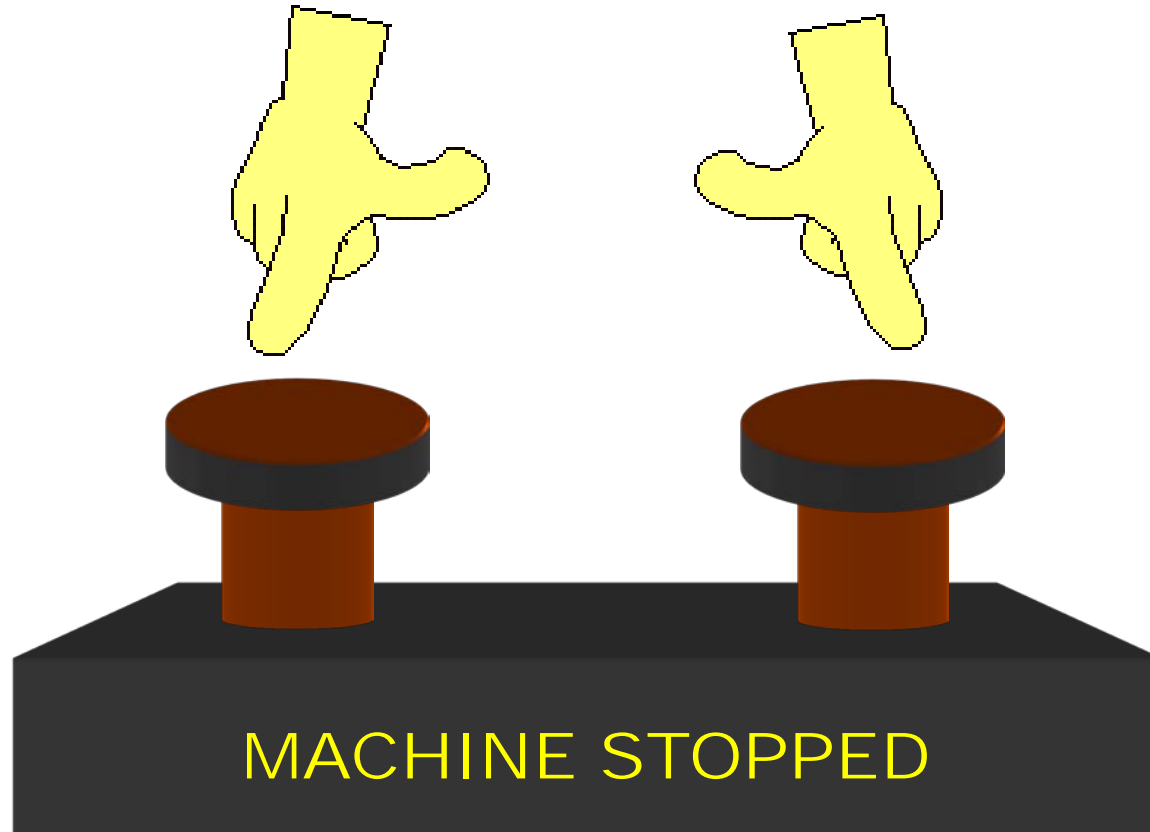


ABB Jokab Safety - Safe Ball 2 Hand Control Devices

Conventional Palm Buttons

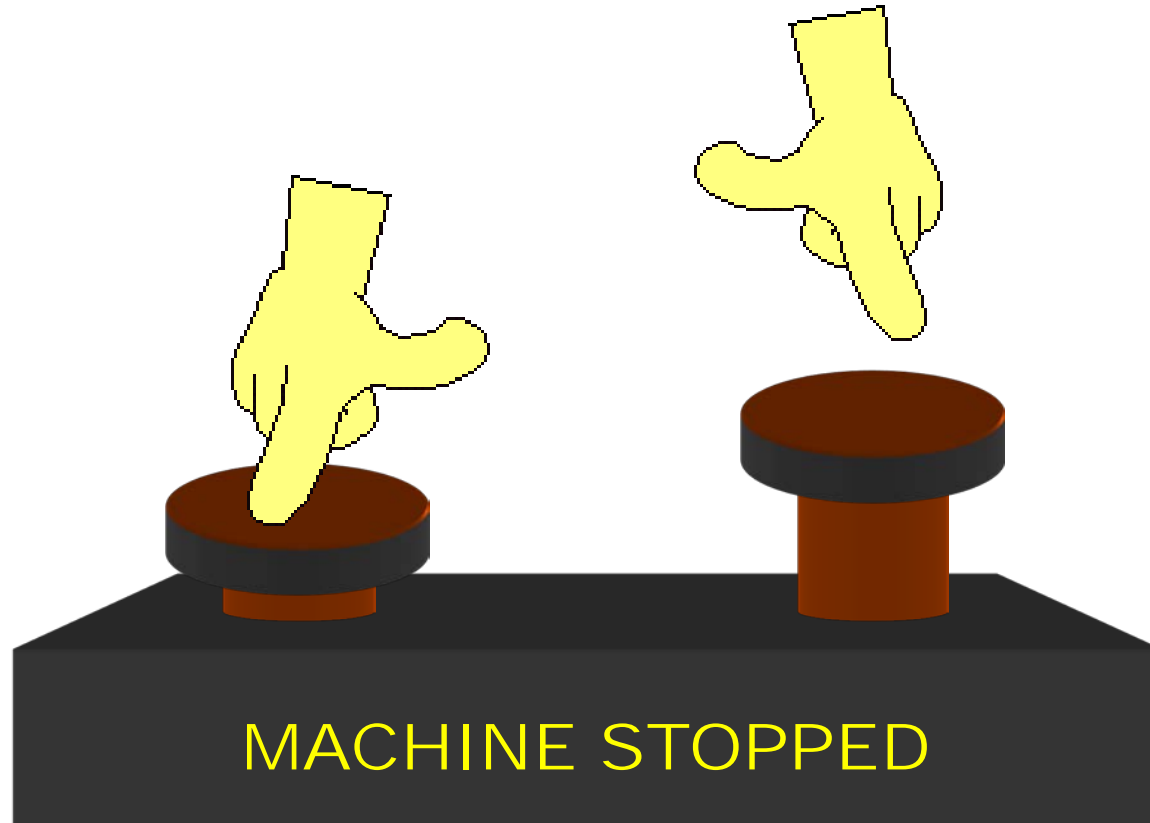
Practical Application Concerns



- Both buttons are “open” and the machine is in the “Stop Condition”.

Conventional Palm Buttons

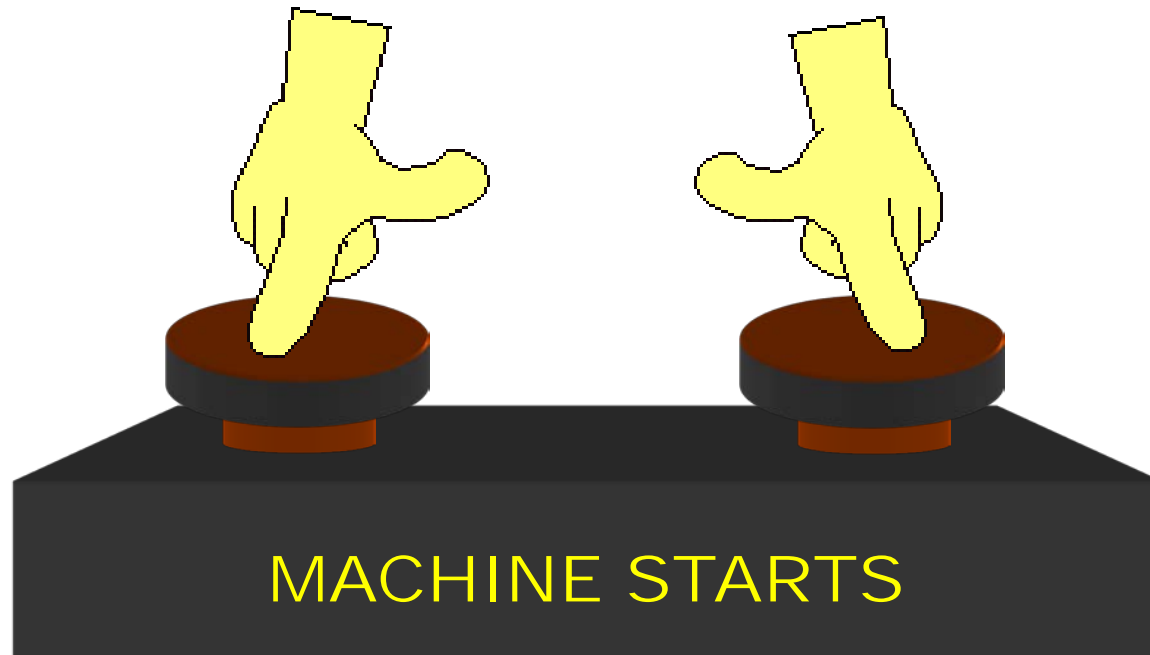
Practical Application Concerns



- The first button is pressed “closed” and within 500ms the second button is pressed “closed”.

Conventional Palm Buttons

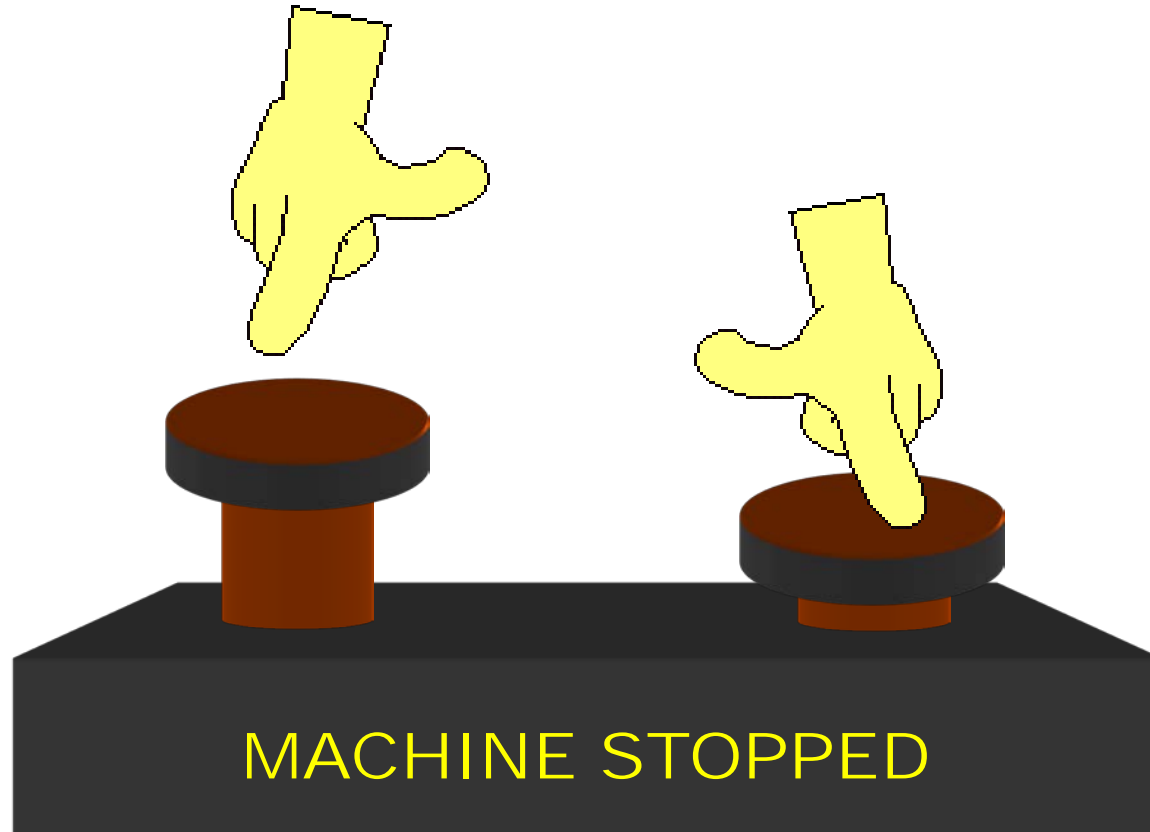
Practical Application Concerns



- The first button is pressed “closed” and within 500ms the second button is pressed “closed”.
- The machine starts.

Conventional Palm Buttons

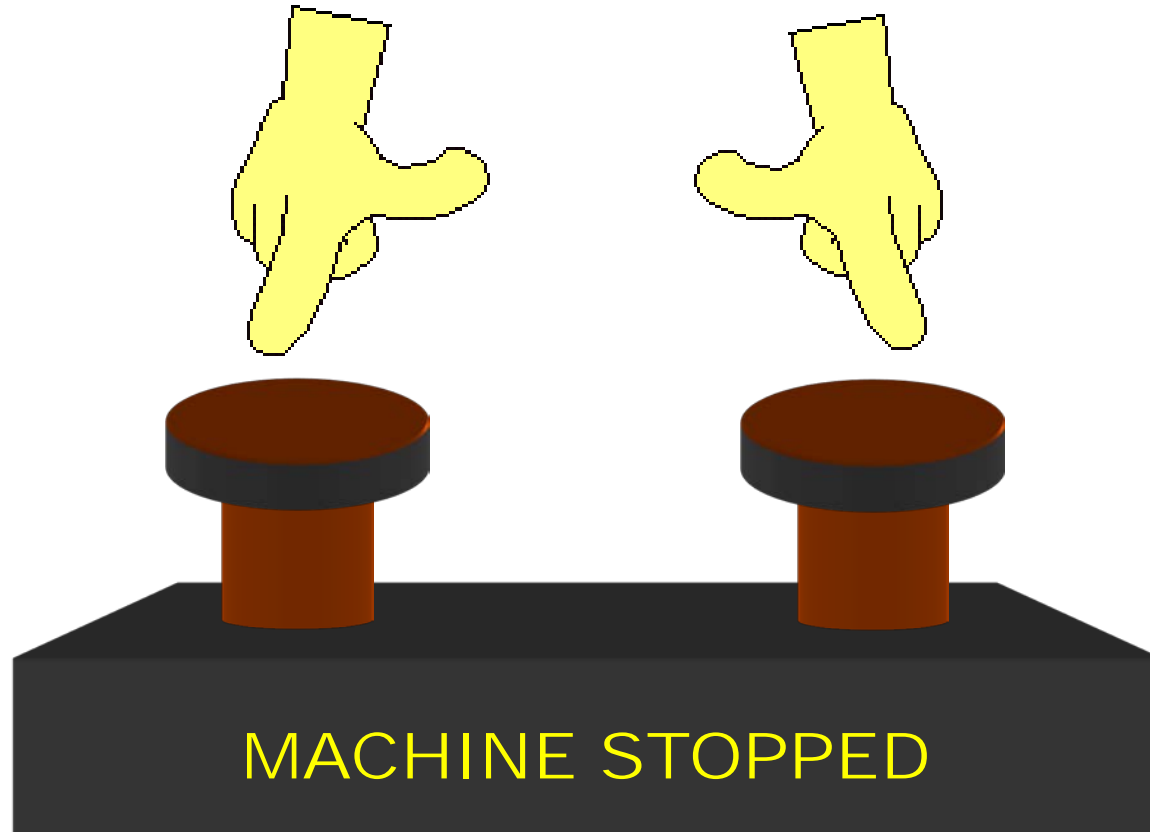
Practical Application Concerns



- If either button is released then the monitoring safety circuit will send the stop condition.
- The machine stops.

Conventional Palm Buttons

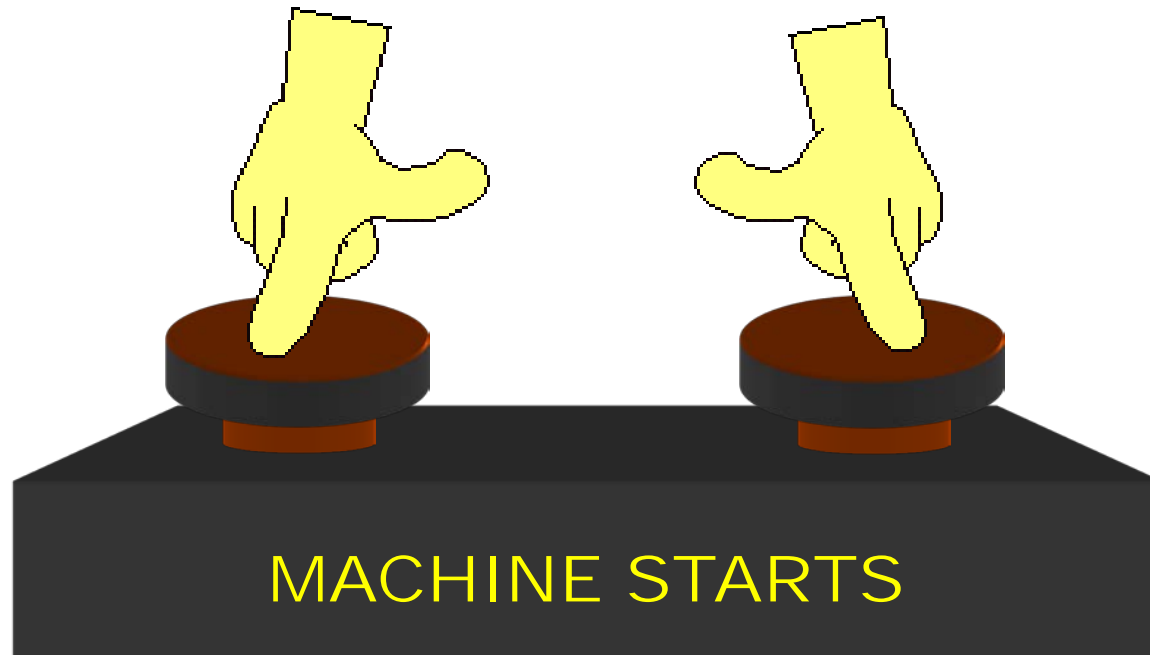
Practical Application Concerns



- To initiate another cycle, both buttons must “open” and then “close” again within 500ms.

Conventional Palm Buttons

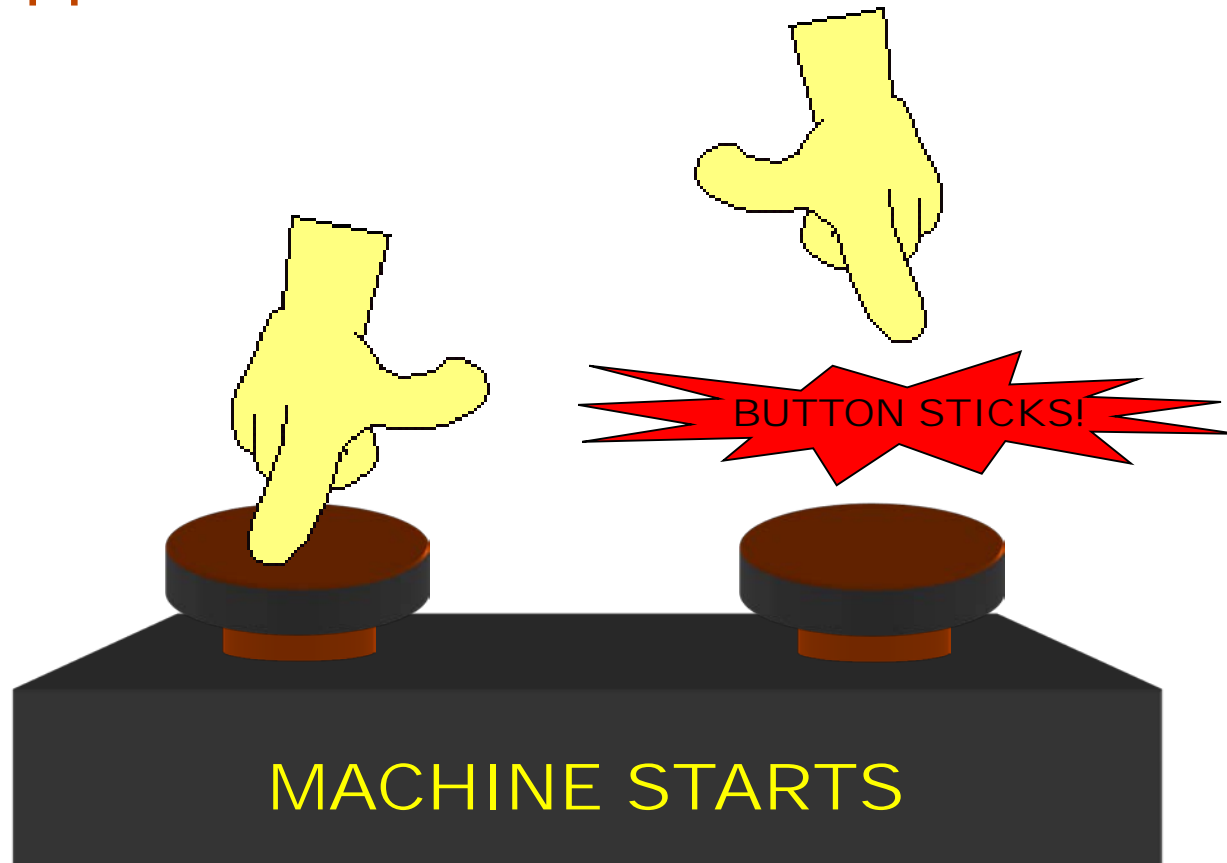
Practical Application Concerns



- To initiate another cycle, both buttons must “open” and then “close” again within 500ms.

Conventional Palm Buttons

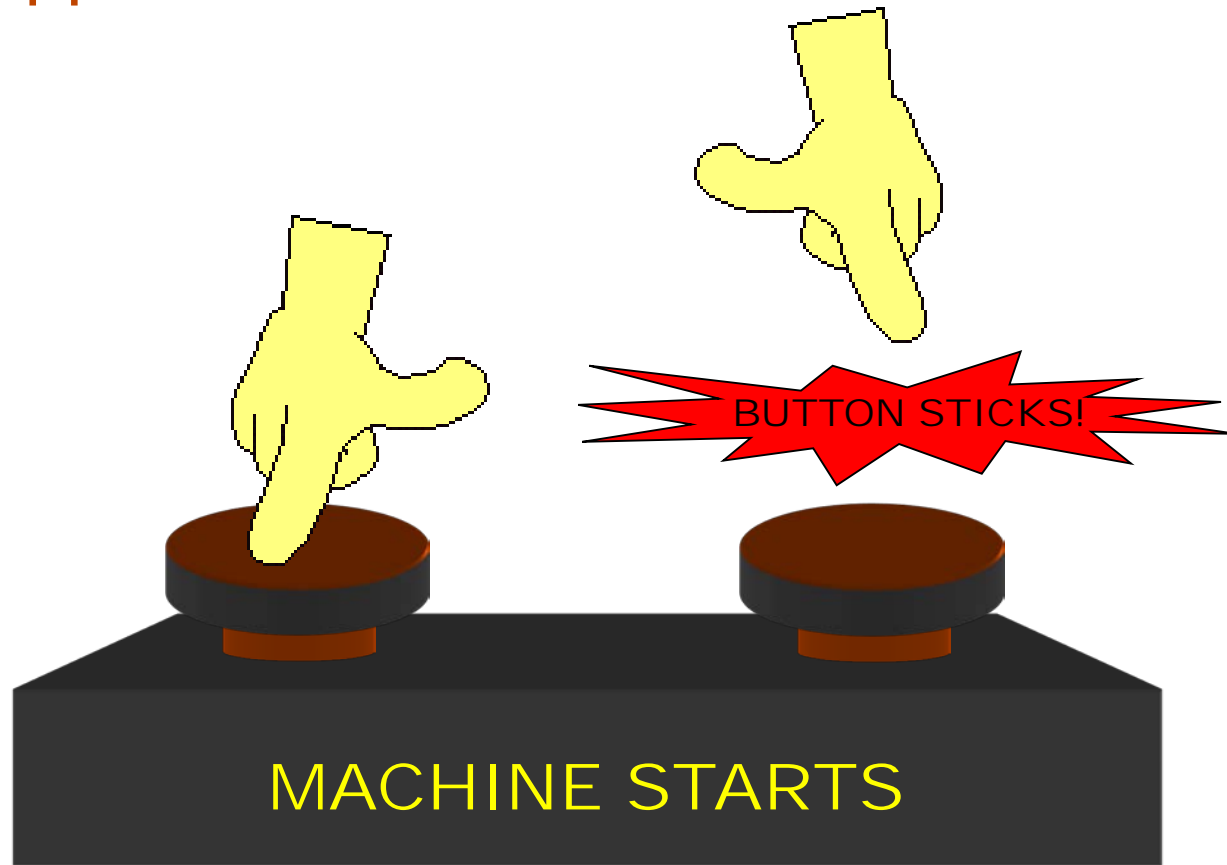
Practical Application Concerns



- The number one failure of push buttons is sticking. If you remove your hand and the button sticks, **THE MACHINE WILL NOT STOP!**
- This is what happens when non-safety rated products are used in safety applications.

Conventional Palm Buttons

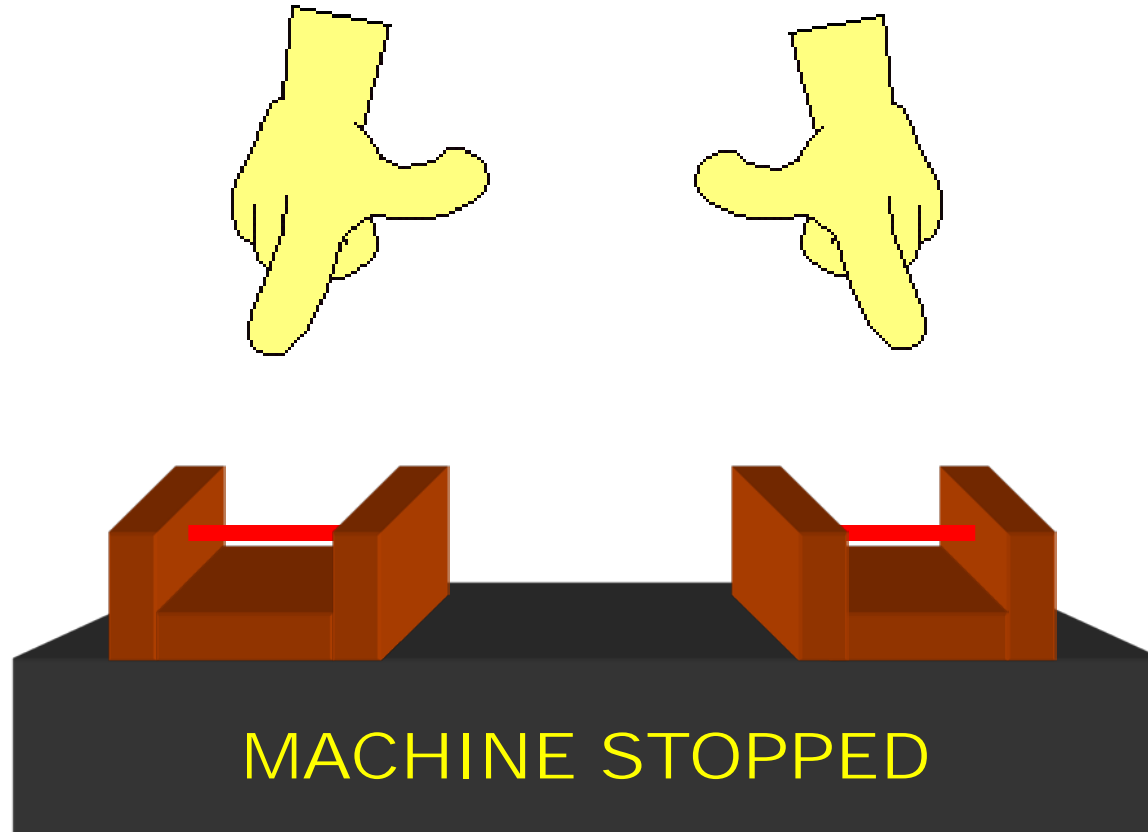
Practical Application Concerns



- If the operator reaches into the machine as an “After Grasp” to adjust a part he will expose his hand to the hazard point.

Conventional Optical Buttons

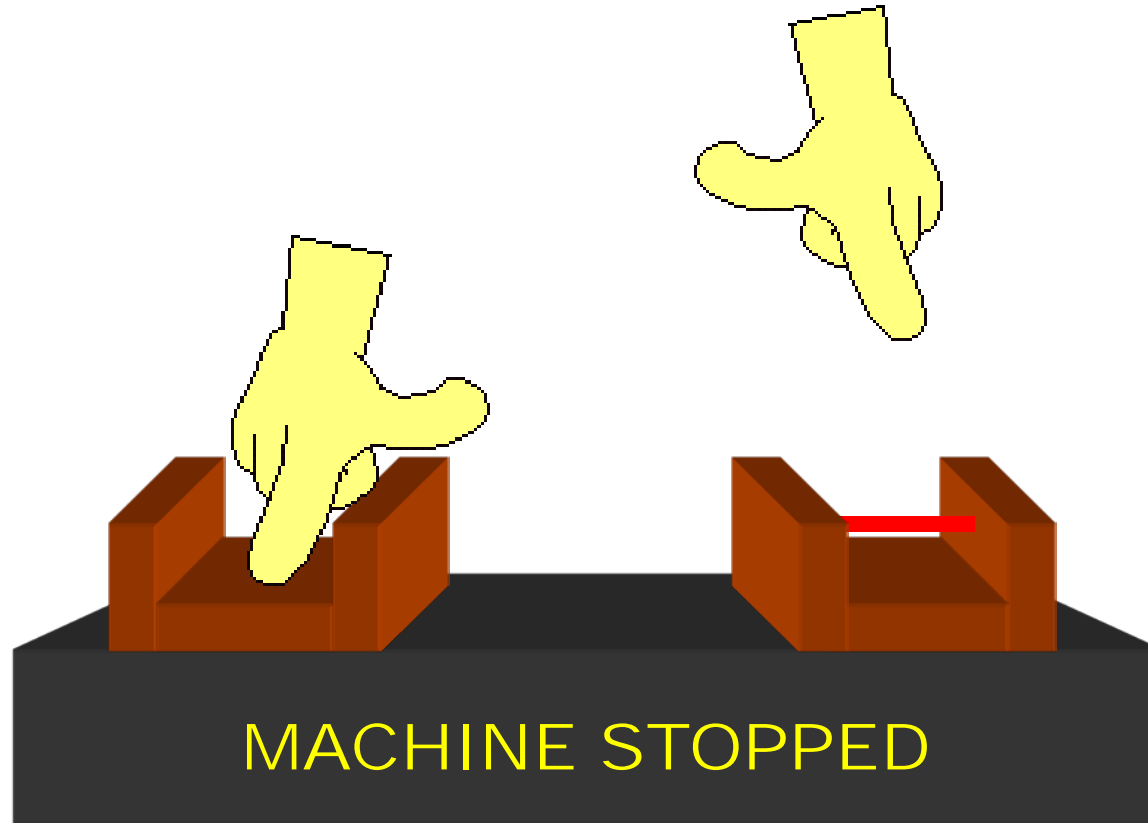
Practical Application Concerns



- This failure mode also occurs with optical style buttons.
- Optical initiation buttons are not approved as safety devices!

Conventional Optical Buttons

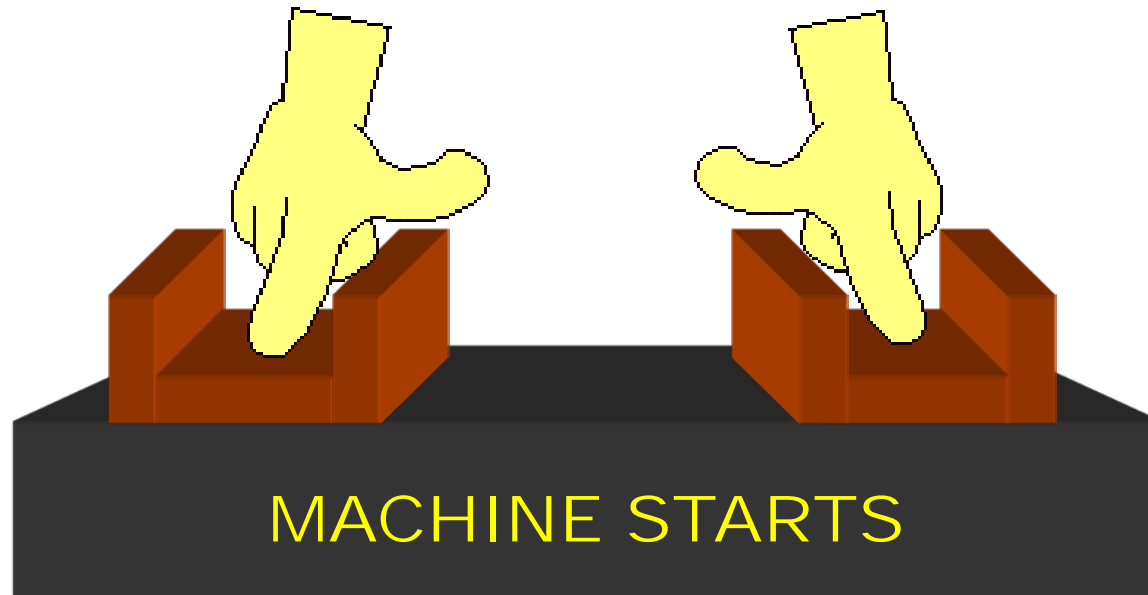
Practical Application Concerns



- Both buttons must still be made within 500ms for a “Safe Start”.

Conventional Optical Buttons

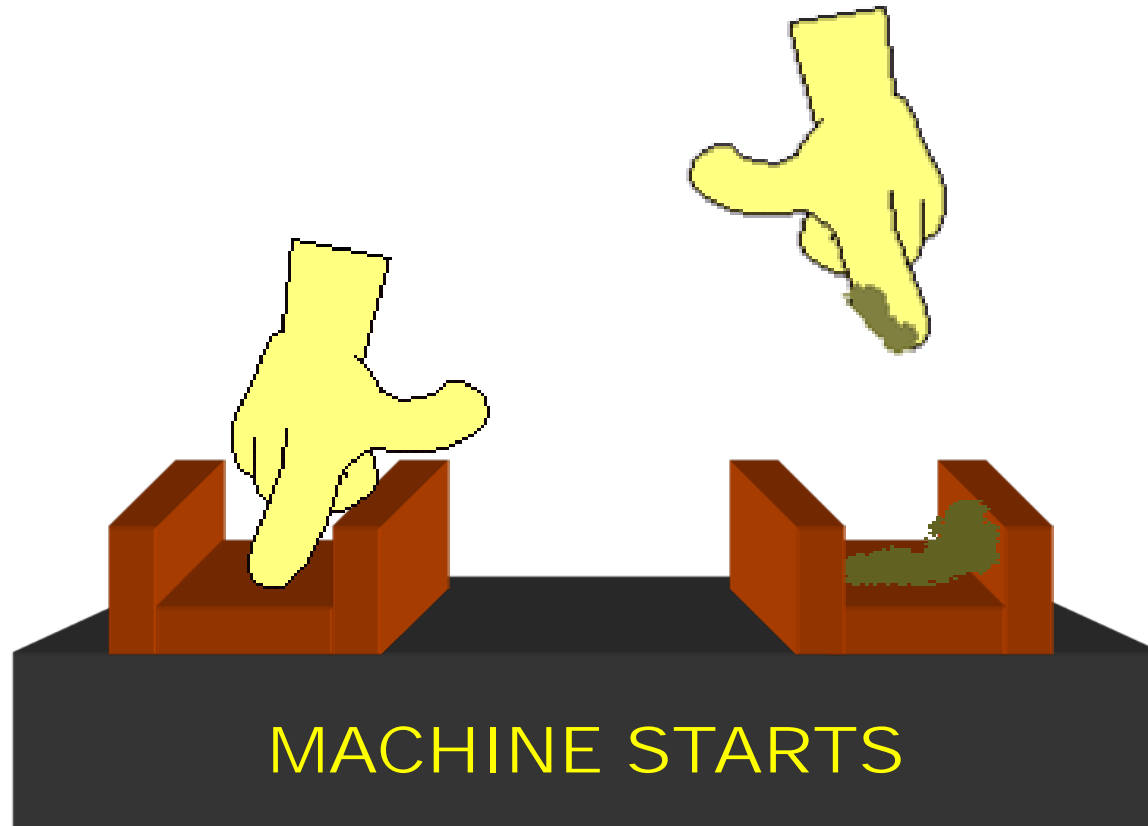
Practical Application Concerns



- Both buttons must still be made within 500ms for a “Safe Start”.

Conventional Optical Buttons

Practical Application Concerns



- Any contamination on the optical button will read as a false on.
- Common causes are oil, grease, dirt, sleeves, gloves, tools.
- **A “Safe Start”, NOT A SAFE STOP!**

SafeBall

Safety Category 4



- Completely new 'HANDS ON' approach has been developed.
- SafeBall is a spherical ball with TWO INDEPENDENT PUSH BUTTON ACTURATORS.
- The risk of unintentional activation is minimized.
- Simple and ergonomic to use device.

SafeBall

Safety Category 4

Applications:

- One-Hand device (machine reset).
- Two-Hand device (machine control).

Features:

- Flexible mounting.
- Several grip possibilities.
- Ergonomic.
- Highest safety level (Safety Category 4) with either the JSBR4 Safety Relay or Pluto Safety PLC.
- Low activation force 2N.
- Two-channel switching in each hand.



SafeBall

Options and Systems



JSTD25A



JSTD25B



JSTD25D



JSTD25E

SafeBall

Mobile Applications



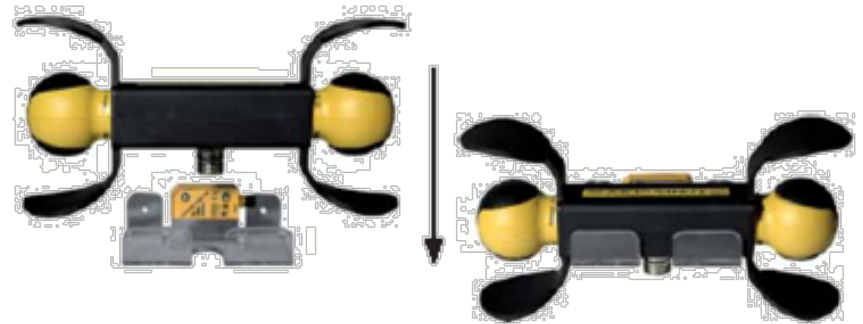
JSTD25F/H



JSTD25G



JSTD25P-1



Power and productivity
for a better world™

