Handy Manual Pulse Generator

HM Series

Outline

HM series have a variety of switches which can be customized according to your requests. The model is compact and lightweight, which is perfect for accurate and smooth manual operation.

Features

- Various switches available: Emergency switch (2 positions), side mounted (right/left) enabling switches, 2 rotary switches (as axis and multiplication selector etc.)
- Compact, thin-line and lightweight.
- Strong plate magnets available on back side. (optional)
- RoHS compliant (box/cord)
- Various types of curl cords provided along with connectors of all sorts at your request.

Specifications

<table>
<thead>
<tr>
<th>1. Body</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension</td>
<td>145 × 73 × 35 (mm)</td>
</tr>
<tr>
<td>LED light</td>
<td>DC24V Green</td>
</tr>
<tr>
<td>Enabling Switch</td>
<td>Available on both sides</td>
</tr>
<tr>
<td>Logo</td>
<td>Logo available on the wheel cover</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Mechanical specifications</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Rotary Encoder Unit</td>
<td></td>
</tr>
<tr>
<td>Output Voltage</td>
<td>DC5V±10%, DC12V±10%</td>
</tr>
<tr>
<td>Wheel</td>
<td>100 clicks / rotation</td>
</tr>
<tr>
<td>Rotational Durability</td>
<td>100 puluse or 25 pulses per rotation</td>
</tr>
<tr>
<td>Output Waveform</td>
<td>Over 1,000,000 times</td>
</tr>
</tbody>
</table>

1) Turning the shaft clockwise would generate the signal A when the signal E 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);

2.2 Selector Switches

| MR8A (Rotary switch) | 25V15mA (AC/DC) |
| MR8C (Code switch) | 15V10mA (AC/DC) |

* See MR8A/MR8C pages for details

3. Curl/Straight Cords

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

4. Connector Unit

| Connector | Driprooved connector to be attached on the end of the cord optionally provided |

Warranty

- 1 year from the date of shipment.
Dimensions (mm)

HM Unit with curl cord

- This drawing is an example, it may differ according to number of switches etc.

With Drip-proofed connector

NRW-2424-PM8

Samples of Case layout

Original Holder

<table>
<thead>
<tr>
<th>Length (as reference)</th>
<th>2m (460mm)</th>
<th>3m (690mm)</th>
<th>4m (920mm)</th>
<th>5m (1080mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19/25 conductors only</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
H M 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".

<table>
<thead>
<tr>
<th>Pulses/Rev.</th>
<th>100PPR</th>
<th>25PPR</th>
</tr>
</thead>
</table>

*25PPR and yet 100 Clicks/Revolution

Axis Selector/Multiplication Selector Switches
- MR8C type (Gray code switch)
- MR8A type (Selection switch)

Indications for Axis Selector (left)
- e.g. OFF, X, Y, Z, 4, 5

Indications for Multiplication Selector (right)
- e.g. \( x1, x10, x100 \)

Power Supply | 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)

* 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( )

2-Position Enabling Switch
- None
- One on the left
- On both sides

Emergency Switch (contacts)
- None
- Mounted ( )

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

Waterproofed Connector (for curl cord)
- None
- Male connector (NRW-2424-PM8)
- Female connector (NRW-2424-RF )

* 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 x 1

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

* We will select either 19-conductor cord or 25-conductor cord to cover your requested specs

Waterproofed Connector (for curl cord)
- None
- Male connector (NRW-2424-PM8)
- Female connector (NRW-2424-RF )

* Fill in both spaces to order both connectors.

Magnet on the backside
- None
- Mounted

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