Cursor Controls

TPM Series: OEM Touchpad Module, 6-inch, USB Output

Figure 1: 6" OEM Touchpad Module (shown with standard polyester touch surface)

1. DESCRIPTION

Using our years of knowledge/experience gained from developing industrial trackball technology, Cursor Controls Ltd have developed a range of advanced touchpad solutions. Cursor Controls touchpads provide smooth and precise cursor control using the latest and most advanced touch sensing technology and are designed for use in the most extreme environments.

The TPM Series OEM touchpad provides both conventional X and Y-axis cursor movement with plug-and-play, multi-finger gesture support for enhanced user interaction. The mutual-capacitance based tracking engine combines the benefits of solid state sensing (no moving parts) with the precision, functionality and performance associated with the Cursor Controls product range. When installed, the design allows for easy cleaning and decontamination, ensuring continued optimum performance and operation under the harshest of conditions. The unit has been designed to be mounted as part of OEM keyboards and consoles.

2. FEATURES

- Solid state sensing technology – capacitive touch sensing tracking engine
- Output: USB
- Haptic and audible feedback (function specific)
- Multi-finger gesture support
- 8 capacitive touch feature buttons
- Smooth operation in rugged environments
- Tolerant to moisture, water and liquid contaminants
- Various touch surface overlay options available as standard
- Custom feature button configurations / overlays available

3. APPLICATIONS

- Industrial consoles
- Medical systems
- Marine systems
- Sound and lighting desks
- Video editing consoles
- Custom keyboard applications
- OEM custom solutions available

6. TOUCHPAD FEATURES

6.1. Touchpad Features

The TPM Series touchpad module includes the following features / technologies;

- **Touchpad Technology:** The 6-inch active touchpad area provides both conventional X and Y-axis cursor movement with plug-and-play, multi-finger gesture support for enhanced user interaction (see Section 6.2).
- **Feature Buttons:** 8 x feature buttons are located at the top of the touchpad module. These utilise capacitive touch sensing technology and incorporate functions such as Cut, Copy & Paste, cursor resolution adjustment, and a panel lock feature to facilitate cleaning / decontamination of the device.
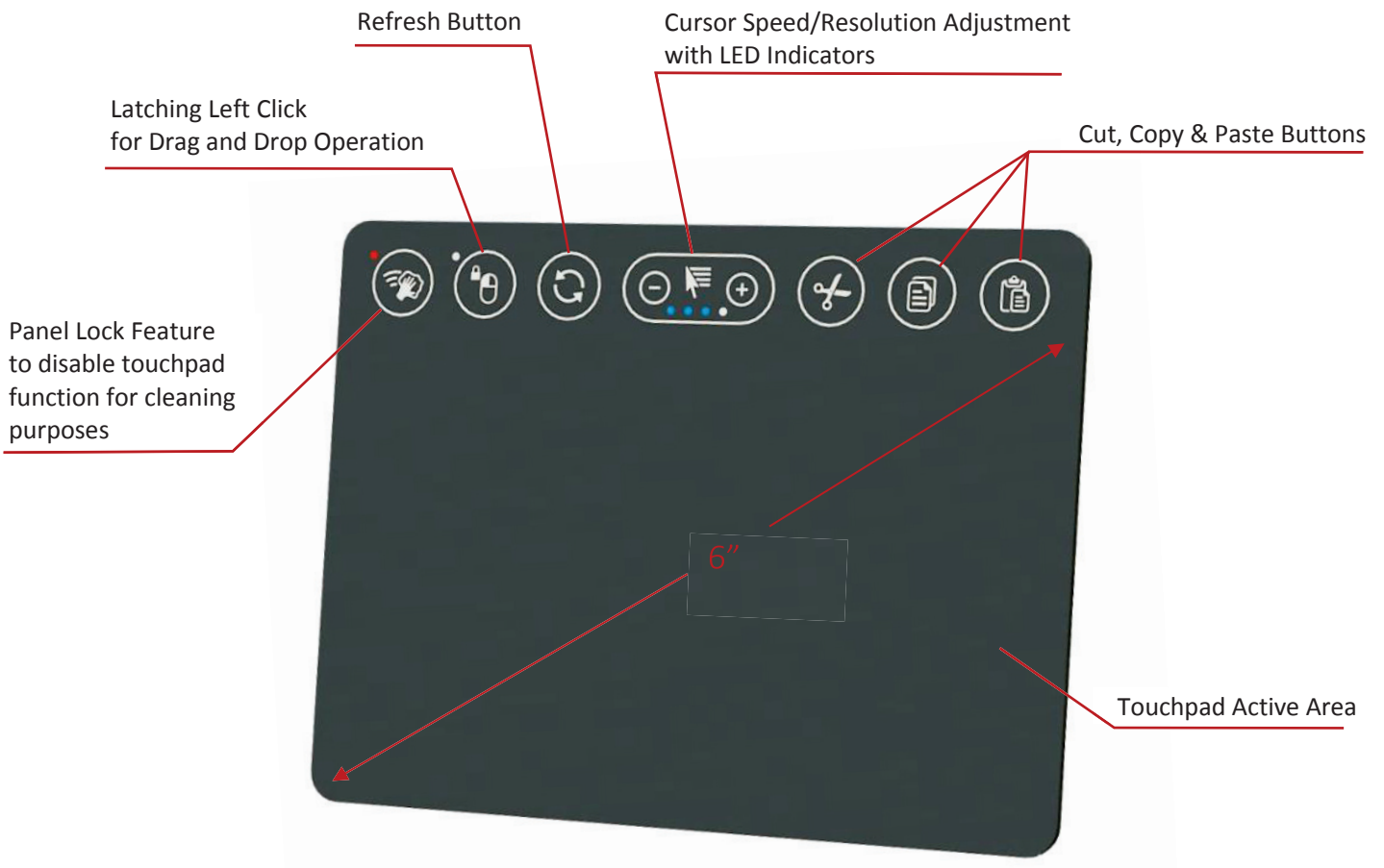

Figure 4: Module features

6.2. Gesture Operations

The touchpad incorporates an in-built gesture recognition engine designed to enhance user experience and increase the overall efficiency of user interaction with a host system. Use of gesture control enables the user to access frequented functions such as button clicks, scrolling and zooming by means of highly intuitive multi-finger operations. See table 3 below for details on the available gesture actions.

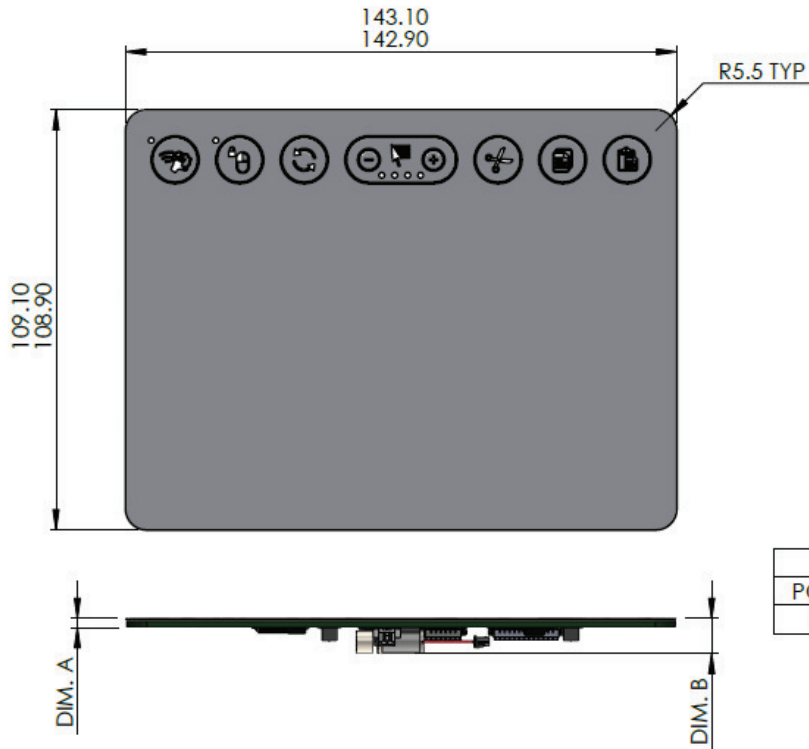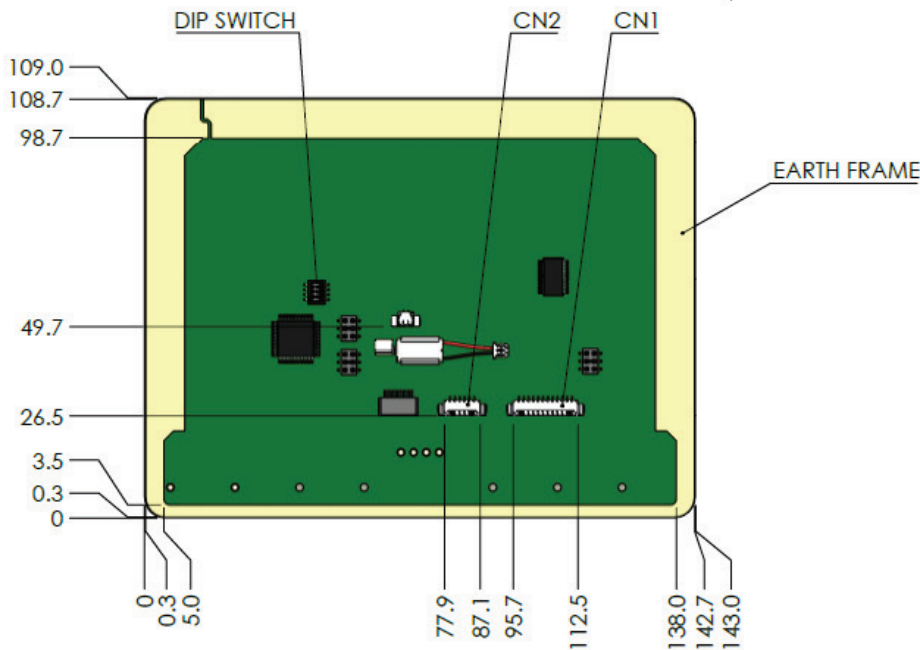| GESTURE ACTION	FUNCTION
Single-Finger Tap	Left mouse button click Double/triple tap supported
Two-Finger Tap	Right mouse button click Double/triple tap supported
Three-Finger Tap	Middle mouse button click Double/triple tap supported
Two-Finger Vertical Drag	Scroll Up/Down
Two-Finger Horizontal Drag	Scroll Left/Right [1]
Two-Finger Splay	Zoom In [1]
Two-Finger Pinch	Zoom Out [1]
Three-Finger Swipe Left	Back [1]
Three-Finger Swipe Right	Forward [1]

Table 3: Gesture Operations

Notes:
   1. Horizontal scroll and zoom functions are dependent on application support.

9. TOUCHPAD DIMENSION DRAWING

VARIANT	DIM. A	DIM. B
POLYESTER OVERLAY	2.30	9.1
GLASS OVERLAY	3.20	10.0

Dimensional drawing specifies factory default orientation.
All dimensions are in mm unless otherwise stated.
Tolerances +/- 0.2mm unless otherwise stated
Please note that an IGES model is available on request. Please contact your local sales office for more information.
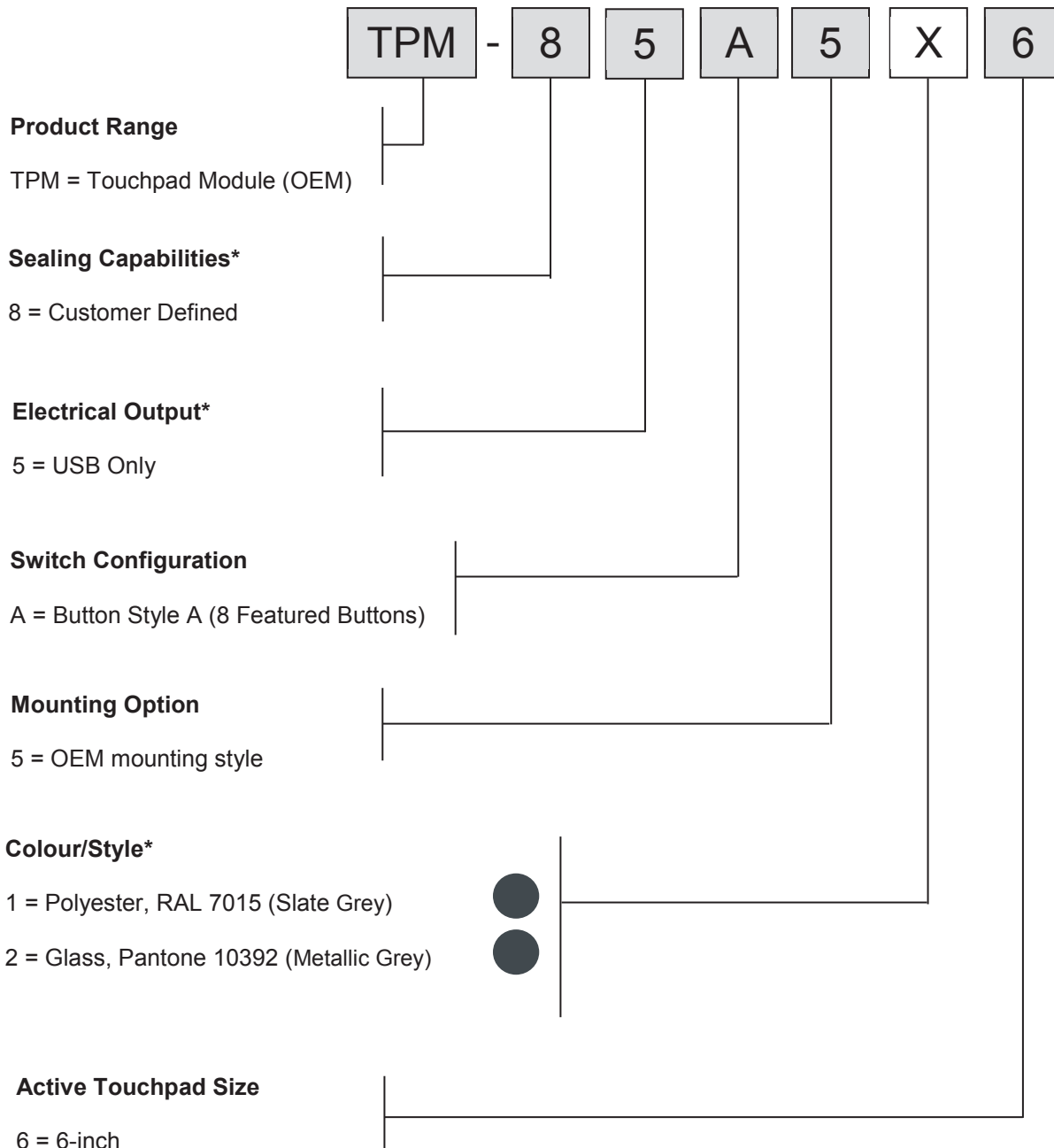
10. MOUNTING RECOMMENDATIONS

The TPM series touchpad module can be mounted into panels and consoles using various methods.

For details of typical mounting methods applicable to this module, please refer to Cursor Controls Ltd Application Note AN0060. Please contact your local sales office for further details.

11. PRODUCT ORDERING CODE SYSTEM

Please construct your standard product ordering code by selecting the numbers and letters to suit your specification:

| TPM | - | 8 | 5 | A | 5 | X | 6 |

Product Range

TPM = Touchpad Module (OEM)

Sealing Capabilities*

8 = Customer Defined

Electrical Output*

5 = USB Only

Switch Configuration

A = Button Style A (8 Featured Buttons)

Mounting Option

5 = OEM mounting style

Colour/Style*

1 = Polyester, RAL 7015 (Slate Grey)

2 = Glass, Pantone 10392 (Metallic Grey)

Active Touchpad Size

6 = 6-inch

For further options please contact your local sales representative.

11.1. Ordering Example

TPM-85A516: Touchpad, Customer defined sealing, USB Interface, 8 x feature buttons, OEM style, RAL 7015 polyester overlay, 6-inch.