# **Handy Manual Pulse Generator**

# HR Series





## **Outline**

HR series provide you comfort in long time use and safety with various options of switches.

#### **Features**

- Ergonomically designed to be held with one hand
- 3-position (off-on-off) switch available on both sides
- RoHS compliant (box/cord)
- Upper part is free to design and allows various kinds of switches (including emergencystop button) to be set
- HR series also provide you various line-up of switches to be set on the middle part: DP - the digital code switch series, RS400 - the rotary switch series etc.
- Strong plate magnets available on back side. (optional)
- Various types of curl cords provided along with connectors by all sorts of your request

## Specifications

1. Body	
Dimension	190×100×50.5(mm)
Enabling Switch	Available on both sides
Other Features	Logo available on the wheel cover

## 2. Mechanical specifications 2.1 Rotary Encoder Unit

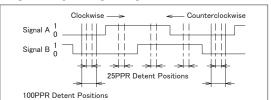
DC5V±10%, DC12V±10% Output Voltage Wheel 100 clicks / rotation

100 puluse or 25 pulses per rotation

Rotational Durability Over 1,000,000 times

**Output Waveform** 

- 1) Turning the shaft clockwise would generate the signal A when the signal B outputs a low voltage (0);
- 2) Rotating the shaft counter-clockwise would generate the signal A when the signal B outputs a high voltage(1);



<sup>\*</sup> See RE45B page for details

2.2 Selector	Switches
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<sup>\*</sup> See RS400/DP pages for details

3. Curl/Straight Cords	
Curl Cord	19/25-conductor shielded cable 19-conductor: select from 2m, 3m, 4m, 5m 25-conductor: select from 3m, 5m (We will select either 19 or 25-conductor in accordance with required functions) For further details, please see the catalogues for curl cords
Straight Cord	Also available

4. Connector Unit	
Connector	Dripproofed connector to be attached on the end of the cord optionally provided

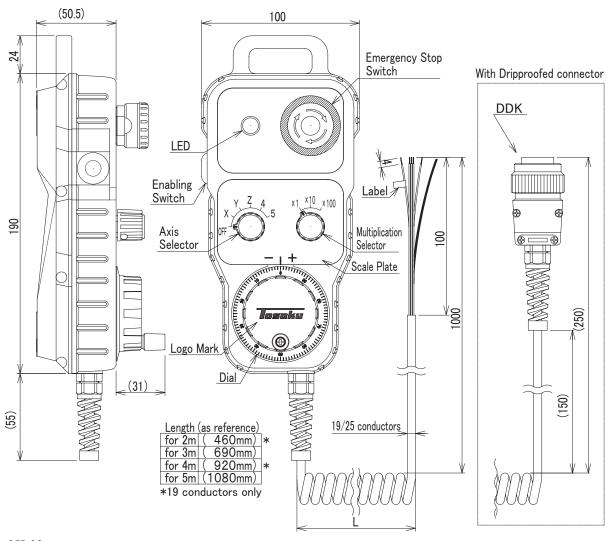
#### Warranty

• 1 year from the date of shipment.

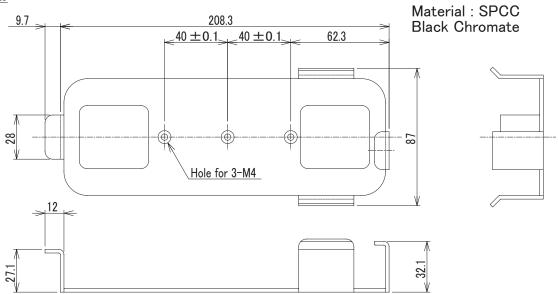
## Dimensions (mm)

HR Unit with curl cord

\* This drawing is an example, it may differ according to number of swithes etc.



#### Original Holder



## HR series Order Sheet (Print out this page for sending orders.)

We'll hand in to you a drawing in accordance with your order. The drawing shall be approved before starting in on production.

1) Select one from each spec table and fill blank spaces with " ".

Pulses/Rev.
100PPR
25PPR

<sup>\*25</sup>PPR and yet 100 Clicks/Revolution

Pow	er Supply	Output
	5 <b>V</b>	5V (330Ω Pull Up)
	5 <b>V</b>	Open Collector
	5 <b>V</b>	(for Line Driver)
	12V	5V(2.2kΩ Pull Up)
	12V	12V (2.2k <b>Ω</b> Pull Up)
	12V	Open Collector
	12V-	for Photocoupler
k	24V	(Open Collector)

<sup>\*</sup> Transistor will be "OFF" at every clicked positions.

(For other open collector output models, transistors will be "ON" at every clicked positions.

Logo on the dial	
None	
with "TOSOKU" logo	
with an original logo(	)

3-P	3-Positions Enabling Switch (contacts)	
	None	
	One on the left ( )	
	On both sides ( )	

<sup>\*</sup> Assigned contacts should be 2 or less for normally open (NO) and 2 or less for normally closed (NC). (2A2B maximum.)

 <u> </u>
Emergency Switch (contacts)
None
Mounted (

<sup>\* 1</sup> for (NO), 4 for (NC) maximum (1A/4B). Maximum of 4 contacts in total (1A3B or 4B).

Magnet on the backside	
None	
Mounted	

Axis Selector/Multiplication Selector Switches	
Gray code switch	
Binary code switch	
Selection switch	

**Indications for Axis Selector (left)** 

mulcat	indications for Axis selector (left)		
e.g.	OFF, X, Y, Z, 4, 5		
Indications for Multiplication Selector (right)			
e.g.	×1, ×10, ×100		

Curl Cord Length
2m Curl Cord (for only 19-conductor cord)
3m Curl Cord
4m Curl Cord (for only 19-conductor cord)
5m Curl Cord

<sup>\*</sup> We will select either 19-conductor cord or 25conductor cord to cover your requested specs

Waterproofed Connector (for curl cord)
None
Male connector (EBSP2119MG-D, DDK)
Female connector (EBSP2119FGS-D, DDK)

<sup>\*</sup> Fill in both spaces to order both connectors.

2) Other options

Other options to request
(e.g.)
Switches with LED illumination x 2
2 contact selector switch x1



Rotary Encoders Pulse Generators Rotary Switches Code Switches Lever Switches Trackballs 12.2