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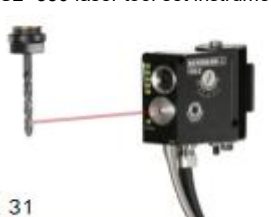
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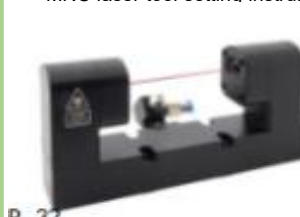
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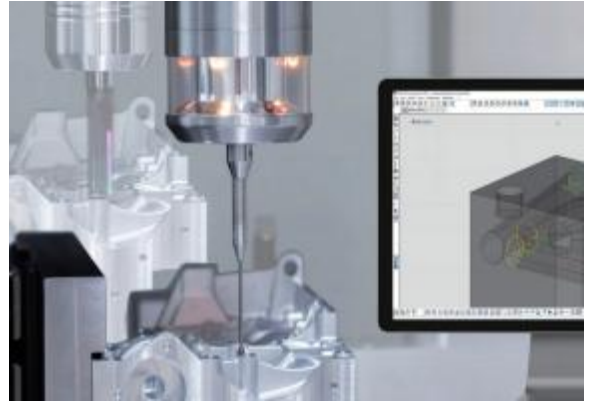
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# CNC MACHINE TOOL PROBE SERIES

## summary

Machine tool probe is an innovative machine tool measurement device that can be installed on CNC machines such as machine tools, machining centers, grinders, specialized equipment, robots, etc., and allows the CNC machine tool to automatically measure the size and position of the tool or workpiece without human intervention during the machining cycle, and automatically correct the offset of the workpiece or tool based on

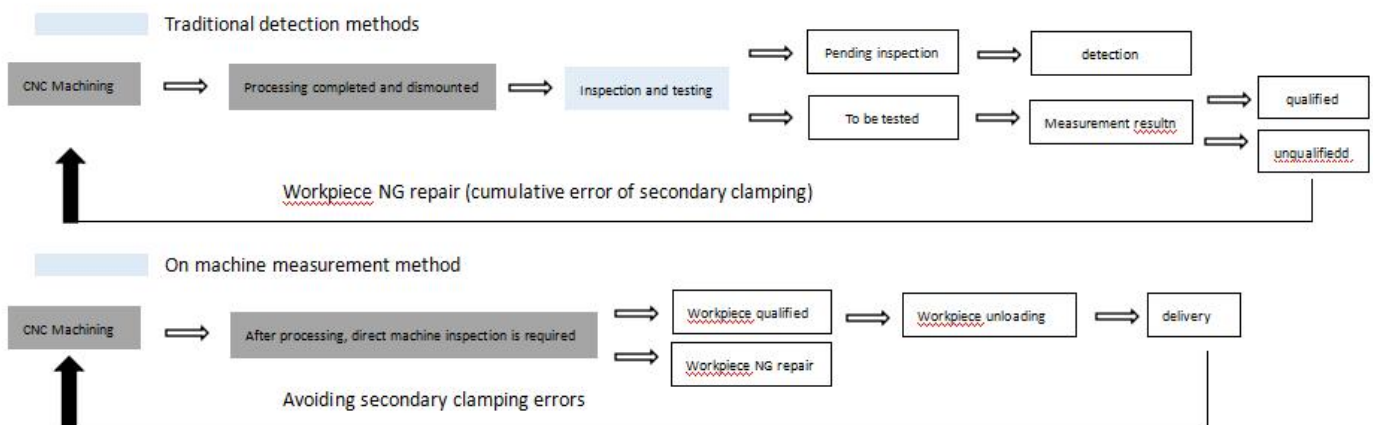


## Characteristics Overview

1. Able to automatically identify machine tool accuracy errors and compensate for machine tool accuracy;
2. Replace manual manual automatic centering, edge finding, measurement, automatic correction of coordinate system, and automatic tool compensation;
3. Directly measure the surface of large and complex parts on the machine tool;
4. Improve the processing capacity and accuracy of existing machine tools, complete online correction of large products in one go, and eliminate the need for secondary clamping, rework, and repair;
5. Improve generation efficiency, improve manufacturing quality, and ensure product qualification rate;
6. Reduce the manufacturing cost and appearance processing process of making part benchmarks;
7. Batch production can be completed in one go, making it convenient and fast to adjust the machine for the first piece, make a large sample, and determine the production plan;
8. Reduce machine tool assistance time, reduce manufacturing costs, and reduce scrap rates!

## Online measurement application

Reasonable use of online measurement technology in machine tools can greatly reduce processing assistance time, improve work efficiency, reduce scrap rates, effectively improve the production capacity of CNC equipment, and achieve maximum benefits.



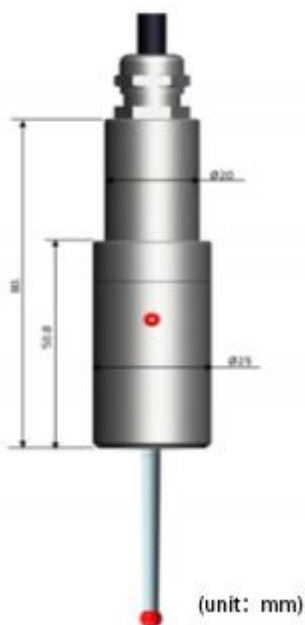
## CNC machine tool wired measuring head MP25-1



### ● sketch

The MP25-1 series of wired measuring heads are suitable for batch processing of parts in CNC machining centers, milling machines, lathes, grinders, precision engraving machines, high gloss machines, engraving machines, etc. They are connected by cables to continue real-time communication with CNC machine tools. The measurement signals of the measuring heads are output to the CNC system in real time through cables, and automatic measurement can be achieved through specialized macro programs.

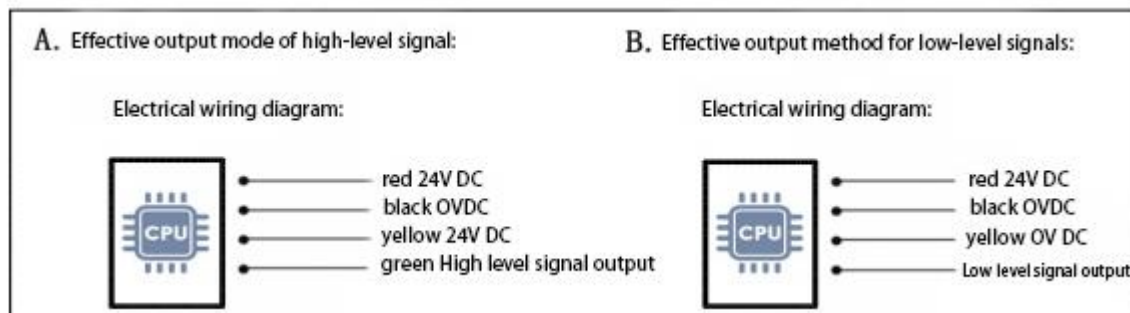
### ● Outline Drawing



### ● Product parameters

Product Name	Cable probe
Product model	MP25-1
repeatability	$\leq 0.001\text{mm}$ (The probe: 50mm, /speed:50~200mm/min)
Signal transmission method	Cable
Measuring needle induction direction	$\pm X$ 、 $\pm Y$ 、 $+Z$
Departure protection travel	12.5 "in XY plane, 6.35mm in Z direction
Measuring speed	$\leq 5\text{m/min}$
Trigger lifespan	$\geq 1000$ 万次/10million times or more
Body material	Stainless steel 316
Cable specifications	Standard 5-meter oil resistant 4-core $\Phi 5\text{m}$
Protection level	IP68(Double layer sealing)
Power Supply	12~30VDC
working temperature	10C~40C
Storage temperature	-20°C~70°C
indicator light	With LED indicator light
Net weight	327g
Gross weight	610g
Warranty	12months

### ● circuit diagram

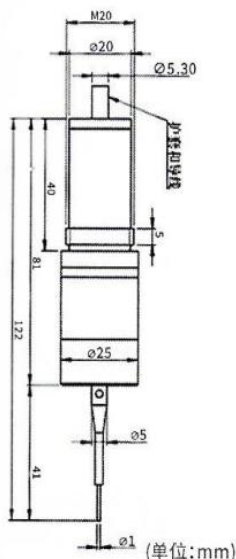


# CNC MACHINE TOOL PROBE SERIES

## Nc machine tool wired probe ML25-PLus



Contour map

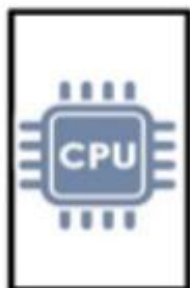


### Paper

Wired probe ML25-PLus series, with high compatibility, is applicable to most brands on the market, mainly used for online measurement of CNC machining centers, milling machines, grinders, precision engraving machines, etc. (It can also be used as a sensor) The cable connection mode is adopted to continue the real-time communication with CNC machine tool. The measuring signal of the probe is output to the CNC system in real time through the cable, and the automatic measurement can be realized with the special macro program.

### Product parameters

Product Name	Wired probe
Product Model	ML25-PLus
Repeated positioning accuracy	0001mm(30-120mm/min)Condition operating speed30-120mm/min)
Signal transmission mode	Cable
Measure needle sensing direction	$\pm X$ 、 $\pm Y$ 、Z
Maximum stroke	5mm
Trigger life	10 million times
Force to contact	1N
Body material	304stainless steel
Needle material	Super hard alloy (according to requirements)
Probe length	81mm (Needle length is not included)
Cable specifications	Standard 1M oil resistance (length can be customized)
Electric shock rating	DC24V
Protection grade	IP68
Indicator light	Without indicator light
Net weight	160g
Gross weight	293g
Quality assurance	12 months



- Red line: DC+24 power supply
- White wire: 0V power supply
- Green line: public end
- Blue line: NO signal output (normally open)
- Brown line: NC signal output (normally closed)
- Shielding layer: shielding

### Note

- Do not connect the blue wire and the brown wire to the system at the same time. Insulate the excess wire harness to avoid short circuit.
- Confirm the IO voltage status of SKIP signal.
- To ensure probe accuracy, handle with care when installing and using.
- In order to ensure the measurement accuracy, please wipe with alcohol when using in bad environment. Swab needle ruby.
- Install correctly according to the circuit diagram.
- The probe is oil-proof and waterproof, but the chip oil should be avoided from directly facing the test head. High pressure spray.

# CNC MACHINE TOOL PROBE SERIES

## Nc machine tool wireless probe MDP40



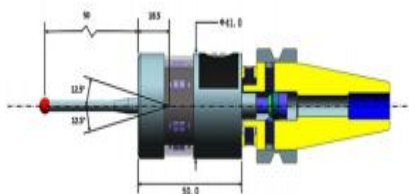
### Paper

MDP40 is a compact 3D triggered workpiece detection probe, using optical signal, radio signal transmission, the scope of application is mainly used in CNC milling machine mold 2D,3D surface detection, lathe, grinding machine parts batch processing field; In small and medium-sized CNC machining center for workpiece finding and workpiece detection, and automatic compensation tool wear to ensure parts accuracy, large Reduce parts scrap rate and rework rate.

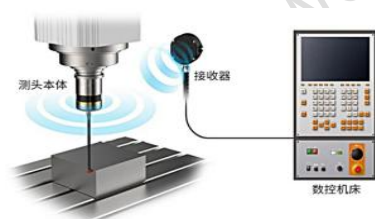
### Product parameters

产品名称/Product Name	无线测头/Wireless probe
产品型号/Product Model	MDP40
重复定位精度/Repeated positioning accuracy	0.001mm
信号传输方式/Signal transmission mode	无线电/Unlimited electricity 红外线/infrared
触发方向/Trigger Dir	±X, ±Y, ±Z
电源/Power Supply	14250锂电池/Lithium battery (3.6V)
本体材质/Body material	不锈钢/Stainless steel
测针/Stylus	默认平头钨钢测针 Default flat top tungsten steel measuring needle (螺纹/Thread M4)
测头外径/Probe diameter	41mm
测头长度/Probe length	50mm
测量速度/Measure speed	≤500mm/min
最大过行程/Maximum over travel	XY±12.5, Z±35mm
触发力/Trigger force	可调/Adjustable
触发方式/TRIG MODE	接触式/Contact
触发寿命/Trigger life	>1000万次/> 10 million times
工作温度/Working Temperature	-10~60℃
防护等级/Protection grade	IP68 EN60529
净重/Net weight	1011g
毛重/Gross weight	1685.8g
应用行业/Applicable Industry	CNC机床, 模具行业, 手机行业, 航空航天, 车床磨床, 加工中心, 电子领域, 工业机械, 轨道交通等/CNC machine tools, mold industry, mobile phone industry, aerospace, lathe grinder, machining center, electronic field, industrial machinery, rail train, etc

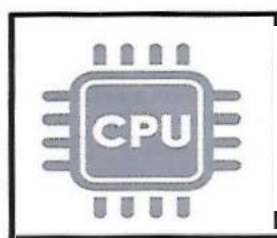
### Contour map



### Working principle diagram



### Radio probe receiver wiring diagram



- Red wire connects to 24VDC power supply of machine tool
- Black wire connects to 0V DC power supply of machine tool
- Green line connect to the COM port of machine tool jump signal
- Yellow line connects to machine tool jump signal port



# HMWTECH CO.,LTD

## CNC MACHINE TOOL

### PROBE SERIES

#### Nc machine tool wireless probe MYP40



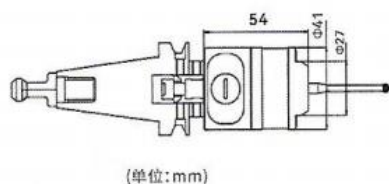
#### Paper

MYP40 wireless probe uses optical signal, radio signal transmission, can be installed on most CNC machine tools such as CNC lathes, machining centers, CNC grinding machines. In the processing cycle without human intervention, directly to the tool or workpiece size and position measurement, and automatically correct the workpiece or tool bias, so that the same machine can process higher precision parts. Greatly reduce parts scrap rate and rework rate, 3C high light chamfer products more uniform symmetry.

#### 产品参数 Product parameters

产品名称/Product Name	无线测头/Wireless probe
产品型号/Product Model	MYP40
重复定位精度/Repeated positioning accuracy	0.001mm
信号传输方式/Signal transmission mode	无线电/Unlimited electricity 红外线/infrared
触发方向/TriggerDir	±X、±Y、-Z
电源/Power Supply	14250锂电池/lithium battery (3.6V)
本体材质/Body material	不锈钢/Stainless steel
测头外径/Probe diameter	41mm
测头长度/Probe length	54mm
测量速度/Measure speed	≤500mm/min
最大过行程/Maximum over travel	XY±15°, Z4mm
触发力/Trigger force	可调/Adjustable
触发方式/TRIG MODE	接触式/Contact
防护等级/Protection grade	IP68: EN60529
净重/Net weight	1187g
毛重/Gross weight	1350g
应用行业/Applicable Industry	CNC机床、模具行业、手机行业、航空航天、电子领域、工业机械、轨道列车等/CNC machine tools, mold industry, mobile phone industry, aerospace, electronic field, industrial machinery, rail train, etc.

#### 外形图 Contour map

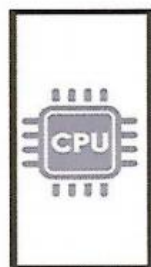


#### 工作原理图 Working principle



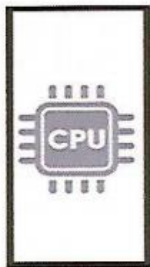
#### 常见机床接线案例 Common machine connection cases

##### FANUC机床/FANUC machine



- 红色线: 24V (电源)
- Red line: 24V (power supply)
- 绿色线: 5-24V Dc (输入信号电压)
- Green line: 5-24V DC (input signal voltage)
- 黄色线: X4.7 (SKIP) 信号
- Yellow line: X4.7 (SKIP) signal
- 黑色线: 0V DC
- Black line: 0V DC
- 棕色线: 24V Dc (低压报警输入)
- Brown line: 24V DC (low voltage alarm input)
- 白色线: X4.5
- White line: X4.5

##### BROTHER TCS2D/S2Dnz



- 红色线: XTO板102接口 (IO24)
- Red line: XTO board 102 interface (IO24)
- 绿色线: XTO板11接口
- Green cable: port 11 on the XTO board
- 黄色线: XTO板12接口 (信号)
- Yellow line: XTO board 12 port (signal)
- 黑色线: XTO板112接口 (IOG)
- Black line: XTO board 112 interface (IOG)
- 白色线: XTO板12接口 (电池低压)
- White wire: XTO board 12 port (low battery voltage)

# CNC MACHINE TOOL PROBE SERIES

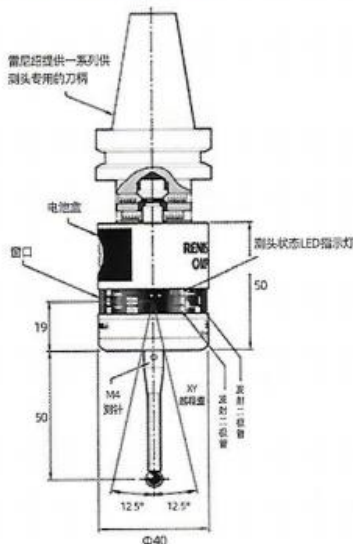
## Renishaw wireless probe OMP40



### Paper

The original Renishaw wireless probe OMP40-2 is an ultra-small 3D triggered workpiece detection probe, which uses optical signal transmission. It is suitable for workpiece detection and alignment in small and medium-sized machining centers, multi-purpose turning and milling centers, composite machine tools and CNC milling machines. Complex 3D surface in machine inspection. The product is resistant to optical interference, false trigger and vibration.

### 外形图 Contour map



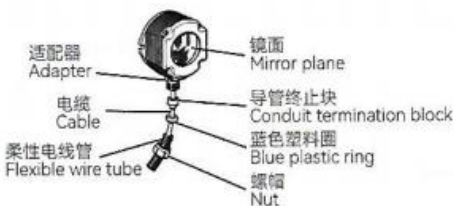
测针越程极限		
测针长度	±X/±Y	+Z
50	12	6
100	22	6

### 产品参数 Product parameters

产品名称/Product Name	雷尼绍光学测头/Renishaw optical probe
产品型号/Product Model	OMP40-2
重复定位精度/Repeated positioning accuracy	0.001mm
信号传输方式/Signal transmission mode	360°红外线光学传输/360° infrared optical transmission
触发方向/TriggerDir	±X、±Y、+Z
电源/Power Supply	3.6V 锂亚硫酰氯电池(LTC)/3.6V lithium thionyl chloride cell (LTC)
测头外径/Probe diameter	40mm
测头长度/Probe length	50mm
测量速度/Measure speed	1000rev/min
最大过行程/Maximum over travel	XY±12.5°, Z6mm
触发力/Trigger force	可调/Adjustable
触发方式/TRIG MODE	接触式/Contact
触发寿命/Trigger life	>1000万次/> 10 million times
防护等级/Protection grade	IP68: EN60529
重量 (不含刀柄) /Weight (excluding handle)	含电池/Contain the battery/250g
	不含电池/No batteries/234g
应用行业/Applicable Industry	CNC机床、模具行业、手机行业、航空航天、电子领域、工业机械、轨道列车等/CNC machine tools, mold industry, mobile phone industry, aerospace, electronic field, industrial machinery, rail train, etc.

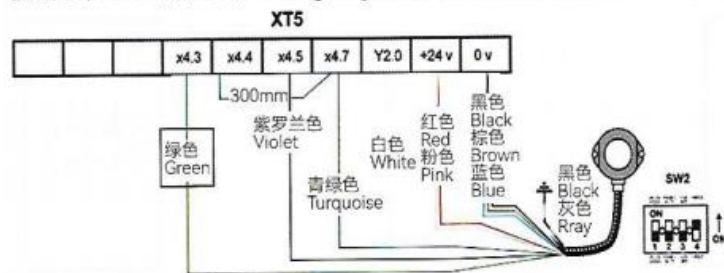
### 系统安装 System Installation

#### 硬件安装 Hardware installation



注：一定要在电缆线外套上保护管，安装时将蓝色塑料圈套在保护管口，将导管终止块旋入保护管，再拧紧螺母。  
Note: Be sure to put the protective tube on the cable jacket. When installing, place the blue plastic trap at the mouth of the protective tube and tighten the nut.

#### 接线图 (FANUC机床为例) Wiring diagram (FANUC machine tool for example)





HMWTECH CO.,LTD

# CNC MACHINE TOOL

## PROBE SERIES

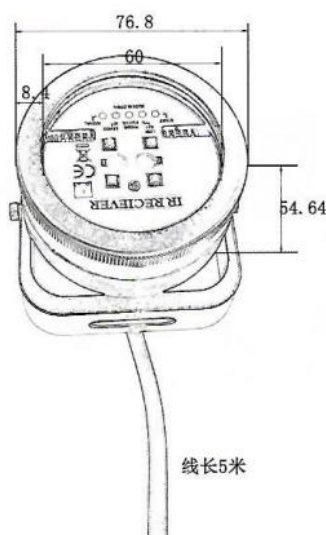
Compatible probe receiver MI series



### Paper

The compatible probe receiver MI series is an optical receiver integrated with the machine interface, which can be installed in the processing area of the machine tool. The "modulation" optical transmission operation mode is adopted, which is compatible with the machine tool probe that also adopts the "modulation" operation mode. The MI compatible probe receiver is suitable for most brands of probes on the market.

### 外形图 Contour map



(单位: mm,纯手工测量,公差0.05mm)

### 产品参数 Product parameters

产品名称/Product name	兼容型测头接收器/Compatible probe receiver
产品型号/Product model	MI系列/MI series
传输类型/Transport type	红外线光学传输 (调制模式) /Infrared optical transmission (modulated mode)
兼容测头/Compatible with the measuring head	适用于市面上大部分品牌的测头 The probe is applicable to most on the market
工作范围/Working range	达6m/Up to 6 m
电源电压/Power voltage	12V DC-30V DC 传输信号: 160mA (最大峰值) /Transmission signal: 160mA (maximum peak value)
电源电流/Supply current	接收信号: 40mA (平均) /Received signal: 40mA (average) 注: 在24V DC时且所有输出均为开路/Note: at 24V DC and all outputs are open circuit
输入/输出保护/I/O protection	电源由可更换的保险丝进行保护/The power supply is protected by a replaceable fuse 输出由电流过载保护电路进行保护/The output is protected by the current overload protection circuit
电缆规格/Cable specification	5m长电缆/5 m long cable
净重/Net weight	535g
毛重/Gross weight	660g
LED诊断指示灯/LED Diagnostic indicator	开启、电池电压低、测头状态、错误、系统生效和信号状态/On, battery low voltage, probe status, error, system active and signal status
主要应用/Chief application	MI兼容型测头接收器处理来自测头的信号, 将其转换为机床输出信号, 然后传输至CNC控制器/The MI compatible probe receiver processes the signal from the probe, converts it into the output signal of the machine tool, and then transmits it to CNC controller

### 特点 Feature

- 结构紧凑, 适用性广。接收器直径仅有76.8mm, 产品安装更加方便。
- 采用万向调节机构, 方便对准测头方向, 比传统机构更加灵活。
- 采用正反电源保护设计, 避免因接线错误导致的问题。
- 接线端标明接线定义, 大大简化安装难度和风险。
- 兼容性强, 可以适用于绝大部分品牌的测头。
- Compact structure and wide applicability. The receiver diameter is only 76.8mm, making the product easier to install.
- Universal adjusting mechanism is adopted to facilitate alignment of probe direction, which is more flexible than the traditional mechanism.
- Adopt positive and negative power protection design to avoid problems caused by wiring errors.
- The wiring end is marked with the wiring definition, which greatly simplifies the installation difficulty and risk.
- It has strong compatibility and can be applied to most brands of probes.

Website: <https://www.himcnc.com>

Get-a-Quote email: [info@harmonywolrd.com](mailto:info@harmonywolrd.com)

# KNIFE SET INSTRUMENT SERIES

## ● Profile

Tool set instrument is also commonly known as the machine tool set, broken tool detection instrument or automatic tool set instrument, it is a standard accessories in CNC machine tools. The core component of the tool tester is composed of a high-precision switch (contact), a hard alloy round body with high hardness and high wear resistance (tool face) and a signal transmission conversion chip (other parts are omitted). The tool face is used to contact with the tool and transfer the force to the high-precision switch. The on-off signal sent by the switch is transmitted to the macro program of the NC system through the transmission line with high flexibility, high conduction and high masking for tool direction identification, operation, compensation, access and so on. So as to realize the detection of tool, broken tool, tool wear, tool diameter, tool swing and so on. The tool setting instrument can shorten the measuring time and improve the efficiency of machine tool. Realize automatic operation, save manpower, improve processing accuracy prevent the appearance of defective products.



## ● Characteristics of the paper

### (一) Contact tool setting instrument

It is connected with CNC machine tool system through signal transmission. It is a part of automatic production of machine bed. After finding the installation position in the horizontal and vertical position of the workbench, in the corresponding numerical control system input program can effectively realize the automatic detection of tool wear compensation and monitoring tool rupture, damage warning function to avoid defective products and waste products in time. Repetition accuracy up to 1μm.

#### Main Features

- rapid tool damage monitoring. can avoid subsequent losses,
- Automatic tool measurement automatic compensation and broken tool detection in machining center,
- beyond the trip will send out an alarm signal, can prevent damage accidents! (except some tool setting instruments):
- built-in photoelectric measuring mechanism, no mechanical wear, to ensure high reliability.
- durable mechanical design, easy installation.

### (二) Non-contact tool setting instrument (laser tool setting instrument)

The laser tool setting instrument uses the laser through the transmitter and receiver to set the tool, which can be used for high-speed operation, high precision tool setting and tool fracture detection. Laser tool is the laser transmitter and receiver respectively fixed on both sides of the knife device when the tool through the sword of the laser beam, beam brightness changes on the receiver, thus to create a trigger signal, and perception of cutting tool state, we dedicated software system of tool deviation alarm or automatic compensation, The minimum diameter of the tool can be detected is 0.03mm and the repeated detection accuracy is less than or equal to 0.1μm.

#### Main Features

- Shorten the adjustment time of the tool, the tool can be moved to the laser beam at a high speed, without the danger of being damaged.
- The tool can be measured under the normal spindle speed, to achieve accurate measurement of tool length and diameter, to obtain the tool runout and oscillatory cone parameters.
- To be able to measure very small sophisticated tools without wearing or damaging the tool;
- Can detect tool damage at a very high speed, detection cycle time is short. automatic machining reliability is high.
- Can detect the damage of each tooth of multi-tooth cutter
- The online tool adjustment function can automatically update the tool offset error eliminate the operator's operation error, but also can monitor the machine tool spindle thermal deformation and compensation.

# CONTACT TOOL SETTING INSTRUMENT SERIES

## Plunger tool setting instrument



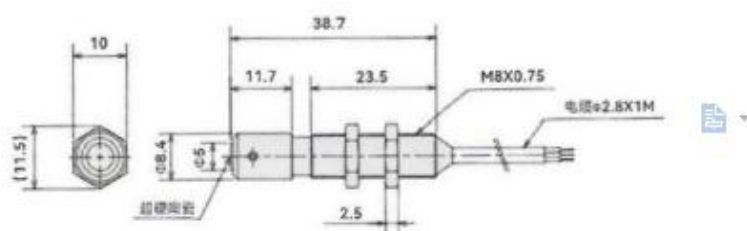
### Paper

This type of plunger cutter (can be used as contact sensor), mainly used for small mini engraving machine, dispensing machine, denture machine, tooth carving machine broken knife detection, tool wear and damage detection.

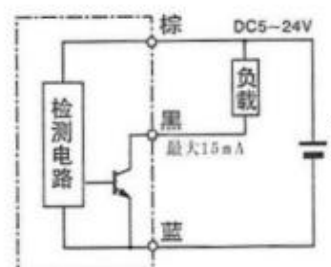
### 产品参数 Product parameters

产品名称/Product name	柱塞型对刀仪/Plunger tool setting instrument
重复精度/Repeatably	0.001mm
行程/Stroke	3mm
操作力/Operating Force	0.6N
动作位置/Operating position	0.2-0.5mm
回差/Return difference	0.1mm以下
电源电压/Power voltage	DC5-24V
输出方式/Output mode	NPN 常开 (NO) (接近时ON/when doseto ON) NPN 常闭 (NC) (接近时OFF/when doseto OF) (型号尾部B/Model Tail B)
输出电流/Output current	15mA MAX
消耗电流/Current consumption	5mA MAX
电缆线规格/Specification of cable	1m 长度 Length, NO: 灰色/Grey, NC: 黑色/Black, $\phi 2.8\text{mm}$
耐电压/Withstand Voltage kV	AC1000V1 分钟/1 minute
绝缘电阻/Insulation resistance	DC: 250V $\geq 20\text{M}\Omega$
指示灯/Indicator lamp	距离主体约100mm/About 100mm from the main body
材质/Material	外壳/螺母/轴/Housing/nut/shaft SUS303
安装/Installation	M8螺母安装转距5N/M8 nut mounting pitch 5N, m
净重/Net weight	24g
毛重/Gross weight	25g
保护等级/Protection class	IP67 等同/IP67 equivalent
工作环境温度/Working Temperature	-20°C-85°C (无结露/No condensation)
工作环境湿度/Working Relative Humidity	20-95%RH

### 外形图 Contour map



### 电路图 Circuit diagram



# CONTACTTOOLSETTING INSTRUMENT SERIES

## Mini tool setting instrument MP11-10



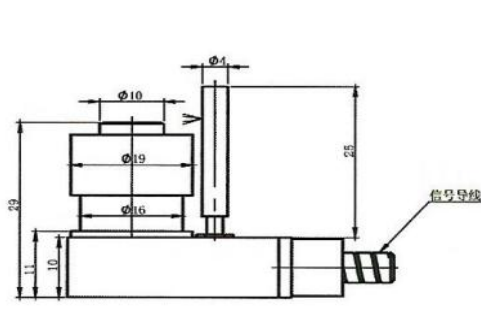
### ● Paper

This mini knife set instrument is mainly used for small mini carving machine, jade carving machine, denture machine, dispensing machine, tooth carving machine, glass machine and other tool measurement and broken knife detection, broken knife wear and damage detection.

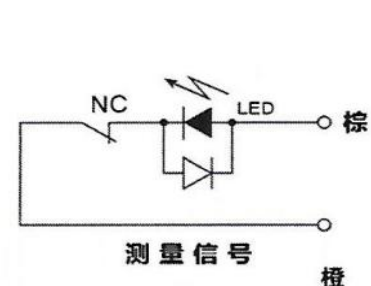
### ● Product parameters

Productname	Mniknife setting instrument
Model	MP11-10-2、MP11-06-2
Diameter of cutter face	10mm、06mm
Output mode	B:NC(/normally dosed)
Pretravel	0
Stroke	5
Repeatabily	0001mm(50-200mm/min/Condtion operating speed 50-200mm/min)
Contactlie	3 milion times
Protection architecture	IP67
Contact force	15N(nstalation status; vertica)
Contact surface materia	Tungsten steel
Surfaceprocessing method	Grinding 4S miror
Contact rating	DC24V-20mA(MAX)(recommended 10mA)estance load
Cable	3Moil resstance 2 core $\phi 48$ tensle strength 30N, minimum bending radius R7
Net weight	727g
Gross weight	77/8g

### ● 外形图 Contour map



### ● 电路图 Circuit diagram





# CONTACT TOOL SETTING INSTRUMENT SERIES

## Small automatic tool setting instrument MP13-10



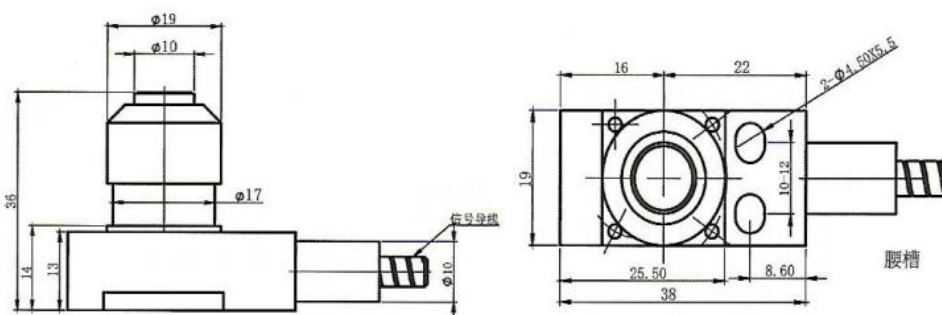
### Paper

This small tool set instrument is used for CNC engraving and milling machine, highlight machine, glass jade machine tool measurement, wear and damage detection; 0.001mm repeat precision, improve machining accuracy, shorten tool measurement time, improve machine efficiency

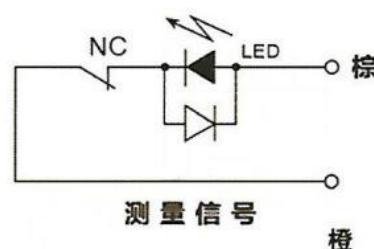
### Product parameters

Product name	Small automatic tool check instrument
Model	MP13-10
Diameter of cutter face	φ10mm
Output mode	NC Normally closed type NC
Pretravel	Nothing
Stroke	5mm
Repeatability	0.001mm (50-200mm/min/Condition: operating speed 50-200mm/min)
Contact life	3 million times
Protection architecture	P68 depth waterproof
Contact force	10N (installation must be vertical)
Contact surface material	Hard alloy
Surface processing method	4S/Grinding 4s
Contact rating	DC24V-20mA (MAX) (recommended 10mA) resistance load
Contact voltage	DC24V 100mA resistance load
Cable	2MΩ resistance (length can be customized), 2 cores
Net weight	1493g
Gross weight	180g

### 外形图 Contour map



### 电路图 Circuit diagram



# CONTACT TOOL SETTING INSTRUMENT SERIES

## Automatic tool setting instrument MP21-10



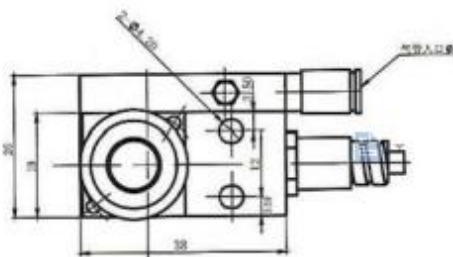
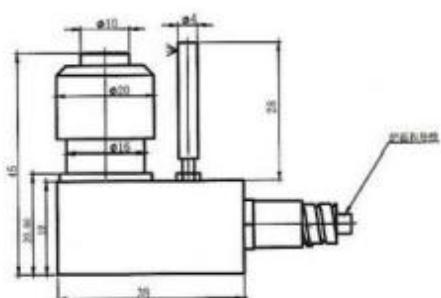
### ● Paper

This tool set instrument is mainly used for CNC engraving and milling machine, highlight machine, glass jade machine and other equipment tool measurement, wear damage detection, broken tool detection; An alarm signal will occur when the trip is exceeded, which can prevent damage accidents.

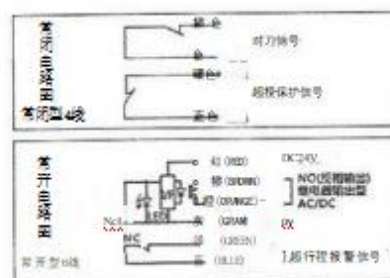
### ● Product parameters

Product name	Automatic toolchecking instument
Model	MP21-10、MP21-16
Diameter of outer face	φ10mm、φ16mm
Output mode	NC normally closed / NO normally open
Pretravel	0
Stroke	5
Repeatability	0.001mm(50-200mm/min/Condition operating speed 50-200mm/min)
Contact life	3 million times
Protection architecture	P67*100% waterproof oil-proof sealing performance
Contact force	15N(Installation must be vertical)
Contact surface material	Tin-plated steel
Surface processing method	Grinding 4 μm
Contact rating	DC24V-20mA(MAX)(recommended 10mA)/resistance load
Cable	2mm resistance 4-core φ4.8mm tensile strength 30N, the minimum bending radius R7
Protective tube	1mm minimum bending radius R25
The pitch of the installation	10-12mm
Net weight	193g(default MP21-10 weight)
Gross weight	277g(default MP21-10 weight)
Overrange alarm signal	Output mode NC normally closed (range detection signal is about 25mm) DC24V-20mA(MAX)(10mA)/Contact voltage DC24V-20mA(MAX)(recommended value 10mA)/resistance load

### ● Contour map



### ● Circuit diagram





# CONTACT TOOL SETTING INSTRUMENT SERIES

## Automatic tool setting instrument MP21-10(tungsten steel)



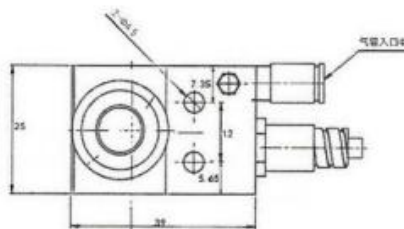
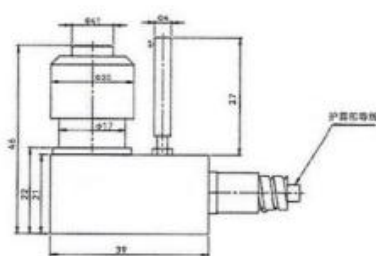
### Paper

The main body of the tool set instrument is super hard alloy, the accuracy is as high as 0.0005mm, mainly used for CNC engraving and milling machine, highlight machine, glass jade machine and other equipment tool measurement, wear damage detection, broken tool detection; The alarm signal will occur when the trip is exceeded, which can prevent the damage accident.

### Product parameters

Product name	Automatic tool checking instrument
Model	MP21-10(Tungsten steel with)
Diameter of cutterface	φ10
Output mode	NC normally closed/NO normally open
Pretravel	0
Stroke	5mm
Repeatability	0.0005mm
Contact life	3 million times
Protection architecture	P67 4100% waterproof oil proof sealing performance
Contact force	1.5N (Installation must be vertical)
Contact surface material	Superhard alloy
Surface processing method	Grinding 4S mirror
Contact rating	DC24V-20mA(MAX) (recommended 10mA) resistance load
Cable	Standard 5M of resistance, 4 core φ48, tensile strength 30N bending radius R
Protective tube	2MM minimum bending radius R25
The pitch of the installation	10-12mm
Net weight	3252g
Gross weight	388g
Overrange alarm signal	Output mode NC normally closed (range detection signal is about 25mm)
	Contact voltage DC24V-20mA(MAX) (recommended
	value 10mA) resistance load

Contour map



Circuit diagram



HMWTECH CO.,LTD

# CONTACT TOOL SETTING INSTRUMENT SERIES

Automatic tool setting Instrument M26D-20(steel)



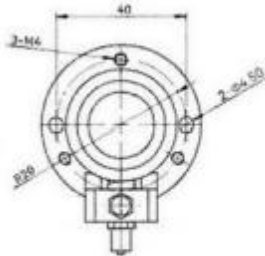
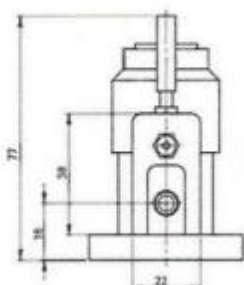
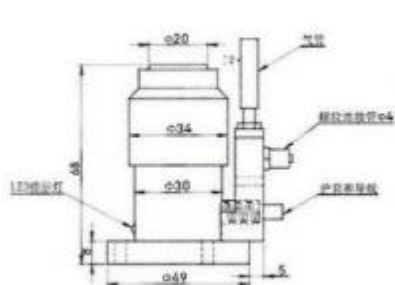
## ● Paper

This tool setting instrument is fully compatible with all brands of tool setting instruments in the market, and is mainly used for tool measurement, wear and tear detection, and broken tool detection of CNC machining centers, engraving and milling machines, high gloss machines, glass and jade machines and other equipment; An alarm signal will occur when the travel is exceeded, which can prevent damage accidents.

## ● Product parameters

Product name	Automatctool checking irstument
Model	M26D-20(Steel)
Diameter of cutter face	φ20mm
The main body materia	Stainless steel
Contact site material	Superhard alloy
Surface processing method	Grinding 4Smirror
Output mode	Normally open/normaly dosed
Pretavel	Ncthing
Stroke	5mm
Repeatably	0.001mm(Condition operating speed 50-200mm/min)
Contact life	3 million times
Protecton architecture	P67*100% waterproof cl-proof seaing performance
Contact force	1.5N(lrstalation must be vertical)
Contact rating	DC24V-20mA(MAX) (recommended 10mA)resistance load
Cable	Standard 5Molresstance,6coreφ48,tensiestrength 3CN,bending adusR7
Cable material	PU
Protective tube	8mm 304 stainless steel 15mlong
Indicator lamp	Normally dosed, LED ight on when working
The pitch of the installation	40mm
Net weight	515g
Gross weight	585g
Overange alarm signal	Output mode NCnormalydosed (ange detection signalisabout25mm)
	Contact voltage DC.24V-20mA(MAX)(recommended
	value 10mA) resistance load

Contour map



● Circuit diagram



Website: <https://www.himcnc.com>

Get-a-Quote email: [info@harmonywolrd.com](mailto:info@harmonywolrd.com)



This tool is mainly used for CNC machining center, engraving and milling machine, high light machine, glass jade machine and other equipment tool measurement, wear damage detection, broken tool detection; An alarm signal will be generated when the trip is exceeded, which can prevent damage accidents.

Product name	High precision automatic tool setting instrument
Model	M26D-30 series
Signal output	NO normally open /NC normally closed
Diameter of cutter face	φ30mm
Material of knife face	tungsten steel superhard alloy
Surface processing method	Grind the 4S mirror
Repeatability	0.001mm(0.001mm(Condition: operating speed 50-200mm/min))
Contact life	3 million times
Efforts to contact	1N(installation state must be vertical)
Pretravel	0
Stroke	8mm
Contact rating	DC5-24V20mA(MAX)Recommended value 10mA /Resistive load
Cable specification	Standard 5MΩ resistance (length can be customized)
Cable shield	8mmV304 stainless steel/15mm long, sheath length 30mm bending radius R7
Net weight	536g
Gross weight	612g
Overrange alarm signal	Output mode: NC/normally closed (emergency stop/customizable normally open after signal disconnection)
	/Output mode: NC/ normally closed (emergency stop when the signal is disconnected/can be ordered normally open)
	Contact voltage: DC24V20mA resistive load (load and current limiting are required in special cases)
	/Contact voltage: DC24V20mA resistance load (load and current limit should be added in special cases)

常闭电路 图		热 继电器 颜色	对刀信号
常闭触头		热继电器 颜色	超程保护信号
常开电路 图		红 (RED)	DC24V
常开触头		橙 (ORANGE)	ACDC
常开触头	NZ	蓝 (BLUE)	PI
常开触头	-	黄 (YELLOW)	超行程报警信号
常开触头	-	蓝 (BLUE)	超行程报警信号

# CONTACT TOOL SETTING INSTRUMENT SERIES

## Precision automatic tool set NC



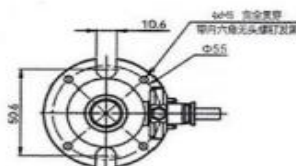
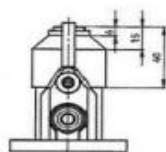
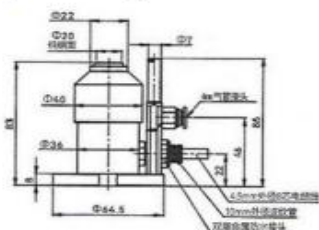
### Paper

This tool for CNC engraving and milling machine, CNC machining center, engraving machine, grinding machine, machine tool and other broken tool detection, tool measurement, wear, damage detection; Alarm signals will occur when the trip is exceeded, which can prevent damage accidents. In addition, the upgraded version of this model carries the alarm button to realize the integration function of normally open and normally closed.

### Product parameters

Product name	Precision automatic tool set
Mode	NCseries
To the tool face size	φ20mm
Outputmode	Normally opennormally dosed
Pretravel	Nothing
Stroke	5mm
Repeatability	0.001mm(Condition Operetng speed 50-200mm/min)
Contact life	3 million times
Protection architecture	P67*100%waterproof and oil proof sealing performance
Contact force	4N(installation state must bevertical)
Contact material	Superhard alloy
Surface processingmethod	Ginding 4s
Contact rating	DC24V-20mA(MAX)(Recommended value 10mA)Resistive load
Cable	Standard 5M oil resistant, material black PU
Cablejoint	Double metal proof joint with blocking belowtype
Cable shield	Outer diameter 10mm specification bellows, bellows 3 meters
Control enclosure	Connect the REC2311790 square junction box 500mm from the end of the cable, which has a disarming function and a red LED power indicator light and a green signal output indicator light, with a spacing between the lights Asquarejunction box of REC23*17*90 is connected at 500mm at the end of the cable, and the junction box has the alarmfunction,red LED power indicatorand green signaloutputindicator and the intervalbetween lights is 17mm,and the middle resetbutton
Remove alarm button	Redlight (farknife warninglight), green light(or normalwork)
The pitch ofthe installation	50.6mm
Net weight	5962g
Grossweight	7327g
Overrange alarm signal	Outputmode NCnormally closed (about25mm from thedetection signal) DC24V-20mA(MAX)(Recommended value 10mA)Resistive load

### Contour map



### Circuit diagram

常开型6线	棕色 对刀信号 蓝色 对刀信号 绿色 对刀信号 白色 对刀信号		
	常开型6线		
常开型6线	NL	红 (RED) 橙 (ORANGE) 黄 (ORANGE) 绿 (GREEN) 蓝 (BLUE) 白 (WHITE)	DC24V Ace 行程报警信号



# CONTACT TOOL SETTING INSTRUMENT SERIES

Tool setting instrument for woodworking engraving machine



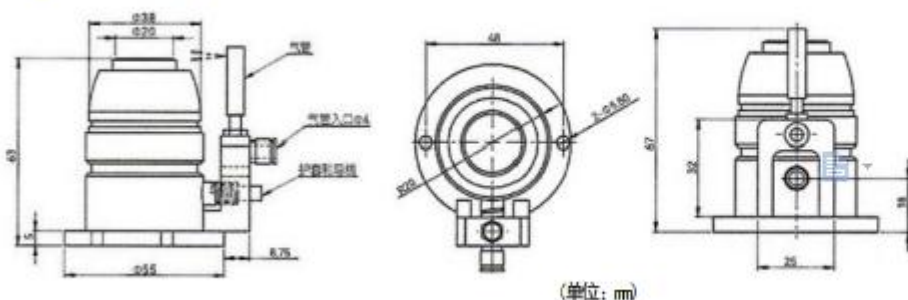
## Paper

This woodworking tool tester is mainly used for woodworking machinery tool measurement, wear damage detection; Alarm signals will occur when the trip is exceeded, and damage accidents can be prevented. Applicable to China, Japan, Taiwan, Korea, Germany and other woodworking engraving machine and all kinds of woodworking control machinery, cutting machine, etc.

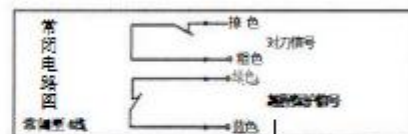
## Product parameters

Product name	Woodworking engraving machine knife instrument
Model	MY20-20-2
Signal output	NC normally dosed
Diameter of cutter face	φ20mm
Material of knife face	Tungsten steelsuperhard alloy
Surface processing method	Grind the 4Smimor
Repeatability	0001mm(0001mm(Condtiont operating speed 50-200mm/min
Contact life	3 million times
Efforts to contact	13-24N(Depending on the sensing direction)
Pretravel	0
Stroke	8mm
Contact rating	DC5-24V20mA(MAX)Recommended value 10mA Resistive load
Cable spedfication	Standard configuration 2m (diameter R435mm, 4-core shielded cable, each core φ 07*02mm)/Sardard2M(dereterR435mm,4 coeshilded cable,eachcxe 0702mm)
Waterproof Rate	IP65
Net weight	363g
Gross weight	417g
Overrange alarm signa	Output mode: NC/normally closed (emergency stop/customizable normally open after signal disconnection)
	Output mode: NC/normally dosed (emergency stop when the signalis disconnected/can be ordered normally open)
	Contact voltage: DC24V20mA resistive load (load and current limiting are required in special cases) /Contact voltage DC24V/20mArestance load (loed and aurent limit should be added in special cases)

## Contour map



## Circuit diagram





# CONTACT TOOL SETTING INSTRUMENT SERIES

## Precision automatic tool setter T24E-20



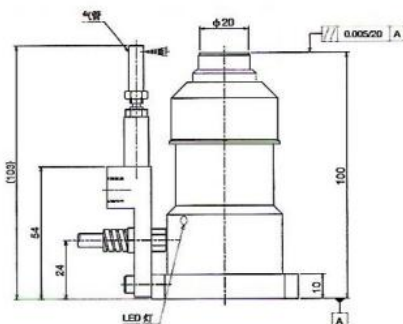
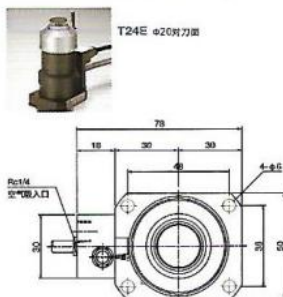
### Paper

This instrument is a square base, mainly used for CNC engraving and milling machine tool measurement, wear, damage detection; Alarm signals will be generated when exceeding the trip, which can prevent damage accidents. It is suitable for China, Japan, Taiwan, Korea, Germany and other machining centers engraving machines and various CNC control machines.

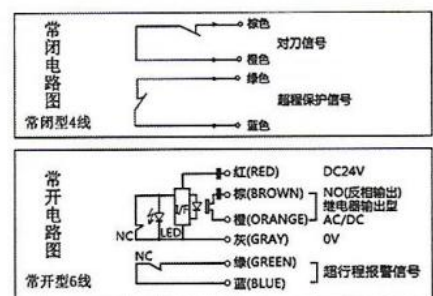
### Product parameters

Productname	Precision automatic tool set
Mode	T24E-20
Signal output	Normally open/normally closed
Diameter of cutter face	φ20mm
Material of knife face	Tungsten steel
Surface processing method	Grind the 4Smirror
Repeatability	0.001mm(Condition: Operating speed 50-200mm/min)
Contact life	3 million times
Efforts to contact	25N(Installation status Vertical)
Pretravel	Nothing
Stroke	12mm
/Contact rating	DC24-20mA(MAX) Recommended value 10mA Resistive load
Cable specification	Standard configuration 5m (customizable) Type 6 φ 48 tensile strength 30N, minimum bending radius R7/Sandad5M (an be astored) 6type048tarslelength30N, minimum bending radiusR
Cable shield	Standard 1.5m(customizable) minimum bending radiusR25
LED Light	Open when working normally closed
Waterproof Rate	P68*100% waterproof oil proof sealing performance
Net weight	641g
Grossweight	721g
Overrange alarm signal	Output mode: NC/normally closed (emergency stop/customizable normally open after signal disconnection)
	Output mode NC/normally closed (emergency stop when the signal is disconnected can be ordered normally open)
	Contact voltage: DC24V/20mA resistive load (load and current limiting are required in special cases)
	Contact voltage DC 24V20mA resistanceload (load and current limit should be added in special cases)

### 外形图 Contour map



### 电路图 Circuit diagram





# CONTACT TOOL SETTING INSTRUMENT SERIES

Photoelectric tool setter/sensor M86-20(tool face 20mm)



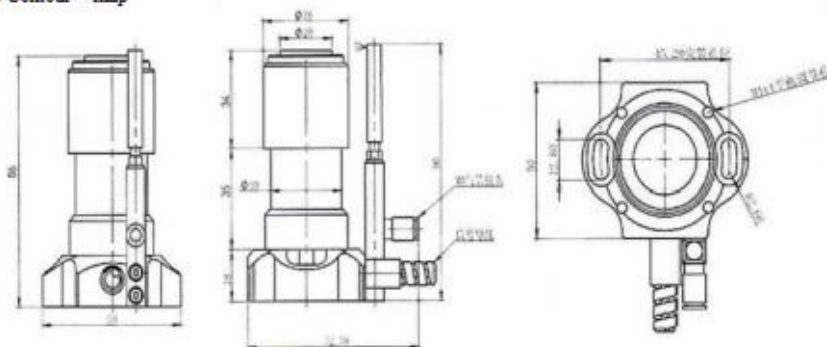
## ● Paper

Photoelectric tool measuring instrument is a cable connected measuring system, which can quickly and accurately measure the tool length and monitor the tool damage on the machining center. With its robust mechanical design and photoelectric signal trigger principle, it can ensure the highest measurement accuracy even in harsh working environments. Alarm signals will occur when the trip is exceeded, and damage accidents can be prevented. Suitable for all kinds of machining centers and CNC control machinery.

## ● Product parameters

Product name	Photoelectric tool detector sensor
Model	MB6D-20-1、MB6D-20-2
Output mode	- 1:NO(Normally open) - 2:NC(Normal close)
Measuring mode	Photoelectric device triggering (contactless structure)
Working power	DC5-24V
Trigger trip	2mm
Repeatability	0.002mm (Condition: Operating speed 50-200mm/min)
Electrical life	6 million times
Protection architecture	P68 (100m waterproof/corrosion resistant)
Trigger gravity	0.8N (Installation state must be vertical)
Material of knife face	Super-hard tungsten steel
Diameter of cutter face	20mm
Surface processing method	Grinding 4s
Load rating	DC24V/20mA (MAX) Recommended value 10mA Resistive load
Cable specification	Standard 5M oil resistant 6-core wire (length can be customized)
Cable shield	8mm/304 stainless steel protective tube/L1.5m
Work indicating lamp	The first signal indicator is green, and the second model indicator is red
Overrange alarm signal	Output mode NC normally closed (emergency stop when the signal is disconnected) Load rating: DC24V 20mA (MAX) Recommended value 10mA Resistive load

## ● Contour map



## ● Circuit diagram



# CONTACT TOOL SETTING INSTRUMENT SERIES

## Multi - directional tool set instrument MS27R-3-1



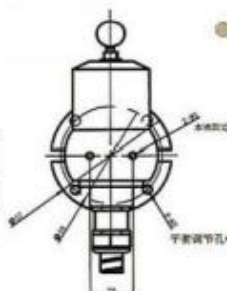
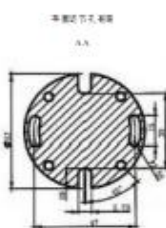
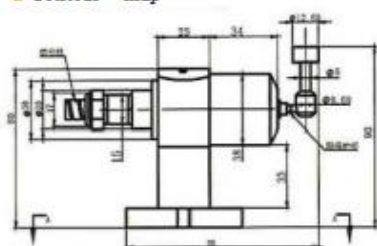
### Paper

Multi-direction tool set instrument is mainly used in CNC machine tools CNC machining center, tool, tool length, tool diameter, skew measurement, broken tool detection, tool positioning, wear, damage detection. It is a special measuring system for various types of vertical and horizontal gantry machining centers. It adopts cable connection to continue real-time communication with CNC machine tools, and the measurement signal of the probe is transmitted to the numerical control system through the cable in real time, with the special macro program. Out of the trip will occur alarm signal, can prevent damage accidents!

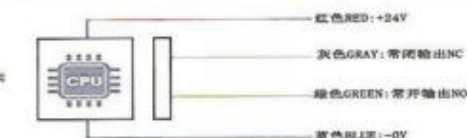
### Product parameters

Product name	Muti drection tool setinstrument
Model	MS27R-3-1
Control the output	PNPNPN(Normaly openhormally dosed)
The contact diameter	14-20mm
Direction of measurement	$\pm X, \pm Y, +Z$
Texture	Aloy
Surface processing method	Grinding 4 Smirror
Repeatably	0001mm
Contact ife	3 milion times
Efforts to contact	0.7N
Stroke	3mm
Mainsinput	12-24VDC
Contact rating	15mA(MAX)Recommended value 10mA Resistive load
The signal number	wires and 2 sets of signal outout
Cable specification	5M high flexible ail resistant drag chain cable
Protection architecture	P67
Environment temperature	-20℃~+40℃
Relative humnidty	25%-95% No condensation
Netweight	605g
Gross weight	620g
Probe dimensions(optional)	$\phi 8$ round head, 8*8 square head, others
Matters need attention	Be sure to use within the rated power supply range (12-24VDC)
	The installation base must be grounded or shielded

### Contour map



### Wiring diagram of multi-directional tool set instrument



(注意：常开/常闭信号不能同时使用，不用的需绝缘好。  
Note: normally open/normally closed signals cannot be used at the same time, and the unused signals should be well insulated)



# CONTACT TOOL SETTING INSTRUMENT SERIES

## Five direction tool set instrument MTS27R-1



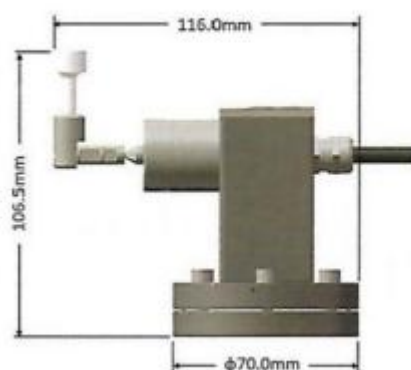
### Paper

Five direction tool set instrument is mainly used in CNC machine tools CNC machining center, tool, tool length, tool diameter, bias measurement, broken tool detection, tool positioning, wear, damage detection. it is a special measuring system for various types of vertical and horizontal gantry machining centers. it adopts cable connection to continue real-time communication with CNC machine tools, and the measurement signal of the probe is transmitted to the numerical control system through the cable in real time, with the special macro program. Beyond the trip will occur alarm signal, can prevent damage accidents!

### Product parameters

Product name	Five direction tool set instrument
Model	MTS27R-1
Output mode	Hardwire connection for transmission
The contact diameter	14-20mm
Direction of measurement	$\pm X, \pm Y, +Z$
Contact site material	Tungsten steel
Surface processing method	Grinding 4 Smirror
Repeatability	0001mm(min/Conditions Operating speed 50-200/min)
Contact life	3 million times
Efforts to contact	13-24N(Depends on the direction of induction)
Protection architecture	IP68
Pretravel	无
Contact rating	DC.24V-20mA(MAX)Recommended value 10mA Resistive load
Cable specification	Standard configuration 5M (diameter 60mm,4-core shielded cable)
Power Supply	12-30VDC
Net weight	9036g
Gross weight	13565g
Matters need attention	Be sure to use within the rated power supply range(12-30VDC) The installation base must be grounded or shielded

### Contour map



### Circuit diagram

对刀仪线	红	黑	黄	绿
机床电气	24V	0V	24V(高电平有效) 0V(低电平有效)	跳转信号输入

A 高电平信号有效输出方式:

B 低电平信号有效输出方式:

电气接线图:



电气接线图:



注: 请仔细核对功能参数及电器参数, 以免误接导致内部元器件烧毁。焊接后的线头请用绝缘材料包好, 以免其他因素导致短路内部元器件被烧坏。

# CONTACT TOOL SETTING INSTRUMENT SERIES

## Renisho five direction tool set instrument TS27R



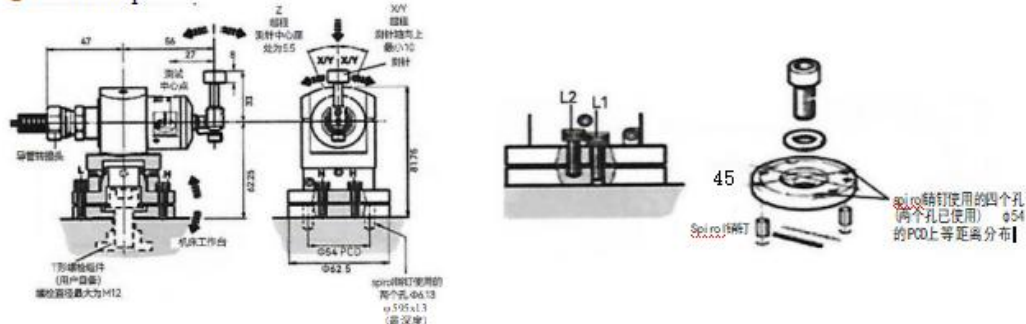
## ● Paper

Renishaw original five direction tool set instrument is mainly used in CNC machine tools. CNC machining center, tool, tool length, tool diameter, skew measurement, broken tool detection, tool positioning, wear, damage detection. It is a special measuring system for various types of vertical, horizontal and gantry machining centers. It adopts wire and cable connection to continue real-time communication with CNC machine tools, and the measuring signal of the probe is output to the CNC system through the cable in real time, with the special macro sequence. Out of the tip will occur alarm signal, can prevent damage accidents!

## ● Product parameters

Product name	Renishaw five direction tool se
Model	TS27R
Brand	Rainie salt
Output mode	Hardwire connection for transmission
The contact diameter	14-20mm
Receiver/interface	HSIM18-4 or HSI
Recommend measuring neede	Discneedle or square neede
Pretravel	0
Direction of measurement	$\pm X, \pm Y, +Z$
Repeatablty	0001mm(Conditions Operating speed 50-200mm/min)
Contactlfe	3 milion times
Protection architecture	IP68
contact force	13-24N(Depends on the direction of induction)
Contact part material	Tungsten steel/ceramic
Aspect processing method	Grinding 4Smimor
Cable	Sandard coniguration 10M(dameter 435mm, 4-core shielded cable
Instal	M12T M12Tboit
Needle qualty was measured with disc shape	1055g
Working Temperature	+5℃~60℃
storage temperature	-10℃~+70℃

- Contour map





# LASER TOOLSET INSTRUMENT SERIES

## Renisho unilateral laser tool set instrument TRS2S-350



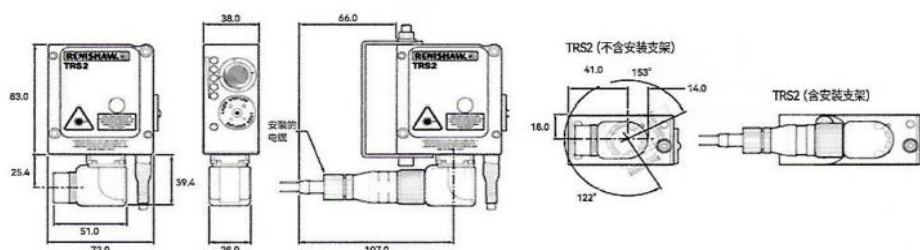
### Paper

Renisho TRS2 laser tool tester (non-contact tool damage detection system) is a one-sided, non-contact tool damage detection equipment with the help of laser principle. It can be used in various types of vertical and horizontal machining centers, a variety of gantry machining centers and multifunctional machine tools on the solid tool for high-speed, non-contact tool damage detection. With TRS2, the goal of reducing reject rate can be easily achieved, and the efficiency of process control will be greatly improved.

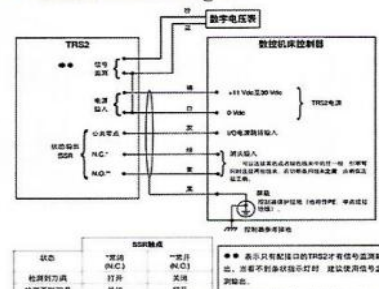
### Product parameters

Product name	Renishaw unilateral laser tool set instrument
Model	TRS2S-350
Productsze	Height*width*cepth(83*38*73mm)
Product weight	750g(10mcable)
Transporttype	Hardwie connection for transmission
Compatbe with the nterface	Not applicable (integrated interface)
Tool damage detection	φ0.2mm
Detect distance	The TRS2 can be adusted between 300mm and 2M,and the factory settings is 350mm
Powervoltage	11VDC-30VDC
Supply current	65mAfor 12VDC;For 24VDC,it is 42mA
Output siana	State outout Novatage sold state relayoutput, can be configured normally open or nomaly dosed
mput/output doth	Power/output is protected by a reconfigurable fuse
Cable specfication	5-core insulated shielded cable, 没 芯 18*0.1mm/No core 18*01 mm
Electrical connection	Leads from the bottom of the unit
Air source	φ4mm Air tube
Lasertype	Class 2 laser products
Laser beam alignmeni	The device is equipped with adustable mounting bracket
instal	Provide mounting bracket with M6(2) slots
Protectioncass	IP68
Net weight	7824g
Gross weight	1342g
Chief application	Used nvenousvetcal and horizontalmachring centers, vamous GANTy machring centers and mutfunctional machine tools for high-speed, non-cortact tooldamage detectonof sold tools

### 外形图 Contour map

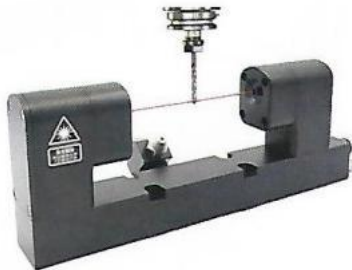


### 电路图 Circuit diagram



# LASER TOOLSET INSTRUMENT SERIES

## Laser tool set instrument MNC series



### ● Paper

MNC series non-contact laser tool setting instrument, using focused laser design, can detect the minimum diameter of 0.03mm tool, at the same time with machine bed tool setting, tool detection and automatic compensation functions. Tool length, tool diameter and tool swing can be detected, including multi-tooth cutter tooth damage; The tool offset error can be automatically updated, and the thermal deformation of the spindle can be monitored and compensated. It can be tested at a very high speed to reduce the detection time.

### ● Product parameters

Product name	Lasertool setting instrument		
Model	MNC56	MNC86	MNC168
Centralized measurement of tool diameter range	003-50mm	003-80mm	0.03-160mm
Tangent measurement tool diameter range	003-60mm	003-110mm	003-320mm
Maximum repetition accuracy	0.1μm (Depends on the system, interval, and installation)		
Conventional subsynthesis accuracy	1μm		
Laser type	Power < 1mW, wavelength 680nm		
Laser beam accuracy	There is an adjustable mounting plate for adjustment		
Power voltage	50mA@24VDC		
Power protection	Recoverable protection, replaceable fuse		
Output signal	Maximum current 50mA, maximum voltage 50V		
Signal transmission mode	5M, 8-core shielded twisted pair, oil resistant		
Air source	4mm tube		
Life span	> 1 million switch cycles		
Seal grade	P68 (can reach the sub standard with or without compressed air)		
The fuselage material	Aviation aluminum		
Storage temperature	-10℃~70℃		
Working Temperature	-5℃~50℃		
Chief application	<p>Used for high-speed, non-contact tool damage detection of solid cutting tools on various vertical and horizontal machining centers, various gantry machining centers, and multi-functional machine tools.</p> <p>/Used in various vertical and horizontal machining centers, various GANTRY machining centers and multifunctional machine tools</p> <p>for high-speed, non-contact tool damage detection of solid tools</p>		

### ● Contour map



### ● Case demonstration



## ELECTRONIC HANDWHEEL SERIES

### ● Profile

Electronic hand wheel, namely hand pulse generator (also known as hand wheel, hand pulse, hand artery wave generator, etc), is used for teaching CNC machinery work origin setting, step fine tuning and interrupt insertion and other actions, in addition to printing machinery is also widely used electronic hand wheel

### ● Characteristics of the paper

- Easy installation, high compatibility.
- Driver output, anti-interference ability, long distance transmission.
- Non-contact optical detection structure; the accuracy remains unchanged after millions of uses.
- Special spring cable standard connection mode, wire rod guarantee 200,000 times of stretching life.
- Multiple OUTPUT interface types: voltage (single end), differential two output options, to suit a variety of applications.
- Add reversible bipolar, with voltage connection reverse protection function. Shell material by special treatment, impact resistance.
- The electronic handwheel adopts shield design, resistant to electromagnetic interference. Wheel dust-proof and waterproof design, support multi-axis use.
- Electronic handwheel parts can be replaced separately, simple operation and cost saving.
- Wide application scope: in CNC machine tools, printing machinery, such as zero correction and signal segmentation.



# ELECTRONIC HANDWHEEL SERIES

## HC series electronic handwheel (East Test)



### System selection

HC115 series-Signal(AB),voltage (5V),pulse (100PPR) for Fanuc and other systems.

HC11D series -signal(AB-A-B),voltage(5v), pulse (100PPR) suitable for A variety of systems. HC121 series-signal (AB), voltage (12v), pulse(25PPR)for mitsubishi and other systems.

(Note:The current market can see the system, this type of handwheels applicable.)

### 手轮综合接线图 (点对点)

Integrated wiring diagram of Hand wheel (point to point)



### 产品参数 Product parameters

产品名称/Product name	TOSOKU 电子手轮/TOSOKU electronic handwheel
产品型号/Model	HC115、HC121、HC11D系列/series
产品尺寸/Product size	125*72*28 (mm)
核心器件/The core components	东测TOSOKU脉冲发生器 (5V 100PPR) (12V 25PPR) /East test TOSOKU pulse generator (5V 100PPR) (12V/25PPR)
波段开关/Band switch	东测TOSOKU/East side TOSOKU MRBA/MRBC
吸附方式/Adsorption manner	带磁铁吸附、挂钩支撑保护 (根据用户选择) /With magnet adsorption, hook support protection (according to user's choice)
全套配件/Complete spare parts	含高档挂钩、含5米抗油螺旋线、包装盒、说明书 /including high grade hook, including 5 m oil resistant spiral wire, packing box, instruction manual
LED可见指示器/LED visible indicator	绿色/Green
抗扰度/Noise immunity	EN50082-2标准/EN50082-2 standard
保修期/Warranty period	12个月/12 months
净重/Net weight	508.6g
毛重/Gross weight	618.1g
系统选型/System selection	HC115: 电压 (5V), 脉冲 (100PPR) 适合发那科等系统 HC115: Voltage (5V), pulse (100PPR) suitable for Fanuc and other systems HC11D: 电压 (5V), 脉冲 (100PPR) 适合西门子等系统 HC11D: Voltage (5V), pulse (100PPR) suitable for Siemens and other systems HC121: 电压 (12V), 脉冲 (25PPR) 适合三菱等系统 HC121: voltage (12V), pulse (25PPR) suitable for mitsubishi and other systems



## LJJ series electronic handwheel



## ● System selection

UJ-5V- 100PPR—Signal(A B-A-B),voltage (5V), pulse (100PPR), suitable for Siemens,Baoyuan,Xindai, FAGE, Fanuco, Weihong, Hedehan, Guangsu, Kaixin, Kaindi and other well-known systems.

LJJ- 12V-25PPR —Signal(A B), voltage (5- 12V), pulse(25PPR) suitable for Mitsubishi and other systems.

LJ-24V- 100PPR—Signal (AB),voltage (24V) suitable for PLC.

Note: The current market can see the system, this type of handwheel is applicable.

## ● 手轮综合接线图 (点对点) Integrated wiring diagram of Hand wheel (point-to-point)



## ● 产品参数 Product parameters

产品名称/Product name	LJJ系统电子手轮/LJJ system electronic handwheel
产品规格/Product standard	LJJ-5V-100PPR, LJJ-12V-25PPR, LJJ-24V-100PPR
产品尺寸/Product size	130*70*35 (mm)
核心器件/The core components	光电式全金属脉冲/Photoelectric all-metal pulse
选项开关/The option to switch	台湾进口 (ALPS) /Imported from Taiwan (ALPS) 轴选/Shaft to choose OFF XYZ 4, 倍率/Multiplying power X1 X10 X100
吸附方式/Adsorption manner	带强磁吸附/With strong magnetic adsorption
线缆/Cable	静止1.6米, 拉直5.5米抗油螺旋线 /Stand still 1.6m, straighten 5.5m oil resistant helix
全套配件/Complete spare parts	含5.5米抗油螺旋线, 挂钩, 包装盒, 说明书/Includes 5.5 m oil resistant spiral wire, hook, packing box, instruction manual
LED可见指示器/LED visible indicator	绿色/Green
抗扰度/Noise immunity	EN50082-2标准/EN50082-2 standard
保修期/Warranty period	12个月/12 months
净重/Net weight	701.8g
毛重/Gross weight	769.8g
系统选型/System selection	LJJ-5V-100PPR: 适合发那科、西门子、广数等系统 LJJ-5V-100PPR: Suitable for Fanuc, Siemens, Guangzhou and other systems LJJ-12V-25PPR: 适合三菱等系统 LJJ-12V-25PPR: Suitable for Mitsubishi and other systems LJJ-24V-100PPR: 适合PLC系统 LJJ-24V-100PPR: suitable for PLC systems



# ELECTRONIC HANDWHEEL SERIES

## HK Series Electronic Handwheel(HEDSS)



### System selection

HK001-100-5L series — signal (A B, A-B), voltage (5V), pulse (100PPR) is suitable for Fanuc, Weihong, Guangzhou Digital, Beijing Jingdiao, Siemens, Baoyuan, Xindai, Fage, Kandi, and other systems.

HK001-25-12 series - Signal(A B), voltage (12V), pulse(25 PPR) for Mitsubishi and other systems.

Note: The current market can see the system, this type of handwheel is applicable.

### 手轮综合接线图 (点对点) Integrated wiring diagram of Hand wheel (point-to-point)



### 产品参数 Product parameters

产品名称/Product name	瑞普HEDSS电子手轮/Ripp HEDSS electronic handwheel
产品型号/Model	HK001-100-5L、HK001-25-12
产品尺寸/Product size	125*72*28 (mm)
核心器件/The core components	瑞普 (海德HEDSS) 原装脉冲/ Rip (HEDSS) original pulse (5V 100PPR) (12V 25PPR)
波段开关/Band switch	日本进口 (ALPS) /Japanese import (ALPS) 轴选/Shaft to choose OFF、X、Y、Z、4、5、 倍率/Multiplying power X1 X10 X100
吸附方式/Adsorption manner	常磁铁吸附、挂钩支撑保护 (根据用户选择) With magnet adsorption, hook support protection (according to user's choice)
全套配件/Complete spare parts	含高档挂钩、含拉直5.5米抗油螺旋线、包装盒、说明书/ Including high-grade hook, including straightening 5.5 meters anti-oil spiral, packaging box, manual
LED可见指示器/LED visible indicator	绿色/Green
抗扰度/Noise immunity	EN50082-2标准/EN50082-2 standard
保修期/Warranty period	12个月/12 months
净重/Net weight	655.7g
毛重/Gross weight	776.3g
系统选型/System selection	HK001-100-5L: (5V, 100PPR) 适合发那科等系统 HK001-100-5L: (5V, 100PPR) Suitable for fanuc and other systems HK001-25-12: (12V, 25PPR) 适合三菱等系统 HK001-25-12: (12V, 25PPR) Suitable for mitsubishi and other systems

# ELECTRONIC HANDWHEEL SERIES

## MK series electronic handwheel



### System selection

MK002-100-5L—Signal (AB-A-B), voltage (5V), Pulse (PPR) 100 is suitable for the number of fanuc, macro, wide, Beijing carved, bao yuan, A new generation of Siemens, send into, Kane emperor, the xing—such as.

MK002-25-12E—signal (A,B), voltage (12V) pulse (25 PPR) is suitable for Mitsubishi system, etc. Note: The current market can see the system, this handwheel is applicable. Special note: The encoder voltage is DC5-24V (such as Mitsubishi system is DC12V, other such as Widener/Fanuc/Siemens/Farge system is DC5V, PLC control is 24V), the wrong voltage or the wrong line will cause the encoder to burn out, please note.

### 手轮综合接线图 (点对点) Integrated wiring diagram of Hand wheel (point-to-point)



### 产品参数 Product parameters

产品名称/Product name	MK系列电子手轮/MK series electronic handwheel
产品型号/Model	MK002-100-5L、MK002-25-12E
产品尺寸/Product size	138*72*34 (mm)
核心器件/The core components	日本内密控UFO系列脉冲 (5V 100PPR) (12V 25PPR) / Japan internal secret control UFO series pulse (5V 100PPR) (12V 25PPR)
波段开关/Band switch	轴选/Shaft to choose OFF、X、Y、Z、4、5、6、倍率/Multiplying power X1 X10 X100
吸附方式/Adsorption manner	带磁铁吸附、挂钩支撑保护 (根据用户选择) With magnet adsorption, hook support protection (according to user's choice)
全套配件/Complete spare parts	含高档挂钩、含拉直5.5米抗油螺旋线、包装盒、说明书/ Including high-grade hook, including straightening 5.5 meters anti-oil spiral, packaging box, manual
LED可见指示器/LED visible indicator	绿色/Green
抗扰度/Noise immunity	EN50082-2标准/EN50082-2 standard
保修期/Warranty period	12个月/12 months
净重/Net weight	600.3g
毛重/Gross weight	708.6g
系统选型/System selection	MK002-100-5L (5V, 100PPR) 适合发那科等系统 MK002-100-5L (5V, 100PPR) Suitable for fanuc and other systems MK002-25-12E (12V, 25PPR) 适合三菱等系统 MK002-25-12E (12V, 25PPR) is suitable for Mitsubishi and other systems

# ELECTRONIC HANDWHEEL SERIES

## MH series electronic handwheel



### System selection

MH001-100-5L—signal (AB,A-B), voltage (5V),pulse (100PPR), suitable for Fanak,Weihong, Guangsu, Beijing Jingdiao Siemens, Baoyuan, New generation, Fage, Kandi, Zhongweixing and other systems.

MH001-25-12E—signal (A B), voltage (12V), pulse (25PPR) suitable for Mitsubishi and other systems.

Note: The current market can see the system, this handwheel is applicable.

Special note: The encoder voltage is DC5-24V(such as Mitsubishi system is DC12V, other such as Wide number/Fanak/Siemens/Farge system is DC5V), the wrong voltage or the wrong line will cause the encoder to burn out, please note.

### 手轮综合接线图 (点对点) Integrated wiring diagram of Hand wheel (point-to-point)



### 产品参数 Product parameters

产品名称/Product name	MH系列电子手轮/MH series electronic handwheel
产品型号/Model	MH001-100-5L、MH001-25-12E
产品尺寸/Product size	125*72*26 (mm)
核心器件/The core components	光电式全金属脉冲/Photoelectric all-metal pulse
	日本进口 (ALPS) /Japanese import (ALPS)
波段开关/Band switch	轴选/Shaft to choose OFF、X、Y、Z、4、5、 倍率/Multiplying power X1 X10 X100
吸附方式/Adsorption manner	带磁铁吸附、挂钩支撑保护 (根据用户选择) With magnet adsorption, hook support protection (according to user's choice)
全套配件/Complete spare parts	含高档挂钩、含拉直5.5米抗油螺旋线、包装盒、说明书/ Including high-grade hook, including straightening 5.5 meters anti-oil spiral, packaging box, manual
LED可见指示灯/LED visible indicator	绿色/Green
抗扰度/Noise immunity	EN50082-2标准/EN50082-2 standard
保修期/Warranty period	12个月/12 months
净重/Net weight	515.9g
毛重/Gross weight	695.5g
系统选型/System selection	MH001-100-5L: (5V, 100PPR) 适合发那科等系统 MH001-100-5L: (5V, 100PPR) Suitable for fanuc and other systems MH001-25-12E: (12V, 25PPR) 适合三菱等系统 MH001-25-12E: (12V, 25PPR) Suitable for mitsubishi and other systems



# ELECTRONIC HANDWHEEL SERIES

## Emergency stop electronic handwheel



### System selection

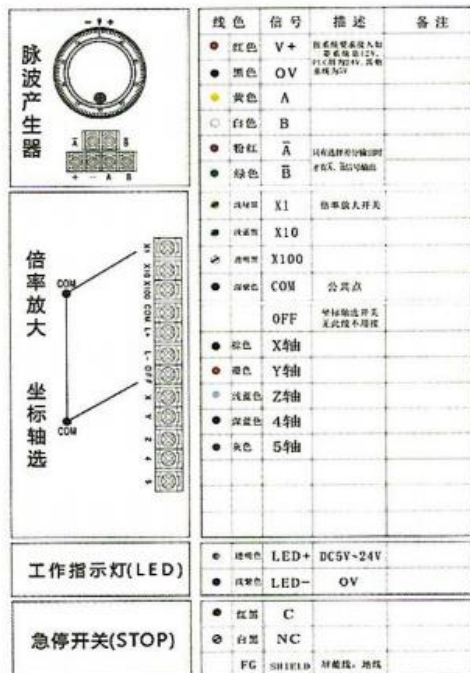
MS— 12V-25PPR:signal (A B), voltage (5-12V), pulse (25PPR) suitable for Mitsubishi and other systems.

MS-24V-100PPR: signal (A B), voltage (5-26V), pulse (100PPR) suitable for PLC and other systems.

Note: The current market can see the system, this handwheel is applicable.

Special note: The encoder voltage is DC5-24V (such as Mitsubishi system is DC12V, other such as Wide number/Fanuc/Siemens/Farge system is DC5V, PLC control is 24V), the wrong voltage or the wrong line will cause the encoder to burn out, please note.

### 手轮综合接线图 (点对点) Integrated wiring diagram of Hand wheel (point-to-point)



#### 注意事项:

- △使用本产品前请务必仔细阅读说明书
- △接线务必正确, 错误接线会导致内部电路损坏
- △不要超过极限转速, 如果超过极限转速, 会导致电信号丢失
- △手轮芯线如果有未使用的, 需将裸露的铜线剪除并用绝缘材料包裹, 以防短路造成内部电路损坏
- △请不要私自打开本产品

### 产品参数 Product parameters

产品名称/Product name	急停电子手轮/Emergency stop electronic handwheel
产品型号/Model	MS-5V-100PPR, MS-12V-25PPR, MS-24V-100PPR
产品尺寸/Product size	141*73*31 (mm)
核心器件/The core components	光电式全金属脉冲/Photoelectric all-metal pulse
选项开关/The option to switch	台湾进口 (ALPS) /Imported from Taiwan (ALPS)
轴选/Shaft to choose	轴选/Shaft to choose OFF, X, Y, Z, 4, 5, 6, 倍率/Multiplying power X1 X10 X100
吸附方式/Adsorption manner	带强磁吸附/With strong magnetic adsorption
线缆/Cable	静止1.6米, 拉直5.5米抗油螺旋线/Static 1.6 meters, straightening 5.5 meters oil resistant spiral
全套配件/Complete spare parts	含5.5米抗油螺旋线, 挂钩, 包装盒, 说明书/Contains 5.5 m oil-resistant spiral wire, hook, packing box, instruction manual
LED可见指示器/LED visible indicator	绿色/Green
抗扰度/Noise immunity	EN50082-2标准/EN50082-2 standard
保修期/Warranty period	12个月/12 months
净重/Net weight	710.3g
毛重/Gross weight	818.7g
系统选型/System selection	MS-5V-100PPR: 适合发那科、西门子、广数等系统 MS-5V-100PPR: Suitable for Fanuc, Siemens, Wide number and other systems MS-12V-25PPR: 适合三菱等系统 MS-12V-25PPR: Suitable for Mitsubishi and other systems MS-24V-100PPR: 适合PLC系统 MS-24V-100PPR: Suitable for PLC system

## FUTURE electronic handwheel



## ● System selection

EHDW-BA4S-IM,EHDW-CA4S-M:suitable for Fanucsystem,axisX,Y,Z,4;  
EHDW-BD4S-M,EHDW-CD4S-IM:suitable for Mitsubishi system,axisX,Y,Z,4;  
EHDW-BE4S-IM,EHDW-CE4S-IM:suitable for Siemens system,axisX,Y,Z,4;  
(note 4s on behalf of the shaft, such as the number of 4s=4 axis and  
5s=5axis,6s=6axis-) system can be seen on the market at present we adapted the  
handwheel can be, under the specific reference such as: EHDW series is suitable for  
the number of fanuc, macro, wide, Beijing carved, Siemens, bao yuan, the new  
generation, the hairinto, Kane emperor, the xing, mitsubishi and other systems.

● 手轮综合接线图 (点对点) Integrated wiring  
diagram of Hand wheel (point-to-point)

## ● 产品参数 Product parameters

产品名称/Product name	远瞻 (FUTURE) 电子手轮/FUTURE electronic handwheel
产品型号/Model	EHDW系列/EHDW series
产品尺寸/Product size	124*73*26mm
额定电压/Nominal voltage	5~24V (直流5V或12V电源系统 (PLC系统选用24V) ) 5~24V (5V or 12V DC power supply system (24V is selected for PLC system))
脉冲数/Pulse count	25PPR, 100PPR
抗扰度/Noise immunity	EN50082-2标准/EN50082-2 standard
选项开关/The option to switch	轴选/Shaft to choose OFF、X、Y、1、2、3、4、5、6, 倍率/Multiplying power X1 X10 X100
电缆线/Cable	静止是1.8米, 拉伸达5米螺旋线/Static is 1.8M, stretching up to 5M spiral
保护等级/Protection class	IP67
全套配件/Complete spare parts	电子手轮、含高档挂钩、含5米抗油螺旋线、说明书 Electronic handwheel, including high-grade hook, including 5 meters anti-oil helix, manual
保修期/Warranty period	12个月/12 months
净重/Net weight	647g
毛重/Gross weight	805.6g
系统选型/System selection	此手轮可配的系统如下: 发那科、西门子、三菱、凯恩帝、广州数控、宝元、 、新代、海那克、开通、发格、海德汉、四开、华兴、华中、大森、航天、 广泰、维宏等各种CNC数控系统/This hand wheel can be equipped with the following systems: Fank, Siemens, Mitsubishi, Kandi, Guangzhou CNC, Baoyuan , New generation, Henak, Kaihua, Fagen, Heide Han, Sikai, Huaxing, Huazhong, Dasen, Aerospace, Guangtai, Weihong and other CNC control systems



## Demagi DMG electronic handwheel



### System selection

Original Demagi DMG five-axis linkage electronic handwheel DMG-HBG-2687447,6FX2007-1AD03): EUCHNER Siemens special handwheel, FAGOR hair special handwheel, hanging handwheel HBA full series of handwheel.

### Product parameters

Product name	Neworiginal DMG five-axis electronic handwheel
Model	DMG-HBG-2687447、SIEMENS-6FX2007-1AD03
Nominalvoltage	5VDC、24VDC
Pulse count	100pulses/RPM(TL)25pulses/RPM(PLC)
Noise immunity	EN50082-2 standard
Tne option to switch	Shaft to choose OFF、X、Y、1、2、3、4、5. Mutiphing powerX1X10X100.
Cable	Staticis 1.6M,stretchingup to 5M spiral
Protection dass	IP67
Complete spare parts	Eettonichandwhee. indlusing high grade hock inducuding 5 metersanti-ol helx manual
Waranty period	12 months
System selection	This handwheel can be equipped with the following systems: Fanuc, Siemens, Mitsubishi, Kaidi, Guangzhou CNC, Baoyuan, New Generation, HNAC, Kaitong, Fage, Heidehan, Sikai, Huaxing, Huazhong, Daisen, Aerospace
	This hand whedl can be equipped wth thefolowng systens Fanak Slemens Mtsubish;,Kand, Guangzhou CNC, Baoyuan,
	New generation.Henak,Kalhua,Fagen,Heide Han,Sika, Huaxing Huazhong,Dasen, Aerospace; Guangtai, Wehong and other aNCcontolsystems

## EUCHNER electronic handwheel



## ● System selection

5V-100PPR—signal(A B-A-B), voltage (5 v), pulse(\$100) for fanuc, macro, wide, Beijing carved bao yuan, the new generation, the hair into, Kane emperor, the xing such as system.

12V-25PPR—signal (A B), voltage (5-12V), pulse(25PPR) suitable for Mitsubishi and other systems.

24V-100PPR—signal (A B), voltage (5-26V), pulse (100PPR) suitable for PLC and other systems.

Note: The current market can see the system, this handwheel is applicable.

Special note: The encoder voltage is DC5-24V(such as Mitsubishi systemis DC12V,other such as Wide number/Fanak/Siemens/Farge system is DC5V, PLC control is 24V), the wrong voltage or the wrong line will cause the encoder to burn out, please note.

## ● 手轮综合接线图 (点对点) Integrated wiring diagram of Hand wheel (point-to-point)



## ● 产品参数 Product parameters

产品名称/Product name	安士能电子手轮/Anshi Neng electronic handwheel
产品规格/Product standard	5V-100PPR、12V-25PPR、24V-100PPR
产品尺寸/Product size	191*89*40 (mm)
核心器件/The core components	光电式全金属脉冲/Photoelectric all-metal pulse
选项开关/The option to switch	轴选/Shaft to choose OFF、X、Y、Z、4、5、 倍率/Multiplying power X1 X10 X100
吸附方式/Adsorption manner	带强磁吸附/With strong magnetic adsorption
线缆/Cable	静止1.6米, 拉直5米抗油螺旋线/ Static 1.6 meters, straighten 5 meters oil resistant spiral
全套配件/Complete spare parts	含5.5米抗油螺旋线, 挂钩、包装盒、说明书/ Contains 5.5 m oil-resistant spiral wire, hook, packing box, instruction manual
LED可见指示器/LED visible indicator	绿色/Green
抗扰度/Noise immunity	EN50082-2标准/EN50082 2 standard
保修期/Warranty period	12个月/12 months
系统选型/System selection	5V-100PPR: 适合发那科、西门子、广数等系统 5V-100PPR: Suitable for Fanuc, Siemens, wide number and other systems 12V-25PPR: 适合三菱等系统 12V-25PPR: Suitable for Mitsubishi and other systems 24V-100PPR: 适合PLC系统 24V-100PPR: Suitable for PLC system

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# ELECTRONIC HANDWHEEL SERIES

## M800 hand pulse generator



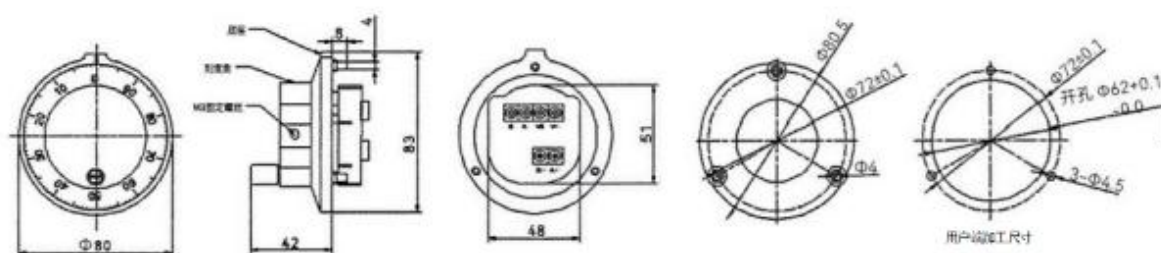
### ● System selection

This is a large handwheel with a diameter of 80mm, two orthogonal output signals (A,B), resolution of 25 pulse, 100 pulse, output mode for long line drive, voltage output, etc. It is mainly used in CNC machine tools, printing machinery zero correction or signal segmentation.

### ● Product parameters

Product name	Panel type manual pulse generator
Mode	M800 series
Main input	DC5V-24V
Pulse count	25PPR、100PPR
Size	φ80mm
Product mo	Hand-held/hand-held
Amphenol connector	4 terminals/6 terminals
Weight	115g
Maximum mechanical speed	600r/min
Normal mechanical speed	≤200r/min
Mechanical service life	3*100000 RPM (below 200r/min)
Operating temperature	-10℃~60℃
Storage temperature	-20℃~70℃
Level of protection	IP54
Can match system	Fanuc, Italy, Heidenhain, Guangshu, Kaitong, Kaidi, Siemens, Mitsubishi
	Fagor, France, Heidenhain, Baoyuan, Xindai, Sikai, Huaxing, Huazhong, Daisen,
	Famous CNC systems such as Aerospace and Guangtai.
	Fanuc, Italy; Heidenhain, wide number, open, Kane Diamond, Siemens, Mitsubishi
	Fagor, France, Heidenhain, Bao Yuan, New generation, four Kai, Huaxing, Huazhong, Daisen, Aerospace, Guangtai and other well-known CNC systems

### ● Outside view



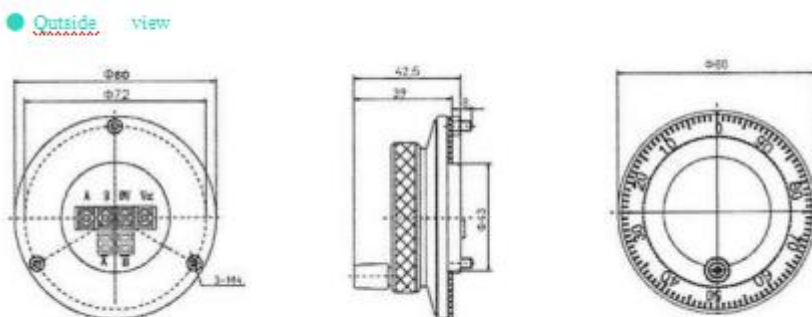
Website: <https://www.himcnc.com>

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## A circular dial with a rotating top and a scale from 0 to 90 degrees. The scale is marked with numbers 0, 10, 20, 30, 40, 50, 60, 70, 80, and 90. The dial is mounted on a base with four small feet.

This is a large handwheel with a diameter of 80mm. ASIC devices are used inside, which has high reliability, long life and strong anti-interference performance. The stainless steel structure has higher stability and protection, and the metal shell is more solid and resistant to impact. Metal gear, rotation feel clear. It is mainly used in CNC machine tools, printing machinery zero correction or signal segmentation.

Productname	Panel type manual puse generator
Model	MK800 系列/MK800 series
Product standard	MK800-5V-100PPR(5V,100PPR,A,B,A,B-phase cutput)
	MKE00-12V-25PPR(12V,25PPR,Aand B phase output)
	MKBO0-24V-100PPR(24V,100PPR,Aand B phase output) PLC
Mains input	5-26V
Puse count	25PPR、100PPR
Size	φ80mm
Weight	115g
Maxmum mechanical speed	600r/min
Mechanical servicelf	3“100000RPM(below200rmin)
Operating temperature	25℃~70℃
Storage temperature	-25℃~85℃
Levelofprotection	IP50
Net weight	236.1g
Grossweight	2638g
Can matchsystm	Fanuc, Italy, Heinac, Guangshu, Kaishi, Siemens, Mitsubishi, Fage, France, Heidenham, Baoyuan, Xindai, Sikai, Huaxing, Huazhong, Daisen, Aerospace
	Famous CNC systems such as Guangtai.
	Fanuc, taly, Henak widenumber open,Kane D;Semens, Mtsubish, Farge, Fiance, Heide Han, Bao Yuan, New generation, four Kai, Huaing
	Huazhong, Dasen,Aerospace, Guangtai and other well-known CNC systems



# ELECTRONIC HANDWHEEL SERIES

## MK600 hand pulse generator



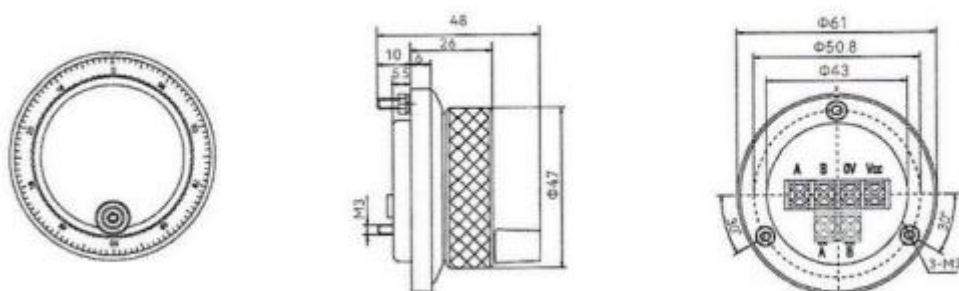
### ●System selection

This is a 60mm diameter handwheel with ASIC devices, high reliability long life and strong anti- interference performance. The stainless steel structure has higher stability and protection, and the metal shell is more solid and resistant to impact. Metal gear, rotation feel clear. It is mainly used in CNC machine tools, printing machinery zero correction or signal segmentation.

### ●Product parameters

Product name	Paneltype manual pulse generator
Mode	MK600 系列 /MK600 series
Product standard	MK600-5V-100PPR(5V100PPR,A,B,A,B phase output
	MK600-12V-25PPR(12V,25PPR,Aand B phase cutput)
Mains input	5-24V
Puse count	25PPR、 100PPR
Sze	φ60mm
ANeight	115g
Maximum mechanical speed	600rmin
Mechanical sevicef	3100000RPM(below200rmn)
Cperating temperature	-25℃-70℃
Storage temperature	-25℃-85℃
Levelof protection	IP50
Net weight	174g
Gross weight	205g
Can match system	Fanuc, Italy, Heinac, Guangshu, Kaitong, Kaidi, Siemens, Mitsubishi, Fage, Faquan, Heidenham, Baoyuan, Xindai, Sikai, Huaxing, Huazhong, Daisen, Aerospace
	Famous CNC systems such as Guangtai.
	Fanuc,tay, Henak wide number, open,Kane D; Semens, Mtsubsh, Fage, Fance,Heide Han,BaoYuan.Newgeneration,four Kkai, Huaxng
	Huazhong, Dasen,Aerospace,Guangtaiandothor wel-known CNCsystems

### ●Outside view





## MJ800 hand pulse generator



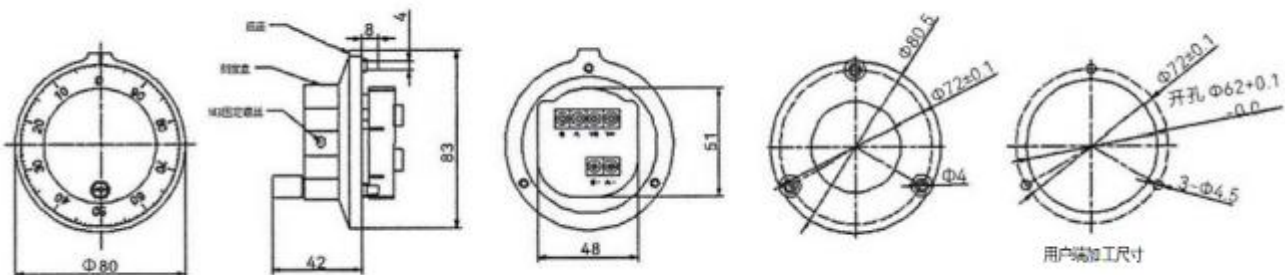
## ●System selection

MJ800 Hand Shake Pulse Generator series, is a diameter of 80mm handwheel, internal ASIC devices, high reliability, long life, strong anti-interference performance. The stainless steel structure has higher stability and protection, and the metal shell is more solid and resistant to impact. Metal gear, rotation feel clear. It is mainly used in CNC machine tools, printing machinery zero bit correction or signal segmentation.

## ●Product parameters

Product name	Metal panel handwheel pulse generator		
Model	MJ800 series		
Product diameter	80mm		
supply voltage	DC5±10%	DC8±26V	DC5±10%
Pulse number	25/100PPR	25/100PPR	25/100PPR
(VH)/Output voltage (VH)	245V	≥10V	≥38V
(VL)Output voltage (ML)	≤03V	≤03V	≤03V
Output current	100mA	100mA	100mA
Model Format	AB	AB	ABA-B-
Output resistance	R330	R22K	DIFF
reaction rate	5KHz	5KHz	5KHz
Current consumption	50mA	50mA	50mA
Starting torque(maximum)	150g	150g	150g
Avis quantity(minimum)	R2kg±10%	R2kg=10%	R2kg=10%
/Rotating life(minimum)	1KKR	1KKR	1KKR
weight	100g/115g	100g/115g	100g/115g
Operating temperature	0℃/+50℃	0℃/+50℃	0℃/+50℃
Storage temperature	-10℃/+70℃	10℃/+70℃	10℃/+70℃
Operating humidity	35-80%	35-80%	35-80%
Vibration resistance	05G	05G	05G
/Resistant to heavy vibrations	2G	2G	2G

## ●Outside view



# ELECTRONIC HANDWHEEL SERIES

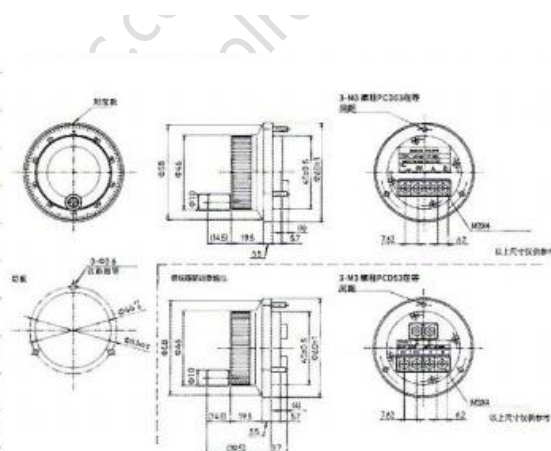
## UFO hand pulse generator



### System selection

Hand pulse generator UFO series, is the diameter of 60mm hand wheel, the internal use of advanced devices, high reliability, long life, strong anti-interference performance, rotation feel clear. Mainly used in CNC machine tools, printing machinery zero correction or signal segmentation.

### Product parameters



产品名称/Product name		UFO系列手摇脉冲发生器/UFO series hand pulse generator			
产品型号/Model	UFO-M2-01-2D-B: 信号/Signal (A、B、-A、-B),				
	电压/Voltage (5V), 脉冲/Impulse (100PPR)				
	UFO-0025-2H: 信号/Signal (A、B),				
	电压/Voltage (12V), 脉冲/Impulse (25PPR)				
机械规格 Machinery specification	轴/Axis	9.8N			
	负荷/Load	19.6N			
	最大转速/Maximum speed	600min <sup>-1</sup> (瞬时/Instant)			
		200min <sup>-1</sup> (连续/continuous)			
	旋转寿命/Rotational life	>100万次/1 million times (200min <sup>-1</sup> )			
	净重/Net weight	200g			
电气参数 Electric parameter	类型/Type	Z1	Z9	H	D
	电源电压/Mains input	DC+4.5V~+13.2V	DC+5V±10%	DC+12V±10	DC+5V±5%
	电流消耗/Current dral	50mA MAX	70mA MAX	50mA MAX	100mA MAX
	分辨率/Resolution ratio	100mA MAX · 25P/R	100mA MAX · 25P/R	25P/R	100P/R · 25P/R
	输出电压/Output voltage	*H VCC-1V min		+5V±10%	2.5V min
		*L 0.5V MAX			
	最大频率/Maximum frequency	5kHz			
	起落时间/Take-off and landing time	1μs MAX		1.5μs MAX	200ns MAX
	最大反向电流/Maximum reverse current	20mA MAX			
	环境特性 Environmental characteristics	工作温度/Operating temperature	-10℃~+60℃		
储存温度/Storage temperature		-30℃~+70℃			
湿度/Humidity		RH 85% MAX不冷凝/RH 85% MAX does not condense			
振幅/Amplitude		10-55Hz/1.5MM X,Y,Z,Each 2h			
冲击/Impact		490m/s,11ms,XYZ,Each 3 times			
防护等级/level of protection		IP64 (面板装配/Panel mounting)			
系统选型/System selection	UFO-M2-01-2D-B	适用于发那科、维宏、广数、北京精雕、西门子、宝元、新代、发格、广州数控、华中、凯恩帝、众为兴等系统/It is suitable for FANUC, Weihong, GuangSU, Beijing Jingdiao, Siemens, Baoyuan, Xindai, FAGE, Guangzhou CNC, Huazhong, Kane Di, Zhongwei Xing and other systems			
	UFO-0025-2H	适合三菱等系统/Suitable for Mitsubishi and other systems			
	注明/Indicate	未列出的系统, 联系客服备注手轮电压及脉冲数/For systems not listed, contact customer service to note handwheel voltage and pulse count			

# ELECTRONIC HANDWHEEL SERIES

## RA600 hand pulse generator



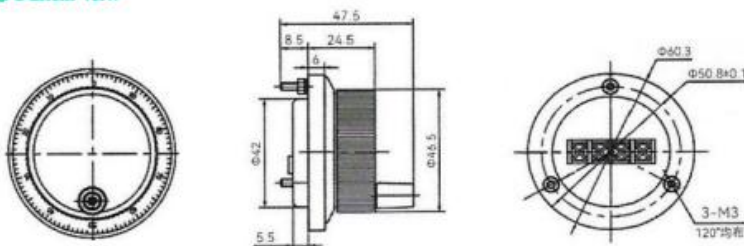
### System selection

Hyde original hand-crank pulse generator RGT600 series, diameter of 60mm hand wheel, the internal use of ASIC devices, high reliability, long life, strong anti-interference performance; Mainly used in CNC machine tools, printing machine zero correction or signal segmentation.

### Product parameters

Productname	Original Ripple panel type manual pulse generator
Model	RA600 series
Product standard	RA600-001-100B-5L(5V、100PPR、A、B、A、B-Phaseoutput)
	RA600-001-25B-12E(12V、25PPR、A、BPhase output)
	RA600-001-100B-24E(24V、100PPR、A、BPhase output)
Mains input	DC5-24V
Puse count	25PPR、100PPR
Size	φ60mm
Productmix	Hand/hand
Terminal blodks	4terminals/6 terminals
Maximum mechanical speed	600r/min
Normal mechanical speed	≤200r/min
Mechanical service If	3*100000 RPM(below200R/min)
Operating temperature	-10℃~60℃
Storage temperature	20℃~70℃
Net weight	1605g
Grossweight	189.1g
Level of protection	IP54
Can match system	Fanuc, Italy, Heinac, Guangshu, Kaitong, Kaidi, Siemens, Mitsubishi, Fage, France, Heidenham, Baoyuan, Xindai, Sikai, Huaxing, Huazhong, Daisen, Aerospace, Guangtai
	Fanak, tay, Henak, Guangshu, Kainin, Slemens, Mitsubishi; Fange. France, Heichan, Baoyuan, Xindai, Ska, Huaxing, Huazhong, Dasen
	Aerospace, Guangtai and other wel-known numerical control systems
Notes	This 5V-100PPR is fully compatible with the old model of 4 terminals, can consult the store

### Outside view



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# ELECTRONIC HANDWHEEL SERIES

## FANUC hand pulse generator

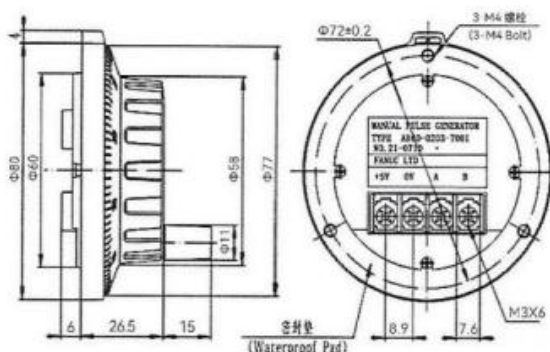


Original genuine FANUC electronic handwheel pulse generator A860-0203-T001, installation site size 72mm, thin, ight body, metal panel, rotation feel clear; Drive output type, strong anti-interference ability, long distance transmission. Mainly used in CNC machine tools. printing machinery zero correction or signal segmentation.

### Product parameten

Product name	Original fanakpaneltype manual puse generato
Modd	A860-0203-T001
Mains input	DC+5V either or5- 15VDC+5Vor5- 15V
Puse count	100PPR
Size	φ72mm
Product standard	Hand/hand
Weight	150g
Operating temperature	-10℃~60℃
Storage temperature	20℃~70℃
Level of protecton	IP54
Net weight	1378g
Gross weight	1718g
Can match system	Fanuc, Italy, Heinac, Guangshu, Kaitong, Kaidi, Siemens, Mitsubishi, Fage, France, Heidenham, Baoyuan, Xindai, Sikai, Huaxing, Huazhong, Daisen, Aerospace
	Famous CNC systems such as Guangtai.
	Fanuc, taly.Henak, wide number open, Kane D, Siemens, Mtsubishi.Farge, France, Heide Han, Bao Yuan,New generation,four Kei.Huaxng
	Huazhong, Dasen,Aerospace, Guangtai and other well-known CNC systems

Outside view



(单位: mm. 若无特殊说明, 尺寸公差为 ±0.2mm)

Website: <https://www.himcnc.com>

Get-a-Quote email: [info@harmonywolrd.com](mailto:info@harmonywolrd.com)

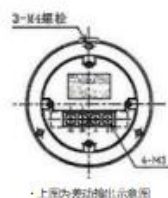
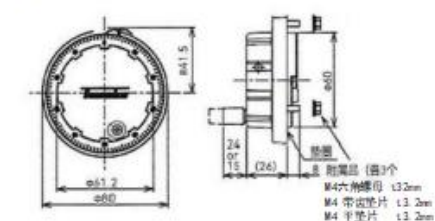


## Product parameters

Product name	The original east panel type manual pulse generator
Model	RE46、RE47 series
Mains input	DC5-24V
Pulse count	25PPR、100PPR
Size	RE46:φ80mm RE47:φ80mm
Weight	RE46:220g RE47:85g
Maximum mechanical speed	600r/min
Mechanical service life	More than a million rotations
Operating temperature	-10℃~60℃
Storage temperature	40℃~85℃
Level of protection	IP50
Can match system	Fanuc, Italy, Heineck, Guangshu, Kaitong, Kaidi, Siemens, Mitsubishi, Fagor, France Famous CNC systems such as Heidehan, Baoyuan, Xindai, Sikai, Huaxing, Huazhong, Daisen, Aerospace, Guangtai, etc Fanuc, Italy, Heineck, Guangshu, Kalxin, Siemens, Mitsubishi, Fagor, France, Heidhan Baoyuan, Xindai, Sikai, Huaxing, Huazhong, Daisen, Aerospace, Guangtai and other well-known numerical control systems

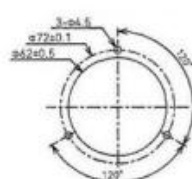
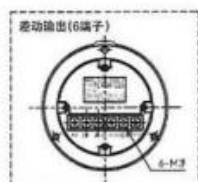
## Outside view

RE46

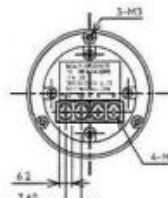
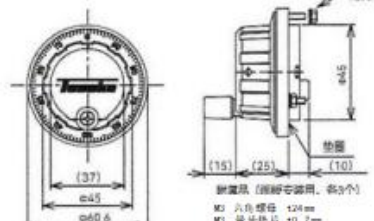


· 上方为内部接线示意图

安装孔  
安装孔间距: 13mm 以下  
M4 六角螺帽 (4-9kg·cm)  
0.4-0.9N·m (4-9kg·cm)

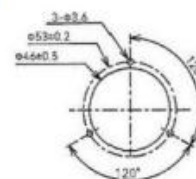
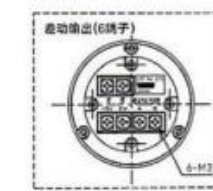


RE47



· 上方为内部接线示意图

安装孔  
安装孔间距: 13mm 以下  
M4 六角螺帽 (4-9kg·cm)  
0.4-0.9N·m (4-9kg·cm)





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# ELECTRONIC HANDWHEEL SERIES

## RE45T hand pulse generator



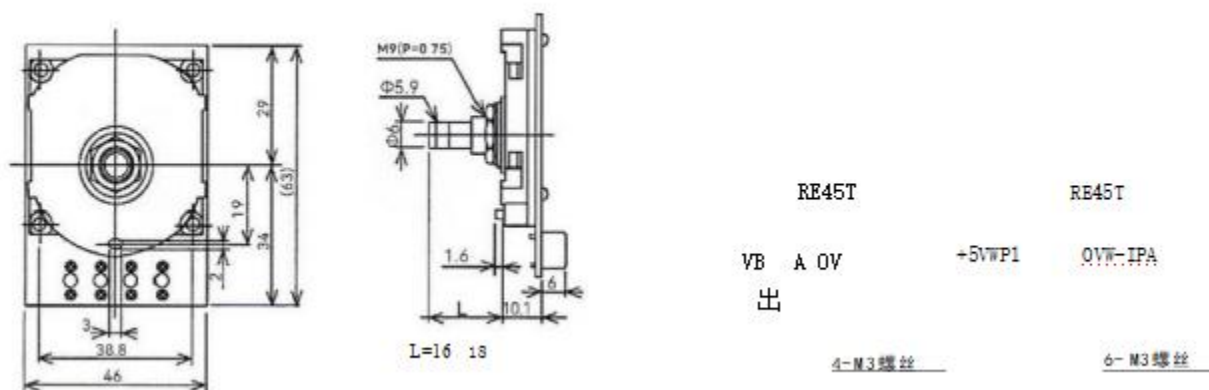
### System selection

TOSOKU original RE45T series electronic handwheel pulse generator, this is an ultra-thin optical hand pulse generator, the thickness of 10mm, the installation diameter of 60mm, widely used in various CNC machine tools, measuring equipment, medical machinery, CNC processing machinery, communication machines, etc, high compatibility; Optical rotary encoder signal output, non-contact detection.

### Product parameters

Product name	Original TOSOKU East test manual pulse generator
Mode	RE45Tseries
Mains input	DC5-24V
Pulse count	25PPR、100PPR
Size	φ60mm
Weight	915g
Maximum mechanical speed	600r/min
Mechanical service life	More than a million rotations
Operating temperature	-10℃~60℃
Storage temperature	40℃~85℃
Level of protection	P50
Can match system	Fanuc, Italy, Heindac, Guangshu, Kaitong, Kaidi, Siemens, Mitsubishi, Fagor, France, Heidenham, Baoyuan, Xindai, Sikai, Huaxing, Huazhong, Daisen, Aerospace, Guangtai
	Fanuc, Heindac, Guangshu, Kaixin, Siemens, Mitsubishi, Fagor, France, Heidenham, Baoyuan, Xindai, Sikai, Huaxing, Huazhong, Daisen
	Aerospace, Guangtai and other well-known numerical control systems

### Outside view



Website: <https://www.himcnc.com>

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## ●Profile

Band switch is a kind of connection element of the circuit. Also called multi-pole multi-throw switch, because it can not only do band open band switch, but also do other purposes. As for how many knives (that is, how many sets of contacts) are needed, it depends on the needs of the circuit. At least two groups can be called band switch. How many rolls (that is, how many stalls) are needed depends on the demand. From 2 to more than 10 gears. If the band switch is made, it is less than 4 sets of contacts, and at most 6 sets of contacts are sufficient. Gear, as many bands as you need, at least 2 gears. Band switches are used to convert bands or select different circuits. According to the specification, it is divided by the number of knives, bits and insulation layers; According to the structure, it is divided into action type, rotation type, push key type, piano key type, etc.



## ●Use of band switch

It is mainly used in radio, recorder, TV and various instruments and meters. It is generally a multi-pole switch, and its various contacts are fixed on the insulating substrate. The application of digital band switch is increasingly extensive, involving NC machine tools, NC equipment and precision instruments.

# BAND SWITCH SERIES

## Taiwan Yougan U-Chain band switch

### ●Paper

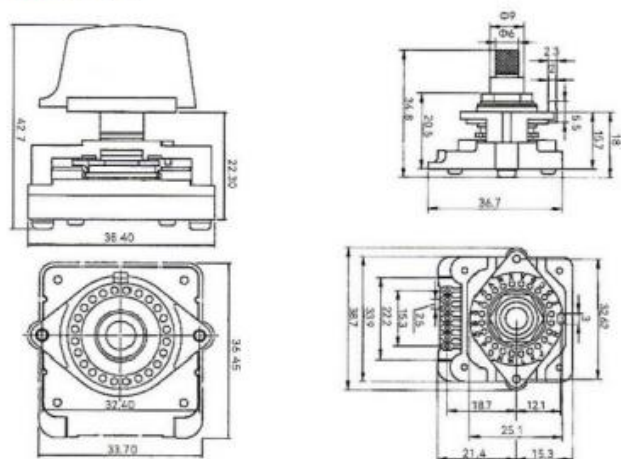


Original Taiwan Yougan band switch, digital band switch, also known as digital coded switch, coded band switch; It is mainly suitable for the selection of operation mode, axial direction, magnification, rate percentage and other bands of CNC mechanical panel. Using digital coded switches on PLC applications can usually save a lot of IO points. (This style includes model, function, size and so on is completely the same as Japan Tosoku East test DPP series band switch, can be directly replaced.

### ●Product parameters

Product name	Band switch
Product brand	U-chain/Friends do U-chain
Model	DP series
Product origi	Taiwan
Product packaging	Original binding
Weight	433g
Product standard	OON. O1N. 02N. O3N. O4N
	00H.01H.02H.03H.04H
	00J 01J 02103J 04J
	0S. 01S. 02S.03S.04S
Notes	52N.41N. 42N.43S.04QN.04QS
	This design including model, function, size and so on, is completely consistent with Japan Totest DPP series band switch, and can be directly replaced

### ●Outside view



# BAND SWITCH SERIES

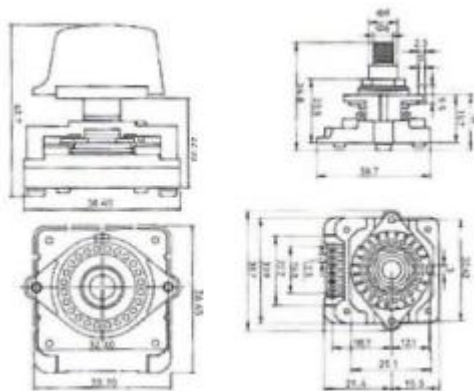
## Taiwan Yuanzhan FUTURE Band Switch (NDS series)



### ●Paper

Taiwan FUTURE Yuanzhan band switch NDS series, mainly suitable for CNC mechanical panel operation mode, axial direction, magnification, rate percentage and other band selection. 1) The metal appearance is durable and strong, the number of segments is clearly marked, and the band angles of 15°, 30°, 1385 and 27.69° are available for selection; Gold plated double contact, stable contact resistance, the number of band can be set arbitrarily by the double bar a variety of output digital code type, with use.

### ● Outside view



### ●Product parameters

Product name	Band switch
Product brand	Further FUTURE
Mode	NDS series
Product origin	Taiwan
Output pad	Original binding
Weight	533g
Product standard	00N 01N 02N 03N
	00H.01H.02H.03H
	001.011021.03

### ●The order selection

NDS 系列订购选型/NDS series order selection

NDS	1	J	0	CB
系列名称 Series name	代码 Code	角 Angle	轴 Axis	连接器 Connector
NDS	输出编码模型 Output coding model	阶梯角度模型 Step Angle model	轴长 Axial length	连接器模型 Model of connector
	1 二进制 Binary	角度 Angle	空白 Blank	无连接器 No connector
	2 互补二进制 Complementary binary system	H 1385	20 20mm	CB 180°连接器 Connector
	3 灰色 Gray	J 15°	25 25mm	CS 90°连接器 Connector
	4 互补灰色 Complementary gray	N 30°	0-11	



# BAND SWITCH SERIES

## Japan East Test band switch (DPP/DPN series)



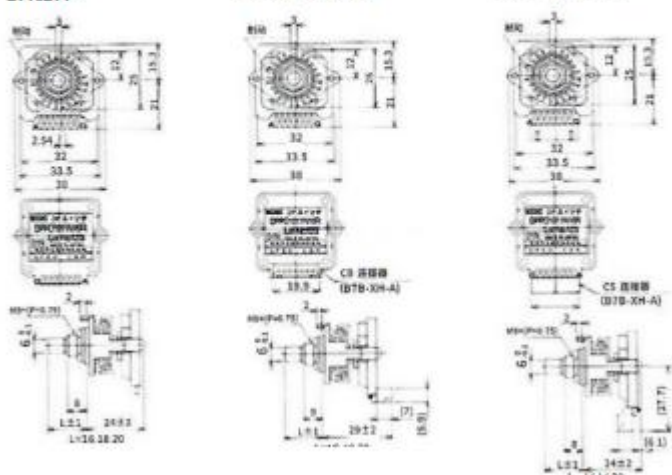
### Paper

Japan imported TOSOKU band switch DPP/DPN series, digital band switch, also known as digital coded switch, coded band switch. It is mainly suitable for the selection of operation mode, axial direction, magnification, rate percentage and other bands of CNC mechanical panel. In addition, digital coded switches are used in PLC applications, which can usually save a lot of I/O points.

### 外形图/Outside view

#### 尺寸(mm)

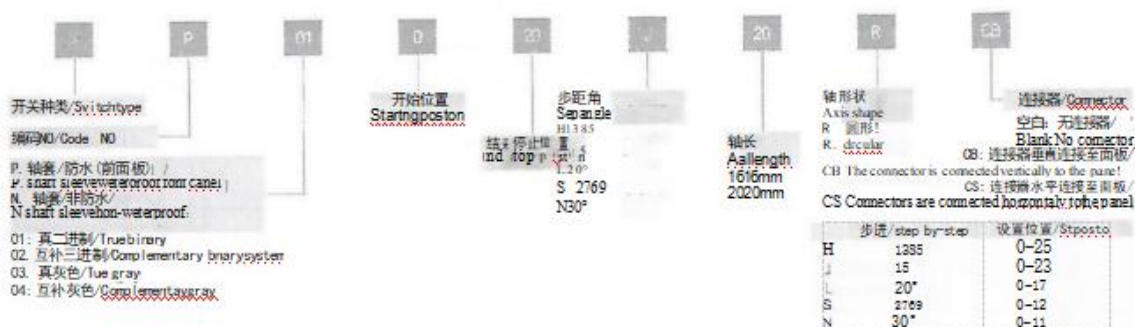
#### DPNDPP



### 产品参数 Product parameters

Productname	/Band switch
Product brand	East side TOSOKU
Mode	DPP series
Product origin	Japan
Product packaging	Original binding
Meight	447g
Product standard	01N.02N. 03N
	01H 02H.03H
	01J. 02103
Nctes	01S.02S 03S
	This style includes model, function, size, etc. It is completely consistent with the quality
	The band switch of the installed Youqian DP series is completely consistent and can be directly replaced
	This style, including model, function, size and soon, is completely consistent with the original Youqian DP series band switch, which can be directly replaced

### The order selection



# BAND SWITCH SERIES

## Taiwan Alps(MR8D Series)



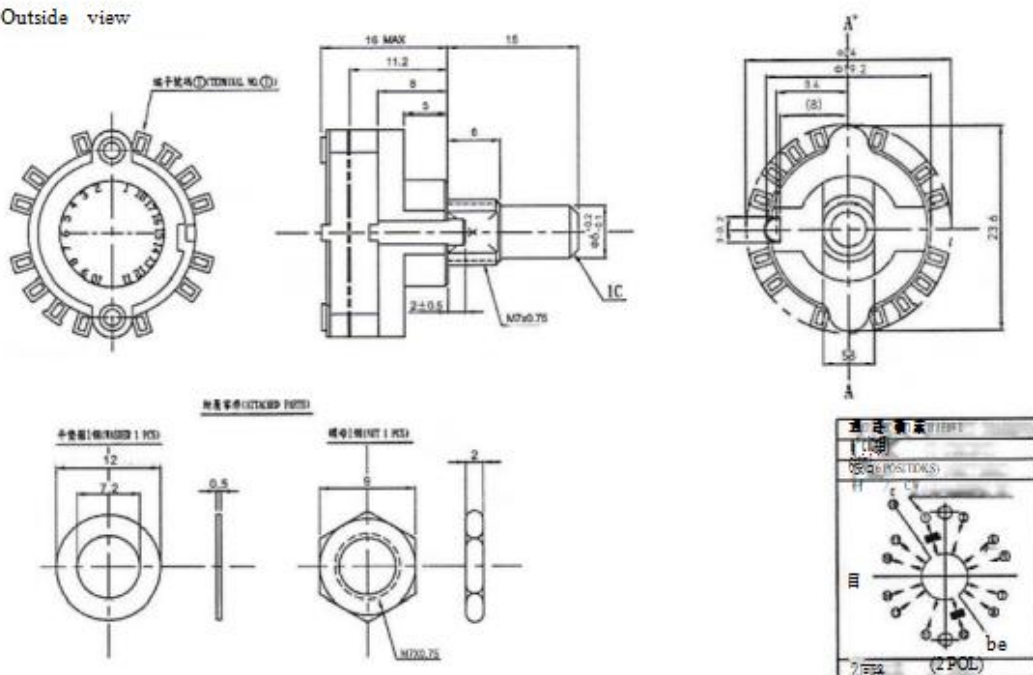
### ●Paper

Taiwan Alps (band switch MR8D series, also known as: SRRN band switch. At present, domestic electronic handwheel manufacturers are using this band switch. Features: zinc alloy body, 6 mm shaft diameter, durable, not easy to break. Specially applied in the hand wheel, the number of gears is 3,5,6,etc.

### ●Product parameters

Product name	Band switch
Product brand	Taiwan/Alps
Model	MR8D/SRRN
Product origin	Taiwan
Texture	Zinc alloy body
Diameter of axle	6mm
Gear	356789. 10. 11. 12/Gears
Neight	11.8g
Choose fle parameters	Level 3 is generally used on the Mutper selection switch: * 1, * 10, "100
	The fith gearis generalyused on the shaft selector snthch: OFF、X、Y、Z、4
	Thesithgearis generalyused ontheshat selector snthch: OFF、X. Y、Z、4、5

### ●Outside view



# BAND SWITCH SERIES

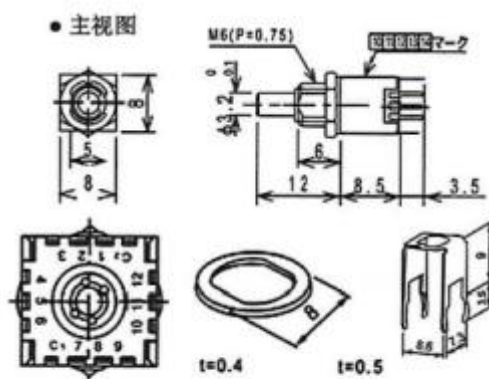
## Japan East Test band switch (MR8A/MR8C series)



### ● Paper

TOSOKU handwheel band switch MR8A/MR8C series : (MR8A is 13 feet, MR8C is 5 feet). Japan TOSOKU handwheel, HC115, HC121 special axis selection and rate switch (mainly used for OFF X Y Z 4-axis selection and X1 X10 X100 rate selection switch), switch MR8A is a total of 13 pins (one pin is 4, the other 3 sides are 3, a total of 13 feet)

### ● Outside view



### ● 端子配列图 ● 防水密封图 ● 加固体

### ● Product parameters

Product name	Band switch
Product brand	Eastside TOSOKU
Model	MRBA、MRBC
Product origin	Japan
Size	8*8 mm; Height 8.5 mm
rated voltage	DC25N
Number of fee	MR8A has 13 feet and MRBC has 5 feet
Neight	46g
Descrption of products	Japan Easttest Handwheel HC115, HC121 Special Axis Selection and Signal Switch/Lapan Easttest
	handwheel HC115, HC121 special shaft selection and rate switch

### ● The order selection

东测MR8A 开关形式表示/East test MR8A switch form



东测MR8C 开关形式表示/East test MR8C switch form



# BAND SWITCH SERIES

## Japan NKK band switch (MR-K112/MR-A112)



### ● System selection

Original Japanese original NKK band switch MR-K112, MR-A112, suitable for all kinds of industrial machines, CNC numerical control machine tools, electronic handwheel, etc., used as axis selection or rate switch; it can adjust the required gear in the range of 2-12 gears.

### ● Product parameters

Product name	Japan original NKK band switch (2-12 adjustable rotary switch)
Model	MR-K112, MR-A112
Electric capacity	MRA: 250mA at 125VAC; MRF or MRK: maximum 0.4NA at maximum 28VAC/DC. (Applicable range 0.1mA-0.1A at 20mV-2BV) / MRA 250mA at 125VAC, MRF or MRK Max 0.4VA at Max 28VAC/DC. (Applicable range 0.1Ma-0.1A at 20MN-28V)
Contact resistance	The maximum MRA is 10 mΩ; MRF and MRK have a maximum of 50 mΩ
Insulation resistance	Above 100 megohm at 500VDC
Dielectric strength	For MRA minimum 1000VAC at least one minute; For MRF and MRK minimum 500VAC for at least one minute
Mechanical life	More than 30000 times
Electrical life	10000 times
Operating torque	For MRA: 0.02-0.07Nm; For MRF and MRK: 0.005-0.02Nm
Point of contact	Non-short circuit (disconnect before contact): MRA self-cleaning, sliding contact, MRF and MRK self-cleaning, rotating contact disc
Product weight	72g
Degrees	30
Range of application	All kinds of industrial machines, CNC machine tools, electronic handwheels used as axis selection or rate switch

#### ● Outside view

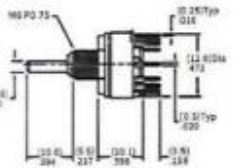
MRK · 印刷电路板端子



MRK112



MRK 设备用于面板安装。安装时若不带面板安装将影响可靠性。



1 极

2 极

4 极



#### 0 Product

#### MRK 和 MRK-A 型

使用设备拆卸时，将轴逆时针旋转到底，如果轴没有逆时针旋转，在最大位置上，将轴上的曲线指向开关的编号1位置。

从以上拆下轴并完全机开述轴以升高制动踏板和整理，重新设定到所需的位置。

注意位置编号在开关的侧面这些编号灯位于轴上，编号和制动踏板孔，将制动踏板插入制动位置调整的最大编号的孔内，如果制动踏板没有正确定位，就不能提供令人满意的开关功能。

将螺母(轴的一边向上)拧紧在制动踏板上。

#### display diagram

将轴逆时针旋转到底，如果轴没有逆时针旋转，在最大位置上，将轴上的曲线指向开关的编号1位置。

六角螺母	
螺母环	
调整螺母	
橡胶环 [MRK]	
出厂前已装配好的:	
六角螺母	
制动踏板	
金属型 (MRK)	
橡胶垫圈	