



Protection Switch Enclosure

Local Breaking Essential in Following Industries



Mining / Cement



Pharmaceutical industry



Paper Industry



HVAC



Automotive



General Machinery



Metalwork



Textile Industry



Protection Switch Enclosure

- Emergency halt and safe breaking
- Secure protection to the man & machine



Protection Switch Enclosure



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Protection Switch Enclosure

LOCAL BREAKING for

- Maintenance Breaking
- Electrical Breaking
- Mechanical Maintenance
- Emergency Breaking

Local Breaking

Positive Isolation of the machine in vicinity of the machine till the Electrical Maintenance or Mechanical Maintenance or Emergency Maintenance is over & to ensure isolation by visible contacts, Tag indicator, Handle position & Pad lock

- The switching system must be near the load (< 5m)
- Cut off all the poles at the same time
- Can perform the function of emergency stop
- Can ensure the cessation of any movement of motor rotation
- Ensures NO restart of the prohibited machine
- Eliminates any risk of burn, fire, explosion and electric shock
- Necessity of Protection Switch Enclosure....

Necessity of Protection Switch Enclosure....

- Electrical Maintenance –ensuring isolation from live voltage
- Mechanical Maintenance –safeguard maintenance personnel from accidental restart of machine
- Emergency Breaking –eradicate risk of physical damage or casualty
- Shut down the machine and avoid it to start again –door lock, padlock, visual open contacts, and flag indication
- Eliminate any risk of burn, fire, explosion and electric shock –emergency stop make it quick accessible and easy to disconnect
- Ensure cessation of any movement (motor rotation –escalators, conveyor belts, crushers, etc.)
- Local disconnection with only the targeted machine is switched off and rest of the installations can continue operating
- Designed for AC23A load breaking
- Disconnect locally without going to the main panel
- Ensure total safety, Visual Indication of contacts, Flag indicator, door interlocked & switch lockable in OFF position
- The enclosure be with IP 55 protection
- Designed for harsh industrial environments with mechanical risks or non-explosive dust risks.

Breaking Switch Enclosure

- AV Load Break Switch
- External Handle side operated
- Pad lockable easy locating Handle
- Pole configuration - 3 Pole
- Ratings – 50A to 250A
- Visible breaking
- Isolation with Arc protection
- Switch mold with high thermal withstand capacity
- Mechanical position indicator
- Operation handle allows locking in the OFF position for up to 3 locks, locks not supplied).
- The operation handle is located on the right side of the enclosure with door interlock which restricts opening of door while switch is ON & prevents switching ON in door open condition.
- Visible breaking: through a Transparent window
- The mechanical indicator is connected directly to the moving contacts. It is flushing with the window and provides a clear and reliable position indication of the switch.

Motor Power (kWh)*	AV LBS Rating (A)
> 20 and ≤ 45	50A-63A
> 50 and ≤ 70	80A-100A
> 90 and ≤ 110	125A-160A
> 180	250A

* 3 X 400Vac, with auxiliary contact used as pre-break

Enclosure 50A to 250A

- Protection Switch Enclosures are used to open and close a circuit as a disconnecting means for service entrance or to facilitate lock-out/tag-out procedures for motors and other critical power systems equipment.
- In today's world it is a high priority to create a safer environment for everyone close to and working on electrical equipment.
- With this intention, Protection Switch Enclosures have evolved to offer more robust protection for equipment and personnel. When equipment requires maintenance, Protection Switches make it quick and easy to disconnect and/or reconnect the power.
- With the power disconnected, operators can safely work on the equipment downstream; there is no need to worry about coming in contact with live voltage.
- Protection Switch Enclosures are a necessity in all commercial and industrial applications, as per the National Electrical Code (NEC) established by the National Fire Protection Association (NFPA).
- According to NEC article 430.102B, a Protection Switch Enclosure must be located in easy sight for all motors or power system equipment. The NEC defines "in sight" as visible and not more than 50 feet from the equipment it controls.
- The Protection Switch provides emergency halt and safe breaking for any low voltage electric circuit to secure protection to the operators working on machines on the circuit. It allows people to safely operate on a machine and feel confident on visual breaking, local breaking & isolate the load.



Protection Switch Enclosure



Technical Characteristics

Rating	50A to 250A
Reference Standard	IEC 61439-2 IS/IEC 60947-3-2020
Type Design	Enclosed switch Disconnecter
Number of Poles	3
Utilisation Category	AC 23A
Rated Operational Voltage (Ue) (V)	415/ 440/ 690Vac
Rated Frequency (Hz)	50/ 60
Rated Operational Current (Ie) (A)	50A to 250A
Conventional free air thermal current (Ith) (A)	50A to 250A
Conventional enclosed thermal current (Ith) (A)	50A to 250A
Rated Insulation Voltage (Ui) (V)	800/ 1000Vac
Rated Impulse withstand Voltage (Uimp) (kV)	8/ 12kV
Rated conditional Short Circuit Test	80kA
Rated short time withstand current & its duration (sec)	9kA for 1 sec
Degree of Protection	IP55
Method of operation	One hand operated
Suitable for isolation	Yes
Number of break per pole	2
Reference Temperature	40°C
Connection	Bottom gland plate
Color	RAL 7035
Sheet Metal	Galvanised steel 1.5mm & roof 2mm
Coating	Polyester Powder

