA, (HFB), HFC, HFD, water, viscosity 15... 100 cSt, purity 20µm
Voltage supply:	18...30 VDC, max. 80 mA, undulation 10 %-undervoltage recognition, inverse-polarity protection, overvoltage protection
Switching output:	PNP / NPN max. switching current 60 mA with max. switching voltage 30 VDC
Connectors:	sensor pin-and-socket connector M12 cable 4-pin without shielding brown: positive operating voltage 18..30 VDC blue: negative operating voltage (GND) black: switching output white: synchronisation,
Coupling:	coupling at the cylinder with coupling medium
Sensor cable length:	2 or 5 m respectively with right-angle plug
Switching point display:	integrated LED in the right-angle plug (green, yellow)
Temperature range:	piston-type accumulator temperature: - 20 ... + 80 °C (attention to viscosity!) surrounding temperature: - 20 ... + 60 °C storage temperature: - 40 ... + 85 °C
Housing:	IP 67, oil-resistant, aluminium anodised, H x Ø: 50 x 52 mm, thread M30x1.5
Regulation:	Protection Type IEC529 (DIN 40050)EMV active EN50081, EN 55011EMV passive EN50082, IEC61000-4-2, -3, -4, -5, -6

SONOCONTROL for position control at locks of a waterway in Middle Germany

SONOTEC
DIN EN ISO 9001: 2000 TÜV Cert

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