



**SOFT TOUCH ERGONOMIC
PALM BUTTONS
PART #s: 2297203 & 2297304**

User / Installation Manual

Rev A

Oct 2025

TABLE OF CONTENTS

<u>1 LIST OF FIGURES</u>	<u>3</u>
<u>2 SAFETY CONSTRAINTS</u>	<u>3</u>
2.1 READ FIRST	3
2.2 MECHANICAL LOCATION	3
<u>3 ELECTRICAL SPECIFICATIONS</u>	<u>4</u>
3.1 INPUT POWER	4
3.2 OUTPUT SECTION	4
<u>4 MECHANICAL SPECIFICATIONS</u>	<u>5</u>
<u>5 SOF-TOUCH-2 WIRING INFORMATION:</u>	<u>6</u>
5.1 WIRING TERMINAL LOCATIONS.	7
5.2 POWER CONNECTION	8
5.2.1 AC POWER CONNECTION	8
5.2.2 DC POWER CONNECTION	8
<u>6 OPERATING INSTRUCTIONS:</u>	<u>8</u>
<u>7 CORRECT MOUNTING LOCATIONS AND ORIENTATIONS:</u>	<u>9</u>
<u>8 INCORRECT MOUNTING:</u>	<u>10</u>
<u>9 ORDERING INFORMATION</u>	<u>10</u>
9.1 SOF-TOUCH-2 INSTALLATION KIT	11
<u>10 WARRANTY</u>	<u>12</u>

1 List of figures

Figure 1: Internal Relay Circuit	5
Figure 2: Mechanical Dimensions.....	5
Figure 3 : Suggested Cut-Out Area	6
Figure 4: Std Mechanical Button Wiring	6
Figure 5: SOF-TOUCH-2 Wiring Example	7
Figure 6: Wiring terminal.....	7
Figure 7: Correct Mounting Locations.....	9
Figure 8: Incorrect Mounting Locations	10

2 Safety Constraints

2.1 Read First

Before replacing mechanical buttons with **SOF-TOUCH-2** buttons be sure that the control complies with current applicable standards.

The SOF-TOUCH-2 buttons are designed to replace mechanical palm buttons on various types of machinery. The controls must conform to all applicable standards such as OSHA 1910.217 when used on Mechanical Power Presses.

Palm buttons only protect the operator. ISB always suggests the use of Light Curtains, or other safeguards, to protect others that might be exposed to the hazard at some times

WARNING: *When single button initiation is used in an application that has a hazardous motion, adequate point of operation guards must be used*

Care must be taken when mounting the **SOF-TOUCH-2** buttons so that they are spaced apart to require both hands to operate the machine, and that the distance to any hazard complies with the appropriate standards.

2.2 Mechanical Location

For mechanical power presses the OSHA safety distance formula is:

$$Ds = (K) \times (Ts)$$

Where:

Ds = Safety Distance

K = 63

Ts = Stopping time in seconds at 90 degrees.

The response time of the **SOF-TOUCH-2** buttons is less than 15ms (milliseconds). If SOF-TOUCH-2 buttons are used to initiate a press stroke, the total response time of the press

must be added to the stopping time T_s . Determine the proper location for the **SOF-TOUCH-2** buttons and follow the detailed instructions.

WARNING: *The buttons should not be placed such that the operator would reach over the buttons into the die area to insert or remove parts. It should not be possible for person's elbows to be in the button area while their hands are in the die area. See the attached drawings for correct and incorrect mounting in Figure 7 and Figure 8*

3 Electrical Specifications

One isolated normally open and one isolated normally closed contact are supplied in each button for connection into the control circuit.

3.1 Input Power

AC/DC 12-250 VAC, 3Watts max

3.2 Output Section

Output:

1.5 Amps @ 0-250 VAC

Relay life:

10 000 000 mechanical operations

1 000 000 electrical operations with 1 Amp resistive load

300 000 electrical operations with 3 Amp resistive load

Relay Specs:

1NO + 1NC, force guided contacts (Type A EN50205)

Max switching voltage 250 VAC

Minimum load: 10mA @5V

Contact resistance less than:

100 micro-ohms /1A / 24VDC

20 ohms /10mA / 5VDC

Note: Internal output circuit has 5mA leakage @ 110V / 60Hz due to internal R-C snubber circuit

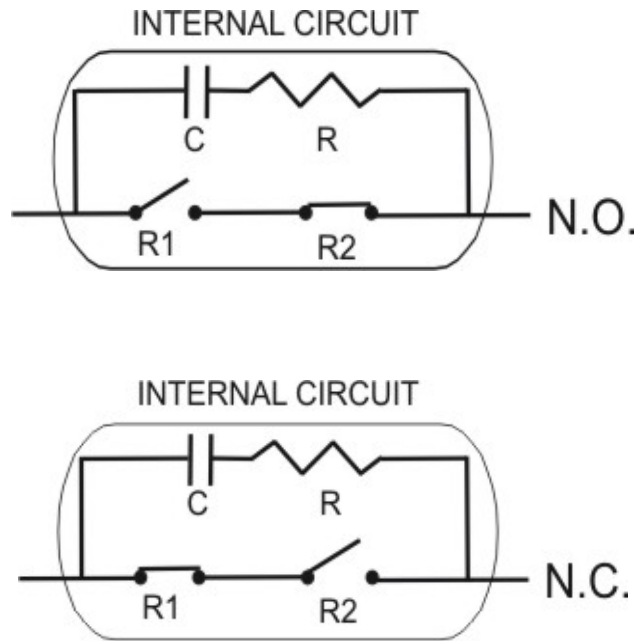


Figure 1: Internal Relay Circuit

4 Mechanical Specifications

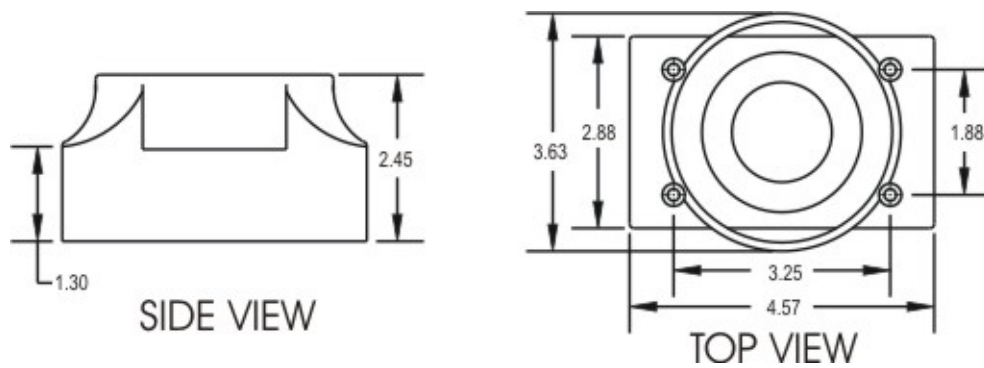


Figure 2: Mechanical Dimensions

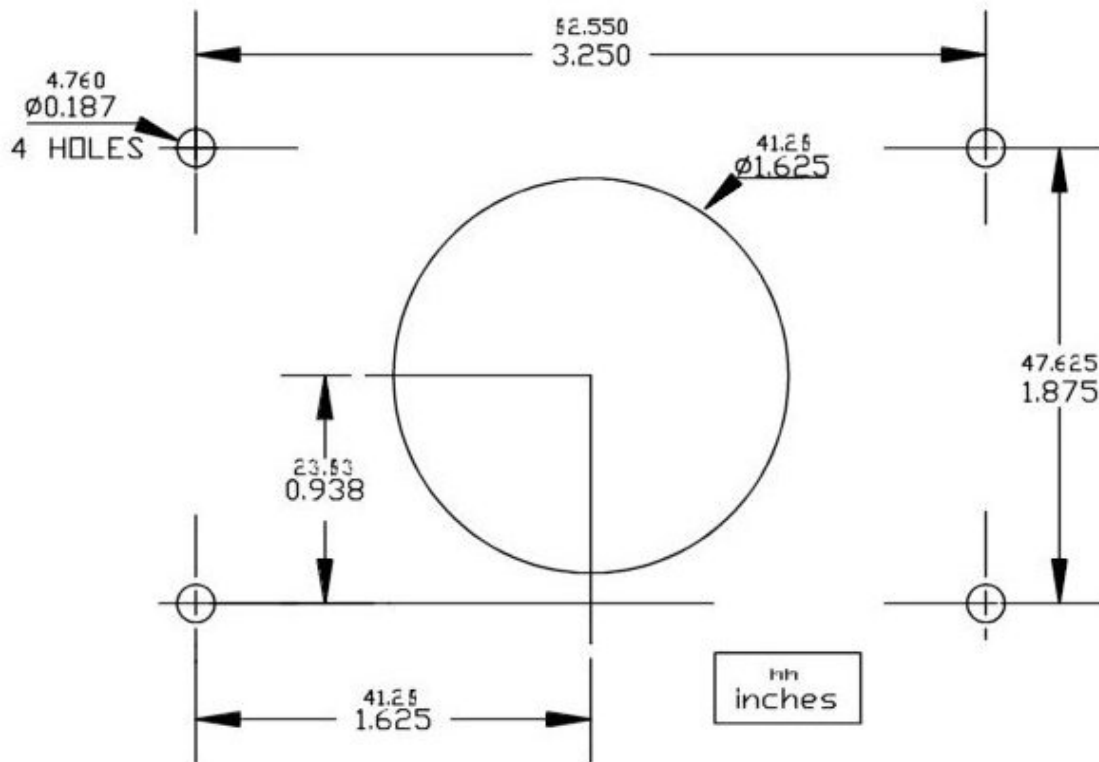


Figure 3 : Suggested Cut-Out Area

If using Bell boxes or mounting where existing buttons were located, the mounting holes may already be suitable. Otherwise you will have to drill holes and make a cutout as shown in Figure 3. A full size template is included in the installation kit for easy hole location.

5 SOF-TOUCH-2 wiring information:

The contacts of the **SOF-TOUCH-2** buttons are meant to directly replace the contacts of mechanical buttons. Because each machine can utilize different wiring methods, we cannot provide exact connection for your particular machine control. One example of replacing mechanical buttons with **SOF-TOUCH-2** buttons is shown in Figure 4 / Figure 5

Typical wiring of mechanical palm buttons:

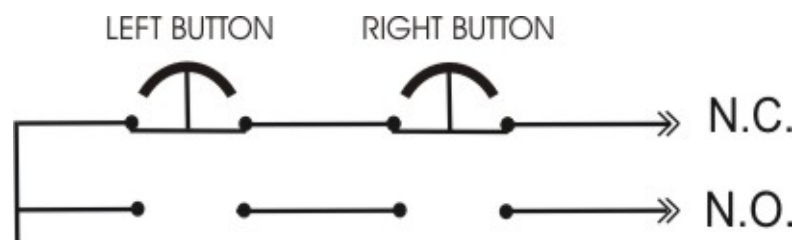


Figure 4: Std Mechanical Button Wiring

Equivalent **SOF-TOUCH-2** wiring:

Replace each normally closed and normally open contact of each button with contacts of the **SOF-TOUCH-2** buttons.

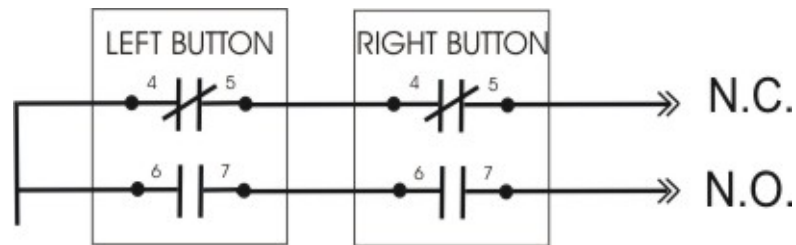


Figure 5: SOF-TOUCH-2 Wiring Example

NOTE: If power is not applied to **SOF-TOUCH-2**, both normally open and normally closed circuits (4&5, 6&7) will remain in an open state

5.1 Wiring terminal locations.

SOF-TOUCH-2 has 1 N.O. (6&7) and 1 N.C. (4&5) contact.

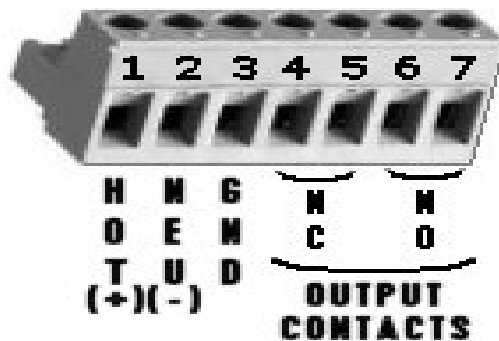


Figure 6: Wiring terminal

ALL WIRING TO AND FROM THE SOF-TOUCH-2 BUTTONS MUST BE IN CONDUIT, METAL TROUGH OR METALIC SEALTITE.

BE SURE POWER IS OFF BEFORE WIRING.

Connect the wires as shown in Figure 6 to the terminal for the input power and the output contacts.

Place the gasket supplied in position, then plug the wiring terminal. Install the O-rings on the screws and secure the SOF-TOUCH-2 button in place with the four screws provided.

5.2 Power Connection

5.2.1 AC Power Connection

- Connect the AC power: Hot (1), Neutral (2) and Ground (3) to the Input/Output connector as seen in Figure 6: Wiring.

5.2.2 DC Power Connection

- Connect the DC power: DC positive (+) (1), DC return ground (-)(2) to the Input/Output connector as seen in Figure 6: Wiring.

6 Operating instructions:

Caution:

The buttons are designed to sense the presence of the operator's hands when placed to within 1/8 of an inch above the green surface. If the button activates when the operator's hand is further than 1/8 inch from the button, do not operate the machine and replace the button. Metal objects may activate the buttons, if the mass is large enough, and it is very close to the green surface. Insure that all other material is kept away from the buttons, including the parts being worked on.

The buttons have built in ring guards to prevent accidental operation. If the ring guards become worn such that the height is reduced replace the button.

Check the buttons daily to confirm the proper operation.

- The setting of the buttons allows the use of most standard gloves.
- A green LED on the face of the **SOFTOUCH-2** button indicates when the output is activated.
- Another green LED in the back of the unit, shows the unit is powered on.
- **SOFTOUCH-2** will de-activate automatically if activated for more than sixty to seventy seconds.
- When using two **SOFTOUCH-2** buttons, machine control must still perform an Anti-tie down check.
- After the installation is complete make sure that both buttons are required to initiate the machine.

7 Correct mounting locations and orientations:

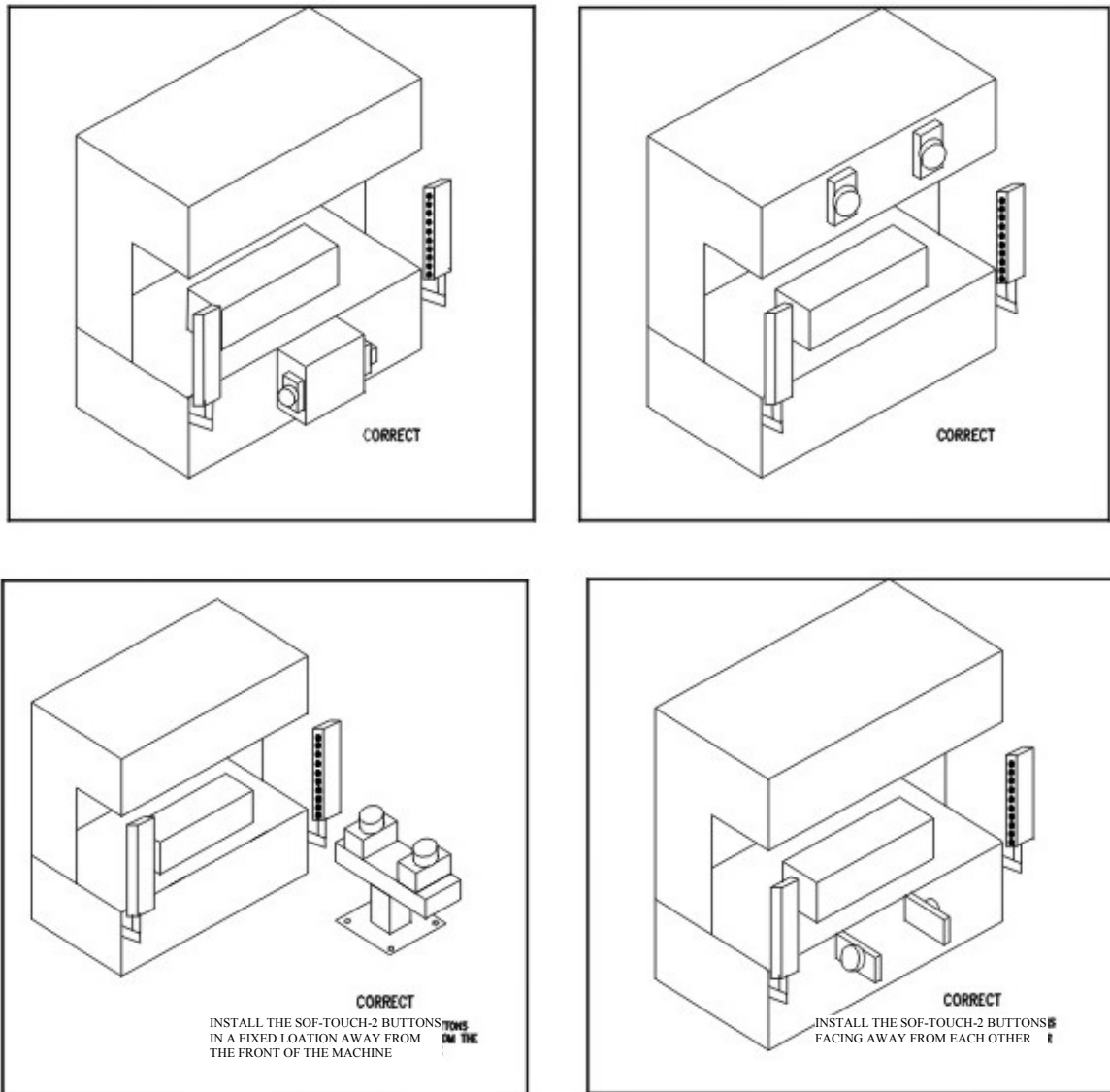


Figure 7: Correct Mounting Locations

8 Incorrect mounting:

Use other safeguards for operator protection if installed as shown below.

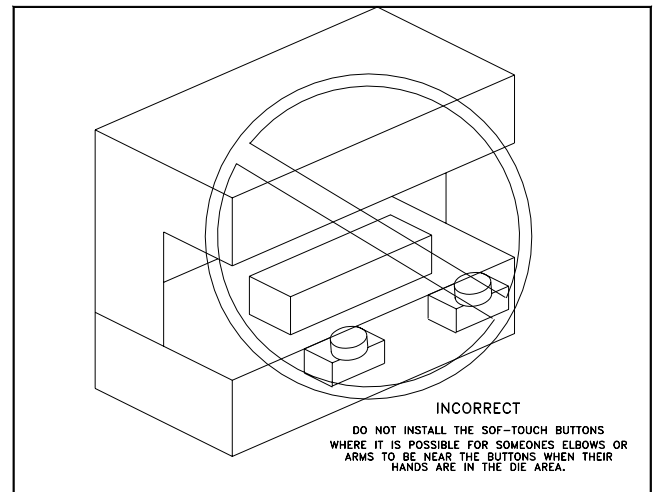
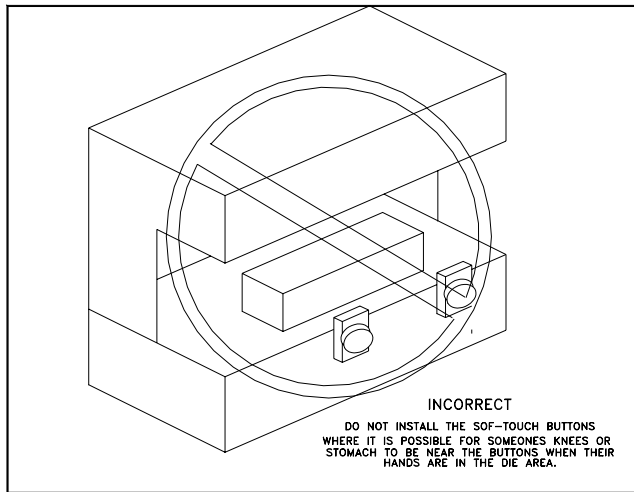


Figure 8: Incorrect Mounting Locations

9 Ordering Information

Part Number	Description
ST2-0001	SOF-TOUCH-2 Button (installation kit included)
ST2-K001	Installation kit

Table 1: Ordering information

9.1 SOF-TOUCH-2 installation kit

The following list of parts is included with each individual **SOF-TOUCH-2** button in a plastic bag:

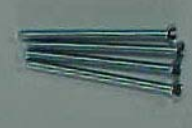
Part Number	Picture	Description	Qty
09-0020		SOF-TOUCH-2 Bell box gasket	1
36-0789		6/32 x 2" mounting screws	4
36-0055		6/32 x 5/16 hex nut	4
36-0352-002		#6 Split lock washer	4
09-0021		O-ring	4
29-0460-007		Input/Output Plug connector 7 pin	1
60-0131		SOF-TOUCH-2 manual (this document)	1
60-0132		Holes Template	1

Table 2: Installation kit breakdown

10 Warranty

ISB DIVISION warrants the products it manufactures to be free from defects in material and workmanship, provided these defects are not caused by abuse, accident or neglect, and agrees by repair or replacement of the part, or parts, any such defect disclosed on examination by us, and which developed under normal installation, use and service for a period of 1 year from the date of shipment to the original purchaser when the equipment is returned to our service facility.

ISB DIVISION does not assume responsibility for unauthorized repairs to apparatus even though defective.

This warranty is in lieu of all other warranties expressed or implied, and no representative or person is authorized to assume for us any of the liability in connection with the sale of our products.

ISB DIVISION shall not be liable for consequential damages. All equipment returned to ISB for warranty must be prepaid. ISB will not accept collect freight shipment. Authorization to return material must be obtained from one of our branch offices, or from our sales department.

For additional information, repair or service, contact your local ISB distributor, or:

ISB DIVISION 3517110 CANADA INC.

Tel: 514-634-7000

Fax: 514-634-9868

Toll Free: 1-866-ISB-LITE

ISB SERVICES, INC.

Toll Free: 1-866-ISB-LITE