

INDUSTRY FOCUS

Semiconductor Manufacturing

Compact E-Stops
22mm & 30mm Applications

ABB offers products and solutions that conform to the requirements for manufacturing equipment in the Semiconductor Industry.

What is the SEMI Spec?

Over the past 12 years, SEMI™ has published eight different versions of SEMI S2, the Safety Guideline for Semiconductor Manufacturing Equipment. Originally completed in 1991, this spec became the industry standard, eliminating the need for manufacturers to meet individual specs (Intel, IBM, Motorola, etc.).

SEMI S2 had its latest update published in July 2003 (SEMI S2-0703). This version includes changes to Section 12, which deals specifically with the “Emergency Machine Off” circuit.

Read below to see how ABB’s Emergency Stop pilot devices are the right choice for manufacturing equipment in the Semiconductor Industry.

SEMI S2-0703: Section 12, EMO Circuit

- Latching E-stops, requiring a manual reset (12.2.5)
- Red mushroom-shaped button heads with yellow background legend plates; both twist- and pull-release latching available (12.3)
- Labeled “EMO” on button surface; in addition, “Emergency Stop” legends available (12.4)
- Designed to be activated by the heel of the palm (12.5)
- Shrouds available to minimize accidental activation (2.5.1)

SEMI S2-0703: Section 19, Seismic Tolerance

- Shock tested at 15g acceleration over an 11ms period; contacts and latching shall not change state
- Vibration tested at 10-500 Hz; contacts and latching shall not change state
- Protection from leakage or splashing of chemicals during seismic event: NEMA 12, 13, 4, 4X, IP66, IP67, IP69K ratings



Conforms to ISO 3864:
Safety colors (red and yellow)

Additional Certifications and Conformities:
IEC 60529, 60947-7, 60947-5-1, 60947-5-5
EN 50013, 60947-1, 60947-5-1, 418
SEMI-S2
UL 508
CS C22.2 No. 14
UL File E76003



*ABB offers a Complete Range of
Emergency Stop solutions for the
Semiconductor Industry.*

Compact Emergency Stops

- Available in twist-release, pull-release, and key lockable styles.
- "EMO" marking available on button surface as a standard offering.
- Built-in, positive-opening contacts are permanently attached to the actuator, ensuring that the contact function will react reliably every time.
- Low built-in depth (42mm) saves space inside a panel
- Self-cleaning contacts guarantee perfect electrical connection, even after long usage in tough environments.
- Durability test: minimum mechanical life of 50,000 operations.
- Environmental protection ratings:
 - NEMA 1, 3R, 12, 13, 4, 4X
 - IP 66, 67, 69K
- Extensive testing to assure products can withstand harsh environmental influences like heat, cold, moisture, and salty atmospheres.
- Approved according to IEC 60947-5-5 and meets demands from the Machine Directive and its reference standard (EN 60204, Safety of Machinery).
- Emergency-stop accessories also available, including an assortment of enclosures, shrouds, and legend plates.



"EMO" Operators
40mm Mushrooms, 2NC

Description	Color	Catalog No.	List Price
Twist Release	Red, White "EMO"	CE9-1003	36.40
Pull Release	Red, White "EMO"	CE9-1004	36.40
Enclosure	Yellow	CEPY1-0	22.00
Shroud	Yellow	CA1-8053	10.00
Legend Plate, 60 mm dia.	Yellow Aluminum	CA6-1026	6.00

For other contact configurations available, contact ABB.

