

# Wide-range gap switch with digital display for even easier use!

Blockage indicator lamp

Output display 1

Output display 2

Output display color can be selected.

OFF: Green ON: Orange <sup>\*2</sup>

or

OFF: Orange ON: Green

<sup>\*2</sup>: Default settings.

Key lock function and

PIN number function also built in.

Operation button

Focus on creating a simpler layout which makes operation easier to picture.

Ref. value <sup>\*1</sup>

<sup>\*1</sup>: The distance between the detection side nozzle and workpiece is a numerical conversion value, and units do not apply.

Threshold 1

Threshold 2

Pressure display

The threshold display can be switched to the detection side pressure display by pressing the ▲ ▼ keys.



When IO-Link option is selected, switching to seating ON/OFF display is also possible.

Screen non-display settings selection possible <sup>\*3</sup>

The reference value and threshold can be set to OFF at shipping.

<sup>\*3</sup>: When screen non-display option is selected.

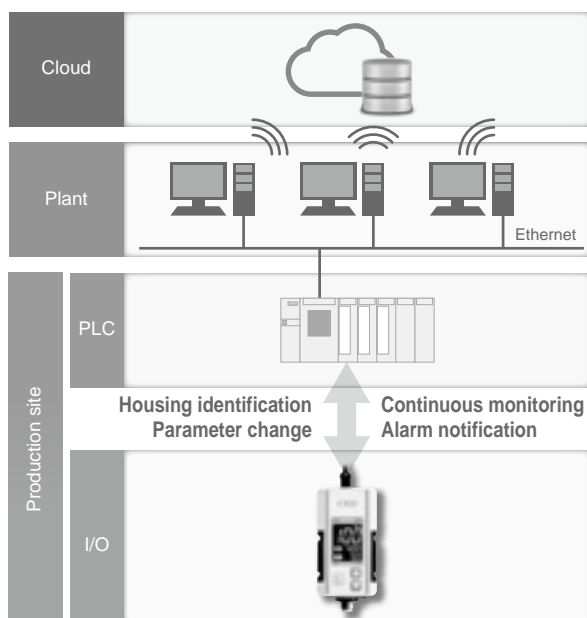
Digital gap switch

# GPS3 SERIES

## Introducing the IO-Link model



IO-Link is a digital communication standard for sensors/actuators at factory sites. (IEC 61131-9) Unlike analog communication, it enables the transmission of parameters and event data.



### Features of IO-Link



Constant monitoring via digital data is possible.



Installation anywhere is possible, as parameters can be configured and changed remotely via the network.



Model Nos., serial Nos., etc., can be confirmed on the network.



The settings can be copied from the master (scanner), making parameter reconfiguration after maintenance obsolete.



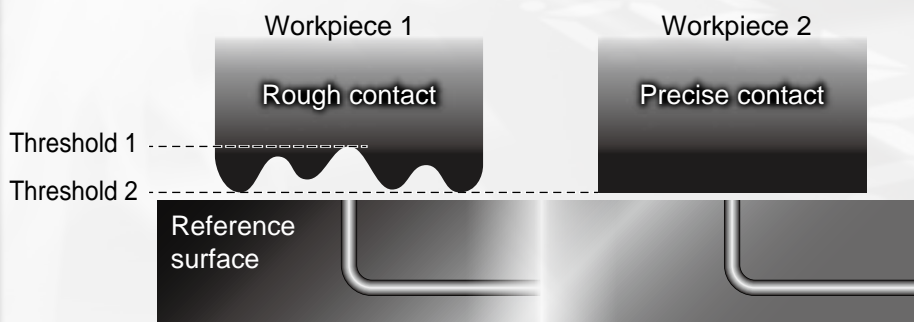
Device failure and disconnection can be confirmed.



It can also be converted to Ethernet networks and connected, enabling devices to be IoT-ready.

## High precision 2-point output

Threshold can be set to 2 points within the detection range scale. For example, a single device can be used to confirm precise contact after clamping the workpiece and to detect rough contact while confirming orientation.



Industry's  
first!!  
PAT.P

February 2016,  
CKD research

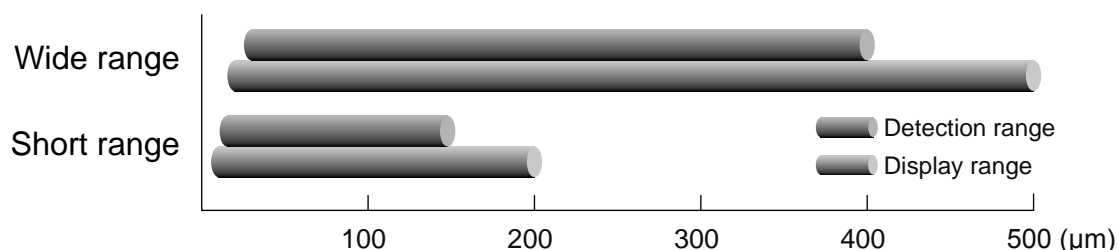


## Detection over a wide range from raw material surfaces through precision machined surfaces

This single unit allows finished surface roughness and material surface roughness settings within the detection range scale from 0.03 mm to 0.4 mm. A new short-range type has also been added to detect shorter distances. (Detection range scale: 0.02 mm to 0.15 mm)

Industry  
number one!  
Wide range

Wide range  
February 2016,  
CKD research



## High maintainability (preventative maintenance)

### [Blockage indicator function]

A lamp blinks and a signal is output <sup>\*4</sup> to indicate a blockage in the detection air flow path. The blinking period indicates which locations are likely to be blocked, enabling rapid recovery. (Default setting is OFF)



Fast blinking: Interior orifice may be clogged  
Slow blinking<sup>\*5</sup>: Detection nozzle may be clogged

### [Orifice easy disassembly]

Orifice blockages can be cleaned without having to disassemble the assembled product.



Reset the threshold  
after disassembly  
or cleaning.

### [Direct blow]

Capable of direct blow of max. 0.6 MPa.

<sup>\*4</sup>: When IO-Link option is selected.

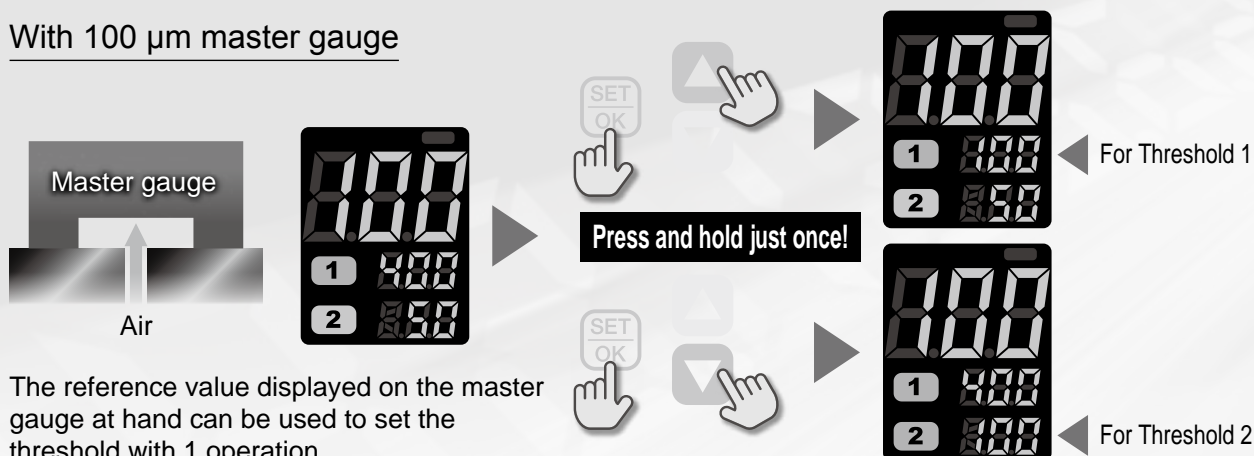
<sup>\*5</sup>: When the light is blinking without a workpiece present (Blinking also occurs during regular contact, due to the detection structure).

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filt
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PresCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

## Easy operation

The master gauge you have at hand can be used to set the threshold easily.

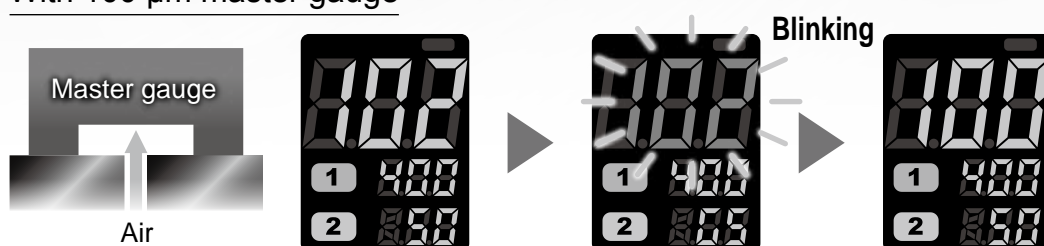
With 100  $\mu\text{m}$  master gauge



The reference value displayed on the master gauge at hand can be used to set the threshold with 1 operation.

Displayed values can be calibrated (actual measurement calibration function).

With 100  $\mu\text{m}$  master gauge



Now with a function allowing calibration of discrepancies in the reference value displayed on the master gauge at hand.

(Refer to Operation mode for details)

## Low noise/energy-saving

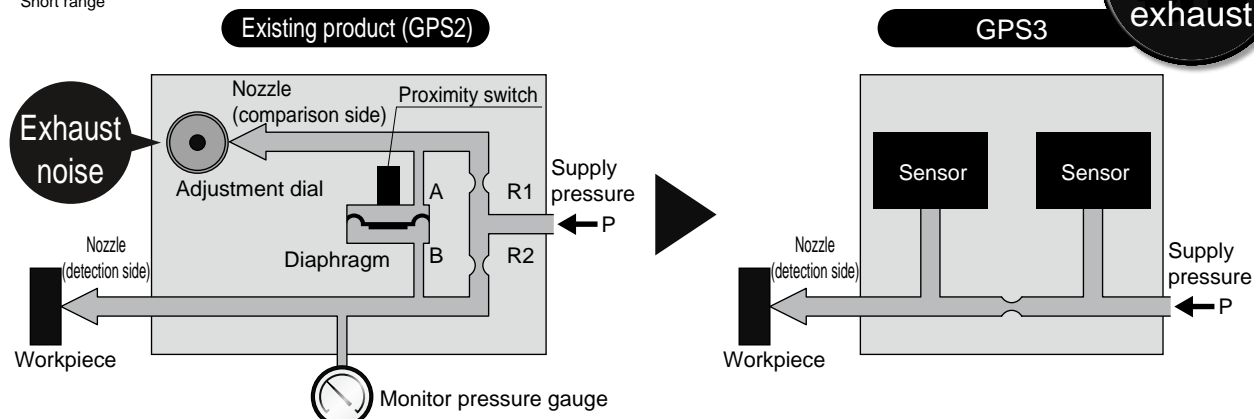
Energy saving

Rethinking the detection circuit has eliminated exhaust air on the comparison side.

Exhaust noise, previously constant, is no longer a concern.  
Air consumption when the nozzle is open can also be reduced.  
Air consumption 9 L/min or less\*.

\* Short range

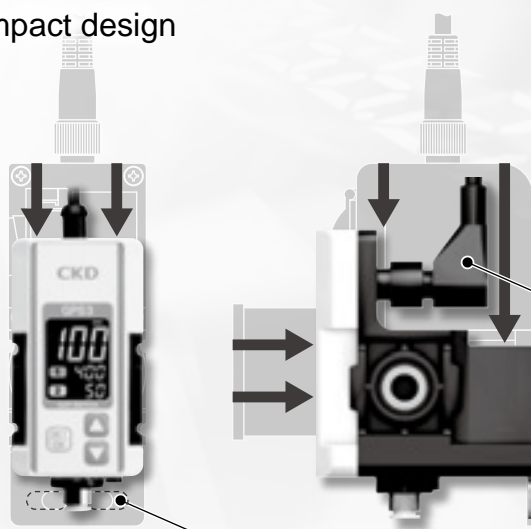
Zero air exhaust!





## Excellent workability

### Compact design



The appearance lives up to high-design equipment.

While the assembled dimensions are compatible with the conventional GPS2 product, the design is more compact, the weight reduced, and replacement is easy.

### M12 connector (4-pin)

The connections are at the rear, so no space is required for connections on the front.

Mounting compatible

Manifold/unit supported. Easily expandable.

Manifold MGPS3

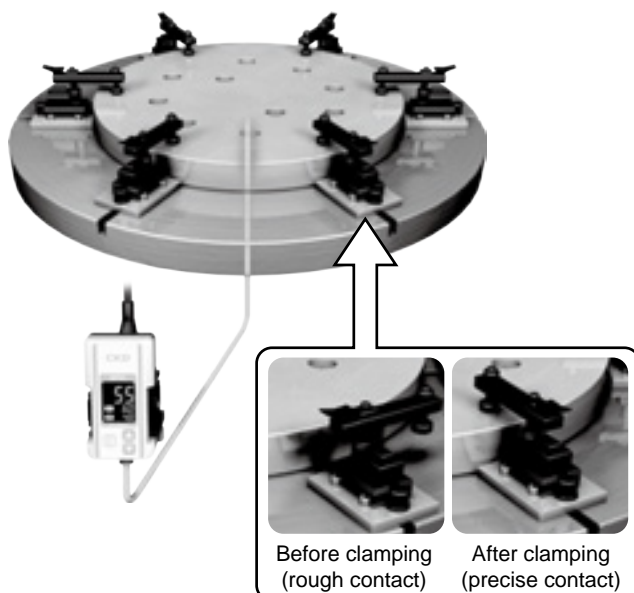


Unit UGPS3



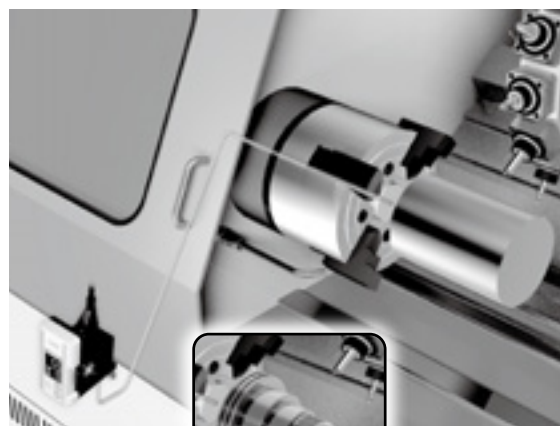
## Applications

Two-point detection for rough and precise contact.



Two-point detection for rough and finish machining.

Rough machining



Finish machining

\*Detection nozzle can be used in any environment

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PresCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending