

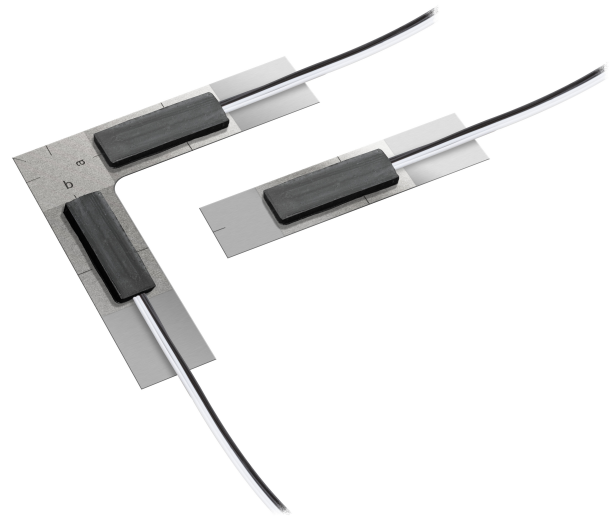
DATA SHEET

# LS31 HT, TS81 HT

## Weldable strain gages

### SPECIAL FEATURES

- Strain gages can be used on site where the cleanliness required for bonding cannot be guaranteed (construction sites, production plants, etc.)
- Rugged for tough environments
- Easily installed using spot welding
- Use at temperatures up to 250°C
- In stock



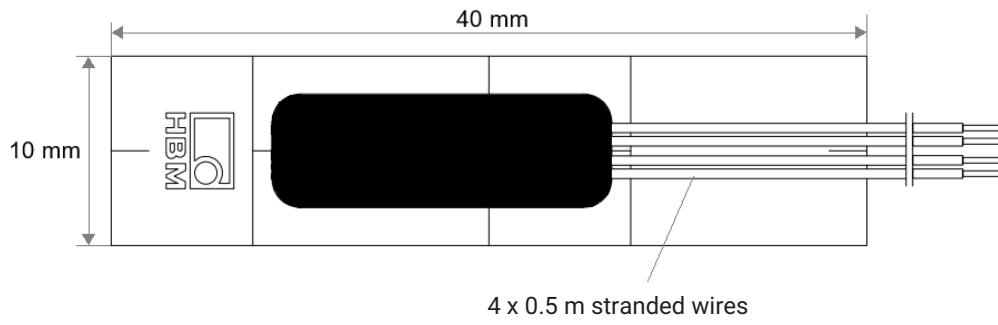
### SPECIFICATIONS

<b>Strain gage construction</b>		Foil strain gage hot-cure bonded to the carrier plate
<b>Measuring grid foil</b>		Nickel-chrome special alloy
<b>Strain gage carrier</b>		Glass-fiber reinforced phenolic resin
<b>Carrier plate</b>		X8Cr17 (1.4016)
<b>Covering agent</b>		Silicone
<b>Connection</b>		4 x 0.5 m fluoropolymer stranded wires per strain gage
<b>Nominal (rated) resistance</b>	Ω	350 (measured at end of cable)
<b>Resistance tolerance</b>	%	±1.0
<b>Gage factor</b>		approx. 2
<b>Nominal value of gage factor</b>		Specified on each package
<b>Gage factor tolerance</b>	%	±1
<b>Temperature coefficient of gage factor</b>		Specified on each package
<b>Transverse sensitivity</b>		Specified on each package
<b>Maximum permissible excitation voltage</b>	V	12
<b>Reference temperature</b>	°C	+23
<b>Operating temperature range</b>	°C	-50 ... +250; +300 for brief periods

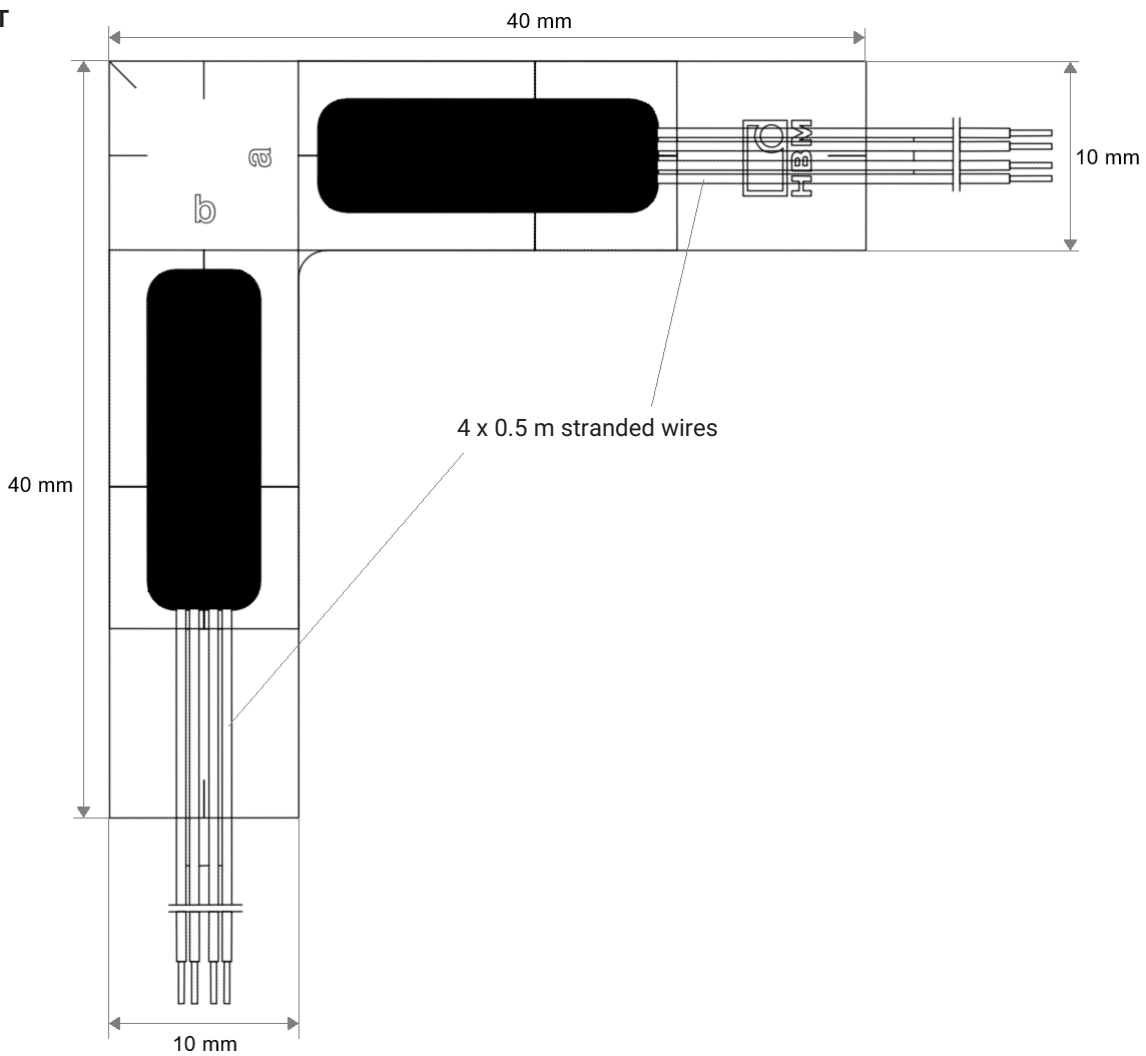
<b>Temperature response matched to expansion coefficient</b> <b><math>\alpha</math> for ferritic steel</b>	1/K	$10.8 \cdot 10^{-6}$
<b>Adaptation of temperature response in the range</b>	°C	-50 ... +250
<b>Maximum elongation at reference temperature</b>	$\mu\text{m}/\text{m}$	$\pm 3000$ ( $\Delta \pm 0.3\%$ )
<b>Fatigue life at reference temperature (spot weld)</b> <b>Achievable number of load cycles <math>L_w</math> with alternating strain <math>\epsilon_w = \pm 500 \mu\text{m}/\text{m}</math></b> Zero point variation $e_m \leq 300 \mu\text{m}/\text{m}$ Zero point variation $e_m \leq 30 \mu\text{m}/\text{m}$		$\gg 10^7$ (test was aborted at $10^7$ ) $> 10^7$ (test was aborted at $10^7$ )
<b>Strain-related restoring force</b>	$\frac{\text{N}}{1000 \mu\text{m}/\text{m}}$	< 250
<b>Smallest bend radius at reference temperature</b> Longitudinal and transverse	mm	75
<b>Mounting method</b>		Spot welding method (see operating manual)

## DIMENSIONS

### LS31HT



### TS81HT



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