

RECEIVED
NOV 05 2017
1736 SUNSHINE ST. SUITE 417
SPRINGFIELD, MO

ALL PANELBOARDS, TRANSFORMERS, TRANSFER SWITCH KIT AND DISCONNECTS WILL BE SUPPLIED BY THE OWNER (O'REILLY). ELECTRICAL GEAR SHALL BE DIRECT ORDERED AND/OR RELEASED FROM THE LISTED ELECTRICAL EQUIPMENT DISTRIBUTOR. SEE "ELECTRIC SERVICE RESPONSIBILITIES" FOR ADDITIONAL CLARIFICATION.

GRAYBAR ELECTRIC CO. INC.
11885 LACKLAND ROAD
ST. LOUIS, MO. 63148

GRAYBAR OREILLY TEAM
EMAIL: oreilly@graybar.com
TOLL FREE: (314) 573-2080

MP PANELBOARD SCHEDULE												
MOUNTING SURFACE		VOLTAGE 208			ACCESSORIES							
SCCR: 200k/10k AC		PHASE 3 Ph, 4W			1. EQUIPMENT GROUND BAR							
TYPE: SQUARE D, NQDD		WIDTH: 20 INCHES			2. ISOLATED GROUND BAR							
SPACE(S): 42		SPACE(S): 42			3. ** GFI BREAKER CKT #11							
		SPACE(S): 42			4. ** SQ. D #001P/AF, CT #15							
CKT	CKT BRK	WIRE	LOAD DESCRIPTION	(KVA)	(A/KVA)	(B/KVA)	(C/KVA)	(KVA)	LOAD DESCRIPTION	WIRE	CKT BRK	CKT
1	20A1P	#10s	CUTOFF SAW	1.73	5.66			3.93	RTU-1			2
2	20A1P	#10s	STARTER/ALT. TEST	1.64		5.57		3.93	7.5-TON	#9s	50A3P	4
3	20A1P	#10s	LATHE	1.70			5.63	3.93				5
7	20A1P	#12s	LIGHTING	0.78	4.71			3.93	RTU-2			8
9	20A1P	#12s	LIGHTING	0.67		4.60		3.93	7.5 TON	#8s	50A3P	10
11	20A1P	#12s	WATER COOLER	0.54			4.47	3.93				12
13	20A1P	#12s	RTU RCPTS	0.54	4.47			3.93	RTU-3			14
15	20A1P	#12s	WATER HEATER	1.65			5.58	3.93	7.5 TON	#8s	50A3P	16
17			SPACE					3.93				18
19			SPACE	0.00								20
21	20A1P	#10s	STARTER/ALT. TEST	1.68		1.68			SPACE			22
23	20A1P	#10s	STARTER/ALT. TEST	1.68			1.68		SPACE			24
25	20A1P	#12s	LIGHTING	0.84	0.84				SPACE			26
27				10.01			10.01		SPACE			28
29	100A3P		PLP PANEL	3.57				3.57	SPACE			30
31				6.10	6.10				SPACE			32
33	20A1P	#10s	BUILDING LIGHTING	0.24		0.74		0.50	HOTBOX	#12s	20A1P	34
35	20A1P	#12s	VENSTAR	0.03		0.39	0.36	0.36	ISO GRND RCPTS	#12s	20A1P	36
37	15A3P	#12s		0.03	0.39			0.36	ISO GRND RCPTS	#12s	20A1P	38
39				0.03		1.78		1.75	COKE MACHINE RCPT	#12s	20A1P	40
41	20A1P	#12s	DATA CONC. RCPT	0.60			2.37	1.77	CRIMPER	#12s	20A1P	42
TOTAL PHASE A (KVA)		TOTAL PHASE B (KVA)		TOTAL PHASE C (KVA)			TOTAL CONNECTED (KVA)			TOTAL AMPS		
22.17		29.96		22.04			74.17			208		

PLP PANELBOARD SCHEDULE												
MOUNTING SURFACE		VOLTAGE 208			ACCESSORIES							
SCCR: 200k/10k AC		PHASE 3 Ph, 4W			1. EQUIPMENT GROUND BAR							
TYPE: SQUARE D, NQDD		WIDTH: 20 INCHES			2. ISOLATED GROUND BAR							
SPACE(S): 42		SPACE(S): 42			3. ** SQ. D #001P/AF, WITH LOCKABLE CLIPS							
CKT	CKT BRK	WIRE	LOAD DESCRIPTION	(KVA)	(A/KVA)	(B/KVA)	(C/KVA)	(KVA)	LOAD DESCRIPTION	WIRE	CKT BRK	CKT
1	20A1P	#12s	SECURITY	0.50	1.84			1.34	LIGHTING	#12s	20A1P	2
3	20A1P	#12s	LIGHTING/FAN	0.85			2.13	1.28	LIGHTING	#12s	20A1P	4
5	20A1P	#12s	RECEPTACLES	0.36			0.36		SPACE			6
7	20A1P	#12s	ISO GRND RCPTS	0.36	1.08			0.72	ISO GRND RCPTS	#12s	20A1P	8
9	20A1P	#12s	CHECK-IN RCPTS (LG)	0.50		1.04		0.54	DAYLIGHTING	#12s	20A1P	10
11	20A1P	#12s	ISO GRND RCPTS	0.36			0.72	0.36	ISO GRND RCPTS	#12s	20A1P	12
13	20A1P	#12s	ISO GRND RCPTS	0.36	0.72			0.36	ISO GRND RCPTS	#12s	20A1P	14
15	20A1P	#12s	PHONE EQUIP. RCPTS	0.22			3.72	3.00	BATTERY BACKUP	#12s	30A1P	16
17			SPACE				0.36	0.36	RECEPTACLES	#12s	20A1P	18
19	20A1P	#12s	BREAK AREA RCPTS	0.36	1.44			1.08	RECEPTACLES	#12s	20A1P	20
21			SPACE				0.90	0.90	BREAK AREA RCPTS	#12s	20A1P	22
23	20A1P	#12s	LIGHTING	0.41			0.91	0.80	PRINTER RCPT	#12s	20A1P	24
25	20A1P	#12s	LIGHTING	0.14	0.50			0.36	ISO GRND RCPTS	#12s	20A1P	26
27	20A1P	#12s	RECEPTACLES	1.00			1.00		SPACE			28
29			SPACE				0.36	0.36	ISO GRND RCPTS	#12s	20A1P	30
31			SPACE				0.36	0.36	ISO GRND RCPTS	#12s	20A1P	32
35	20A1P	#12s	LED BLDG SIGN	0.52			0.52		SPACE			34
35	20A1P	#10s	SITE LIGHTING	0.16			0.16		SPACE			36
37	20A1P	#10s	SITE LIGHTING	0.16	0.16				SPACE			38
39	20A1P	#10s	BATTERY BACK RCPT	0.18			0.70	0.52	WEST LED BLDG SIGN	#12s	20A1P	40
41	20A1P	#10s	BATTERY BACK RCPT	0.18			0.70	0.52	LED BLDG SIGN	#12s	20A1P	42
TOTAL PHASE A (KVA)		TOTAL PHASE B (KVA)		TOTAL PHASE C (KVA)			TOTAL CONNECTED (KVA)			TOTAL AMPS		
6.10		10.01		3.57			19.68			95		

ELECTRIC SERVICE RESPONSIBILITIES			
ITEM NO.	DESCRIPTION (IF APPLICABLE)	FURNISHED BY	INSTALLED BY
		UTILITY CO. CONTRACTOR	UTILITY CO. CONTRACTOR
△	SERVICE LATERAL	X	X
△	SERVICE LATERAL RACEWAY	X	X
△	METER BASE	X	X
△	METER	X	X
△	CT CABINET	X	X
△	OH SERVICE RISER @ BUILDING	X	X
△	TRANSFORMER POLE		
△	SERVICE RISER @ POLE		
△	TRANSFORMER PAD	X	X
△	PAD MOUNT TRANSFORMER	X	X

EQUIPMENT LABELS CHART		
EQUIPMENT	SERVICE DISCONNECT	OPTIONAL STANDBY SOURCE
DISCONNECT	X	X
MP		X
PLP		X
E		X
GENERATOR POWER INLET	X	
CT CABINET		

E TRANSFER SWITCH SCHEDULE			
POSITION	CIRCUIT BREAKER	LOAD DESCRIPTION	(KVA) BREAKER
A	15A/1P	CFM COMPUTER	0.36 PLP-14
B	15A/1P	COLON RECEPTACLES	0.36 PLP-13
C	15A/1P	PRINTER	0.50 PLP-24
D	15A/1P	LABORATORY LIGHTING	0.50 PLP-23
E	15A/1P	TELEPHONE EQUIPMENT RECEPTACLE	0.36 PLP-15
		SHARE	0
		2.08 TOTAL	

GENERATOR POWER INLET LABEL

PERMANENT LABEL SHALL BE 2 X 3 IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. LABEL TO BE PLACED 8 INCHES ABOVE GENERATOR RECEPTACLE.

WARNING:
FOR CONNECTION OF A NONSEPARATELY DERIVED (FLOATING NEUTRAL) SYSTEM ONLY

EXAMPLE OF LABELING ABOVE.

OPTIONAL STANDBY SOURCE LABEL

PERMANENT LABEL SHALL BE 2 X 3 IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. LABEL TO BE PLACED ON DISCONNECT DOOR.

CAUTION
TWO SOURCES OF SUPPLY

STANDBY POWER SOURCE: PORTABLE 6kW GENERATOR LOCATION: OVERHEAD DOOR.

EXAMPLE OF OPTIONAL STANDBY SOURCE LABELING ABOVE.

SERVICE DISCONNECT LABEL

THE SERVICE DISCONNECTING MEANS SHALL BE PROPERLY MARKED. SERVICE DISCONNECTS REFER TO SECTION 26_00_20. FURTHER IDENTIFICATION IS RECOMMENDED.

EXAMPLE OF SERVICE DISCONNECT LABELING ABOVE.

SERIES RATING LABELS REQUIRED

CIRCUIT BREAKERS OR FUSES ARE APPLIED IN COMPLIANCE WITH SERIES COMBINATION RATINGS MARKED ON THE EQUIPMENT BY THE MANUFACTURER. THE EQUIPMENT CABINET(S) SHALL BE LABELED IN THE FIELD TO INDICATE THE EQUIPMENT IS BEING USED WITH SERIES COMBINATION RATINGS. THE LABEL(S) SHALL BE READILY VISIBLE AND STATE THE FOLLOWING: CAUTION—SERIES COMBINATION SYSTEM RATED 200K/10K AMPERS. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED.

Series Ratings NQ Panelboards

Class 1640

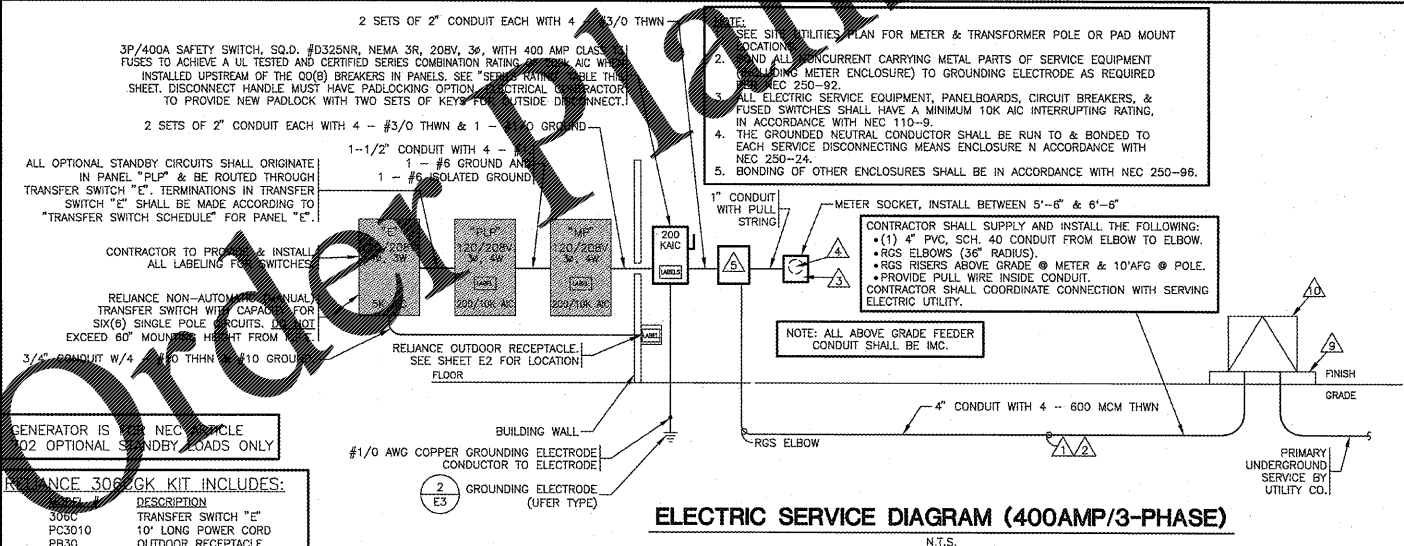
www.us.schneider-electric.com FOR CURRENT INFORMATION

This page contains UL Tested and Certified series combination ratings for panelboards. These ratings apply to either an integral main located in the same enclosure or a remote main located in a separate enclosure.

Table 9.1: NQ Series Connected Circuit Breaker Ratings (RMS Symmetrical)

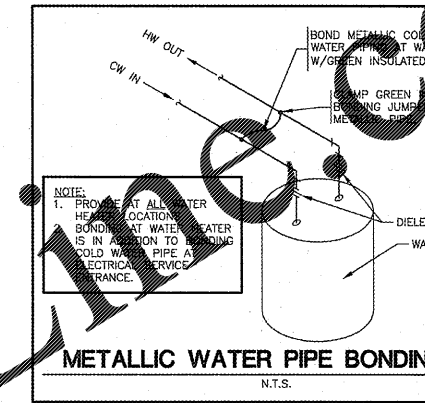
Max. System Voltage AC _M	Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges		
			Type	1 Pole	2 Pole
240	65,000	400 A Max. Class J or T6 Fuses	QO (B) VH 15-30 A	15-125 A	15-100 A
			QO (B) VH 15-20 A	150 A	
	100,000	200 A Max. Class T3 Fuses	QO (B) AFI 15-20 A		
			QO (B) AFI 15-20 A		
200,000	200 A Max. Class J or T6 Fuses and 400 A Max. Class T3 Fuses	QO (B) 15-20 A	15-125 A	15-100 A	
		QO (B) AS 15-30 A	15-30 A	15-30 A	
		QO (B) GFI 15-30 A	15-60 A		

- For shown circuit breakers rated less than this maximum voltage, the indicated short circuit current rating also applies, but at the voltage rating of the circuit breaker.
- Short circuit tests are conducted at 100-105% of the maximum rated voltage of the panelboard.
- Suffixes HID, SWD, and SWN may also be applied to the applicable branch circuit breakers shown above. Suffix SWN may not be applied in combination with LG main breakers.
- Where QO (B) circuit breakers are shown above, QO (B) H, QO (B) VH, and QH (B) circuit breakers may also be used.
- Where QO (B) GFI circuit breakers are shown above, QO (B) EPD circuit breakers may also be used.



WIRING & LABELING OF EXIT & EMERGENCY LIGHT CIRCUITS

- SEE DETAIL 1/E1 FOR WIRING OF EXIT & EMERGENCY LIGHTS ON THESE CIRCUITS.
- ALL EXIT & EMERGENCY LIGHTING CIRCUITS SHALL BE LABELED BY THE CONTRACTOR ON THE "PANEL DIRECTORY". (SPEC: NEPA 70-408.4 & 700.12.)

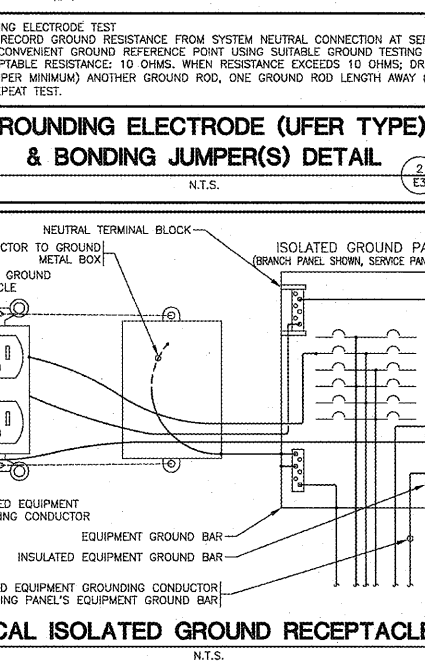
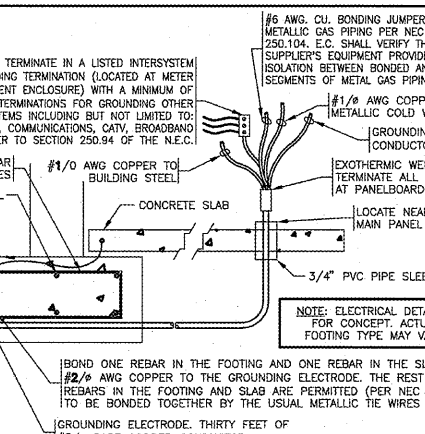


BONDING REQUIREMENTS

N.T.S.

- BOND ALL NONCURRENT CARRYING METAL PARTS OF SERVICE EQUIPMENT (INCLUDING METER ENCLOSURE) TO GROUNDING ELECTRODE AS REQUIRED. PER NEC 250-92.
- THE GROUNDING NEUTRAL CONDUCTOR SHALL BE RUN TO AND BONDED TO EACH SERVICE DISCONNECTING MEANS ENCLOSURE IN ACCORDANCE WITH NEC 250-24c.
- BONDING OF OTHER ENCLOSURES SHALL BE IN ACCORDANCE WITH NEC 250-96.

SERVICE EQUIPMENT GROUNDING & BONDING SHALL BE IN ACCORDANCE WITH:
 • NEC 250-28 • NEC 250-53 • NEC 250-66 • NEC 250-80 • NEC 250-92 • NEC 250-130



ION E. RECKARDT, P.E.
License No. 043117
3030 E. Matthews Road, Suite 1000
Springfield, Missouri 65802
PHONE: 417.861.0080
FAX: 417.861.0083

Craig A. Schneider, AIA
Architect

1736 East Sunshine, Suite 417
Springfield, Missouri 65804
e-mail: architect@estryscneider.com
417.862.8534
FAX: 417.862.3265

PROJECT:
NEW O'REILLY AUTO PARTS STORE
SLIDING HILL PLACE
ASHLAND, VA #2 - ASHLAND MAGISTERIAL DISTRICT

O'Reilly Auto Parts

CORPORATE OFFICES
233 SOUTH PATTERSON
SPRINGFIELD, MISSOURI 65802
(417) 862-2674 TELEPHONE

COMM # 3993
DATE: 2-24-17
REVISION DATE: 8-16-17
11-3-17