

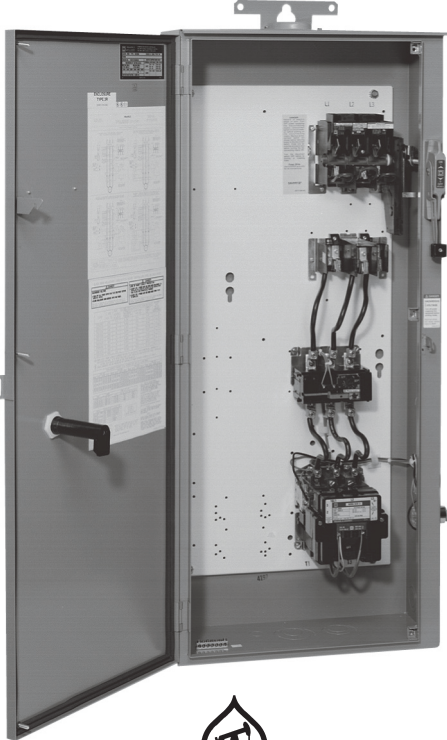
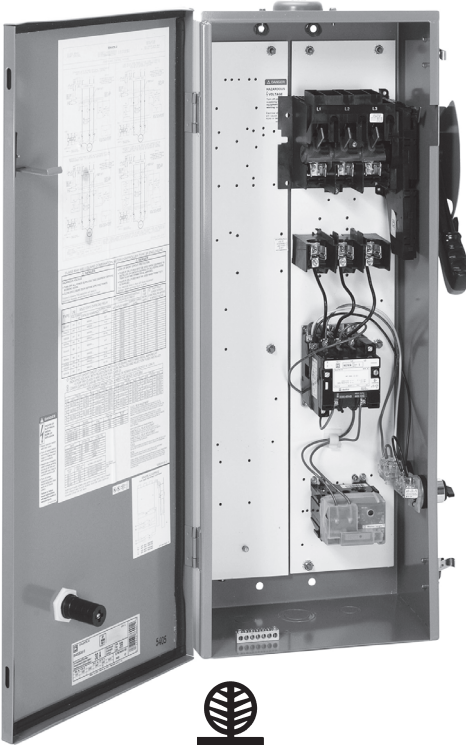
# Well-Guard Control™

## Pumping Plant Panels

Catalog  
8940CT9701R11/15

2016

Class 8940



### CONTENTS

|                                     |         |
|-------------------------------------|---------|
| Selection .....                     | Page 3  |
| Factory Modifications .....         | Page 6  |
| Specifications .....                | Page 7  |
| Replacement Overload Relays .....   | Page 8  |
| Thermal Unit Selection Tables ..... | Page 9  |
| Dimensions .....                    | Page 10 |



by Schneider Electric





## Irrigation and Oil Field Style

Class 8940 Type SS and XS panels in NEMA 3R enclosures are specifically designed for pumping applications. Extra space is provided for field installation of auxiliary equipment.

These pumping plant panels feature the following:

- Type S contactor provided as standard
- Approval for submersible pump applications
- Motor Logic™ solid-state overload relay (SSOLR)—Class 10/20 (selectable) through 200 hp @ 480 V, 100 hp @ 240 V—included in the base catalog number for Type SS (the H30 suffix is not required). Includes a rubber boot.
- A Start push button and a Hand-Off-Auto selector switch as standard
- Adjustable trip current
- Phase failure sensitivity through 200 hp @ 480 V, 100 hp @ 240 V, Type SS only
- Ambient temperature compensated overload relay
- All devices UL Listed, and marked “Suitable For Use As Service Equipment”

**NOTE:** Motor Logic SSOLRs are designed to protect 50/60 Hz, three-phase AC motors from overload and phase loss conditions. Open Delta systems or grounded B-phase systems are difficult to balance and could cause the Motor Logic SSOLR to trip. For applications of this nature, bimetallic overload relays (Form **B12**) are recommended. You can substitute an IEC ambient-compensated bimetallic overload relay (up to size 5) for the Motor Logic SSOLR on Type SS devices only. Request Form **B12** and indicate the motor hp (no charge).

For information on ordering, see the Catalog Numbering System for NEMA contactors and starters in *Digest* Section 16.

**Table 1: 3-Pole Polyphase—480 Vac Maximum (50–60 Hz)—Fusible or Thermal-Magnetic Circuit Breaker**

| Voltage | Coil Voltage     | Maximum Hp, Polyphase       | Fuse Clip (A) <sup>[1]</sup> or Circuit Breaker | Class 8940, Type            |
|---------|------------------|-----------------------------|---|-----------------------------|
| 240     | 240-60<br>220-50 | 3, 5, 7.5                   | 30 A  | SSC2007 <sup>[2], [3]</sup> |
|         |                  | 10, 15                      | 60 A  | SSD2015 <sup>[2], [3]</sup> |
|         |                  | 20, 25, 30                  | 100 A   | SSE2030 <sup>[2]</sup>      |
|         |                  | 40, 50                      | 200 A   | SSF2050 <sup>[2]</sup>      |
|         |                  | 75                          | LLL36400U31X <sup>[4]</sup>                     | XSG2075 <sup>[5]</sup>      |
|         |                  | 100 (fusible style)         | 400 A   | SSG2100 <sup>[2]</sup>      |
|         |                  | 100 (circuit breaker style) | LLL36400U31X <sup>[4]</sup>                     | XSG2100 <sup>[5]</sup>      |
|         |                  | 200                         | MJL36800 <sup>[4]</sup>                         | XSH2200 <sup>[5]</sup>      |
|         |                  | 250, 300                    | PLL34120 <sup>[4]</sup>                         | XSJ2300 <sup>[5]</sup>      |
| 480     | 480-60<br>440-50 | 3, 5, 7.5, 10               | 30 A  | SSC4010 <sup>[2], [3]</sup> |
|         |                  | 15, 20, 25                  | 60 A  | SSD4025 <sup>[2], [3]</sup> |
|         |                  | 30                          | 60 A  | SSD4030 <sup>[2], [3]</sup> |
|         |                  | 40, 50                      | 100 A   | SSE4050 <sup>[2]</sup>      |
|         |                  | 60, 75, 100                 | 200 A   | SSF4100 <sup>[2]</sup>      |
|         |                  | 150                         | LLL36400U31 <sup>[4]</sup>                      | XSG4150 <sup>[5]</sup>      |
|         |                  | 200 (fusible style)         | 400 A   | SSG4200 <sup>[2]</sup>      |
|         |                  | 200 (circuit breaker style) | LLL36400U31X <sup>[4]</sup>                     | XSG4200 <sup>[5]</sup>      |
|         |                  | 300, 350, 400               | MJL36800 <sup>[4]</sup>                         | XSH4400 <sup>[5]</sup>      |
|         |                  | 500, 600                    | PLL34120 <sup>[4]</sup>                         | XSJ4600 <sup>[5]</sup>      |

<sup>[1]</sup> Fuse clips are sized for use with dual-element time-delay fuses.

<sup>[2]</sup> A voltage code is not required for 240 V or 480 V common control with 8940SS controllers.

<sup>[3]</sup> To select a Motor Logic SSOLR with an FLA lower than the standard NEMA sizing, use the four-character Form H30•. See “Special Factory-Assembled Overload/Contactor Size Combinations” under “Factory Modifications: Solid-State Overload Relay” in *Digest* Section 16.

<sup>[4]</sup> Circuit breaker disconnect provided. (See *Digest* Section 7 for circuit breaker adjustment range.)

<sup>[5]</sup> See Table 3 on page 4 for the coil voltage codes.

# Well-Guard Control™ Pumping Plant Panels Irrigation and Oil Field Style

**Table 2: 3-Pole Polyphase—480 Vac Maximum (50–60 Hz)—  
Electronic Motor Circuit Protector (MCP)**

| Voltage | Coil Voltage <sup>[1]</sup> | Max. Hp Polyphase | Class 8940, Type              | Circuit Breaker |
|---------|-----------------------------|-------------------|-------------------------------|-----------------|
| 240     | 240–60<br>220–50            | 30                | XSE2030V03H30                 | HLL36100M73     |
|         |                             | 40                | XSE2040V03H309 <sup>[2]</sup> | JLL36250M75     |
|         |                             | 50                | XSF2050V03H30                 | JLL36250M75     |
| 480     | 480–60<br>440–50            | 40                | XSE4040V06H30                 | HLL36100M73     |
|         |                             | 50                | XSE4050V06H30                 |                 |
|         |                             | 75                | XSE4075V06H309 <sup>[2]</sup> | JLL36250M75     |
|         |                             | 100               | XSF4100V06H30                 | JLL36250M75     |

<sup>[1]</sup> See Table 3 for the coil voltage codes.

<sup>[2]</sup> FLA is 45–135.

**Table 3: Coil Voltage Codes**

| 60 Hz                  | Voltage |  | Code |
|------------------------|---------|--|------|
|                        | 50 Hz   |  |      |
| 24 <sup>[1], [2]</sup> | —       |  | V01  |
| 120 <sup>[2]</sup>     | 110     |  | V02  |
| 208 <sup>[2]</sup>     | —       |  | V08  |
| 240                    | 220     |  | V03  |
| —                      | 380     |  | V05  |
| 480                    | 440     |  | V06  |
| 600 <sup>[2]</sup>     | 550     |  | V07  |

<sup>[1]</sup> 24 V coils are not available on Size 4 starters.

<sup>[2]</sup> Form S (separate control) is required for 24 V, 120 V, 208 V, and 600 V coils.



Listed File E152395  
CCN NKJH



Listed File E152395  
CCN NKJH7

## Oil Field Style

The Style S2 line of Class 8940 pumping plant panels in NEMA 3R enclosures are specifically designed for oil field applications. All panels are provided with an electronic motor circuit protector (MCP) or a visible-blade, fused disconnect switch. This line of pumping plant panels features:

- Rugged spring latches for easy access without a tool
- Side-mounted control units for convenient operation
- Available door retainer for windy areas
- A Hand-Off-Auto selector switch as standard
- UL Listed for use as service equipment for motors
- Extra panel space for additional electrical controls
- All devices UL Listed and marked “Suitable For Use As Service Equipment”

**NOTE:** To specify a Motor Logic Class 20/30 (selectable) SSOLR, include Form H30 in the catalog number, as shown in Table 4.

If a melting alloy overload relay is selected (no H30 suffix), thermal units must be ordered separately. See “Thermal Unit Selection” in the *Digest*.

**Table 4: 3-Pole Polyphase—480 Vac Maximum (50–60 Hz)**

| V   | Max. Hp Polyphase | Coil Voltage     | NEMA Size | Fusible Disconnect Style |                            | Circuit Breaker Style |                            |
|-----|-------------------|------------------|-----------|--------------------------|----------------------------|-----------------------|----------------------------|
|     |                   |                  |           | Fuse Clip (A)            | Class 8940, Type           | Circuit Breaker       | Class 8940, Type           |
| 240 | 7.5               | 240–60<br>220–50 | 1         | 30                       | WC1S2V03H30 <sup>[1]</sup> | HLL36030M71           | XC1S2V03H30 <sup>[1]</sup> |
|     | 10                |                  | 2         | 60                       | WD1S2V03H30 <sup>[1]</sup> | HLL36050M72           | XD1S2V03H30 <sup>[1]</sup> |
|     | 15                |                  |           |                          |                            | HLL36100M73           | XD2S2V03H30 <sup>[1]</sup> |
|     | 30                |                  | 3         | 100                      | WE1S2V03H30                | HLL36100M73           | XE1S2V03H30                |
|     | 50                |                  | 4         | 200                      | WF1S2V03H30                | JLL36250M75           | XF2S2V03H30                |
| 480 | 10                | 480–60<br>440–50 | 1         | 30                       | WC3S2V06H30                | HLL36030M71           | XC4S2V06H30                |
|     | 15                |                  | 2         | 60                       | WD3S2V06H30                | HLL36030M71           | XD3S2V06H30                |
|     | 25                |                  |           |                          |                            | HLL36050M72           | XD4S2V06H30                |
|     | 50                |                  | 3         | 100                      | WE3S2V06H30                | HLL36100M73           | XE3S2V06H30                |
|     | 100               |                  | 4         | 200                      | WF3S2V06H30                | JLL36250M75           | XF4S2V06H30                |

<sup>[1]</sup> To select a Motor Logic SSOLR with an FLA lower than the standard NEMA sizing, use the four-character **Form H30**. See “Special Factory-Assembled Overload Relay / Contactor Size Combinations” under “Factory Modifications: Solid-State Overload Relay” in the *Digest*.

# Well-Guard Control™ Pumping Plant Panels

## Factory Modifications and Accessories

### Factory Modifications and Accessories

**Table 5: Factory Modifications (Forms)**

| Description  |   | Form Letter      |    |
|--|---|------------------|----|
| <b>Substitutions</b>   |   |                  |    |
| Class 10 IEC bimetallic overload relay—specify the motor hp (NEMA Sizes 0–4 only)  |   | B12              |    |
| Class 10/20 (selectable) Motor Logic SSOLR (comes standard on Type SS—no Form required)  |   | H30              |    |
| Standard trip melting alloy overload relays  |   | Y61              |    |
| Quick-trip melting alloy overload relay (Sizes 1 and 2 only)—not available on IEC style contactors   |   | Y611             |    |
| Slim panel—Style S2, Types WC, WD, WE, XC, XD, and XE only   |   | L8               |    |
| Short panel—Types SSE, SSF, XE (Style S2) and XF (Style S2) only   |   | L9               |    |
| Control operators moved from the enclosure side to the door  |   | Y45              |    |
| Class R rejection fuse clips for standard fuse clip (Type SSC, SSD, SSE, SSF, SSG, WC, WD, WE and WF)  |   | Y1071            |    |
| <b>Additional Features</b>   |   |                  |    |
| Control transformer with fused primary   | <i>Types and corresponding VA ratings:</i> <ul style="list-style-type: none"> <li>• SSC, WC, XC (50 VA)</li> <li>• SSD, WD, XD (100 VA)</li> <li>• SSE, WE, XE (150 VA)</li> <li>• SSF, WF, XF (300 VA)</li> <li>• SSG, XSG (50 VA and an interposing control relay)</li> </ul> | F4T              |    |
| Factory-installed door wind latch assembly in a standard Class 8940 Type SSC, SSD, SSE, SSF, XSE, or XSF                                     |   | G45              |    |
| Elapsed time meter   |   | G97              |    |
| On-delay timer   |   | K25              |    |
| Off delay timer  |   | K26              |    |
| Program timer with day omission feature  |   | K141             |    |
| Backspin timer (time delay upon energization)  |   | K15              |    |
| Start push button (Style S2 panels only)   |   | A28              |    |
| Pilot light—does not include auxiliary contact (Specify lens color—for more selections, see “Pilot Light Forms” in <i>Digest</i> Section 16) |   | red              | P1 |
|  |   | green            | P2 |
| Separate control   |   | S                |    |
| Auxiliary contacts (specify N.O. or N.C.)  |   | X <sup>[1]</sup> |    |
| Special UL panel label for modified UL Listed devices on non-standard panels (requires approval by the manufacturing plant)                  |   | Y1               |    |
| Lightning arrester   |   | Y1532            |    |
| Phase failure / phase reversal relay with time delay, including under- and over-voltage protection   |   | R44              |    |

<sup>[1]</sup> To determine the maximum number of auxiliary contacts that can be added to each Type S device, and for the appropriate X Form, refer to the *Digest* pages for *non-reversing single-speed NEMA contactors*, or for *reversing or two-speed devices*.

**Table 6: Class 8940 Electrical Interlocks**

| Disconnect Switches      |                      |                      | Circuit Breakers |            |         |         |
|--------------------------|----------------------|----------------------|------------------|------------|---------|---------|
| Class and Type           | SPDT                 | DPDT                 | Class and Type   | Powerpact™ | SPDT    | DPDT    |
| <b>Irrigation Panels</b> |                      |                      |                  |            |         |         |
| 8940SSC...               | EIK-1 <sup>[1]</sup> | EIK-2 <sup>[1]</sup> | 8940SSC...       | n/a        | n/a     | n/a     |
| 8940SSD...               | EIK-1 <sup>[1]</sup> | EIK-2 <sup>[1]</sup> | 8940SSD...       | n/a        | n/a     | n/a     |
| 8940SSE...               | 9999TC10             | 9999TC20             | 8940SSE...       | L          | 9999R26 | 9999R27 |
| 8940SSF...               | 9999R39              | 9999R40              | 8940SSF...       | L          | 9999R26 | 9999R27 |
| 8940SSG...               | 9999R35              | 9999R36              | 8940SSG...       | L          | 9999R26 | 9999R27 |
| —                        | —                    | —                    | 8940XSG...       | L          | 9999R26 | 9999R27 |
| —                        | —                    | —                    | 8940XSH...       | M          | 9999R26 | 9999R27 |
| —                        | —                    | —                    | 8940XSJ...       | M          | —       | —       |
| <b>Oil Field Panels</b>  |                      |                      |                  |            |         |         |
| 8940WC...                | 9999TC10             | 9999TC20             | 8940XC           | H          | 9999R26 | 9999R27 |
| 8940WD...                | 9999TC10             | 9999TC20             | 8940XD           | H          | 9999R26 | 9999R27 |
| 8940WE...                | 9999TC10             | 9999TC20             | 8940XE           | H          | 9999R26 | 9999R27 |
| 8940WF...                | 9999R39              | 9999R40              | 8940XF           | J          | 9999R26 | 9999R27 |

<sup>[1]</sup> No class number required.

## Specifications

**Table 7: Class 8940—UL Listed Short Circuit Ratings**  
These ratings apply to standard enclosures, which include non-oversize NEMA 1, 4 & 4X Stainless, and 12.

| NEMA Size                                    | NEMA Fuse Class or Voltage | Available Amperes (RMS Symmetrical) |
|--|----------------------------|-------------------------------------|
| <b>Fusible Type</b>                          |                            |                                     |
| 0-3  | Class H or K               | 5,000                               |
| 0-3  | Class R                    | 100,000                             |
| 0-2  | Class H or K               | 5,000                               |
| 0-2  | Class R                    | 100,000                             |
| 4-5  | Class H or K               | 10,000                              |
| 4-5  | Class R                    | 100,000                             |
| 6  | Class H or K               | 18,000                              |
| 6  | Class R                    | 100,000                             |
| <b>Thermal-Magnetic Circuit Breaker Type</b> |                            |                                     |
| 0-5  | 0-480 V                    | 100,00                              |
| 6-7  | 0-480 V                    | 65,000                              |

**Table 8: Application Data, Class 8940**

| Type    | Disconnect Switch           | Fuse Base  | Contactor    | Overload Relay           |
|---------|-----------------------------|--|--------------|--------------------------|
| SSC2007 | 40567-200-51 <sup>[1]</sup> | 40566-143-51   | 8502SCO2     | 9065SF120 <sup>[2]</sup> |
| SSD2015 | 40567-200-51 <sup>[1]</sup> | 40566-143-51 (60 A 250 V) /<br>40566-144-51 (60 A 600 V) | 8502SDO2     | 9065SF220 <sup>[2]</sup> |
| SSE2030 | 31301-056-65                | 31301-059-50   | 8052SEO2     | 9065SF320 <sup>[3]</sup> |
| SSF2050 | 31055-366-51                | Included with switch                                     | 8502SFO2     | 9065SF320 <sup>[3]</sup> |
| SSC4010 | 40567-200-51 <sup>[1]</sup> | 40566-143-51   | 8052SCO2     | 9065SF120 <sup>[2]</sup> |
| SSD4025 | 40567-200-51 <sup>[1]</sup> | 40566-143-51 (60 A 250 V) /<br>40566-144-51 (60 A 600 V) | 8502SDO2     | 9065SF220 <sup>[2]</sup> |
| SSD4030 | 40567-200-51 <sup>[1]</sup> | 40566-143-51 (60 A 250 V) /<br>40566-144-51 (60 A 600 V) | 8502REQ2617G | 9065SF220 <sup>[2]</sup> |
| SSE4050 | 31301-056-65                | 31301-059-50   | 8502SEO2     | 9065SF320 <sup>[3]</sup> |
| SSF4100 | 31055-366-51                | Included with switch                                     | 8502SFO2     | 9065SF420 <sup>[3]</sup> |
| XSG2075 | LLL36400E20                 | NA   | 8502SGO2     | 9065ST520 <sup>[2]</sup> |
| SSG2100 | 400 A Switch                | NA   | 31102-668-50 | 9065ST520 <sup>[2]</sup> |
| XSG2100 | LLL36600E20                 | NA   | 8502SGO2     | 9065ST520 <sup>[2]</sup> |
| XSH2200 | MJL36800                    | NA   | 8536SHO2     | 9065ST620 <sup>[2]</sup> |
| XSJ2300 | PLL34120                    | NA   | 8536JO2      | 9065ST720 <sup>[2]</sup> |
| XSG4150 | LLL36400E20                 | NA   | 8502SGO2     | 9065ST520 <sup>[2]</sup> |
| SSG4200 | 400 A Switch                | NA   | 31102-668-00 | 9065ST520 <sup>[2]</sup> |
| XSG4200 | LLL36600E20                 | NA   | 8502SGO2     | 9065ST520 <sup>[2]</sup> |
| XSH4400 | MJL36800                    | NA   | 8536SHO2     | 9065ST620 <sup>[2]</sup> |
| XSJ4600 | PLL34120                    | NA   | 8536JO2      | 9065ST720 <sup>[2]</sup> |

**NOTE:** Two operating mechanisms are shipped; keep one as a spare.

<sup>[1]</sup> Includes switch base and operating mechanism. To ensure handle compatibility, part number HM0610F must also be purchased.

<sup>[2]</sup> For a replacement boot, purchase 9999MRB12.

<sup>[3]</sup> For a replacement boot, purchase 9999MRB34.

# Well-Guard Control™ Pumping Plant Panels

## Replacement Overload Relays

### Replacement Overload Relays

**Table 9: Well-Guard Control™ Pump Panel Full Voltage—  
Class 8940 Replacement Overload Relays,  
Class 9065 Motor Logic SSOLR, 600 Vac Maximum**

| NEMA Starter Size | Overload Relay Size <sup>[1]</sup> | Overload Relay Ampere Range | Form No. | Class 10/20 Selectable SSOLR |   | Replacement Boot for SSOLR |
|-------------------|------------------------------------|-----------------------------|----------|------------------------------|---|----------------------------|
|                   |                                    |                             |          | Separate Mounting            | Replacement or Retrofit of Square D Type S Starters |                            |
| 1                 | 00B                                | 1.5 to 4.5                  | H308     | 9065SFB20                    | 9065SFB20 <sup>[2]</sup>                            | 9999MRB12                  |
| 1                 | 00C                                | 3 to 9                      | H309     | 9065SFC20                    | 9065SFC20 <sup>[2]</sup>                            | 9999MRB12                  |
| 1                 | 0                                  | 6 to 18                     | H300     | 9065SF020                    | 9065SF020 <sup>[2]</sup>                            | 9999MRB12                  |
| 1                 | 1                                  | 9 to 27                     | H30      | 9065SF120                    | 9065SF120 <sup>[2]</sup>                            | 9999MRB12                  |
| 2                 | 00C                                | 3 to 9                      | H308     | 9065SFC20                    | 9065SFC20 <sup>[2]</sup>                            | 9999MRB12                  |
| 2                 | 0                                  | 6 to 18                     | H309     | 9065SF020                    | 9065SF020 <sup>[2]</sup>                            | 9999MRB12                  |
| 2                 | 1                                  | 9 to 27                     | H300     | 9065SF120                    | 9065SF120 <sup>[2]</sup>                            | 9999MRB12                  |
| 2                 | 2                                  | 15 to 45                    | H30      | 9065SF220                    | 9065ST220   | 9999MRB12                  |
| 3                 | 3                                  | 30 to 90                    | H30      | 9065SF320                    | 9065ST320   | 9999MRB34                  |
| 4                 | 4                                  | 45 to 135                   | H30      | 9065SF420                    | 9065ST420   | 9999MRB34                  |
| 5                 | 5                                  | 90 to 270                   | H30      | N/A                          | 9065ST520 <sup>[3]</sup>                            | 9999MRB12                  |
| 5                 | 5                                  | 90 to 270                   | H30      | N/A                          | 9065SF520 <sup>[4]</sup>                            | 9999MRB12                  |
| 6                 | 6                                  | 180 to 540                  | H30      | N/A                          | 9065ST620 <sup>[3]</sup>                            | 9999MRB12                  |
| 7                 | 7                                  | 270 to 810                  | H30      | N/A                          | 9065ST720 <sup>[3]</sup>                            | 9999MRB12                  |

<sup>[1]</sup> Size 00B and 00C Motor Logic SSOLRs are not actual NEMA sizes.

<sup>[2]</sup> Size 00B, 00C, 0 and 1 are furnished without lugs. Lower amperage loads can be protected by looping power wires.

<sup>[3]</sup> Size 5, 6, and 7 replacement overload relays are only for existing Type S NEMA starters with Motor Logic overload relays. External CTs and additional components are not included.

<sup>[4]</sup> Size 5 is a complete drop-in replacement for Square D NEMA-style Type S melting alloy and Form Y500 overload relays only.

**Table 10: Class 9065 Bimetallic Overload Relay with CT pack (Class 10)**

| Catalog Number | FLA     |
|----------------|---------|
| 9065TJF40      | 40–63   |
| 9065TJF63      | 63–100  |
| 9065TJF100     | 100–160 |
| 9065TJF160     | 160–250 |



# Well-Guard Control™ Pumping Plant Panels

## Thermal Unit Selection Tables

### Thermal Unit Selection Tables

Melting Alloy Quick Trip Thermal Unit Selection Tables (Form Y611)  
Based on Motor Full Load Current <sup>[1], [2]</sup>

**Table H—NEMA Size 1 (Table 78)**

| Types WC, XC  |              |
|---------------|--------------|
| Motor Amperes | Thermal Unit |
| 2.26-2.51     | FB 3.33      |
| 2.52-2.81     | FB 3.71      |
| 2.82-3.09     | FB 4.1       |
| 3.10-3.30     | FB 4.5       |
| 3.31-3.69     | FB 4.75      |
| 3.70-4.27     | FB 5.3       |
| 4.28-4.72     | FB 6.1       |
| 4.73-5.25     | FB 6.75      |
| 5.26-5.53     | FB 7.45      |
| 5.54-5.81     | FB 7.8       |
| 5.82-6.14     | FB 8.2       |
| 6.15-6.44     | FB 8.6       |
| 6.45-6.81     | FB 9.0       |
| 6.82-7.19     | FB 9.5       |
| 7.20-7.59     | FB 10        |
| 7.60-7.99     | FB 10.6      |
| 8.00-8.17     | FB 11.2      |
| 8.18-8.74     | FB 12.1      |
| 8.75-9.31     | FB 13.1      |
| 9.32-9.94     | FB 13.9      |
| 9.95-10.5     | FB 14.8      |
| 10.6-11.1     | FB 15.6      |
| 11.2-12.0     | FB 16.4      |
| 12.0-12.4     | FB 17.6      |
| 12.5-13.1     | FB 18.4      |
| 13.2-14.3     | FB 19.4      |
| 14.4-15.3     | FB 21.1      |
| 15.4-15.9     | FB 22.6      |
| 16.0-16.9     | FB 23.6      |
| 17.0-18.3     | FB 24.8      |
| 18.4-19.5     | FB 26.7      |
| 19.6-20.5     | FB 28.3      |
| 20.6-21.1     | FB 29.6      |
| 21.2-22.6     | FB 30.5      |
| 22.7-23.7     | FB 32.6      |
| 23.8-24.3     | FB 34.1      |
| 24.4-26.0     | FB 35        |

**Table J—NEMA SIZE 3 (Table 80)**

| Types WE, XE  |              |
|---------------|--------------|
| Motor Amperes | Thermal Unit |
| 20.5-21.7     | FB 26.7      |
| 21.8-23.1     | FB 28.3      |
| 23.2-24.8     | FB 29.6      |
| 24.9-26.5     | FB 30.5      |
| 26.6-28.4     | FB 32.6      |
| 28.5-30.4     | FB 34.1      |
| 30.5-32.8     | FB 38.3      |
| 32.9-34.9     | FB 40.2      |
| 35.0-37.3     | FB 42        |
| 37.4-39.8     | FB 44        |
| 39.9-42.5     | FB 46        |
| 42.6-45.8     | FB 48        |
| 45.9-48.2     | FB 50.5      |
| 48.3-50.6     | FB 52.5      |
| 50.7-53.1     | FB 55.5      |
| 53.2-56.5     | FB 58        |
| 56.6-59.4     | FB 60        |
| 59.5-63.4     | FB 63.5      |
| 63.5-71.0     | FB 69        |
| 71.1-78.8     | FB 77        |
| 78.9-86.0     | FB 84        |

**Table I—NEMA SIZE 2 (Table 79)**

| Types WD, XD  |              |
|---------------|--------------|
| Motor Amperes | Thermal Unit |
| 4.24-4.69     | FB 6.1       |
| 4.70-5.21     | FB 6.75      |
| 5.22-5.49     | FB 7.45      |
| 5.50-5.74     | FB 7.8       |
| 5.75-6.07     | FB 8.21      |
| 6.08-6.35     | FB 8.6       |
| 6.36-6.71     | FB 9.0       |
| 6.72-7.03     | FB 9.5       |
| 7.04-7.53     | FB 10        |
| 7.54-7.91     | FB 10.6      |
| 7.92-8.53     | FB 11.2      |
| 8.54-9.14     | FB 12.1      |
| 9.15-9.71     | FB 13.1      |
| 9.72-10.2     | FB 13.9      |
| 10.3-10.8     | FB 14.8      |
| 10.9-11.5     | FB 15.6      |
| 11.6-12.3     | FB 16.4      |
| 12.4-13.0     | FB 17.6      |
| 13.1-13.9     | FB 18.4      |
| 14.0-15.1     | FB 19.4      |
| 15.2-16.1     | FB 21.1      |
| 16.2-16.9     | FB 22.6      |
| 17.0-17.9     | FB 23.6      |
| 18.0-19.4     | FB 24.8      |
| 19.5-20.7     | FB 26.7      |
| 20.8-21.7     | FB 28.3      |
| 21.8-22.3     | FB 29.6      |
| 22.4-23.9     | FB 30.5      |
| 24.0-25.1     | FB 32.6      |
| 25.2-25.9     | FB 34.1      |
| 26.0-27.1     | FB 35        |
| 27.2-28.6     | FB 36.6      |
| 28.7-30.1     | FB 38.3      |
| 30.2-31.7     | FB 40.2      |
| 31.8-33.3     | FB 42        |
| 33.4-34.5     | FB 44        |
| 34.6-36.5     | FB 46        |
| 36.8-38.5     | FB 48        |
| 38.6-39.9     | FB 50.5      |
| 40.0-45.0     | FB 52.5      |

**Table K—NEMA SIZE 4 (Table 81)**

| Types WF, XF  |              |
|---------------|--------------|
| Motor Amperes | Thermal Unit |
| 52.2-55.6     | FB 50.5      |
| 55.7-58.8     | FB 52.5      |
| 58.9-62.5     | FB 55.5      |
| 62.6-66.0     | FB 58        |
| 66.1-70.1     | FB 60        |
| 70.2-78.6     | FB 63.5      |
| 78.7-92.0     | FB 69        |
| 92.1-102      | FB 77        |
| 103-114       | FB 84        |
| 115-123       | FB 92        |
| 124-133       | FB 105       |

<sup>1</sup> These thermal unit selections are for controllers protected from solar radiation and located in an ambient temperature of 40 °C (104 °F) or less. For overload relays which are not ambient temperature compensated (NEMA Sizes 3 and 4), thermal units larger than normal might be required under conditions of high ambient temperature or solar radiation. Consult your local Square D field office.

<sup>2</sup> This is a partial list of Thermal Unit Selection Tables. The complete list can be found in *Digest* Section 16.

# Well-Guard Control™ Pumping Plant Panels

## Dimensions

### Dimensions

Table 11: Approximate Dimensions

| Type                     | Fig. | Units | A     | B     | C    | D     | E     | F     | G    | H    | J    | K    | Conduit L | M    | Knockout  |                 |                    | V    |
|--------------------------|------|-------|-------|-------|------|-------|-------|-------|------|------|------|------|-----------|------|-----------|-----------------|--------------------|------|
|                          |      |       |       |       |      |       |       |       |      |      |      |      |           |      | R         | S               | T                  |      |
| SSC<br>SSD               | 1    | in.   | 39.05 | 13.73 | 6.67 | 9.70  | 33.05 | 37.93 | 7.00 | 2.41 | 3.00 | 3.00 | 2.5       | 2.41 | 0.5, 0.75 | 1.25,<br>1.5    | 0.5, 0.75          | 1.41 |
|                          |      | mm    | 992   | 349   | 169  | 239   | 839   | 963   | 178  | 61   | 76   | 76   |           |      |           |                 |                    |      |
| SSE<br>SSF<br>XSE<br>XSF | 2    | in.   | 49    | 19.15 | 8.81 | 10.37 | 44.07 | 47.88 | 7.00 | 2.17 | 2.69 | 3.44 | 2.5       | 2.57 | 0.5, 0.75 | 1.25,<br>1, 2.5 | 1, 1.25,<br>1.5, 2 | 1.41 |
|                          |      | mm    | 1245  | 486   | 224  | 263   | 1119  | 1216  | 178  | 55   | 68   | 87   |           |      |           |                 |                    |      |

Figure 1: Sizes 1 and 2

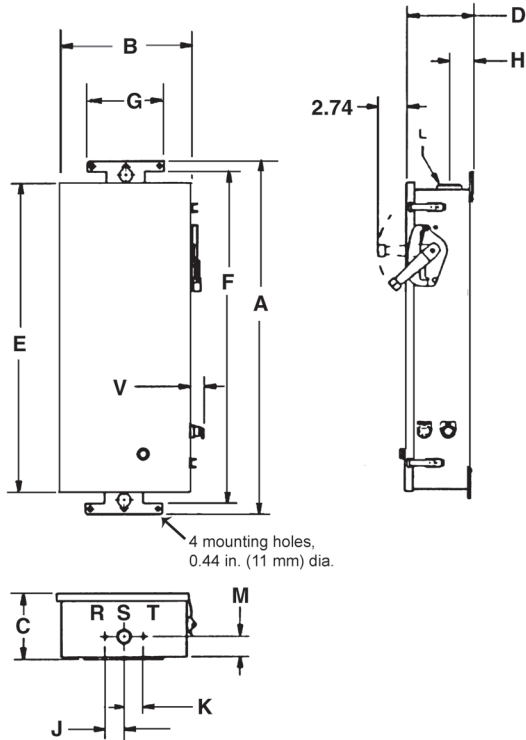
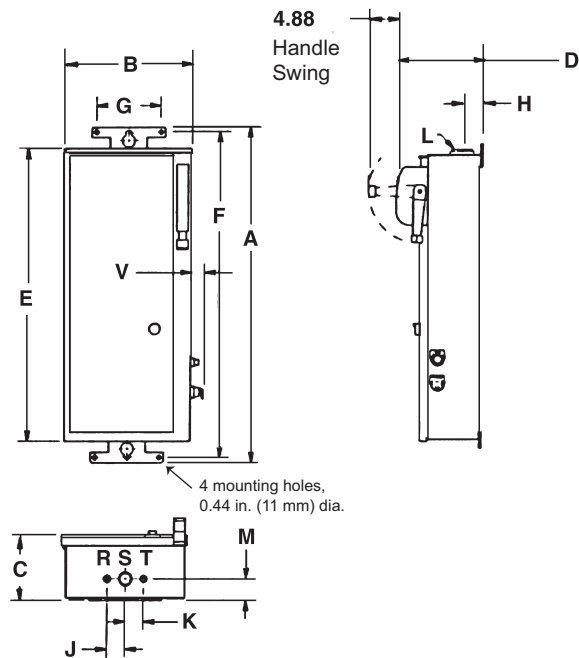


Figure 2: Sizes 3 and 4



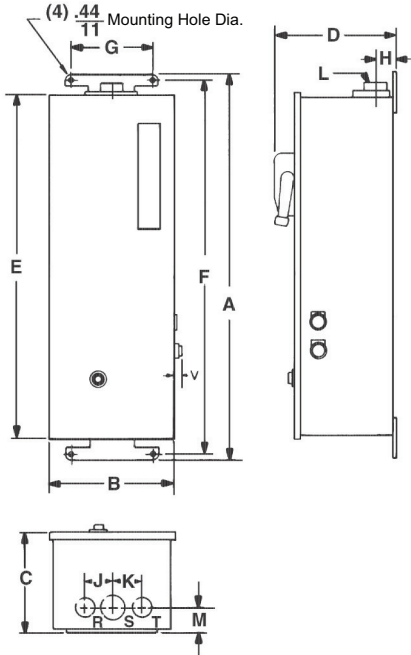
Dual Dimensions:  $\frac{\text{in.}}{\text{mm}}$

# Well-Guard Control™ Pumping Plant Panels Dimensions

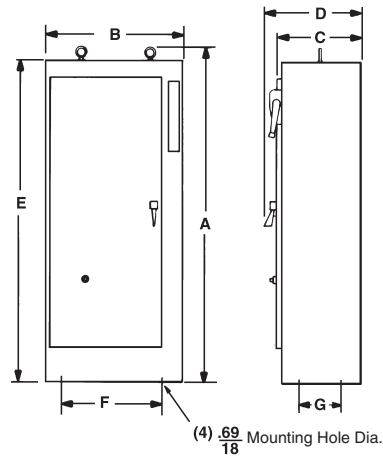
**Table 12: Approximate Dimensions**

| Style  | Type                 | Fig. | Units | A     | B     | C     | D     | E     | F     | G     | H    | J    | K    | Conduit L | M    | Knockout     |                    |                    | V    |      |    |
|--------|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|-----------|------|--------------|--------------------|--------------------|------|------|----|
|        |                      |      |       |       |       |       |       |       |       |       |      |      |      |           |      | R            | S                  | T                  |      |      |    |
| S2     | WC<br>WD<br>XC<br>XD | 3    | in.   | 38.50 | 19.00 | 7.29  | 9.39  | 34.00 | 37.38 | 7.00  | 2.18 | 2.13 | 2.13 | 1.5       | 2.12 | 0.5–<br>0.75 | 1, 1.25,<br>1.5    | 0.5,<br>0.75       | 1.41 |      |    |
|        |                      |      | mm    | 978   | 483   | 185   | 239   | 864   | 949   | 178   | 55   | 54   | 54   |           | 54   |              |                    |                    | 54   | 36   |    |
|        | WE<br>WF<br>XE<br>XF | 3    | in.   | 56.50 | 23.00 | 8.23  | 10.33 | 52.00 | 55.38 | 7.00  | 2.18 | 2.69 | 3.44 | 2         | 2.68 | 0.5–<br>0.75 | 1, 1.25,<br>2, 2.5 | 1, 1.25,<br>1.5, 2 | 1.50 |      |    |
|        |                      |      | mm    | 1435  | 584   | 209   | 262   | 1321  | 1407  | 178   | 55   | 68   | 87   |           | 68   |              |                    |                    | 68   | 38   |    |
| SS, XS | SSG<br>XSG           | 3    | in.   | 74.50 | 22.00 | 13.80 | 17.55 | 73.00 | 0.50  | 14.00 | —    | 0.56 | —    | —         | —    | —            | —                  | —                  | —    | 1.50 |    |
|        |                      |      | mm    | 1892  | 559   | 351   | 446   | 1854  | 13    | 356   | —    | 14   | —    | —         | —    | —            | —                  | —                  | —    | —    | 38 |
|        | XSH                  | 4    | in.   | 82.50 | 36.00 | 20.00 | 23.25 | 80.00 | 33.75 | 16.50 | —    | —    | —    | —         | —    | —            | —                  | —                  | —    | —    |    |
|        |                      |      | mm    | 2096  | 914   | 508   | 591   | 2032  | 857   | 419   | —    | —    | —    | —         | —    | —            | —                  | —                  | —    | —    | —  |
|        | XSJ                  | 4    | in.   | 92.50 | 34.00 | 20.00 | 23.25 | 90.00 | 31.75 | 16.50 | —    | —    | —    | —         | —    | —            | —                  | —                  | —    | —    | —  |
|        |                      |      | mm    | 2350  | 864   | 508   | 591   | 2286  | 806   | 419   | —    | —    | —    | —         | —    | —            | —                  | —                  | —    | —    | —  |

**Figure 3: Size 5 and Style S2**



**Figure 4: Sizes 6 and 7**



Dual Dimensions:  $\frac{\text{in.}}{\text{mm}}$

## Well-Guard Control™ Pumping Plant Panels

**Schneider Electric USA, Inc.**  
800 Federal Street  
Andover, MA 01810 USA  
888-778-2733  
[www.schneider-electric.us](http://www.schneider-electric.us)

Schneider Electric, Square D, Well-Guard Control, and Motor Logic are trademarks and the property of Schneider Electric SE, its subsidiaries, and affiliated companies. All other trademarks are the property of their respective owners.  
8940CT9701R11/15 Replaces 8940CT9701R7/08 09/2008  
© 1997–2016 Schneider Electric All Rights Reserved