## INTRODUCTION

Howard Industries' Switch-Pad™ is an oil filled, pad-mounted device intended for fusing, sectionalizing and tapping applications on medium voltage underground electrical distribution systems. Switch-Pad ${ }^{\text {TM }}$ can be provided in many different configurations including single-phase and three-phase configurations and is available with numerous switching and fusing options. Housed in the same oil-filled enclosure used for single-phase pad-mounted transformers, Switch-Pad ${ }^{\text {TM }}$ will blend in well with other pad-mounted equipment in any underground residential or commercial system.

## RATINGS

Switch-Pad ${ }^{T M}$ is suitable for application on system voltages ranging from 4160Y/2400 through 34500Y/19920 (150 kV BIL) at 200 Amps. continuous.

## STANDARD FEATURES

Switch-Pad ${ }^{\text {TM }}$ is supplied with the following standard features:

- All-welded mild steel enclosure with removable flip-up hood and detachable sill
- Stainless steel handle, padlock provision, recess cup, hinge pins, and barrels
- Captive silicon bronze penta-head security bolt
- Recessed stainless steel lifting provisions
- Domed top surfaces of hood and oil compartment to prevent water retention
- Electrostatically applied powder paint finish with polyurethane top coat, Munsel 7GY3.29/1.5 green in color
- Enclosure meets requirements of ANSI C57.12.28 (American National Standard, Pad-Mounted EquipmentEnclosure Integrity)


FIGURE 1: Switch-PadTM pad-mounted fusing, switching, and sectionalizing device

- 200 Amp externally clamped bushing wells.
- Accessory mounting bracket(s)
- Oil fill/oil level plug
- Oil drain plug
- Tank ground provisions
- Automatic pressure relief device
- Laser engraved anodized aluminum nameplate


## OPTIONAL FEATURES

- 200 Amp. load-break high-voltage bushing inserts or 600 Amp. deadbreak externally-clamped onepiece high-voltage bushings
- Externally operated load-break on/off or sectionalizing switch
- Solid stainless steel or hybrid (mild steel/stainless steel) enclosure
- High density polyethylene protector strips on bottom contact surfaces to prevent paint damage during storage and installation
- Molded polymer Pad/Pallet ${ }^{\text {TM }}$ (serves as both shipping pallet and permanent mounting pad)
- Fusing options: (a) internally mounted expulsion fuses, (b) internally mounted expulsion fuses with series connected backup current limiting fuses, (c) draw-out
(Continued on Page 2)
expulsion fuses with or without series-connected isolation links, (d) draw-out expulsion fuses with series-connected backup current limiting fuses, or (e) draw-out full range current limiting fuses in dry well canisters (Notes: Fusing selection may result in a continuous rating below 200 Amps. User must identify source and load connections if fusing is specified.)
- Fault indicators or provisions only
- Drip shields for use with draw-out expulsion fuses
- Tank ground connectors
- Additional accessory mounting brackets
- Hex-head security bolt
- Laser engraved stainless steel nameplate
- Custom stencilling and labeling
- NEMA safety label

Standard single-phase padmounted Switch-Pad ${ }^{T M}$ configurations are illustrated in Figure 2. Single-phase Switch-Pads ${ }^{\text {TM }}$ are also available in round submersible configurations as illustrated in Figure 3. Standard three-phase padmounted SwitchPad ${ }^{\text {TM }}$ configurations are illustrated in Figure 4.

Contact the factory to discuss custom configurations and additional options that may be available to satisfy special user requirements.

| Key to Symbols Used in Figures 2-4 |  |  |
| :---: | :---: | :---: |
|  | Front Panel Symbol | Schematic Symbol |
| HV bushing | $\bigcirc$ | $\bigcirc$ |
| Fuse | (1) | $\bigcirc$ |
| Load-break switch | $\phi$ | $\bullet$ |
| Parking stand | $\square$ |  |
| Switch/fuse interloc |  |  |



FIGURE 2: Front panel layouts and schematic diagrams for standard singlephase padmounted Switch-Pad ${ }^{\text {TM }}$ configurations. (Continued on next page.)


FIGURE 2 (Continued): Front panel layouts and schematic diagrams for standard single-phase padmounted Switch-Pad™ configurations. (Continued on next page.)


FIGURE 2 (Continued): Front panel layouts and schematic diagrams for standard single-phase padmounted Switch-Pad™ ${ }^{\text {configurations. }}$
Ros

FIGURE 3: Cover layouts and schematic diagrams for standard single-phase submersible Switch-Pad™ configurations.

|  |  | （1）（1）（0） ○ッロッ ッ○ OッOッ ロ $O \backsim O \backsim O \backsim$ |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| （2）（1）（1） ○ッOッ ッ○ ○ー○ッツ○ ○ッ○ッ○凹 |  | $\begin{array}{cc}  & 0 \\ O \backsim O & \backsim O \\ O \backsim & \backsim O \\ O \leadsto & O \end{array}$ |  |
| $\varnothing \quad \varnothing \varnothing$ ○ッ○ッ ッ○ Oッロッッロ $O \backsim O \backsim O \backsim$ |  | （2）（1）（1） <br>  <br>  |  |
| （1）（1）（2） ○ッOッ 1 ज ○凹○ッФッ○ $\bigcirc \backsim \bigcirc \backsim O \backsim$ |  |  |  |

FIGURE 4：Front panel layouts and schematic diagrams for standard three－phase padmounted Switch－Pad™ configurations．

## Switch-PadTM

Catalog Section 70-10
Document 2.4.01, Revision 02, November 19, 2004
Copyright © 2004 Howard Industries, Inc.
Laurel, Mississippi
Telephone: 601-425-3151
Fax: 601-649-8090
E-mail: mkt@howard-ind.com
Web: howardtransformers.com

