

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

APPLICATION

EPLX and D2LX panelboards provide a centrally controlled switching system and short circuit protection for feeder or branch circuits to control lighting, heating, appliances, heat tracing, motor and similar circuits. GFI and EPD options offer personnel and equipment protection, respectively.

EPLX panelboards are designed for use in Class I, Divisions 1 & 2, Groups B (with EPL GB KIT), C, D; Class II, Groups E, F, G; Class III hazardous areas as defined by the National Electrical Code® (NEC) and Canadian Electrical Code (CEC), as well as in damp, wet locations – indoors or outdoors – with NEMA 3.

D2LX panelboards are designed for use in Class I, Division 2, Groups B (with EPL GB KIT), C, D; Class II, Division 2, Groups F, G; Class III.

⚠ WARNING

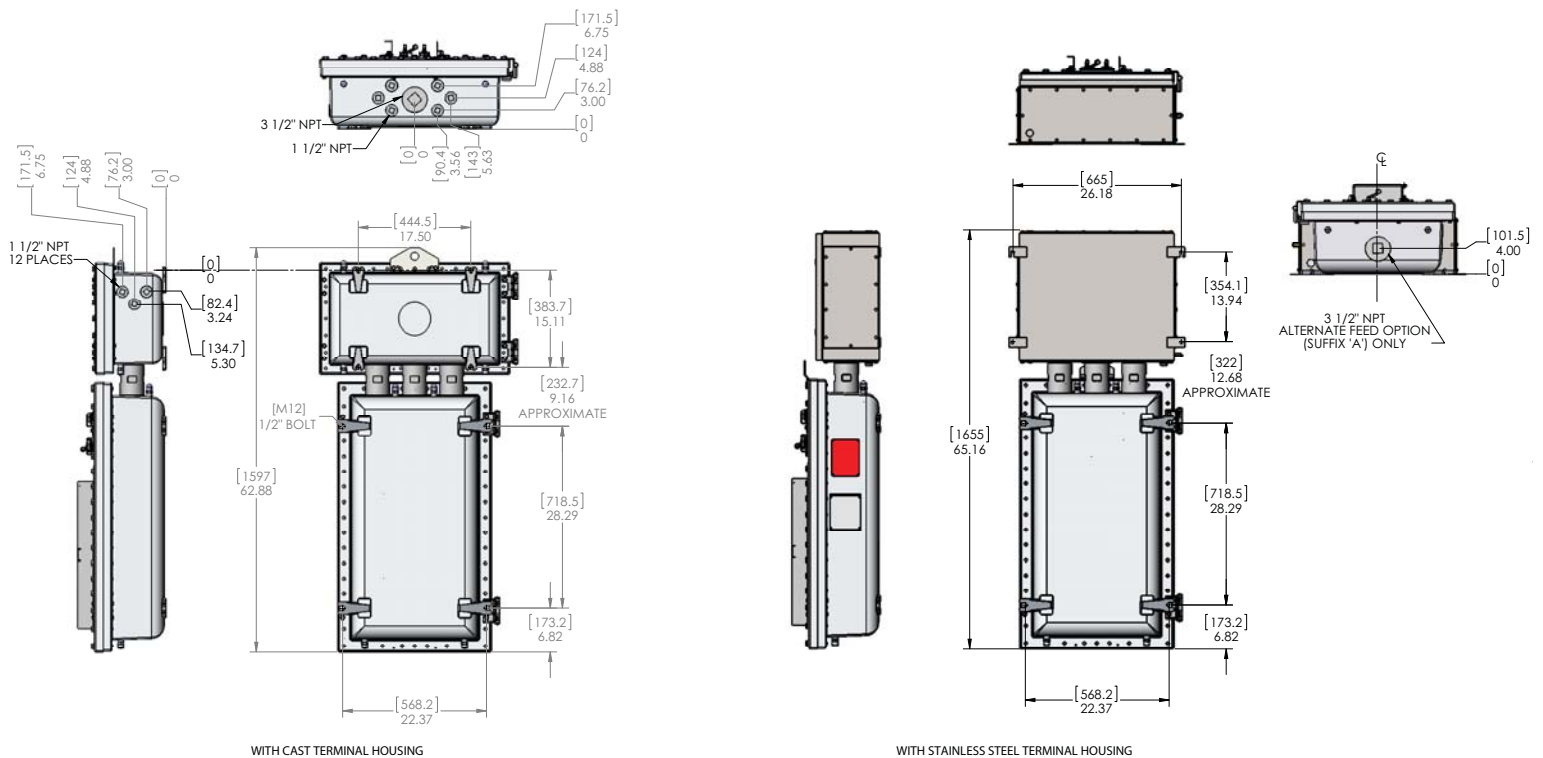
To avoid electrical shock or explosion, panelboards should be installed, inspected, maintained and operated by qualified and competent personnel. Read entire instructions before starting installation of this product. Contact your local Eaton's Crouse-Hinds Division sales representative, customer service or distributor if you have any questions.



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FIGURE 1 – MOUNTING DIMENSIONS AND WEIGHTS



WEIGHTS

Cat. #	Product Weight		Shipping Weight	
	Lbs.	Kg.	Lbs.	Kg.
D2LXS	520	236	715	324
D2LXA	650	295	845	383
EPLXA	660	299	855	388

⚠ WARNING

To avoid personal injury or damage to the panelboard assembly, always securely fasten the cast aluminum breaker housing before securing the terminal housing.

⚠ WARNING

To avoid the risk of explosion, always clean both flat joint surfaces of body and cover before closing. Dirt or foreign material must not accumulate on flat joint surfaces. Surfaces must seat fully against each other to provide a proper explosionproof joint.

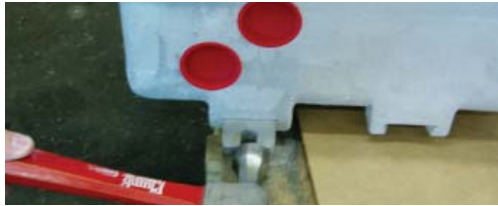
⚠ WARNING

To avoid the risk of explosion, do not add or enlarge conduit entries in cast enclosures.

GENERAL INSTALLATION, MOUNTING AND LIFTING

1. Select a mounting location that will provide suitable strength and rigidity for supporting the panelboard and all components.

Refer to Figure 1 for mounting dimensions and approximate weights.



2. Install detachable mounting feet while enclosure is on the floor or work bench.

Insert wedge shaped mounting feet into dovetail on all cast enclosures.

3. Use dedicated lifting eye to mount enclosure on suitable mounting surface. Refer to lifting diagrams (Figure 2) for appropriate lifting procedure.

4. Align enclosure with the two (2) left side mounting feet on selected mounting surface. While continuing to support the enclosure in position, install the right two (2) bolts of breaker enclosure. Securely tighten all bolts around breaker enclosure. If a terminal housing has been supplied, securely fasten four (4) remaining bolts for that enclosure after breaker housing is fastened.

⚠ WARNING

To avoid the risk of explosion, all unused conduit openings must be closed properly with an approved plug, drain or breather such as Crouse-Hinds series PLG plugs or ECD breather/drains.

Division 1 panels with conduit runs 2" and higher require sealing fittings installed within 18" of enclosure.

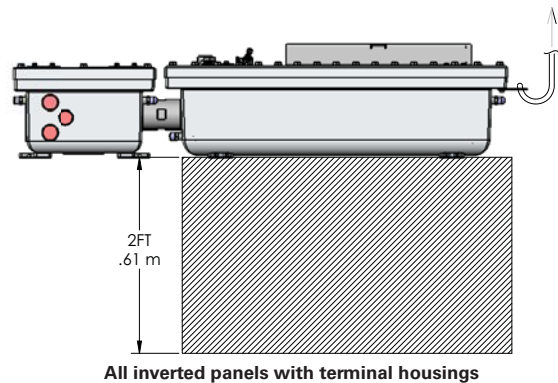
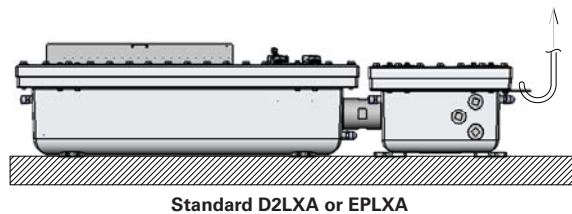
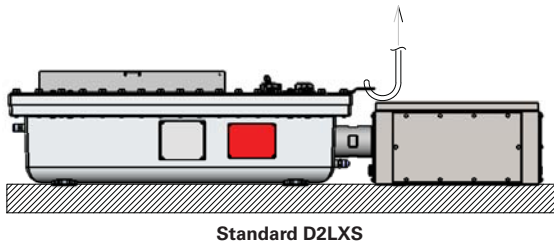
5. With panelboard securely fastened to the mounting surface, remove plastic plugs from desired entries.
6. After enclosure is positioned and secured in its permanent location, pull wires into panelboard terminal enclosure, making sure that they are long enough to make the required connections.
7. Make sure all screws and bolts are tightened to the appropriate torque values found in Chart 1 below.

CHART 1

TORQUE REQUIREMENTS

Item description	Wire range	Torque required	
POWER TERMINALS (A, B, C)	4 - 4/0	74 - 83 in.-lbs.	8.4 - 9.4 N-m
100 AMP BRANCH TERMINALS (1, 3, 5)	6 - 0	21.8 - 26.1 in.-lbs.	2.5 - 2.9 N-m
50 AMP BRANCH TERMINALS	24 - 8	7.1 - 8.9 in.-lbs.	0.8 - 1.0 N-m
	14 - 10	35 in.-lbs.	4.0 N-m
GROUND/NEUTRAL STRIP	8	40 in.-lbs.	4.5 N-m
	6 - 4	45 in.-lbs.	5.1 N-m
	2 - 1/0	50 in.-lbs.	5.7 N-m
GROUND/NEUTRAL & CHASSIS LUGS (3/8")	6 - 350 MCM	375 in.-lbs.	42.4 N-m
	14 - 10	20 in.-lbs.	2.3 N-m
QUICKLAG BREAKER WIRE TERMINALS	8	25 in.-lbs.	2.8 N-m
	6 - 4	27 in.-lbs.	3.1 N-m
	3 - 1/0	45 in.-lbs.	5.1 N-m
'F' FRAME BREAKER WIRE TERMINALS	3 - 4/0	50 in.-lbs.	5.7 N-m
BREAKER TO BUS SCREWS (#10)	N/A	28 - 32 in.-lbs.	3.2 - 3.6 N-m
CIRCUIT BREAKER BODY GROUND LUG	4	120 in.-lbs.	13.6 N-m
D2L-S TERMINAL COVER SCREWS	N/A	35 in.-lbs.	4.0 N-m
D2L-S GLAND PLATE SCREWS	N/A	18 in.-lbs.	2.0 N-m
D2L-S GROUND STUD	N/A	35 in.-lbs.	4.0 N-m
1/2" ENCLOSURE COVER BOLTS	N/A	40 - 45 ft.-lbs.	54.2 - 61.0 N-m
5/16" HINGE SCREWS	N/A	25 - 30 ft.-lbs.	33.9 - 40.7 N-m

FIGURE 2 – LIFTING DIAGRAMS



NOTE: For all inverted panels, prior to lifting with eye, place on a 2 ft. (0.61m) staging surface that can withstand the approximate weight of the panel. Panel weights are listed in Figure 1 - mounting dimensions and weights.

D2L INSTALLATION WITH SHEET METAL TERMINAL ENCLOSURE (D2LX)

Refer to the general installation instructions before proceeding.

CAUTION

To avoid the risk of water ingress, when removing the gland plates, do not damage or compromise the gasket. Contact Crouse-Hinds for replacement gland plates if damaged.

CHART 2 – SPACING CHART FOR MYERS™ HUBS

Conduit

Cond. Size	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
3/8	1 5/32	1 1/4												
1/2	1 5/16	1 13/32	1 9/16											
3/4	1 7/16	1 17/32	1 11/16	1 13/16										
1	1 9/32	1 11/16	1 27/32	1 31/32	2 1/8									
1 1/4	1 25/32	1 7/8	2 1/32	2 5/32	2 5/16	2 1/2								
1 1/2	1 31/32	2 1/16	2 7/32	2 11/32	2 1/2	2 11/16	2 7/8							
2	2 7/32	2 5/16	2 15/32	2 19/32	2 3/4	2 15/16	3 1/8	3 9/8						
2 1/2	2 15/32	2 9/16	2 23/32	2 27/32	3	3 3/16	3 3/8	3 5/8	3 7/8					
3	2 25/32	2 7/8	3 1/32	3 5/32	3 9/16	3 1/2	3 11/16	3 15/16	4 3/16	4 1/2				
3 1/2	3 3/32	3 3/16	3 11/32	3 15/32	3 7/8	3 13/16	4	4 1/4	4 1/2	4 13/16	5 1/8			
4	3 11/32	3 7/16	3 19/32	3 23/32	3 7/8	4 1/16	4 1/4	4 1/2	4 3/4	5 1/16	5 3/8	5 3/4		
5	4 1/32	4 1/8	4 9/32	4 13/32	4 9/16	4 3/4	4 15/16	5 1/16	5 1/8	5 3/4	6 1/16	6 3/16	7 1/8	
6	4 13/32	4 1/2	4 21/32	4 25/32	4 15/16	5 1/8	5 5/16	5 9/16	5 13/16	6 1/8	6 1/16	6 11/16	7 3/8	7 3/4

Minimum space from center of pipe or conduit to nearest obstruction.

1. Dimensions in top row (boxed squares) are centers for conduits of same size.

Example: How close may 3" conduits be spaced? Answer 4 1/2".

2. Dimensions in gray shaded squares are for centers of conduits

NOT of the same size. Example: What is the minimum spacing for 2" and 3/4" conduit? Read down column marked 3/4" to figure opposite 2" and find dimension is 2 9/32".

Note: Minimum spacing dimensions as shown will give approximately 1/8" clearance between locking nuts.

Minimum space from center of pipe or conduit to nearest obstruction

	1 9/32	1 1/16	2 7/32	3 1/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 5/16	2 5/8	2 7/8	3 9/16	3 15/16
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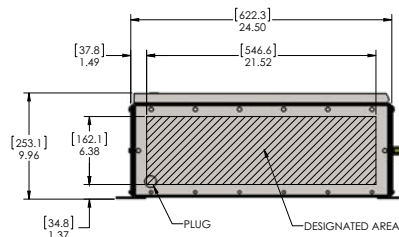
NOTE: Terminal cover is removable to assist in the installation process.

1. Remove gland plates and drill desired conduit entries in accordance with the spacing chart for Myers hubs (Chart 2) and the gland plate dimensional drawing (Figure 3).

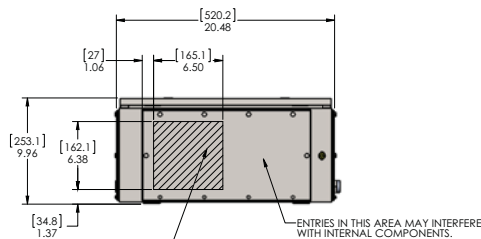
NOTE

Drill conduit entries in "designated area" found in the gland plate dimensional drawing to the right (Figure 3). Be sure to consider wiring and bending when planning entries.

FIGURE 3 – GLAND PLATE DIMENSIONAL DRAWING IN INCHES (MILLIMETERS)



TOP



SIDES

2. Install appropriate Myers hubs per desired entries selected.
3. Reinstall gland plate to stainless steel terminal housing and be sure to tighten screws to the torque values provided in the torque requirement chart (see Chart 1).
4. Install conduit using Myers hub connections.
5. Make sure all screws and bolts are tightened to the appropriate torque values found in Chart 1.

NOTE

For replacement gland plates, please refer to Field installable kits - Section E - adding a gland plate hub kit.

ALTERNATE FEED (SUFFIX A) INSTALLATION

Refer to the general installation instructions before proceeding.

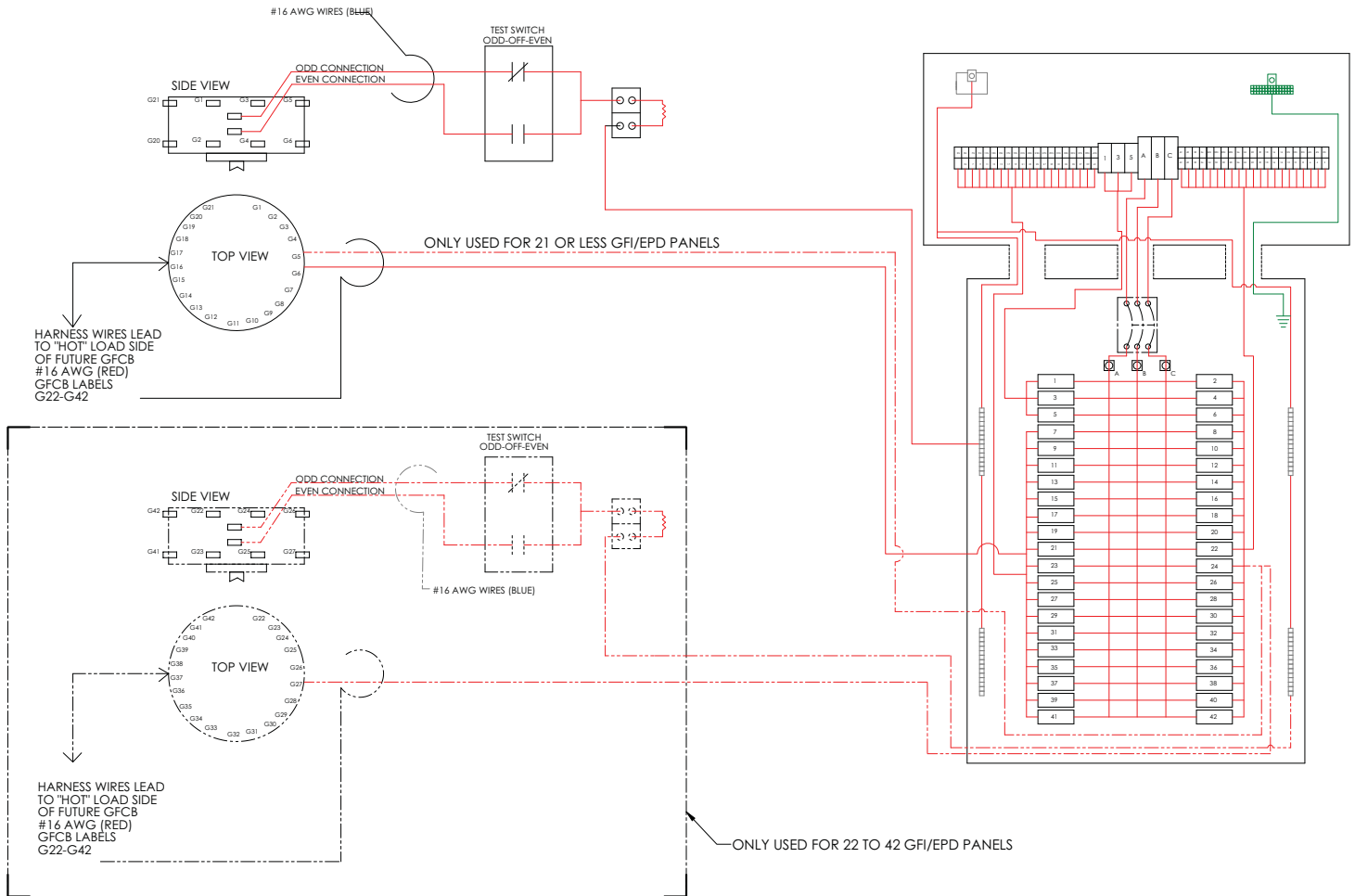
⚠ WARNING

To avoid the risk of explosion or equipment damage, do not scratch or damage flat joint flame path on either cover or body. Always clean both body and cover of dust and foreign particles prior to closing. Dirt or foreign material must not accumulate on flat joint surfaces.

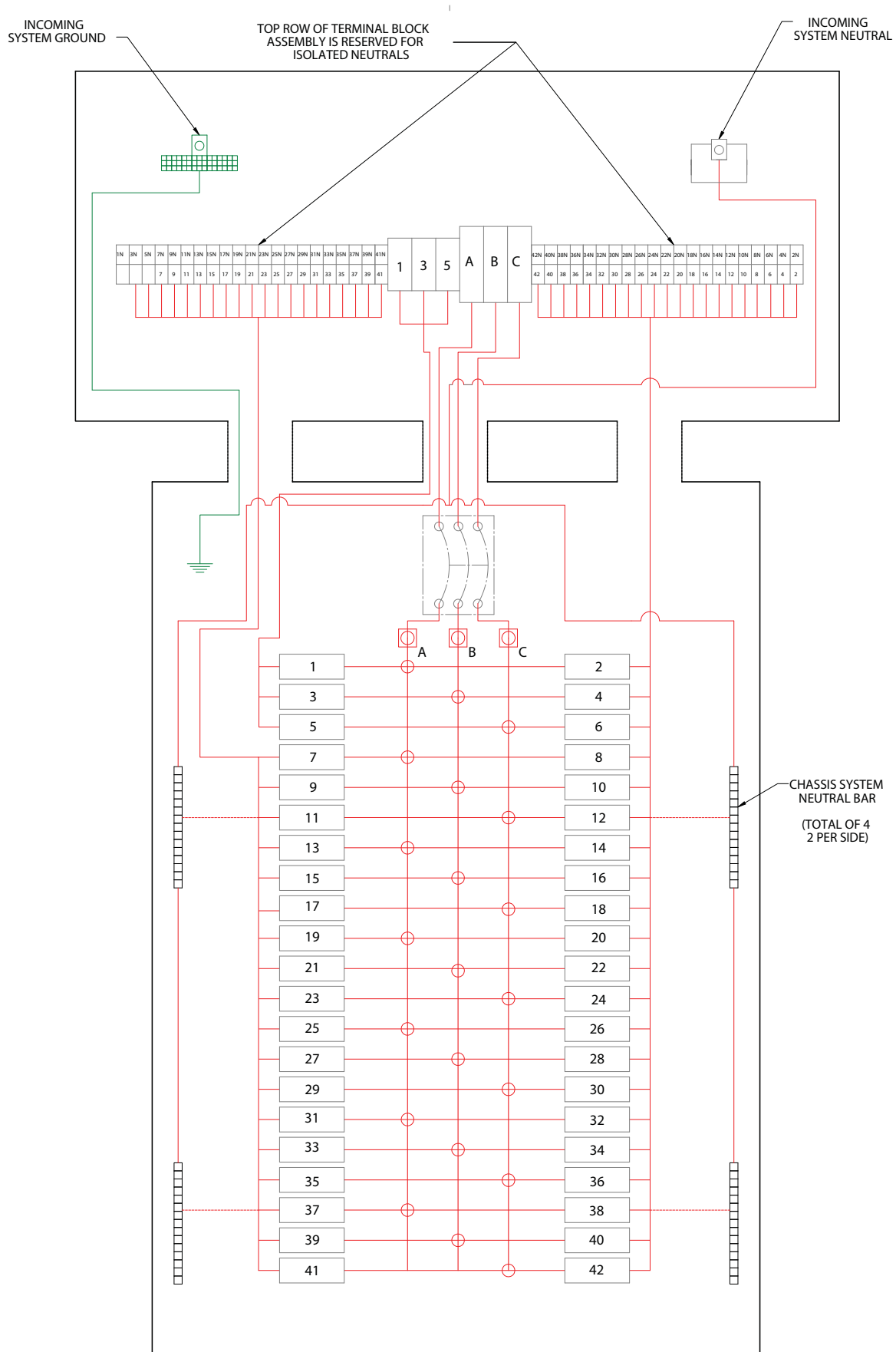
1. Unthread cover bolts from breaker enclosure and swing open on its hinges.
2. Attach sealing fitting and pull wires through entrance.
3. Connect main power directly to main lugs (with main lug only panels) or to main circuit breaker.
4. Close enclosure cover, making sure that bolts are retracted to prevent scratches or damage to the flange surface. Using only the bolts provided with the enclosure, tighten all bolts to 40-45 ft.-lbs. (191.5 - 215.4 N-m).



FACTORY WIRING DIAGRAMS



FACTORY WIRING DIAGRAMS (CONTINUED)



**STANDARD ORIENTATION
THREE PHASE SYSTEM**

FIELD INSTALLABLE KITS

WARNING

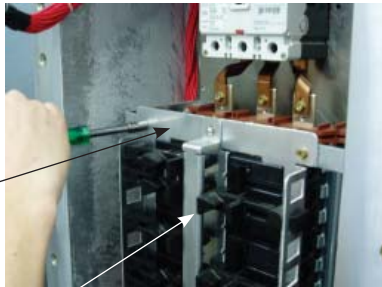
To avoid risk of explosion or equipment damage, do not scratch or damage flat joint flame path on either cover or body. Always clean both body and cover of dust and foreign particles prior to closing. Dirt or foreign material must not accumulate on flat joint surfaces.

A. Adding a circuit breaker (EPL HDL13; EPL HDL12)

1. De-energize panel, open circuit breaker enclosure and make sure bolts are retracted in cover.
2. Remove operator plug from desired position and install operator bearing.
3. Install operator shaft assembly until fully seated. Now turn shaft counter-clockwise 2 to 3 turns. Operator pin must be pointing down.
4. Install handle with screw and washer provided to shaft on the cover exterior.
5. Remove actuator plate and install circuit breaker in desired location. **NOTE:** Circuit breaker must be attached to chassis with torque of 30 in.-lbs. (0.21 N-m). See picture at bottom of page. For GFI and EPD breakers, the laid down neutral wire labeled for the circuit position should be installed in the breaker's neutral terminal. The breaker pigtail should be connected to the closest of four (4) system neutral bars attached to the sides of the chassis. For non-GFI and EPD breakers, the laid down neutral wire must be connected to one of the four (4) system neutral bars.
6. Make sure to attach wire with appropriate torque value listed on circuit breaker. Locate pre-labeled wire corresponding with circuit breaker location and apply torque of 25 in.-lbs. (0.17 N-m).
7. Remove actuator strap from actuator plate assembly.
8. Install and align slider in desired location and re-attach actuator strap.
9. Re-attach actuator plate assembly to chassis and close cover, making sure the flame path is clean and bolts are tightened to a torque of 40-45 ft.-lbs. (19.2 - 21.5 N-m).
10. Following proper installation instructions in prior sections, attach conduit and pull wire to desired terminal block.
11. Make sure all loose wires are secured and will not be pinched between cover and body when closing enclosure.
12. Make sure all screws and bolts are tightened to the appropriate torque values found in Chart 1.

B. Adding Group B kit (EPL GB KIT)

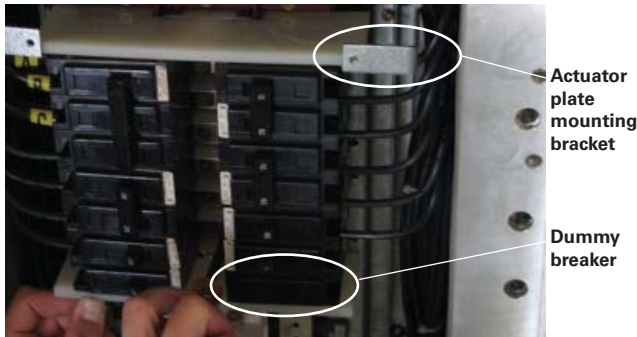
1. De-energize panel, open circuit breaker enclosure and make sure bolts are retracted in cover.
2. Remove actuator plate from housing as shown below.



Actuator plate

Actuator strap

3. Insert insulating plates, one at the top of the chassis and the second below the bottom most breaker position per the following picture.



Actuator plate mounting bracket

Dummy breaker

NOTE: Adjusting actuator plate mounting bracket may be necessary to securely position insulating plate. If an odd number of circuits are being used in the panel, non-operable (dummy) breakers have been included to balance the spacing. Installation of these non-operable breakers is required to ensure proper operation.

4. Reinstall actuator plate and be sure the insulating plates protrude through the actuator plate.
5. Close enclosure cover, making sure that bolts are retracted to prevent scratches or damage of the flange surface. Using only the bolts provided with the enclosure, tighten all bolts to 40-45 ft.-lbs. (19.2 - 21.5 N-m).
6. Make sure all screws and bolts are tightened to the appropriate torque values found in Chart 1.

C. Adding a space heater (EPL R22 KIT)

1. De-energize panel, open circuit breaker enclosure and make sure bolts are retracted in cover.
2. Attach heater with hardware provided to bottom most position in circuit breaker enclosure.



3. Attach wire from newly installed circuit breaker or external power source.

NOTE: Wiring of heater is dictated by customer preference.

4. Close enclosure cover, making sure that the flange is clean and that bolts are tightened to proper torque value (40-45 ft.-lbs.) (19.2 - 21.5 N-m).
5. Make sure all screws and bolts are tightened to the appropriate torque values found in Chart 1.

D. Adding an operator handle cover (EPL HG36 KIT; EPL HG42 KIT)

1. Mount operator cover on lockout plates while securely holding in place.
2. Securely fasten operator cover hinge to lockout plate with hinge screws and nuts provided. Torque to 9.6 in.-lbs.

E. Adding a gland plate hub kit

NOTE: With a D2LXS style panel, the following gland plate hub kits are available:

D2LX HUB2 KIT	(1) 3"; (12) 3/4"
D2LX HUB3 KIT	(1) 3"; (12) 1"
D2LX HUB5 KIT	(1) 3"; (12) 1-1/2"
D2LX HUB0 KIT	No entries for replacement of damaged plates

1. Remove existing gland plates from terminal housing.
2. Install Myers Hubs to new gland plate wrench tight.
3. Install gland plate kit and tighten screws to the appropriate torque values found in Chart 1.

GENERAL MAINTENANCE

WARNING

To avoid the risk of explosion or equipment damage, do not scratch or damage flat joint flame path on either cover or body. Always clean both body and cover of dust and foreign particles prior to closing. Dirt or foreign material must not accumulate on flat joint surfaces.

WARNING

Disconnect all power upstream from panel prior to opening enclosure. Failure to do so could result in personnel injury or damage to equipment.

1. Frequent inspection should be made. A schedule for maintenance checks should be determined by the environment and frequency of use. It is recommended that it should be at least once a year.
2. Eaton's Crouse-Hinds Division recommends an Electrical Preventative Maintenance Program as described in the National Fire Protection Association Bulletin NFPA 70B: Recommended Practice for Electrical Equipment Maintenance (www.nfpa.org).
3. It is recommended that GFI and EPD breakers be tested monthly.
4. Perform visual, electrical and mechanical checks on all components on a regular basis.
 - a. Visually check for undue heating evidenced by discoloration of wires or other components, damaged or worn parts or leakage evidenced by water or corrosion in the interior.
 - b. Electrically check to make sure that all connections are clean and tight.
 - c. Mechanically check that all parts are properly assembled and operating mechanisms move freely.
 - d. When checking torque on main lugs, it may be necessary to remove the actuator plate assembly to get access to the screws on the main lugs or branch circuit breakers.
5. A factory Watguard desiccant pack has been provided. The purpose of this desiccant is to absorb and remove water on contact or from the atmosphere and protect the enclosed equipment from damage. The desiccant packet will expand 3 to 4 times its original size. Desiccant should be checked and replaced at regular equipment service intervals or every 3 to 6 months.

For replacement desiccant packets, order Cat. # WG22 (protects 2-3 cubic feet of air space and is recommended for terminal housings); or Cat. # WG33 (protects 4 to 5 feet of air space and is recommended for circuit breaker housings).

Watguard is non-toxic, emits no fumes and generates no heat during use. No gloves, masks or special clothing is required to handle this product.

WARNING

To avoid the risk of explosion, always clean both ground joint surfaces of body and cover lightly with soft cloth or compressed air before closing. Dirt or foreign material must not accumulate on flat joint surfaces. Surfaces must seat fully against each other to provide a proper explosionproof seal.

6. Make sure all cover bolts are fully retracted into cover before closing cover on body. Close cover and start cover bolt threads by hand. Torque all cover bolts securely to 40-45 ft.-lbs. (19.2 - 21.5 N-m).

All statements, technical information and recommendations contained herein are based on information and tests we believe to be reliable. The accuracy or completeness thereof are not guaranteed. In accordance with Eaton's Crouse-Hinds Division's "Terms and Conditions of Sale," and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his intended use and assumes all risk and liability whatsoever in connection herewith.