



Type SSD4030



Type SSE4050

Class 8940 Type SS, XS Selection

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.

- Type S Contactor provided as standard
- Approved for submersible pump applications
- Motor Logic™ Class 10/20 (Selectable) SSOLR through 200 hp–480 V, 100 hp–240 V. Included in the catalog number for Type SS (the H30 suffix is not required). (Includes rubber boot.)
- All prices include a Start push button and a Hand-Off-Auto selector switch
- Adjustable trip current
- Phase failure sensitive through 200 hp–480 V, 100 hp–240 V, Type SS only
- Ambient temperature compensated overload
- All devices are 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, it is recommended that bimetallic overload relays (Form B12) be used.

Table 16.270: 3-Pole Polyphase—480 Vac Maximum (50–60 Hz)—Fusible or Thermal-Magnetic Circuit Breaker [1]

Volts	Maximum Hp Polyphase	Coil Voltage	Fuse Clip (A) [2]	Type
240	3, 5, 7.5	240–60 220–50	30	SSC2007 [4][5]
	10, 15		60	SSD2015 [4][5]
	20, 25, 30		100	SSE2030 [4]
	40, 50		200	SSF2050 [4]
	75		LLL36400U31X [3]	XSG2075 [6]
	100		400	SSG2100 [4]
	100		LLL36600U31X [3]	XSG2100 [6]
	200		MJL36800 [3]	XSH2200 [6]
	250, 300		PLL34120 [3]	XSJ2300 [6]
	480		3, 5, 7-1/2, 10	480–60 440–50
15, 20, 25		60	SSD4025 [4][5]	
30		60	SSD4030 [4][5]	
40, 50		100	SSE4050 [4]	
60, 75, 100		200	SSF4100 [4]	
150		LLL36400U31X[3]	XSG4150 [6]	
200		400	SSG4200 [4]	
200		LLL36600U31X [3]	XSG4200 [6]	
300, 350, 400		MJL36800 [3]	XSH4400 [6]	
500, 600		PLL34120 [3]	XSJ4600 [6]	

Table 16.271: 3-Pole Polyphase—480 Vac Maximum (50–60 Hz)—Electronic Motor Circuit Protector (MCP)

Volts	Max. Hp Polyphase	Coil Voltage [6]	Circuit Breaker [7]	Type
240	30	240–60 220–50	HLL36100M73	XSE2030V03H30
	40		JLL36250M75	XSE2040V03H309 [8]
	50		JLL36250M75	XSF2050V03H30
480	40	480–60 440–50	HLL36100M73	XSE4040V06H30
	50		JLL36250M75	XSE4050V06H30
	75		JLL36250M75	XSE4075V06H309 [8]
	100		JLL36250M75	XSF4100V06H30

Table 16.272: Class 8940—UL Listed Short Circuit Ratings

NEMA Size	NEMA Fuse Class or Voltage	Enclosure	Available Amperes RMS Symmetrical
Fusible Type			
0–3	Class H or K	Standard	5,000
0–3	Class R	Standard	100,000
0–2	Class H or K	Standard	5,000
0–2	Class R	Standard	100,000
4–5	Class H or K	Standard	10,000
4–5	Class R	Standard	100,000
6	Class H or K	Standard	18,000
6	Class R	Standard	100,000
Thermal-Magnetic Circuit Breaker Type			
0–5	0–480 V	Standard	100,000
6, 7	0–480 V	Standard	65,000

NOTE: Standard enclosures include non-oversize NEMA 1, 4 & 4X Stainless, and 12.

For How to Order information, see page 16-30.

[1] To substitute an IEC ambient compensated bimetallic overload relay (up to size 5) for the Motor Logic SSOLR, request Form B12 and state motor hp (no charge). This applies to the above (SSx) devices only.
 [2] Fuse clips are sized for use with dual-element time-delay fuses.
 [3] Circuit breaker disconnect supplied. (See Section 7 for circuit breaker adjustment range.)
 [4] A voltage code is not required for 240 V or 480 V common control with 8940SS controllers.
 [5] To select a Motor Logic SSOLR with an FLA lower than the standard NEMA sizing, use the four-character Form H30. See page 16-119.
 [6] See Table 16.273 for coil voltage codes.
 [7] See page 7-32 for circuit breaker adjustment range.
 [8] FLA is 45–135.



Type WC3S2V06



Type XE3S2V02B12S

Class 8940 Type W, X

Class 8940 style S2 pumping plant panels in NEMA 3R enclosures are specifically designed for oil field applications. All panels are supplied 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
- Door retainer available for windy areas
- Price includes Hand-Off-Auto selector switch
- UL Listed for use as service equipment for motors
- Extra panel space for additional electrical controls
- All devices are UL Listed, and marked "SUITABLE FOR USE AS SERVICE EQUIPMENT"

Thermal units must be ordered separately. See page 16-132 for selection information.

NOTE: Motor Logic™ Class 20/30 (selectable) SSOLR, Form H30, must be included in the catalog number.

Table 16.275: 3-Pole Polyphase—480 Vac Maximum (50–60 Hz)

V	Max. Hp Poly-phase	Coil Voltage [12]	NEMA Size	Fusible Disconnect Type		Circuit Breaker Type	
				Fuse Clip (A) [13]	Type	Frame Size	Type
240	7-1/2	240–60 220–50	1	30	WC1S2V03H30 [14]	HLL36030M71	XC1S2V03H30 [14]
	10		2	60	WD1S2V03H30 [14]	HLL36050M72	XD1S2V03H30 [14]
	15					HLL36100M73	XD2S2V03H30 [14]
	30					HLL36100M73	XE1S2V03H30
	50					JLL36250M75	XF2S2V03H30
480	10	480–60 440–50	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

Table 16.276: Factory Modifications (Forms)

Description	Form Letter
Substitute Class 10 IEC overload relay – state motor hp (NEMA Sizes 0–4 only)	B12
Control transformer with fused primary: Types: • NPD, NPE, NPF, SSC, WC, XC (50 VA) • NPG, SSD, XD, WD (100 VA) • NPJ, SSE, XE, WE (150 VA) • SSF, XF, WF (300 VA) • SG, NSG, XSG (50 VA and an interposing control relay)	F4T
Factory-installed door wind latch assembly in a standard Class 8940 Type SSC, SSD, SSE, SSF, XSE, and XSF	G45
Elapsed time meter	G97
Substitute Class 10/20 (selectable) Motor Logic™ SSOLR [15]	H30
On Delay Timer	K25
Off Delay Timer	K26
Program timer with day omission feature	K141
Backspin timer (time delay upon energization)	K15
Start Pushbutton (S2 panels only)	A28
Slim panel (Types WC, WD, WE, XC, XD, XE only)	L8
Short panel (Types SSE, SSF, XE-S2 and XF-S2 only)	L9
Pilot light (specify lens color). Does not include auxiliary contact.	P [16]
Separate control	S
Auxiliary contacts (specify N.O. or N.C.)	X [17]
Special UL panel label for modified UL Listed devices on non-standard panels (requires approval by the manufacturing plant)	Y1
Lightning arrestor	Y1532
Move control operators from the enclosure side to the door	Y45
Phase failure, phase reversal relay with time delay including under and over voltage protection	R44
Substitute standard trip melting alloy overload relays	Y61
Substitute quick-trip melting alloy overload relay (Sizes 1 and 2 only)—Not available on IEC style contactors	Y611
Substitution of Class R rejection fuse clips for standard fuse clip. (8940 RD, RE, RF, RG, MD, ME, MF, MG, SSC, SSD, SSE, SSF, SSG, WC, WD, WE and WF)	Y1071

For How to Order Information, see page 16-30.

Table 16.273: Coil Voltage Codes

Voltage		Code
60 Hz	50 Hz	
24 [9] [10]	—	V01
120 [9]	110 [9]	V02
208 [9]	—	V08
240	220	V03
—	380	V05
480	440	V06
600 [9]	550 [9]	V07
Specify	Specify	V99

Table 16.274: Replacement Overload Relay for Square D Class 8940 Pump Panel with IEC Style Bimetallic Overload Relays Mounted on Current Transformers

Ampere Range	Number of Poles	Form	Series	Type [11]
40–63 A	3	B12	B	9065TJF40
63–100 A	3	B12	B	9065TJF63
100–160 A	3	B12	B	9065TJF100
160–250 A	3	B12	B	9065TJF160

[9] Form S required for separate control.

[10] 24 V coils are not available on Size 4–7 starters. On Size 1–3 starters, 24 V coils are available using Form S.

[11] A retro-fit reset kit is required for pre-series B pump panels. See page 16-109 for selection.

[12] Coil voltage code must be supplied to order this product. See Table 16.273 for codes.

[13] Fuse clips are sized for use with dual-element time-delay fuses.

[14] To select a Motor Logic SSOLR with an FLA lower than the standard NEMA sizing, use the four-character Form H30•. See page 16-119.

[15] Motor Logic SSOLR are designed to protect 50/60 hertz three-phase AC motors from overload, phase unbalance 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, it is recommended that bi-metallic overload relays (Form B12) be used.

[16] Indicate pilot light color as Form P1 (red) or Form P2 (green). See page 16-117 for more selections.

[17] To determine the maximum number of auxiliary contacts which can be added to each Type S device and for the appropriate "X Form," refer to Table 16.102 (for non-reversing single-speed devices) or to Table 16.185 (for reversing or two-speed devices)