

High-speed inspection system for connector pin measurement

Specification

Fully-automated non-contact optical system for geometry check of pins and socket with auto loading and sorting functions.

FEATURES

- 100% inspection
- High-speed non-contact measurement
- Based on high-speed 2D optical micrometre
- Check macros programmed by a user
- Auto-sorting (valid/invalid)
- Auto-loading from vibrating bowl.

MEASURABLE PARAMETERS

Any external geometrical parameters can be programmed to be checked.

There are two modes of check:

- **Super fast:**
check in one angular cross-section
- **Super accuracy:**
check in three angular cross-sections

Following parameters can be measured:

- Length / Height / Width
- Diameters
- Bevels
- Roundings
- Holes diameters
- Angle
- Step/pitch

DESCRIPTION

The system provides 100% quality check of pins and sockets when manufacturing. Due to auto-loading and auto-sorting, it has extreme performance. Accurate measurement of the total output of your products minimises the percentage of unaccounted-for rejects.

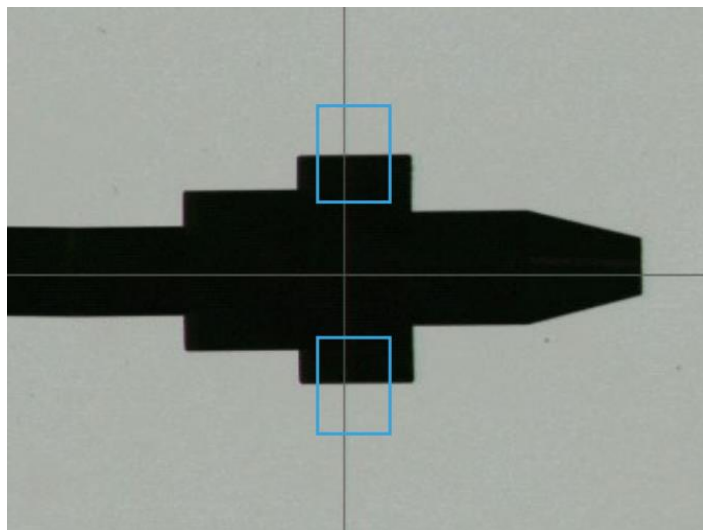
The system is based on the high-speed 2D optical micrometre.

Manufactured and washed pins and sockets (parts) are sent for inspection in batches in universal containers. The parts are fed from the vibration reservoir into the inspection zone and then are fixed by the pneumatic clamp. Rotating the part during measurement ensures inspection in at least three angular cross-sections.

The measured parameters are compared to the reference parameters. Based on the results of the inspection, the parts are automatically sorted into four groups: "Valid", "Correctable +", "Correctable -" and "Defective" according to the criteria set for this type of parts. When the part has been measured and the level of quality has been determined, the system drops the part into one of the sump trays.

The system can be integrated into the production line and connected to the packing equipment.

The system can be adapted to check any type of parts of any size.



APPLICATION

Quality control when manufacturing.

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SPECIFICATION

Maximum size of measured items, mm	6	40	65
Minimal size of measured items, mm	0,04	0,3	0,5
Accuracy, um	± 0,5	± 2	± 3
Number of measured cross-section	On demand		
Performance (time per one item)			
• one cross-section check, sec	0,15		
• three cross-sections check, sec	1		
PC requirements	Windows 10 Windows 7 (higher SP1) Windows Vista (higher SP2) Windows XP (higher SP3)		
External interfaces	Ethernet, TCP/IP, Wi-Fi		
Ambient temperature, °C	+ 0.. + 50		
Air humidity	less 90 %		
Atmospheric pressure	760 ± 30		
Overall dimensions, mm	280 x 400 x 370		
Power	220 V	50 HZ	0,5 kW

OPTIONS

- Integration in to robotic manufacturing line
- Interfacing with a packing machine
- Bespoke configuration for any kind of items

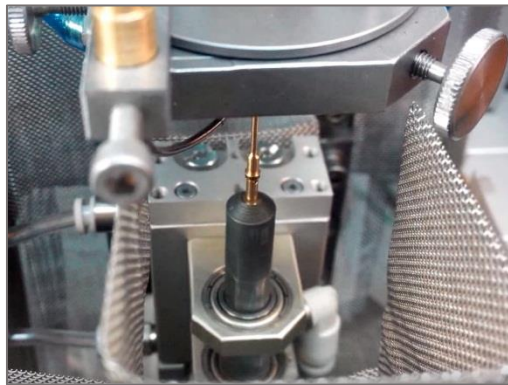
Warranty 2 years

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SUPPLY INCLUDES

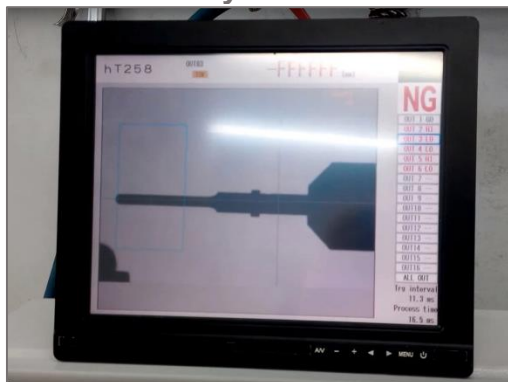
- Measurement system
- Pneumatic feeding (loading) and sorting system
- Power supply unit
- Cable
- PC
- Additional monitor (option)
- Operator console IP54 (option)
- Software
- User manual, maintenance papers, spare part papers



Pneumatic feeding and sorting system



Software



Additional monitor



Operator console

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DESIGNATION K1403 – min / max – express / ultra – D – L – P

Symbol	Description
Min / max	Minimal and maximum size of measurable items Standard options: 0,04/6 0,3/40 0,5/65 or tailored-made system
express	Super fast check 0 – absent; 1 – present.
ultra	A number of cross-sections in Super accuracy option Standard options 1 – 3 or tailored-made system
D	Operator interface D0 – controlling and data output to PC screen; D1 – D0 plus additional monitor D2 – IP54 operator console
L	Integration into a robotic manufacturing line: L0 - absent, all the items are loaded from the trays; L1 - present, all the items come from the conveyor line;
P	Integration with a packing machine/line P0 - absent, all the items are unloaded into outbound trays. P1 - present, all the items are unloaded into a packing machine/line.

NOTE