# **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      |  |
|                              |  |

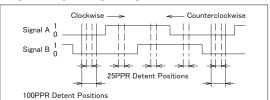
Output Voltage DC5V±10%, DC12V±10% Wheel 100 clicks / rotation

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);



\* See RE45B page for details

| 2.2 Selector Switches |
|-----------------------|
|                       |

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

| 3. Curl/Stra     | ight 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<br>Cord | Also available  |

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

#### Warranty

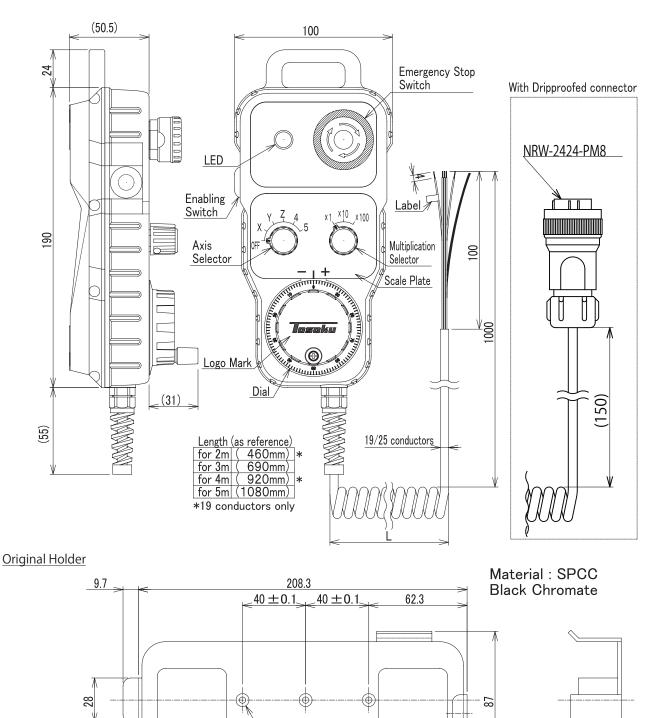
• 1 year from the date of shipment.

## Dimensions (mm)

HR Unit with curl cord

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

32.1



Hole for 3-M4

12 🛌

## H R 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 "O".

| <u> </u>    |
|-------------|
| Pulses/Rev. |
| 100PPR      |
| 25PPR       |
|             |

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

| Power Suppl | y Output           |
|-------------|--------------------|
| 5V          | 5V (330Ω Pull Up)  |
| 5V          | Open Collector     |
| 5V          | (for Line Driver)  |
| 12V         | 5V(2.2kΩ Pull Up)  |
| 12V         | 12V(2.2kΩ Pull Up) |
| 12V         | Open Collector     |
| 12V-        | for Photocoupler   |
| * 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-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.)

| _ |                  |        |            |  |
|---|------------------|--------|------------|--|
|   | <b>Emergency</b> | 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)

| maicai  | ions 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 (NRW-2424-PM8)          |  |
| Female connector (NRW-2424-RF)         |  |

Albar antions to required

#### 2) Other options

| Other options to request                  |
|---|
| (e.g.)                                    |
| Switches with LED illumination $\times 2$ |
| 2 contact selector switch x1              |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |
|   |



Rotary Encoders

**●**Code Switches

Pulse GeneratorsRotary Switches

•Lever Switches

Trackballs

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