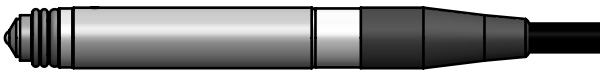
PETER HIRT GmbH

INNOVATIVE
MEASUREMENT
TECHNOLOGY LTD.

Manual
Halfbridge Transducer

Series T200



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Content

English

Introduction

Halfbridge transducers base on the inductive core measurement principle. The probes are characterised by absolut position measurement and high mechanical robustness.

This manual covers the underneath listed products. The handling of customer specific parts may deviate from the description in this manual. The corresponding datasheet inform about additional handling instructions.

Transducer T200 series

Article number	Description	Properties
1001403	T201F	Spring push, +/- 1 mm stroke
1001424	T202F	Spring push, +/- 1 mm stroke
1001484	T202V	Vacuum retract +/- 1 mm stroke
1001465	T202P	Pneumatic push +/- 1 mm stroke
1001447	T202L	Pneumatic push +/- 1 mm stroke

Technical spcifications can be found on our webpage www.peterhirt.ch or in the main catalogue.

Security advices

Faulty transducers potentionally create wrong measurements. To prevent from this periodical plausibility checks must be foreseen. A well defined master piece to check the transducer's functionality shall be used.

Maintenance

Periodical check

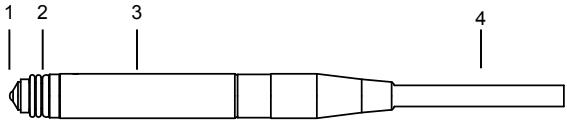
To assure the transducer's functionality and its measuring ability, every year the device should be checked. Properties to be verified are

- a well mechanical behaviour
- metrology abilities as linearity, repeatability and measure value stability

This check can be done by either the manufacturer or a well trained and equipped metrology laboratory.

Installation

The main parts of the transducer



Number	Description	Functionality
1	Tip M2.5	Tip with tungsten carbide ball.
2	Bellow	Bellow to protect the linear ball bearing from dust and particals. On P-models it also closes the pneumatic push cylinder. L-models aren't equipped with a bellow, instead they have an air gap seal.
3	Body	8h6 body to clamp the transducer.
4	Cable	Cable with three signal lines in, shield conncted to the main body.

Measuring insert change

Ex works optional measuring inserts can be premounted supplied. Exchanging the tip afterwards is not possible.

Bellow change

In case of damage of the bellow the transducer has to be sent in to the manufacturer (or authorised) dealer for repair.

Change measuring force

Ex works other measuring forces can be delivered. A change on the usable product is not possible anymore.

Fixing the transducer

The transducer can be clamped on all shaft positions. Take attention to not overthight what could influence the linear bearing preload. The clamping elements must spread the force as good as possible to a wide area.

Extension cable

Extension cables influence the analog transducer signals and therefore induce small changes in the sensitivity and linearity error characteristics. For more details please contact the manufacturer directly.

Application

Sensitivity Setting

HIRT halfbridge transducers are compatible with the TESA (R) standard. Electronics used to drive and read the transducer therefore also must fullfil the standard requirements. Every transducer is checked on 21 measuring points against sensitivity and linearity error. A, with the product enclosed, protocol inform you about thase test results.

Pneumatic advanced transducers

Pneumatically pushed transducers have the following specified maximum pressure

- P models - 1.5 bar
- L models - 4.5 bar

Application of pneumatic air to push forward the tip is allowed only when contacting a workpiece. Otherwise the stroke limitation of the linear ball bearing can permanently be destroyed!
The applied air must be free of oil and appropriately filtered (passby < 1 micrometer).

Conformity

HIRT transducers are conform to country and region specific guidelines and laws. Underneath the conformities are listed.

Guideline 2014/30/EU (CE conformity EMC)

Standard	**Test**
IEC 61000-4-2	Electrostatic Discharges (ESD)
IEC 61000-4-3	Radiated RF electromagnetic Fields
IEC 61000-4-4	Electrical Fast Transients and bursts
IEC 61000-4-6	Conducted Disturbances, induced by RF fields
IEC 61000-4-8	Power-frequency Magnetic Fields

Guideline 2011/65/EU (RoHS Guideline)

HIRT transducers do not consist any materials which exceed the maximum allowed concentration as to 2011/65/EU

Conflict minerals (Dodd Frank Act)

The on the transducer mounted tip consists of wolfram. Its source and the detailed supply chain is provided by the manufacturer upon request.

Change log

Date	**Change**	**new revision**
22.05.2018	Create document	000

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