Enclosures for hazardous
and adverse areas

T&B EX™

Thomas&Betts
A Member of the ABB Group

Enclosures for hazardous and adverse areas

Introduction

Introduction
Low voltage products for hazardous areas

ABB focuses on improving your business performance by providing practical, reliable electrical products and services. To connect and protect for life. To solve everyday problems in the areas of Wire & Cable Management, Cable Protection, Power Connection & Control and Safety.

Our engineering, supply chain and technical sales teams are committed to understanding everything that impacts your business from safety, and supply to Total Cost of Ownership.

Whether you are designing, installing, operating or maintaining an office building, off-shore platform, hospital, high speed train, power plant, or a manufacturing facility, ABB engineered products deliver fit and function in your application while providing superior performance, sustainability, and value throughout the project life cycle.

Our brands are built on product & service solution platforms. Platforms that address your, or your customers' critical electrical needs: from the reliability of energy distribution systems to the protection of data and from debottlenecking of processes to increasing personal safety. Beyond high performance, ABB products, information and services facilitate and speed up your time critical assembly, installation or maintenance process.

Introduction
Low voltage products for hazardous areas

Delivering value through system solutions based on engineering innovation.

About T&B EX™

T&B EX™ , part of the ABB group, provides a complete range of explosion proof enclosures, junction boxes, control panels and panelboards. Our T&B EX™ range covers all classes of potential explosive gas & dust atmospheres and is compliant with NEC and applicable UL standards, making its use possible in a wide variety of industries across all NEC applications.

What is in it for you?

T&B EX™ offers enclosure solutions for:

– Hazardous Environment Protection: Full range of certified enclosure solutions for Gas and Dust hazards
– Corrosive & Harsh Environment Protection: Special materials and coating options for protection in harshest environments - Salt Spray, UV radiation, Wash-Down etc.
– Total Cost of Ownership: A smart & modular design reduces installation cost and simplifies maintenance

As a complement to T&B EX™ enclosures, we also offer a full range of rigid, flexible cable protection systems and hazardous locations rated fittings and luminaires.

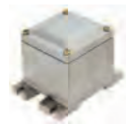
About ABB

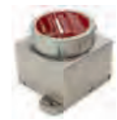
ABB is a leading supplier of power, automation and ancillary electrical support systems. Active in more than 100 countries with over 132,000 employees worldwide, ABB is comprised of four divisions organized in such a way as to align with the customers and industries: Electrification Products, Robotics and Motion, Industrial Automation, and Power Grids. Today, ABB stands as the largest supplier of industrial motors and drives, the largest provider of generators to the wind industry and the largest supplier of power grids worldwide. For more information, please see : www.abb.com

Enclosures for hazardous and adverse areas
Selection guide

1






	Junction box control panel		High V box	Junction / Control box		Instrument housing	Meter box	Combo starter	Motor starter	Manual motor starter
Type	XPCJ	XPCJX	XPHV	XPCS	D2CJ	XPIH	XPGUB	XPCMS	XPMS	XPMMS
NEC/CEC - Hazardous Area Certifications and Compliance										
Cl. I, Div. 1 & 2, Groups B, C, D	●	●	●	–	–	●	●	●	●	–
Cl. I, Div. 1 & 2, Groups C, D	–	–	–	•	–	–	–	–	–	●
Cl. II, Div. 1 & 2, Groups E, F, G	●	●	●	●	●	●	●	●	●	●
Cl. II, Groups E, F, G (Canada only)	–	–	–	–	–	–	–	–	–	–
Cl. II, Div. 1 & 2, Groups F, G	–	–	–	–	–	–	–	–	–	–
Cl. III	●	●	●	–	●	●	●	●	●	–
Cl. I, Div. 2, Groups A, B, C, D	–	–	–	–	–	–	–	–	–	–
Cl. II, Div. 2, Groups B, C, D	–	–	–	–	–	–	–	–	–	–
Cl. II, Div. 2, Groups F, G	–	–	–	–	–	–	–	–	–	–
Cl. I, Zone1**	–	–	–	–	–	●	–	–	–	–

**See catalog page

	XPCJ	XPCJX	XPHV	XPCS	D2CJ	XPIH	XPGUB	XPCMS	XPMS	XPMMS
NEMA Enclosure Type										
4, 4X, 7BCD, 9EFG	●	●	●	–	–	–	–	–	–	–
4, 7CD, 9EFG	–	–	–	●	–	–	–	–	–	–
7CD, 9EFG	–	–	–	–	–	–	–	–	–	●
4X, 9EFG	–	–	–	–	●	–	–	–	–	–
4X, 7, 9	–	–	–	–	–	●	–	●	●	–
4, 7, 9	–	–	–	–	–	–	–	–	–	–
3, 4, 7, 9	–	–	–	–	–	–	–	–	–	–
4X, 12, 13	–	–	–	–	–	–	–	–	–	–
CSA C22.2										
No. 25	●	●	●	●	●	–	●	●	●	–
No. 30	●	●	●	●	●	●	●	●	●	●
UL										
50	●	●	●	●	●	●	●	●	●	–
1203	●	–	●	–	–	●	●	●	●	●
1604	–	–	–	–	–	–	–	●	●	–
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										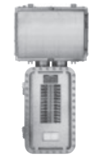	
	Circuit breaker	Disconnect switch	Control stations	Explosionproof pilot devices				Junction / Control box	Increased safety pilot devices	Panelboard	Panelboard
	XPCB	**XPDS**	**XPCS**	**X - push-button**	**X - selector switch**	**X - pilot light**	**X - min pilot devices**	**SSCS**	**E - selector switch** **E - pilot light** **ECD - drain/breather**	**XP2PB**	**XP1PB**
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T&B EX™ Enclosures

Explosionproof enclosures

Bolted cover enclosures are available in a wide range of sizes designed to perform in accordance with codes and standards for hazardous and adverse industrial environments.

Dust-ignition proof enclosures

These durable stainless steel frame and cover boxes with robust aluminum gland plates are specifically designed for use in Class II Division 1 combustible dust environments.

Instrument, equipment and meter enclosures

Threaded cover boxes meet many special requirements. Select from a large assortment of solid, dome, and glass covers arrangements to fit your specific need.

Explosionproof enclosures
XPCJ Series – Cast aluminum

2

Applications
- As a custom control panel, junction or pull box
- To provide enclosures for splices and branch circuit taps
- For housing terminal blocks, relays and other electrical devices
- Use indoors or outdoors in damp, wet, dusty, corrosive and hazardous locations
- Where exposure to frequent or heavy rain, water, spray, moisture, and humidity is common, such as: offshore drilling facilities, cooling towers, coal preparation and handling facilities and sewage and waste water treatment plants
- In areas which are hazardous due to the presence of hydrogen or gases and vapors of equivalent hazard such as found in process industries, missile bases and gas manufacturing plants

Features
- Pre-drilled mounting panel bosses (mounting panel optional)
- Premium, high strength steel cover bolts (zinc plated and coated)
- Walls of enclosures may be drilled and tapped for conduit entries as shown in listings
- External flange design – wide unobstructed cover opening provides a completely accessible interior for wiring and electrical equipment
- Square corners of enclosure body provide maximum interior space and area for conduit openings
- Internal grounding lug provides a means to ground enclosed equipment
- Special Nitrile rubber cover gasket NEMA 4 watertight seal for corrosion and water
- Internal / external grounding screws
- Removable lifting eye bolts (18 x 24 and larger)
- Lid-lifter cover alignment device (18 x 24 and larger)
- Cast-on mounting lugs / feet

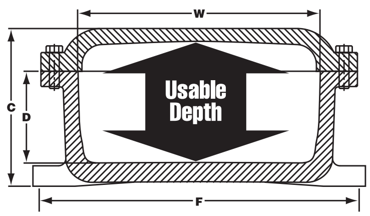
Standard materials
- Body and cover – copper-free aluminum (0.3% max copper content)
- Mounting plate – galvanized steel or aluminum
- Gasket – nitrile rubber, resistant to oil, fuel, and other chemicals
- Cover bolts – premium, high strength steel (zinc plated and coated). Stainless steel – optional
- Hinges – aluminum with stainless steel hardware

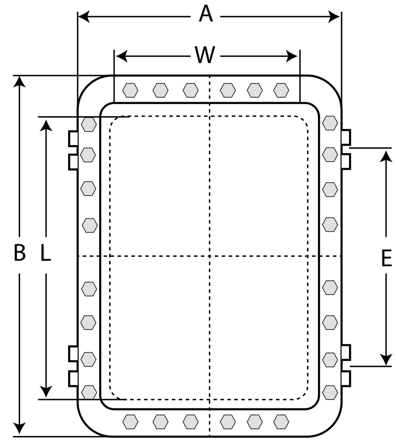
Design options
- Stainless steel cover bolts
- Mounting panels – available in galvanized steel (XPM) or aluminum (XPA)
- Aluminum hinge kits with stainless steel hardware
- Conduit (NPT & Metric) and device (NPSM) drilling & tapping
- Operators and auxiliary devices such as breather / drains and flame arrestors
- Quad lead, quick thread cover bolts
- Window kits – round (up to 8” viewing diameter) or square/ rectangular (up to 13” x 13”)
- Custom machining – milling, counter-boring, spot-facing, blind drilled entries, chamfers
- Panel assembly / population
- Powder and epoxy coating for additional corrosion resistance
- Special mounting provisions
- Captive bolt retainer plate

Certifications & Standards
Class I, Divisions 1 & 2, Groups B*, C, D
Class II, Divisions 1 & 2, Groups E, F, G
Class III
Enclosure NEMA Type 4, Type 4X w/SS cover bolts, 7BCD, 9EFG
UL Standard 1203
UL Standard 50.
CSA C22.2 No. 30

* Group B available without gasket
** For IECEx and ATEX certifications, consult factory

Explosionproof enclosures
XPCJ Series – Cast aluminum





Dimensions and weights

Catalog Part No.	Inside nom. dimensions (in.)			Usable depth (in.)	Overall dimensions (in.)			MTG Lug (in.)		MTG bolt size (in.)	Shipping Wt. (lbs)	Panel Part No.	Panel dimensions (in.)		Hinge Part No.
	W	L	D		A	B	C	E	F				W	L	
XPCJ041604	4	16	4	4 3/4	7 1/4	19 1/4	6	12 1/8	6 3/4	3/8	25	XPM0416	3 1/4	15 1/4	XHB-2
XPCJ060804	6	8	4	4 5/8	9 1/4	11 1/4	5 15/16	4 1/2	9 1/8	3/8	21	XPM0608	5 1/8	7 1/8	XHB-2
XPCJ060805	6	8	5	5 5/8	9 1/4	11 1/4	6 15/16	4 1/2	9 1/8	3/8	23	XPM0608	5 1/8	7 1/8	XHB-2
XPCJ060806	6	8	6	6 5/8	9 1/4	11 1/4	7 15/16	4 1/2	9 1/8	3/8	25	XPM0608	5 1/8	7 1/8	XHB-2
XPCJ061105	6	11	5	5 7/8	9 1/4	14 1/4	7 3/16	7 1/2	9 1/8	3/8	24	XPM0611	5 1/8	10 1/8	XHB-2
XPCJ061204	6	12	4	4 3/4	9 1/4	15 1/4	6 1/16	8 1/2	9 1/8	3/8	24	XPM0612	5 1/8	11 1/8	XHB-2
XPCJ061206	6	12	6	6 3/4	9 1/4	15 1/4	8 1/16	8 1/2	9 1/8	3/8	29	XPM0612	5 1/8	11 1/8	XHB-2
XPCJ061305	6	13	5	5 7/8	9 1/4	16 1/4	7 3/16	9 1/2	9 1/8	3/8	26	XPM0613	5 1/8	12 1/8	XHB-2
XPCJ071004	7	10	4	4 3/4	10 3/8	13 3/8	6 3/16	6 1/2	9 3/4	3/8	27	XPM0710	6 1/8	9 1/8	XHB-2
XPCJ071006	7	10	6 1/8	6 3/4	10 3/8	13 3/8	8 3/16	6 1/2	9 3/4	3/8	31	XPM0710	6 1/8	9 1/8	XHB-2
XPCJ071805	7	18 1/4	5	5 3/4	10 3/8	21 5/8	7 3/16	14 1/2	9 3/4	3/8	55	XPM0718	6 1/8	17 3/8	XHB-2
XPCJ080804	8	8	4	4 13/16	11 3/8	11 3/8	6 3/8	4 1/2	11	3/8	24	XPM0808	7	7	XHB-2
XPCJ080806	8	8	6	6 13/16	11 3/8	11 3/8	8 3/8	4 1/2	11	3/8	28	XPM0808	7	7	XHB-2
XPCJ080808	8	8	8	8 13/16	11 3/8	11 3/8	10 3/8	4 1/2	11	3/8	35	XPM0808	7	7	XHB-2
XPCJ081004	8	10	4	4 3/4	11 3/8	13 3/8	6 1/4	6 1/2	10 3/4	3/8	30	XPM0810	7	9 1/8	XHB-2
XPCJ081006	8	10	6	6 3/4	11 3/8	13 3/8	8 1/4	6 1/2	10 3/4	3/8	34	XPM0810	7	9 1/8	XHB-2
XPCJ081204	8	12	4	4 3/4	11 3/8	15 3/8	6 1/4	8 1/2	10 3/4	3/8	34	XPM0812	6 7/8	10 7/8	XHB-2
XPCJ081206	8	12	6	6 3/4	11 3/8	15 3/8	8 1/4	8 1/2	10 3/4	3/8	42	XPM0812	6 7/8	10 7/8	XHB-2
XPCJ081208	8	12	8	8 3/4	11 3/8	15 3/8	10 1/4	8 1/2	10 3/4	3/8	48	XPM0812	6 7/8	10 7/8	XHB-2
XPCJ091105	9	11	5	5 3/4	12 3/8	14 3/8	7 5/16	7 1/2	12	3/8	41	XPM0911	8	10	XHB-2
XPCJ101004	10	10	4	4 3/4	13 3/8	13 3/8	6 5/16	6 1/2	13	3/8	34	XPM1010	8 7/8	8 7/8	XHB-2
XPCJ101006	10	10	6	6 3/4	13 3/8	13 3/8	8 5/16	6 1/2	13	3/8	44	XPM1010	8 7/8	8 7/8	XHB-2
XPCJ101008	10	10	8	8 3/4	13 3/8	13 3/8	10 5/16	6 1/2	13	3/8	50	XPM1010	8 7/8	8 7/8	XHB-2
XPCJ101206	10	12	6 1/4	7 1/4	13 3/8	15 3/8	8 7/8	8 1/2	13 1/4	3/8	46	XPM1012	10 7/8	8 7/8	XHB-2
XPCJ101404	10	14	4	4 3/4	13 3/8	17 3/8	6 7/16	10 5/8	13	3/8	42	XPM1014	8 7/8	12 7/8	XHB-2
XPCJ101406	10	14	6	6 3/4	13 3/8	17 3/8	8 7/16	10 5/8	13	3/8	49	XPM1014	8 7/8	12 7/8	XHB-2
XPCJ101408	10	14	8	8 3/4	13 3/8	17 3/8	10 1/2	10 5/8	13	3/8	57	XPM1014	8 7/8	12 7/8	XHB-2
XPCJ121206	12	12	6	7	16 1/4	16 1/4	8 15/16	8 5/8	16	1/2	68	XPM1212	10 7/8	10 7/8	XHC-2
XPCJ121208	12	12	8	9	16 1/4	16 1/4	10 15/16	8 5/8	16	1/2	80	XPM1212	10 7/8	10 7/8	XHC-2
XPCJ121806	12	18	6	6 3/4	16 1/4	22 1/4	8 3/4	14 1/8	16	1/2	93	XPM1218	10 1/2	16 1/2	XHC-2
XPCJ121808	12	18	8	8 3/4	16 1/4	22 1/4	10 3/4	14 1/8	16	1/2	101	XPM1218	10 1/2	16 1/2	XHC-2
XPCJ122005	12	20	5	5 3/4	16 1/4	24 1/4	8 1/8	14 3/8	16	1/2	104	XPM1220	11	19	XHC-2

Notes:

1. Operators, windows and hinges are ordered separately.
2. Where reference is made to Class I and Class II hazardous locations, the equipment is suitable for both Div. 1 and Div. 2 locations.
3. Enclosures are pre-drilled for mounting panel and hinge kit unless otherwise specified.
4. Lid lifter cover assist standard on all XPCJ enclosures 18 x 24 and higher.
5. Hinges are added for safety and convenience, but may be removed upon customer request. However they are strongly recommended in sizes 12 x 18 x 06 and above to ensure the safety of installation and MRO personnel.

Explosionproof enclosures
XPCJ Series – Cast aluminum

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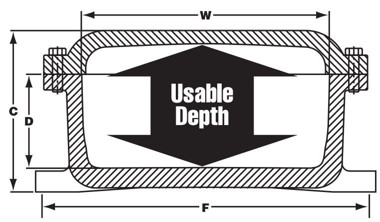
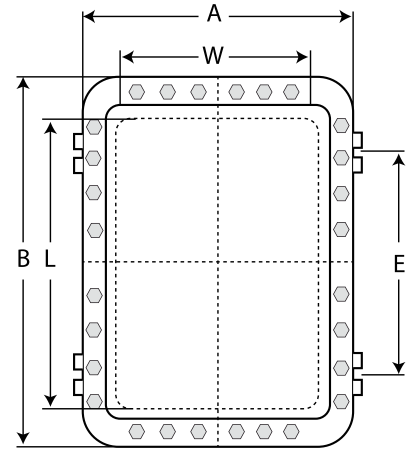




Dimensions and weights - continued

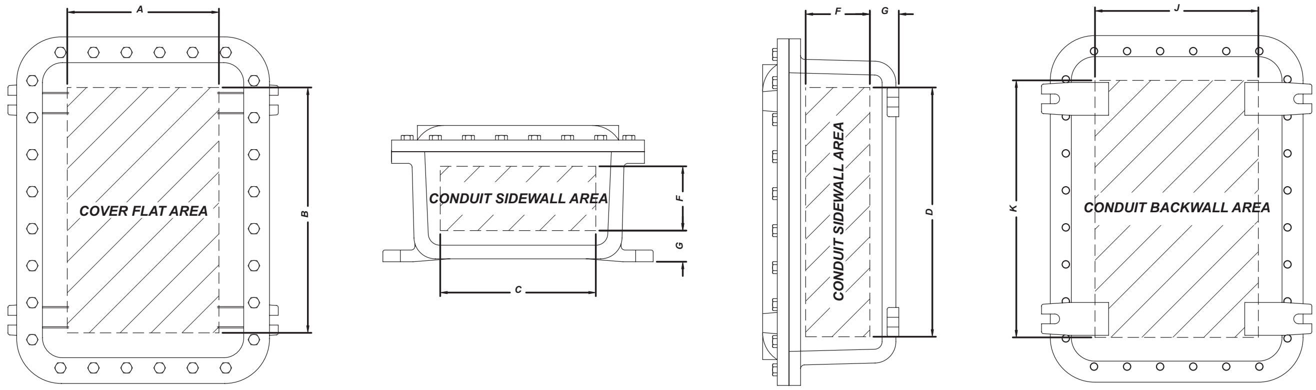
Catalog Part No.	Inside nom. dimensions (in.) W	L	D	Usable depth (in.)	Overall dimensions (in.) A	B	C	MTG Lug (in.) E	F	MTG bolt size (in.)	Shipping Wt. (lbs)	Panel Part No.	Panel dimensions (in.) W	L	Hinge Part No.
XPCJ122406	12	24	6	6 15/16	16 1/4	28 1/4	9 1/4	18 3/8	16	1/2	127	XPM1224	11	23	XHC-2
XPCJ122408	12	24	8	8 15/16	16 1/4	28 1/4	11 1/4	18 3/8	16	1/2	142	XPM1224	11	23	XHC-2
XPCJ122410	12	24	10	10 15/16	16 1/4	28 1/4	13 1/4	18 3/8	16	1/2	154	XPM1224	11	23	XHC-2
XPCJ123006	12	30	6	6 11/16	16 3/4	34 1/4	9 5/8	23	16	1/2	180	XPM1230	10 3/4	28 3/4	XHC-2
XPCJ123606	12	36	6	6 15/16	16 1/4	40 1/4	9 11/16	29	16	1/2	212	XPM1236	10 3/4	34 3/4	XHD-3
XPCJ123608	12	36	8	8 15/16	16 1/4	40 1/4	11 11/16	29	16	1/2	232	XPM1236	10 3/4	34 3/4	XHD-3
XPCJ124608	12	46	8	8 15/16	16 1/4	50 1/4	11 11/16	39	16	5/8	280	XPM1246	10 3/4	44 3/4	XHD-4
XPCJ141406	14	14	6	7	18 1/4	18 1/4	9 1/4	9 3/4	17 3/4	1/2	97	XPM1414	12 7/8	12 7/8	XHC-2
XPCJ141408	14	14	8	9	18 1/4	18 1/4	11 1/8	9 3/4	17 3/4	1/2	103	XPM1414	12 7/8	12 7/8	XHC-2
XPCJ142806	14	28	6	7 13/16	18 1/4	32 1/4	9 9/16	22 1/2	17 3/4	1/2	120	XPM1428	12 7/8	26 7/8	XHF-2
XPCJ161606	16	16	6	7 5/8	20 7/8	20 7/8	9 15/16	11	19 3/4	5/8	135	XPM1616	14 3/4	14 3/4	XHD-2
XPCJ161608	16	16	8	9 5/8	20 7/8	20 7/8	11 15/16	11	19 3/4	5/8	156	XPM1616	14 3/4	14 3/4	XHD-2
XPCJ162406	16	24	6	7 13/16	20 7/8	28 7/8	10 3/8	18 3/8	19 3/4	5/8	190	XPM1624	14 1/2	22 1/2	XHF-2
XPCJ162408	16	24	8	9 13/16	20 7/8	28 7/8	12 3/8	18 3/8	19 3/4	5/8	209	XPM1624	14 1/2	22 1/2	XHF-2
XPCJ162410	16	24	10	11 13/16	20 7/8	28 7/8	14 3/8	18 3/8	19 3/4	5/8	225	XPM1624	14 1/2	22 1/2	XHF-2
XPCJ162806	16	28	6	6 13/16	20 1/2	32 11/16	9 1/2	22 1/2	19 3/4	5/8	200	XPM1628	26 1/2	14 1/2	XHF-2
XPCJ163406	16	34	6	6 15/16	20 1/2	38 1/2	9 1/2	27	19 3/4	5/8	260	XPM1634	14 1/2	28 1/2	XHF-2
XPCJ164610	16	46	10	11 13/16	20 7/8	50 7/8	14 9/16	39	19 3/4	5/8	390	XPM1646	14 1/2	44 1/2	XHF-4
XPCJ181806	18	18	6	7 13/16	22 7/8	22 7/8	10 1/2	13	21 3/4	5/8	177	XPM1818	16 3/4	16 3/4	XHF-2
XPCJ181808	18	18	8	9 13/16	22 7/8	22 7/8	12 1/2	13	21 3/4	5/8	200	XPM1818	16 3/4	16 3/4	XHF-2
XPCJ182406	18	24	6	7 7/16	22 7/8	28 7/8	10 13/16	18 3/8	21 3/4	5/8	226	XPM1824	16 1/2	22 1/2	XHF-2
XPCJ182408	18	24	8	9 7/8	22 7/8	28 7/8	12 13/16	18 3/8	21 3/4	5/8	239	XPM1824	16 1/2	22 1/2	XHF-2
XPCJ182410	18	24	10	11 7/16	22 7/8	28 7/8	14 13/16	18 3/8	21 3/4	5/8	260	XPM1824	16 1/2	22 1/2	XHF-2
XPCJ183008	18	30	8	9 3/8	22 7/8	34 7/8	12 13/16	23	21 3/4	5/8	293	XPM1830	16 1/2	28 1/2	XHF-2
XPCJ183608	18	36	8	9 3/8	22 7/8	40 7/8	12 7/8	29	21 3/4	5/8	318	XPM1836	16 1/2	34 1/2	XHF-3
XPCJ183610	18	36	10	11 3/8	22 7/8	40 7/8	14 7/8	29	21 3/4	5/8	340	XPM1836	16 1/2	34 1/2	XHF-3
XPCJ242408	24	24	8	9 7/16	28 7/8	28 7/8	12 7/16	18 3/8	28	5/8	302	XPM2424	22	22	XHF-2
XPCJ242410	24	24	10	11 7/16	28 7/8	28 7/8	14 7/16	18 3/8	28	5/8	330	XPM2424	22	22	XHF-2
XPCJ243008	24	30	8	9 1/4	28 7/8	34 7/8	12 15/16	23	28	5/8	356	XPM2430	22	28	XHF-2
XPCJ243608	24	36	8	9 1/4	28 7/8	40 7/8	12 7/16	29	28	5/8	408	XPM2436	34	22	XHF-3
XPCJ243610	24	36	10	11 1/4	28 7/8	40 7/8	14 7/8	29	28	5/8	433	XPM2436	34	22	XHF-3
XPCJ323612*	32	36	12	12	37 3/4	41 3/4	15 1/2	29	36 1/8	5/8	691	XPM3236	29	33	XHF-3*

* This unit has limited approval dependent on number of entries

Notes:

1. Operators, windows and hinges are ordered separately.
2. Where reference is made to Class I and Class II hazardous locations, the equipment is suitable for both Div. 1 and Div. 2 locations.
3. Enclosures are pre-drilled for mounting panel and hinge kit unless otherwise specified.
4. Lid lifter cover assist standard on all XPCJ enclosures 18 x 24 and higher.
5. Hinges are added for safety and convenience, but may be removed upon customer request. However they are strongly recommended in sizes 12 x 18 x 06 and above to ensure the safety of installation and MRO personnel.

Explosionproof enclosures
XPCJ Series – Cast aluminum



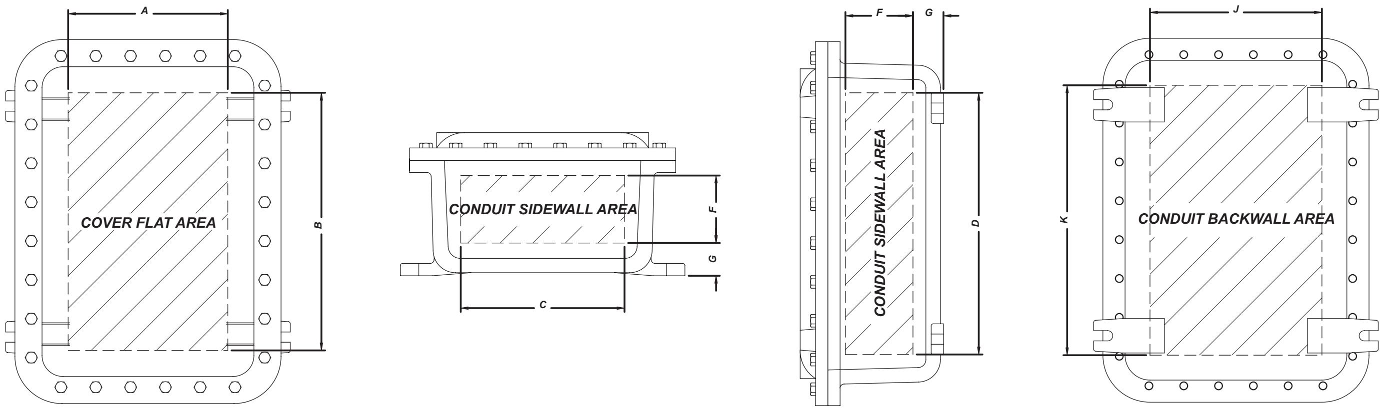
Cover and sidewall area

Enclosure series	Cover flat (in.)		Conduit sidewall (in.)				Back wall (in.)	
	A	B	C	D	F	G	J	K
XPCJ041604	2⅛	14⅛	2¹¹⁄₁₆	14¹¹⁄₁₆	2⅞	1	3⅛	15⅛
XPCJ060804	3⅞	5⅞	4¹¹⁄₁₆	6¹¹⁄₁₆	2⅞	1	5⅛	7⅛
XPCJ060805	3⅞	5⅞	4⅝	6⅝	3⅞	1	5¹⁄₁₆	7¹⁄₁₆
XPCJ060806	3⅞	5⅞	4⁹⁄₁₆	6⁹⁄₁₆	4⅞	1	4¹⁵⁄₁₆	6¹⁵⁄₁₆
XPCJ061105	3⅞	8⅞	4⅝	9⅝	3⅝	1	5⅛	10⅛
XPCJ061204	3⅞	9⅞	4¹¹⁄₁₆	10¹¹⁄₁₆	2⅞	1	5⅛	11⅛
XPCJ061206	3⅞	9⅞	4⁹⁄₁₆	10⁹⁄₁₆	4⁹⁄₁₆	1⁵⁄₁₆	4⁷⁄₁₆	10⁷⁄₁₆
XPCJ061305	3⅞	10⅞	4⅝	11⅝	3⅝	1	5⅛	12⅛
XPCJ071004	4⅞	7⅞	5⅝	8⅝	2½	1⅜	5⅝	8⅝
XPCJ071805	5⅞	16¼	5⁷⁄₁₆	16¹¹⁄₁₆	3½	1⅜	5⁷⁄₁₆	16¹¹⁄₁₆
XPCJ080804	5⅞	5⅞	6⅝	6⅝	2¹¹⁄₁₆	1⅜	7⅛	7⅛
XPCJ080806	5⅞	5⅞	6⁹⁄₁₆	6⁹⁄₁₆	4¹¹⁄₁₆	1⅜	7¹⁄₁₆	7¹⁄₁₆
XPCJ080808	5⅞	5⅞	6⁷⁄₁₆	6⁷⁄₁₆	6¹¹⁄₁₆	1⅜	6¹⁵⁄₁₆	6¹⁵⁄₁₆
XPCJ081004	5⅞	7⅞	6⅝	8⅝	2½	1⅜	6⅝	8⅝
XPCJ081006	5⅞	7⅞	6⁹⁄₁₆	8⁹⁄₁₆	4½	1⅜	6⁹⁄₁₆	8⁹⁄₁₆
XPCJ081008	5⅞	7⅞	6⁷⁄₁₆	8⁷⁄₁₆	6½	1⅜	6⁷⁄₁₆	8⁷⁄₁₆
XPCJ081204	5⅞	9⅞	6⅝	10⅝	2½	1⅜	6⅝	10⅝
XPCJ081206	5⅞	9⅞	6⁹⁄₁₆	10⁹⁄₁₆	4½	1⅜	6⁹⁄₁₆	10⁹⁄₁₆
XPCJ081208	5⅞	9⅞	6⁷⁄₁₆	10⁷⁄₁₆	6½	1⅜	6⁷⁄₁₆	10⁷⁄₁₆
XPCJ091105	6⅞	8⅞	7⁵⁄₁₆	9⁵⁄₁₆	3⅜	1⁹⁄₁₆	7⁵⁄₁₆	9⁵⁄₁₆
XPCJ101004	7⅞	7⅞	8⅜	8⅜	2⅜	1⁹⁄₁₆	8⅜	8⅜
XPCJ101006	7⅞	7⅞	8⁵⁄₁₆	8⁵⁄₁₆	4⅜	1⁹⁄₁₆	8⁵⁄₁₆	8⁵⁄₁₆
XPCJ101008	7⅞	7⅞	8³⁄₁₆	8³⁄₁₆	6⅜	1⁹⁄₁₆	8³⁄₁₆	8³⁄₁₆
XPCJ101206	7¾	9¾	8¼	10¼	4⅝	1⁹⁄₁₆	8¼	10¼
XPCJ101404	7⅞	11⅞	8⅜	12⅜	2⅜	1⁹⁄₁₆	8⅜	12⅜
XPCJ101406	7⅞	11⅞	8⁵⁄₁₆	12⁵⁄₁₆	4⅜	1⁹⁄₁₆	8⁵⁄₁₆	12⁵⁄₁₆
XPCJ101408	7⅞	11⅞	8¹⁄₁₆	12 ¹⁄₁₆	6¼	1¾	7⅝	11⅝
XPCJ121206	9¾	9¾	9¹³⁄₁₆	9¹³⁄₁₆	4⅛	1⅞	9¹³⁄₁₆	9¹³⁄₁₆
XPCJ121208	9¾	9¾	9¹¹⁄₁₆	9¹¹⁄₁₆	6⅛	1⅞	9¹¹⁄₁₆	9¹¹⁄₁₆
XPCJ121806	9¾	15¾	9¹³⁄₁₆	15¹³⁄₁₆	4⅛	1⅞	9¹³⁄₁₆	15¹³⁄₁₆
XPCJ121808	9¾	15¾	9¹¹⁄₁₆	15¹¹⁄₁₆	6⅛	1⅞	9¹¹⁄₁₆	15¹¹⁄₁₆
XPCJ122005	9¾	17¾	10¹⁄₁₆	18¹⁄₁₆	3³⁄₁₆	2	10¹⁄₁₆	18¹⁄₁₆
XPCJ122406	9⅝	21⅝	10¹⁄₁₆	22¹⁄₁₆	4⅛	2	10¹⁄₁₆	22¹⁄₁₆
XPCJ122408	9⅝	21⅝	9¹⁵⁄₁₆	21¹⁵⁄₁₆	6⅛	2	9¹⁵⁄₁₆	21¹⁵⁄₁₆

Note: For closer spacing, consult factory for details. Hydro test may be necessary.

Explosionproof enclosures
XPCJ Series – Cast aluminum

2



Cover and sidewall area - continued

Enclosure series	Cover flat (in.)		Conduit sidewall (in.)				Back wall (in.)	
	A	B	C	D	F	G	J	K
XPCJ122410	9 5/8	21 5/8	9 13/16	21 13/16	8 1/8	2	9 13/16	21 13/16
XPCJ123006	9 5/8	27 7/8	10 1/6	28 1/16	4	2 5/16	10 1/6	28 1/16
XPCJ123608	9 5/8	33 7/8	9 15/16	33 15/16	6	2 3/8	9 15/16	33 15/16
XPCJ124608	9 5/8	42 1/4	9 7/16	43 7/16	5 5/8	2 11/16	9 3/16	43 3/16
XPCJ141406	11	11	12 1/16	12 1/16	3 3/4	2 1/8	11 9/16	11 9/16
XPCJ141408	11	11	11 15/16	11 15/16	5 3/4	2 1/8	11 7/16	11 7/16
XPCJ142806	11	25	11 5/8	25 5/8	4	2	11 5/8	25 5/8
XPCJ161606	12 1/2	12 1/2	14 1/16	14 1/16	4	2 1/16	14 1/16	14 1/16
XPCJ161608	12 1/2	12 1/2	13 15/16	13 15/16	6	2 1/16	13 15/16	13 15/16
XPCJ162406	12 1/2	20 1/2	13 1/2	21 1/2	3 7/8	2 5/16	13 1/2	21 1/2
XPCJ162408	12 1/2	20 1/2	13 3/8	21 3/8	5 7/8	2 5/16	13 3/8	21 3/8
XPCJ162410	12 1/2	20 1/2	13 1/4	21 1/4	7 7/8	2 5/16	13 1/4	21 1/4
XPCJ162806	13 1/4	25 1/4	14 1/16	26 1/16	3 11/16	2 3/16	14 1/16	26 1/16
XPCJ163406	13 7/8	31 3/8	14 1/16	32 1/16	3 15/16	2 5/16	14 1/16	32 1/16
XPCJ164610	12 1/2	42 1/4	13 7/8	43 7/8	7 7/8	2 7/16	13 7/8	43 7/8
XPCJ181806	14 1/4	14 1/4	16 1/16	16 1/16	3 7/8	2 5/16	16 1/16	16 1/16
XPCJ181808	14 1/4	14 1/4	15 15/16	15 15/16	5 7/8	2 5/16	15 15/16	15 15/16
XPCJ182406	14 1/4	20 1/4	15 7/16	21 7/16	3 7/8	2 1/2	15 7/16	21 7/16
XPCJ182408	14 1/4	20 1/4	15 3/8	21 3/8	5 7/8	2 1/2	15 3/8	21 3/8
XPCJ182410	14 1/4	20 1/4	15 1/4	21 1/4	7 7/8	2 1/2	15 1/4	21 1/4
XPCJ183008	14 1/4	26 1/4	15 3/8	27 3/8	5 7/8	2 1/2	15 3/8	27 3/8
XPCJ183608	14 1/4	32 1/4	15 3/8	33 3/8	5 7/8	2 1/2	15 3/8	33 3/8
XPCJ183610	14 1/4	32 1/4	15 1/4	33 1/4	7 7/8	2 1/2	15 1/4	33 1/4
XPCJ242408	20 1/4	20 1/4	20 7/8	20 7/8	5 5/8	2 9/16	20 7/8	20 7/8
XPCJ242410	20 1/4	20 1/4	20 3/4	20 3/4	7 5/8	2 9/16	20 3/4	20 3/4
XPCJ243008	20 1/4	26 1/4	20 5/8	26 5/8	5 7/8	2 7/16	21 3/8	27 3/8
XPCJ243608	20 1/4	32 1/4	21 3/16	33 3/16	5 7/8	2 1/2	21 15/16	33 15/16
XPCJ243610	20 1/4	32 1/4	21 1/8	33 1/8	7 7/8	2 3/4	20 7/8	32 7/8
XPCJ323612*	28 3/4	32 3/4	30	34	3 3/8	2 3/4	28 7/8	32 7/8

Note: For closer spacing, consult factory for details. Hydro test may be necessary.

Explosionproof enclosures
XPCJ Series – Cast aluminum

Options
The following options are available from the factory by adding suffix to catalog number – suffixes are added alphanumerically.

Description	Suffix
Breather/Drain - Installed in bottom	E
Breather and Drain Installed	EE
Epoxy Coating (External), (Specify Color)	LI
Epoxy Coating (Internal and External), (Specify Color)	L2
Phenolic Nameplate (Specify Legend)	NP
Replace cover bolts with Quad-Lead bolts	Q

Mounting panels

Type	Specifications
XPM	Galvanized 12 gauge steel plate
XPA	Aluminum plate — consult factory for availability

Notes:
1. Factory installation of mounting pan included at no charge when specified.
2. Enclosures are pre-drilled for mounting panel unless otherwise specified.
3. The catalog number includes the mounting pan complete with 1/4" nylon spacers and stainless steel mounting screws.
4. Refer to dimensions table for correct panel size

Hinge kits

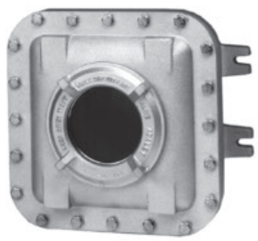
Type	Specifications
XHB-2	Refer to dimensions table for correct hinge selection — refer to p. 1/8 & 1/9
XHC-2	
XHD-2, -3, & -4	
XHF-2, -3, & -4	

Notes:
1. Catalog number represents complete hinge sets necessary for enclosure assembly.
2. Enclosures are pre-drilled for hinge kits unless otherwise specified.
3. Hinges are left side removable standard.
4. Made of extruded aluminum alloy consisting of two sections, female and male (with stainless steel pin) and four stainless steel hex head bolts.
5. Designed to allow right or left hand removable or non-removable installation.

Explosionproof enclosures
XPCJ Series – Cast aluminum

Options
The following options are available from the factory by adding suffix to catalog number – suffixes are added alphanumerically.

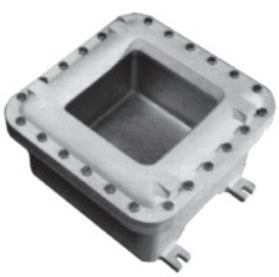
2



Circular window

Type	Window viewing area dia.	Overall window cover dia.	Min. enclosure inside width / length	Thread
XGC 10	1⅛	3	8	2½ - 16
XGC 20	1¹⁵⁄₁₆	4⅛	9	3⅝ - 12
XGC 30	3	5³⁄₁₆	9	4¾ - 12
XGC 40	4	6⅜	9	5½ - 12
XGC 52	5¼	7⅞	10	7⅛ - 12
XGC 66	6¹¹⁄₁₆	10⅜	16	9⅛ - 12
XGC 80	8	12⅛	18	10⅞ - 8

Notes:
1. All dimensions are in inches.
2. Glass window catalog number includes XPCJ cover machining and installation.
3. All windows come with gasket to meet NEMA 4/IP66.
4. To order glass windows for field installations, add suffix “SLF” to XGC catalog number.
5. Consult factory for closer spacing requirements, multiple windows or combinations of operators and windows.



Standard rectangular window

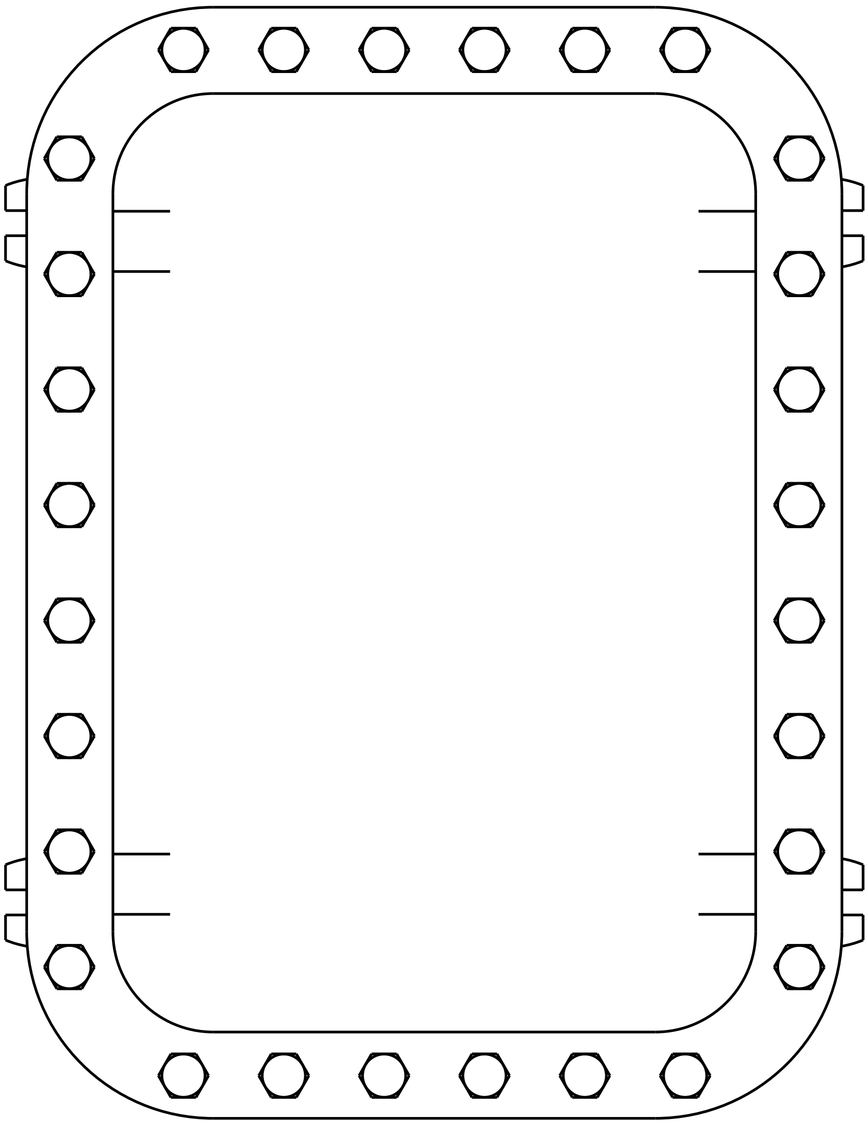
Type	Window viewing area	Min. enclosure inside width	Min. enclosure inside length
XGW 0303	3 x 3	8	8
XGW 0305	3 x 5	8	10
XGW 0307	3 x 7	8	12
XGW 0505	5 x 5	10	10
XGW 0509	5 x 9	10	14
XGW 0707	7 x 7	12	12
XGW 0713	7 x 13	12	18
XGW 0909	9 x 9	14	14
XGW 1111	11 x 11	16	16
XGW 1313	13 x 13	18	18

Notes:
1. All dimensions are in inches.
2. Glass window catalog number includes installation and pattern modifications.
3. All windows come with gasket to meet NEMA 4.
4. Consult factory for special viewing area requirements, closer spacing and to combine windows with other window sizes or operators.
5. Windows can be ordered in sizes between 3” and 13” – consult factory.
6. XGW window kits are not sold for field installation.

Explosionproof enclosures
XPCJ Series – Cast aluminum

Customer design sheet

Cover layout



Dimension all modifications from center lines of cover

Cat #: X ....

ATEX / IECEx

☐ DEMKO U Cert.

UL

☐ UL APPROVED Ref.DS361 & B301

CSA

☐ CSA APPROVED Ref.DS327 & B301

HINGES

☐ Left Hand
☐ Right Hand
☐ Long Side
☐ Short Side
☐ Non Removable

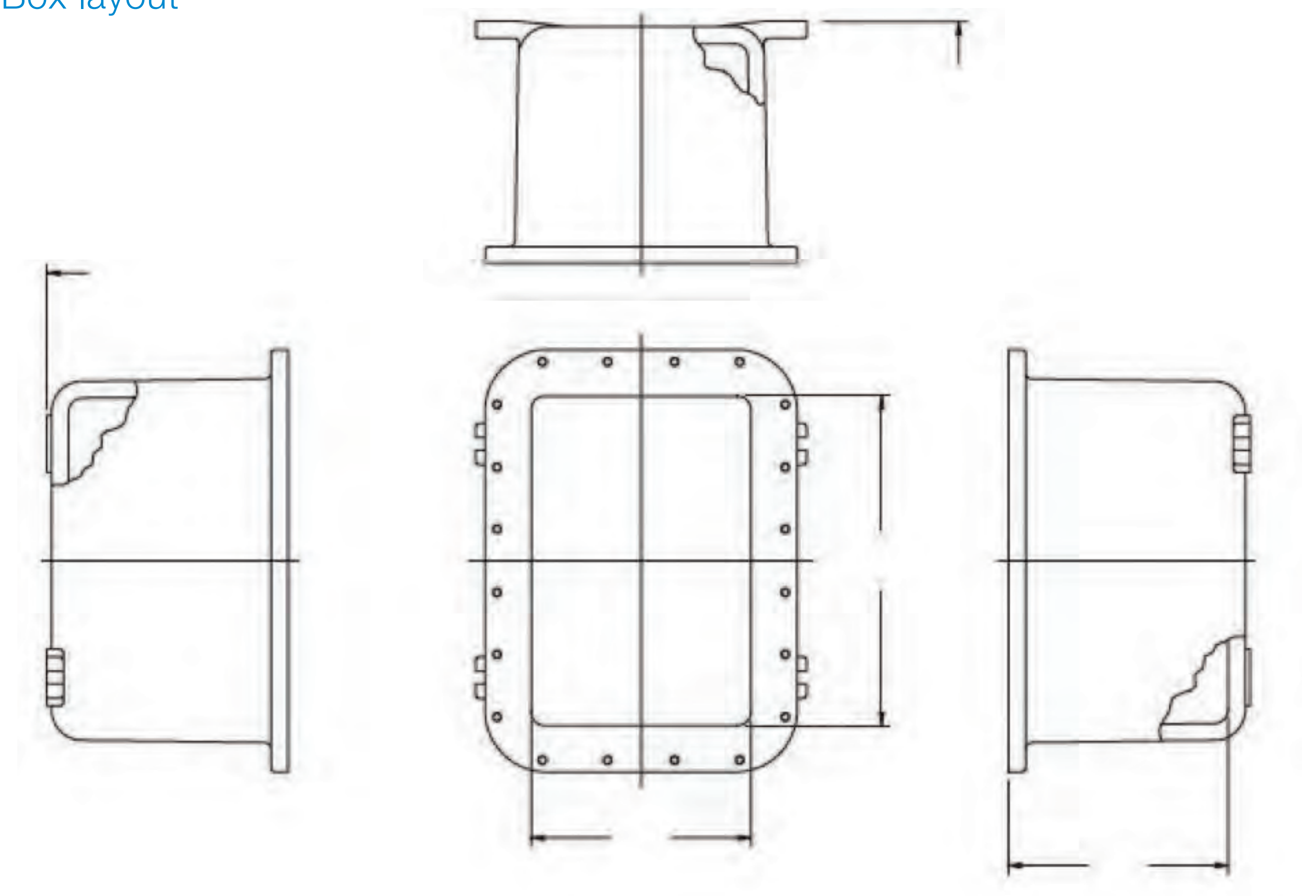
NEMA 4 /IP66

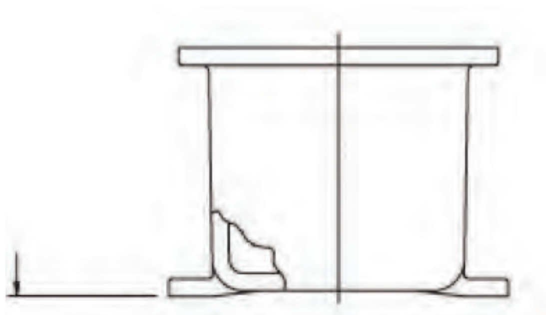
☐ Remove gasket

Explosionproof enclosures
XPCJ Series – Cast aluminum

Customer design sheet

Box layout





Dimensions – all modifications from center lines and bottom of mounting lugs whenever possible.

ATEX / IECEx

- ☐ DEMKO U Cert.

UL

- ☐ UL APPROVED Ref.DS248 & B301

CSA

- ☐ CSA APPROVED Ref.B301

HINGES

- ☐ Left Hand
- ☐ Right Hand
- ☐ Long Side
- ☐ Short Side
- ☐ Non Removable

MTG. PANS

- ☐ XPA Pan
- ☐ XPM Pan

Explosionproof enclosures
XPCJ Series – Cast aluminum

Minimum spacing for operators in covers

Enclosure series	Standard operators				Miniature operators				Cover wall thickness (in.)
	Max #	Rows	Row	CL to CL (in.)	Max #	Rows	Row	CL to CL (in.)	
XPCJ041604	5	5	1	2 1/2	13	13	1	1	1/2
XPCJ060804	2	2	1	2 1/2	8	4	2	1	1/2
XPCJ060805	2	2	1	2 1/2	8	4	2	1	1/2
XPCJ060806	2	2	1	2 1/2	8	4	2	1	1/2
XPCJ061105	3	3	1	2 1/2	14	7	2	1	1/2
XPCJ061204	4	4	1	2 1/2	16	8	2	1	5/8
XPCJ061206	4	4	1	2 1/2	16	8	2	1	5/8
XPCJ061305	4	4	1	2 1/2	18	9	2	1	1/2
XPCJ071004	6	3	2	2 1/2	18	6	3	1	5/8
XPCJ071805	12	6	2	2 1/2	45	15	3	1	5/8
XPCJ080804	4	2	2	2 1/2	16	4	4	1	11/16
XPCJ080806	4	2	2	2 1/2	16	4	4	1	11/16
XPCJ080808	4	2	2	2 1/2	16	4	4	1	11/16
XPCJ081004	6	3	2	2 1/2	24	6	4	1	11/16
XPCJ081006	6	3	2	2 1/2	24	6	4	1	11/16
XPCJ081008	6	3	2	2 1/2	24	6	4	1	11/16
XPCJ081204	8	4	2	2 1/2	32	8	4	1	11/16
XPCJ081206	8	4	2	2 1/2	32	8	4	1	11/16
XPCJ081208	8	4	2	2 1/2	32	8	4	1	11/16
XPCJ091105	6	3	2	2 1/2	35	7	5	1	11/16
XPCJ101004	9	3	3	2 1/2	36	6	6	1	11/16
XPCJ101006	9	3	3	2 1/2	36	6	6	1	11/16
XPCJ101008	9	3	3	2 1/2	36	6	6	1	11/16
XPCJ101206	12	4	3	2 1/2	48	8	6	1	3/4
XPCJ101404	12	4	3	2 1/2	60	10	6	1	3/4
XPCJ101406	12	4	3	2 1/2	60	10	6	1	3/4
XPCJ101408	12	4	3	2 1/2	60	10	6	1	3/4
XPCJ121206	9	3	3	3	64	8	8	1	7/8
XPCJ121208	9	3	3	3	64	8	8	1	7/8
XPCJ121806	15	5	3	3	92	14	8	1	15/16
XPCJ121808	15	5	3	3	92	14	8	1	15/16
XPCJ122005	18	6	3	3	128	16	8	1	1 1/8
XPCJ122406	21	7	3	3	150	20	8	1	1 1/8
XPCJ122408	21	7	3	3	150	20	8	1	1 1/8
XPCJ122410	21	7	3	3	150	20	8	1	1 1/8
XPCJ123006	27	9	3	3	150	26	8	1	1 3/8
XPCJ123608	33	11	3	3	150	32	8	1	1 3/16
XPCJ124608	42	14	3	3	150	41	8	1	1 1/4
XPCJ141406	16	4	4	3	100	10	10	1	7/8
XPCJ141408	16	4	4	3	100	10	10	1	7/8
XPCJ142806	24	6	4	3	100	18	10	1	1 1/8
XPCJ161606	16	4	4	3 1/2	121	11	11	1	7/8
XPCJ161608	16	4	4	3 1/2	121	11	1	1	7/8
XPCJ162406	24	6	4	3 1/2	150	19	11	1	7/8
XPCJ162408	24	6	4	3 1/2	150	19	11	1	7/8
XPCJ162410	24	6	4	3 1/2	150	19	11	1	7/8
XPCJ162806	28	7	4	3 1/2	150	24	11	1	1 1/4
XPCJ163406	32	8	4	3 1/2	150	30	11	1	1 1/4
XPCJ164610	48	12	4	3 1/2	150	41	11	1	1
XPCJ181806	36	6	6	2 1/2	150	13	13	1	1
XPCJ181808	36	6	6	2 1/2	150	13	13	1	1
XPCJ182406	24	6	4	3 1/2	150	19	13	1	1 1/2
XPCJ182408	24	6	4	3 1/2	150	19	13	1	1 1/2
XPCJ182410	24	6	4	3 1/2	150	19	13	1	1 1/2
XPCJ183008	32	8	4	3 1/2	150	25	13	1	1 1/2
XPCJ183608	36	9	4	3 1/2	150	31	13	1	1 7/8
XPCJ183610	36	9	4	3 1/2	150	31	13	1	1 7/8
XPCJ242408	36	6	6	3 1/2	150	19	19	1	1 1/2
XPCJ242410	36	6	6	3 1/2	150	19	19	1	1 1/2
XPCJ243008	42	7	6	3 1/2	150	25	19	1	1 7/8
XPCJ243608	54	9	6	3 1/2	150	31	19	1	1 7/8
XPCJ243610	54	9	6	3 1/2	150	31	19	1	1 7/8
XPCJ323612*	72	9	8	3 1/2	50	31	27	1	1 3/8

* This unit has limited approval dependent on number of entries

Notes:

1. For closer spacing, consult factory for details. Hydro test may be necessary.
2. For standard operator, selection refer to pages 3/28-3/38.
3. For miniature operator, selection refer to pages 3/39-3/41.

Explosionproof enclosures
XPCJ Series – Cast aluminum

Conduit entry drilling and tapping guidelines

When drilling and tapping enclosures for conduit, proper installation requires the following:

- Must be tapped with at least 5 full NPT threads in enclosure back or sides only; min. 1/2" conduit size
- Depth of NPT holes must be plus 1/2 turn min. to plus 2 turns max. past standard NPT plug gauge notch
- Inner end of conduit openings shall be smooth and well-rounded

Table 1. Conduit thread size / min. wall thickness

Thread size of conduit	Minimum wall thickness at conduit entrance
Inches (NPT)	**Explosionproof (in.)**
½ - ¾	¾
1 - 2	7/16
2 ½ - 5	⅝

Table 2. Conduit thread size / distance guideline

Action	Measure (in. / Metric)										
Conduit size, inches (NPT) / metric	½ / M16	¾ / M20	1 / M25	1¼ / M32	1½ / M40	2 / M50	2½ / M63	3 / M75	3½	4	5
Minimum distance from conduit CL to inside corner or back of box	1 5/16	1 7/16	1 9/16	1¾	1⅞	2⅛	2⅜	2 11/16	2 15/16	3¼	3⅞
Approximate diameter of union	1⅞	1⅞	2 1/16	2⅞	3¼	3⅞	4⅞	5½	6	6½	7½

Table 3. Minimum hole spacing for conduit entries (CL to CL)

Size (in. / Metric)	5	4	3½	3	2½	2	1½	1¼	1	¾	½
½ / M16	4½	3⅝	3⅜	3	2⅝	2⅜	2	1⅞	1¾	1⅝	1½
¾ / M20	4¾	3¾	3½	3⅛	2¾	2½	2⅛	2	1⅞	1¾	–
1 / M25	4⅞	4	3⅝	3¼	3	2⅝	2⅜	2¼	2	–	–
1¼ / M32	5⅛	4⅛	3⅞	3½	3⅛	2⅞	2½	2⅜	–	–	–
1½ / M46	5½	4¼	4	3⅝	3¼	3	2⅝	–	–	–	–
2 / M56	5¾	4⅝	4¼	3⅞	3⅝	3¼	–	–	–	–	–
2½ / M63	6	4⅞	4⅝	4¼	3⅞	–	–	–	–	–	–
3 / M75	6¼	5⅜	5	4⅝	–	–	–	–	–	–	–
3½	6½	5⅝	5¼	–	–	–	–	–	–	–	–
4	6¾	5⅞	–	–	–	–	–	–	–	–	–
5	7¼	–	–	–	–	–	–	–	–	–	–

Notes:

1. This information is compiled from data which we believe is reliable and is given in good faith. Because the methods of applications and conditions under which these products are used are beyond our control, we are not able to guarantee the application and/or use of same. The user assumes all risks and liability in connection with the application and use of the product.
2. Dimensions are in inches.
3. Metric threads available from factory for most applications – consult factory.
4. Consult factory for special spacing arrangements. Hydro test may be required.

Explosionproof enclosures
XPCJ Series – Cast aluminum

Auxiliary device drilling and tapping guidelines
For hazardous locations, follow these procedures for proper installation

When using an auxiliary device in the box wall of an enclosure, proper installation requires compliance with the following:

1. A minimum of (5) thread engagement, class 2 fit, required for group C & D applications
2. A minimum of (7) thread engagement, class 2 fit, required for group B applications
3. If auxiliary device contains undercut in engaging threaded section, the minimum wall thickness shown in Table 1 must increase to maintain the minimum required thread engagement. (Fig A)

Fig. A
See Note 3

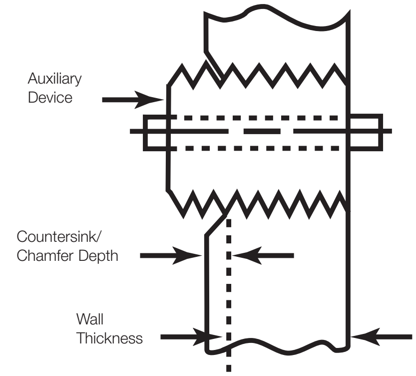


Table 1. Required minimum box wall thickness

Thread size (in.)	Group C & D min. (5) thread engagement (in.)	Group B min. (7) thread engagement (in.)	Typical auxiliary device	Drill dia.
½ - 14 NPSM	⅜	½	XPBO, XHPB, XHSS, standard operators	.747 / .759
¾ - 14 NPSM	⅜	½	XPBO, XHPB, XHSS, standard operators	.958 / .970
1 - 11 ½ NPSM	7/16	⅝	XPCBH Large handle assembly	1.201 / 1.211
⅜ - 18 NPSM	9/32	13/32	XPCBH Small handle assembly	.603 / .612
⅜ - 16 UNC	5/16	7/16	XMOB, XMOSS, mini operators	5/16

Table 2. Minimum distance from auxiliary device CL to corner or back of box

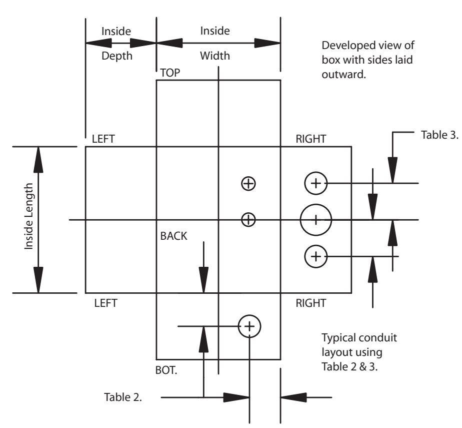
⅜ - 16 UNC	⅜ - NPSM	½ - NPSM	¾ - NPSM	1 - NPSM
1½	1⅝	1¾	1⅞	2

Table 3. Minimum spacing between conduit and auxiliary device entrances

Auxiliary device thread (in.)	5	4	3½	3	2½	2	1½	1¼	1	¾	½
⅜	4½	3⅝	3⅜	3	2⅝	2⅜	2	1⅞	1¾	1⅝	1½
½	4⅝	3¾	3½	3⅛	2¾	2½	2¼	2⅛	2	1⅞	1¾
¾	4¾	4	3⅝	3¼	2⅞	2⅝	2⅜	2¼	2⅛	2	1⅞
1	5	4¼	3⅞	3½	3	2¾	2½	2⅜	2¼	2⅛	2

Table 4. Minimum spacing between auxiliary device entrances

	⅜	½	¾	1
⅜	1½	1½	1½	2½
½	1½	2	2	2½
¾	1½	2	2	3
1	2½	2½	3	3½



Notes:

1. Increase distance between devices as required to maintain minimum through air spacing of contacts required by electrical codes.
2. Double all distances in tables 3 and 4 for holes located in back wall.
3. All measurements are in inches, unless otherwise noted.

Explosionproof enclosures
XPCJX Series – Cast stainless steel

2

Applications

- Control panel, junction, or pull box
- Enclosures for splices and branch circuit taps, terminal blocks, relays and other electrical devices
- This solution is designed and tested to meet the standards of all industries and applications where explosion-proof protection is required.
- Our T&B EX™ cast stainless steel explosion-proof enclosures provide protection against harsh and hazardous locations, found within onshore and offshore industries, petrochemical and marine applications
- Provide an alternative to traditional cast aluminum explosion-proof enclosures which may become compromised or could break down over time in highly corrosive areas

Features

- Meets all requirements for NEC article 500, Class 1 Division 1
- 5 standard sizes available
- Flat plate cover design
- Corrosion resistant, cast stainless steel 316L
- Pre-drilled for mounting panel (mounting panel is optional)
- Internal / external grounding screws
- Removable lifting eye bolts
- Lid-lifter cover alignment device on covers > 100 lbs
- Standard cast-on mounting lugs / feet

Certifications & Standards

Class I, Division 1, Groups B*, C & D
Class II, Groups E, F & G
Class III
Class I, Zone 1, AEx d IIB
NEMA Type 4X, 7, 9

* Group B available without gasket
** For IECEx and ATEX certifications, consult factory

Options

- Conduit (NPT & Metric) and device (NPSM) drilling & tapping
- Auxiliary devices: breather / drains, flame arrestors and operators
- Custom machining – milling, counter-boring, spot-facing, blind drilled holes, entries, chamfers

Standard materials

- Enclosure – stainless steel 316L
- Cover bolts – stainless steel 316L
- Hinge kits – stainless steel 316L
- Gasket – nitrile rubber: resistant to oil, fuel, and other chemicals

	Inside nom. dimensions (in.)			Usable	Overall dimensions (in.)			Mounting lug (in.)		Mounting	Shipping	Panel	Panel dimensions (in.)		Hinge
Part. No.	L	W	D	Depth (in.)	A	B	C	E	F	bolt (in.)	weight (lbs)	Part. No.	W	H	Part. No.
XPCJX101408	10	14	8	8	13 9/16	17 9/16	9 7/8	10 7/8	13	7/16	195	XPM1014	8 7/8	12 7/8	XHBK-2
XPCJX121208	12	12	8	8	16 1/4	16 1/4	9 7/8	8 5/8	15 3/4	5/8	210	XPM1212	10 7/8	10 7/8	XHCK-2
XPCJX122410	12	24	10	10	16 1/4	28 1/4	11 3/4	18 3/8	15 3/4	5/8	380	XPM1224	11	23	XHCK-2
XPCJX242410	24	24	10	10	28 7/8	28 7/8	12 3/8	18 3/8	28	3/4	735	XPM2424	22	22	XHFK-2
XPCJX243610	24	36	10	10	28 7/8	40 7/8	12 3/8	29	28	3/4	985	XPM2436	34	22	XHFK-3

Explosionproof enclosures
XPHV Series – High voltage cast aluminum

XPHV explosion proof high voltage junction boxes are available in 16 sizes up to 8kV and 1000 Amp., the XPHV high voltage enclosures include a set of three porcelain insulators for high voltage applications.

Applications
- Where high voltage cables need termination and or connecting
- Indoors and outdoors – in damp, wet, dirty, dusty hazardous locations without the need for a protective shelter
- In areas where frequent washdowns are necessary or where heavy rain or water spray is prevalent
- On switchracks or other assemblies where it is required to join high voltage cables
- Suitable for petrochemical, water treatment, food processing, coating and chemical installations

Features
- 16 (1 x 1) and 10 (2 x 2) sizes available
- Corrosion resistant, copper free aluminum
- Hinged cover
- Custom steel mounting panel
- Set of three porcelain standoffs and hardware (1 x 1 connection only)
- Set of three porcelain bus supports insulators and hardware (2 x 2 connection only)
- High voltage cover sign
- Internal and external ground lugs
- Removable lifting eye bolts (18 x 24 and larger)
- Lid-lifter cover alignment device (18 x 24 and larger)
- Cast-on mounting lugs / feet

Options
- Stainless steel cover bolts for Type 4X additional corrosion protection
- Conduit (NPT & Metric) and device (NPSM) drilling & tapping
- Auxiliary devices such as breather / drains
- Custom machining – milling, counter-boring, spot-facing, blind drilled holes, entries, chamfers
- Powder and epoxy coating for additional corrosion resistance
- Special mounting provisions

Standard materials
- Body and cover – copper-free aluminum (0.3% max copper content)
- Gasket – nitrile rubber, resistant to oil, fuel, and other chemicals
- Cover bolts – steel, zinc plated and coated, optional stainless steel bolts
- Hinges – copper free aluminum with stainless steel hardware

Standard finish
- Copper-free aluminum – tumblast, natural aluminum finish

Electrical ratings
- 1 x 1 series: 8000 Volts
- 2 x 2 series: 7500 Volts

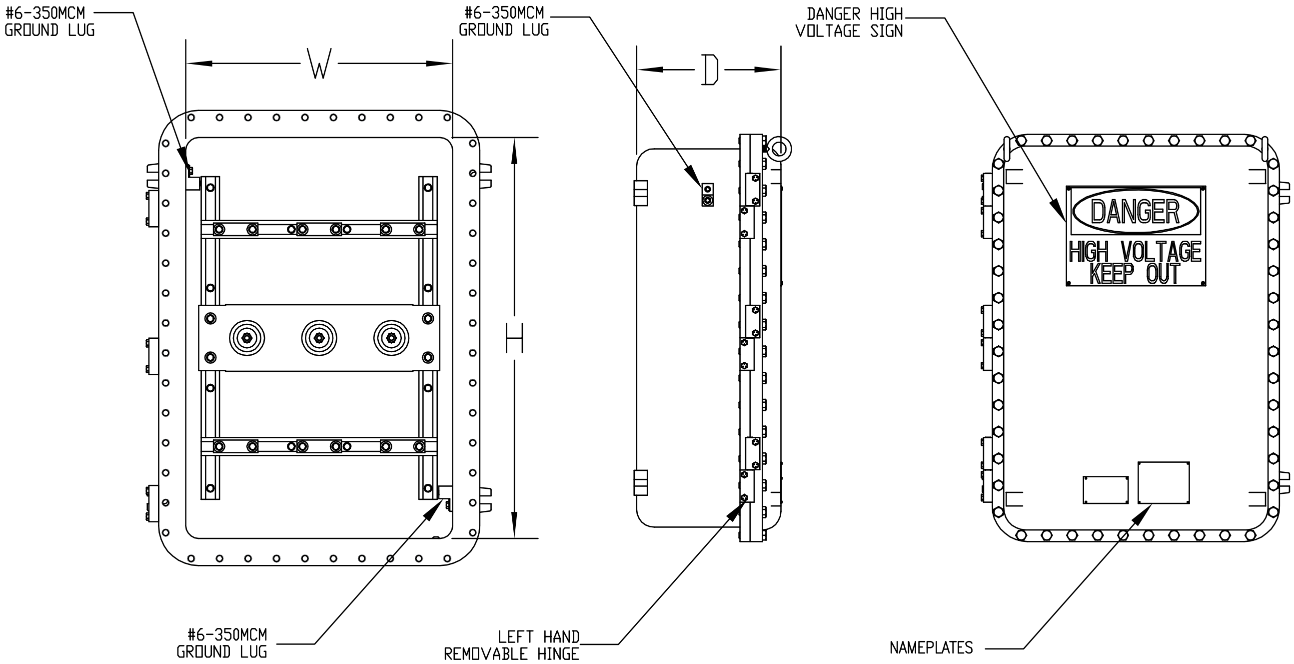
Certifications & Standards

Class I, Divisions 1 & 2, Groups B*, C, D
Class II, Divisions 1 & 2, Groups E, F, G
Class III
Class I, Zone 1, AEx d IIB**

* Group B available without gasket
** For IECEx and ATEX certifications, consult factory

Explosionproof enclosures
XPHV Series – High voltage cast aluminum

1 x 1 connection



XPHV - 1 x 1 connection

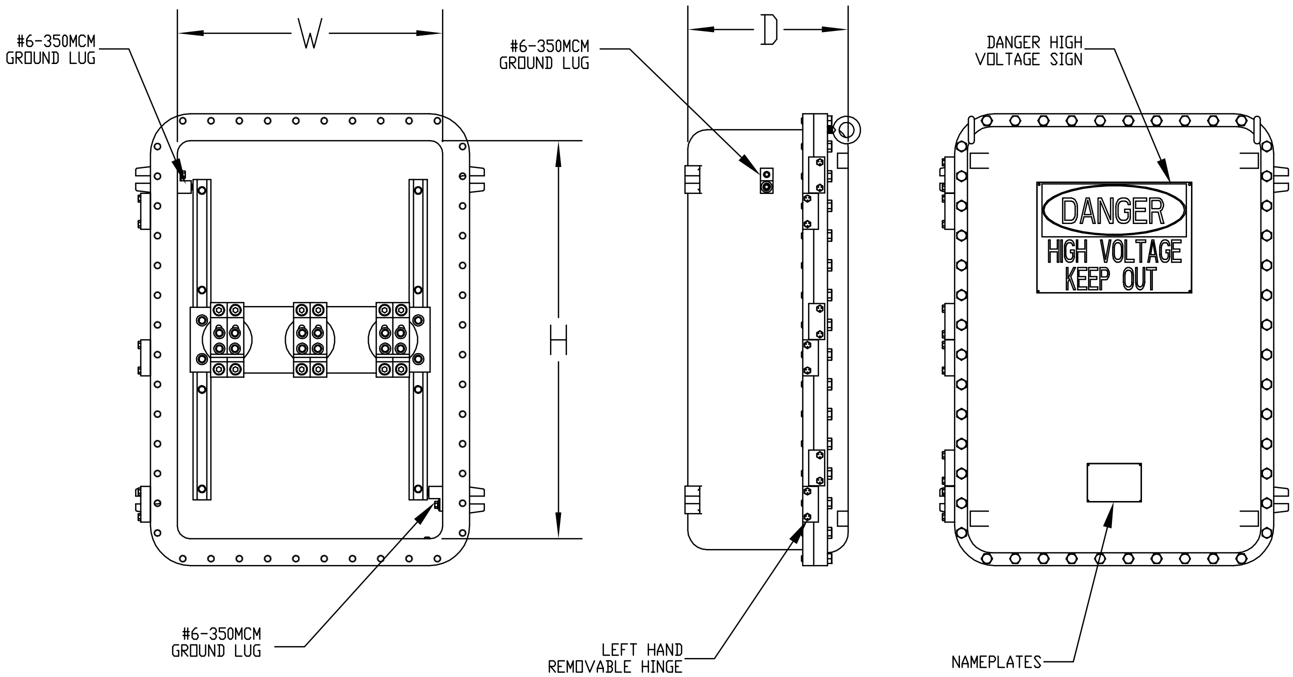
Enclosure Part. No.	Inside nom. dimensions (in.) H	W	D	Conductor size AWG/Kcmil	mm²	Amperage Phase	Amperage Conductor
XPHV121208	12	12	8	2/0	70	2.5kV	160
XPHV161608	16	16	8	3/0	95	6.6kV	200
XPHV162408	16	24	8	350	185	6.6kV	315
XPHV181808	18	18	8	4/0	120	6.6kV	225
XPHV182408	18	24	8	350	185	6.6kV	315
XPHV183008	18	30	8	350	185	6.6kV	315
XPHV183608	18	36	8	350	185	6.6kV	315
XPHV242408	24	24	8	350	185	6.6kV	315
XPHV243008	24	30	8	350	185	6.6kV	315
XPHV243608	24	36	8	350	185	6.6kV	315
XPHV162410	16	24	10	350	185	6.6kV	315
XPHV164610	16	46	10	350	185	6.6kV	315
XPHV182410	18	24	10	350	185	6.6kV	315
XPHV183610	18	36	10	350	185	6.6kV	315
XPHV242410	24	24	10	350	185	8kV	315
XPHV243610	24	36	10	400	240	8kV	400

Min. conductor size mm²	AWG/Kcmil	Amperage max
10	8	50
16	6	80
25	4	100
35	2	125
50	1/0	160
70	2/0	200
95	3/0	225
150	250	250
185	350	315
240	400	400

Note: When ordering XPHV enclosure, specify 1 x 1 or 2 x 2 connection for those sizes that are used for both applications. eg. XPHV182408 2 x 2

Explosionproof enclosures
XPHV Series – High voltage cast aluminum

2 x 2 connection



XPHV - 2 x 2 connection

Enclosure Part. No.	Inside nom. dimensions (in.) H	W	D	Conductor size AWG/Kcmil	mm²	Amperage Phase	Amperage Conductor
XPHV182408	18	24	8	350	185	630	315
XPHV183008	18	30	8	400	240	800	400
XPHV183608	18	36	8	400	240	800	400
XPHV182410	18	24	10	350	185	630	315
XPHV183610	18	36	10	400	240	800	400
XPHV242408	24	24	8	350	185	630	315
XPHV243008	24	30	8	400	240	800	400
XPHV243608	24	36	8	400	240	800	400
XPHV242410	24	24	10	350	185	630	315
XPHV243610	24	36	10	500	300	1000	500

Note: When ordering XPHV enclosure, specify 1 x 1 or 2 x 2 connection for those sizes that are used for both applications. eg. XPHV182408 2 x 2

Min. conductor size mm²	AWG/Kcmil	Amperage max
10	8	50
16	6	80
25	4	100
35	2	125
50	1/0	160
70	2/0	200
95	3/0	225
150	250	250
185	350	315
240	400	400
300	500	500

Explosionproof enclosures
XPCS Series – Cast aluminum small format

Applications
- Custom control panel, junction, or pull box
- Enclosures for splices and branch circuit taps
- Housing terminal blocks, relays and other electrical devices
- Indoors or outdoors in damp, wet, dusty, corrosive and hazardous locations
- Where exposure to frequent or heavy rain, water, spray, moisture, and humidity is common, such as: petrochemical, offshore drilling facilities, cooling towers, coal preparation and handling facilities, food processing, coating, sewage and water treatment, chemical installations
- Hazardous locations due to the presence of hydrogen or gases and vapors of equivalent hazard as found in process industries, missile bases and gas manufacturing plants

Features
- 17 standard sizes available
- Wall mounting feet
- Can be also used as control stations

Standard Materials
- Enclosure – lightweight, corrosion-resistant, copper-free aluminum alloy (0.3% max copper content)
- Cover bolts – premium, high strength steel (zinc plated and coated). Stainless steel – optional
- Gasket - Nitrile

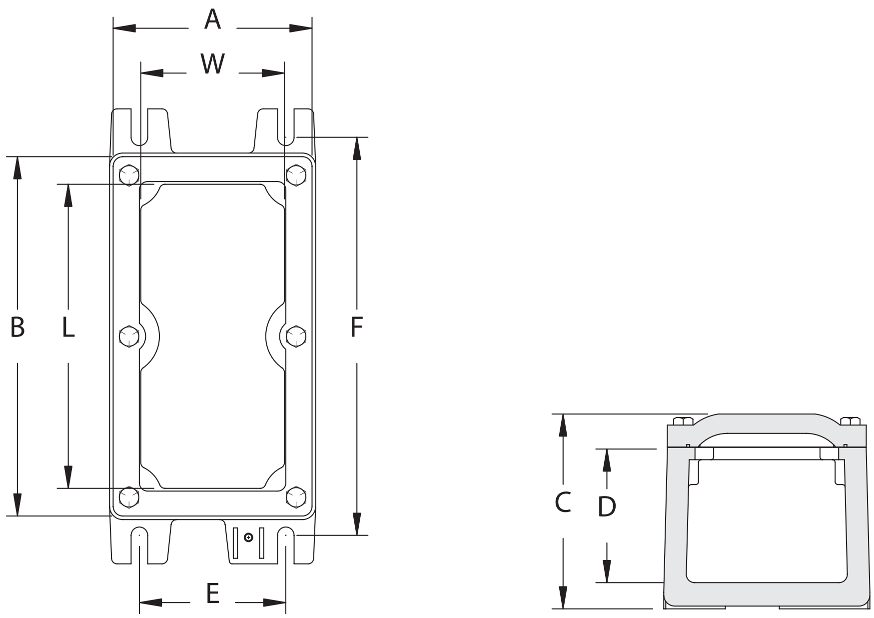
Options
- Auxiliary operator installations available see catalog section 2 for ordering instructions
  Mounting panels
  - Steel (XPM): galvanized 12 gauge steel plate. The catalog number includes the steel mounting pan complete with 1/4" high spacers and stainless steel mounting screws
  - Aluminum (XPA): consult factory for availability
- Conduit drilling & tapping from ½" NPT to 1½" NPT

Certifications & Standards

Class I, Division 1, Groups C & D
Class II, Groups E, F, G
NEMA Type 4, 7, 9
UL 50
CSA C22.2 No. 25 & 30

* CSA certified products require guarded pilot devices
** For IECEx and ATEX certifications, consult factory

Explosionproof enclosures
XPCS Series – Cast aluminum small format



Dimensions and weights

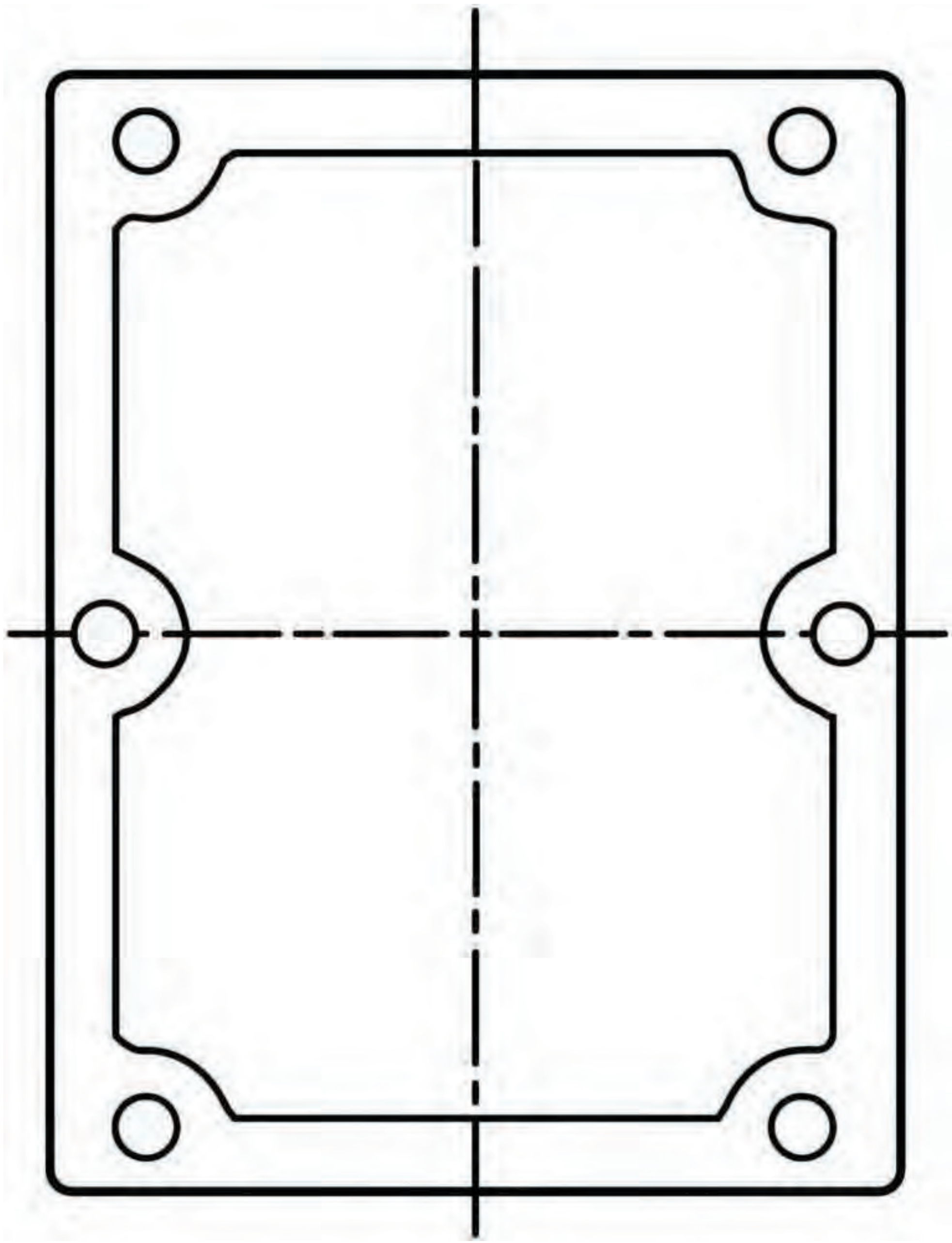
Catalog Part No.	Inside nom. dimensions (in.)			Overall dimensions (in.)			MTG lug (in.)		MTG bolt size (in.)	Shipping weight. (lbs)	Panel Part No.	Panel dimensions (in.)	
	W	L	D	A	B	C	E	F				W	L
XPCS030303	3 5/16	3 5/16	3 3/16	4½	4½	4 5/16	3¼	5½	5/16	5	XPM0303	3	3
XPCS030603	3¼	5¾	3	4½	7 1/16	4¼	3¼	8	5/16	6½	XPM0306	3	5½
XPCS030703	3¼	6⅞	3	4½	8⅛	4 5/16	3 5/16	9	5/16	7½	XPM0307	3	6½
XPCS030903	3 11/32	8 15/16	3	4½	10 1/16	4 5/16	3¼	11	5/16	9½	XPM0309	3	8½
XPCS031103	3¼	10 15/16	3	4½	12	4 5/16	3¼	13	5/16	11	XPM0311	3	10½
XPCS031303	3¼	12 13/16	3	4½	14 1/16	4 5/16	3¼	15	5/16	11½	XPM0313	3	12½
XPCS031503	3¼	14¾	3 1/16	4½	16	4 5/16	3¼	17	5/16	13	XPM0315	3	14½
XPCS031803	3¼	17¾	3	4½	19	4¼	3¼	20	5/16	16	XPM0318	3	17½
XPCS032403	3¼	23 9/16	3	4½	25 1/16	4 5/16	3¼	26	5/16	21	XPM0324	3	23½
XPCS033003	3¼	29½	3	4 9/16	31 1/16	4 5/16	3¼	32½	5/16	28	XPM0330	3	29
XPCS033603	3¼	35 7/16	3	4½	37¼	4⅜	3¼	38⅛	5/16	33	XPM0336	3	35
XPCS040604	4⅛	5⅞	4	5⅜	7	5 5/16	4⅜	8¼	5/16	8½	XPM0406	3⅞	5½
XPCS041204	4¼	11 13/16	4	5½	13⅛	5 5/16	4⅜	14¼	5/16	15½	XPM0412	3⅞	11½
XPCS060606	5½	5½	6	7	7	7⅜	5½	8½	⅜	14	XPM0606	5½	5½
XPCS060608	5¼	5½	8	7	7	9⅜	5½	8½	⅜	17½	XPM0606	5½	5½
XPCS061206	5¼	11⅛	6	7¼	13½	7⅝	5½	15	⅜	28	XPM0612	5½	11½
XPCS070704	6⅞	6⅞	4	7 15/16	7 15/16	5 5/16	6⅝	9⅛	⅜	13	XPM0707	6½	6½

Customer design sheet

2

Cover layout

Design:
CAT # XPCS
☐ MOUNTING PAN



Explosionproof enclosures
XPCS Series – Cast aluminum small format

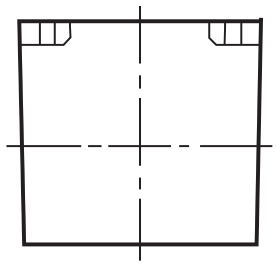
Customer design sheet

Box layout

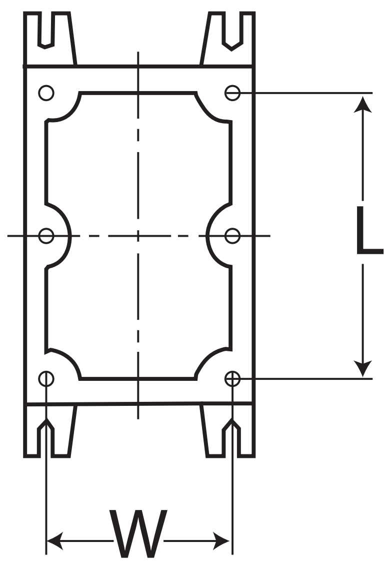
Design:

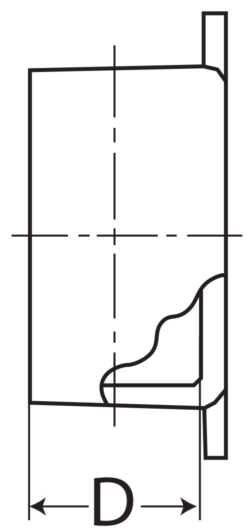
CAT # XPCS

☐ MOUNTING PAN

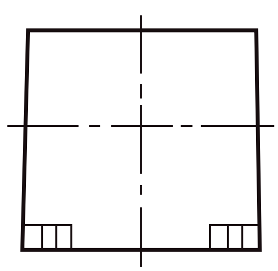


Top View





Right View



Bottom View

2

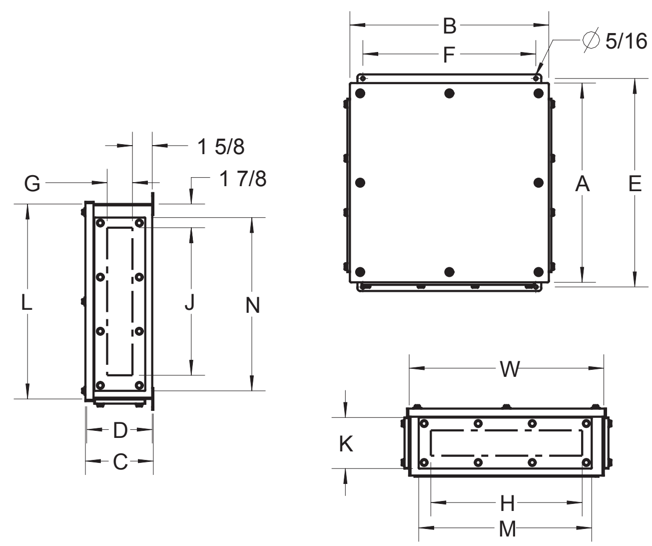
Dust-ignition proof enclosures
D2CJ Series – Stainless steel frame with aluminum plates

Applications
- Custom control panel, junction, or pull box
- Enclosures for splices and branch circuit taps
- Housing terminal blocks
- Indoors or outdoors in dusty, damp, wet, corrosive and Class II hazardous locations
- Class II dust is common, such as: petrochemical, coal preparation and handling facilities, food processing, and chemical installations

Features
- 9 standard sizes available
- Wall mounting feet
- Watertight silicone gasket
- Stainless steel hardware
- Four #10-32 weld nuts for optional mounting panel (mounting panel sold separately)
- Grounding studs on inside of box and cover
- Removable gland plates for drilled and tapped entries (specify sides A,B,C,D counter-clockwise starting from the top)

Standard Materials
- Enclosure – 14 gauge type 316L stainless steel
- Cover bolts – stainless steel 316L
- Gland plates – copper-free aluminum (0.3% max copper content)
- Gasket – silicone
- Mounting panel – painted steel. Stainless steel on request

Options
- Aluminum gland plates
- Conduit drilling & tapping from ½” NPT to 3” NPT
- Custom sizes



Certifications & Standards	
Class II, Division I, Groups E, F, G	CSA C22.2 No. 25
Class III	NEMA Type 4X, 9
UL 1203	UL 50

Dimensions

Catalog Part No.	Inside nom. dimensions (in.)			Overall dimensions (in.)			Mounting feet (in.)		Grand plate opening (in.)			Grand plate area (in.)		
	L	W	D	A	B	C	E	F	G	H	J	K	M	N
D2CJ161206	16	12	6	16½	12½	6¼	17½	10	2½	10⅛	11⅝	4⅝	11⅛	14⅛
D2CJ161608	16	16	8	16½	16½	8¼	17½	14	4½	14⅛	11⅝	6⅝	15⅛	14⅛
D2CJ201608	20	16	8	20½	16½	8¼	21½	14	4½	14⅛	15⅝	6⅝	15⅛	18⅛
D2CJ202008	20	20	8	20½	20½	8¼	21½	18	4½	18⅛	15⅝	6⅝	19⅛	18⅛
D2CJ241608	24	16	8	24½	16½	8¼	25½	14	4½	14⅛	19⅝	6⅝	15⅛	22⅛
D2CJ242410	24	24	10	24½	24½	10¼	25½	22	6½	22⅛	19⅝	8⅝	23⅛	22⅛
D2CJ302410	30	24	10	30½	24½	10¼	31½	22	6½	22⅛	25⅝	8⅝	23⅛	28⅛
D2CJ362410	36	24	10	36½	24½	10¼	37½	22	6½	22⅛	31⅝	8⅝	23⅛	34⅛
D2CJ363010	36	30	10	36½	30½	10¼	37½	28	6½	28⅛	31⅝	8⅝	29⅛	34⅛

Instrument, equipment and meter enclosures
XPIH Series – Instrument housings

2

Applications
- To enclose terminal blocks, meters, instrumentation and control devices
- As an outlet box for pulling and splicing conductors
- In hazardous, abusive and wet locations
- To provide access to conductors for maintenance and future system changes

Features
- Choose from solid or glass lens covers, select from flat or dome shape
- Offset feed through hubs for greater interior space
- Cover set screws for vibration
- Optional terminal blocks available
- Rubber gasket for NEMA Type 4X applications
- See each series for specific features

Standard Materials
- Gasket – buna-nitrile rubber
- Hardware – stainless steel
- Body and Cover – sand cast copper-free aluminum (0.3% max copper content)

Standard Finishes
- Powder coat finish – corrosion resistant, "safety blue" polyester powder coating. Other colors available

Certifications & Standards

Class I, Divisions 1 & 2, Groups B, C, D	Enclosure NEMA Type 4X, 7BCD, 9EFG
Class II, Divisions 1 & 2, Groups E, F, G	UL Standard 1203
Class III	CSA C22.2 No. 25 & 30

* For IECEx and ATEX certifications, consult factory

XPIH Explosion proof instrument housing catalog number construction

Base number	Suffix					
Explosion proof instrument housing	**FCX** Flat cover	**MCX** Mid size cover	**FGCX** Flat glass cover	**DCX** Dome cover	**ECX** Extended cover	**DGCX** Dome glass cover
XPIHL Single end - large - 4" ID	XPIHLFCX	–	XPIHLFGCX	XPIHLDCX	XPIHLECX	XPIHLDGCX
XPIHLD Double end - large - 4" ID	XPIHLDFCX	–	XPIHLDFGCX	XPIHLDDCX	XPIHLDECX	XPIHLDDGCX
XPIHM Single end - medium size - 3 5/8" ID	XPIHMFCX	XPIHMMCX	XPIHMFGCX	XPIHMDCX	–	XPIHMDGCX
XPIHMD Double end - medium size - 3 5/8" ID	XPIHMDFCX	XPIHMDMCX	XPIHMDFGCX	XPIHMDDCX	–	XPIHMDDGCX
XPIH Single end small/med size mini - 3 3/16" ID	XPIHFCX	–	XPIHFGCX	XPIHDCX	–	XPIHDGCX
XPIHD Double end - 3 3/16" ID	XPIHDFCX	–	XPIHDFGCX	XPIHDDCX	–	XPIHDDGCX
XPIH 2L 3 LUG single end/cast 3 Lug - vibration - 3 3/16" ID	XPIHFCX2L3LUG	–	XPIHFGCX2L3LUG	XPIHDCX2L3LUG	–	XPIHDGCX2L3LUG
XPIHSD Double ended mini - 2 5/16" ID	XPIHSDFCX	–	XPIHSDFGCX	XPIHSDDCX	–	XPIHSDDGCX
XPIHN Diecast - 4 1/16" ID	XPIHNFCX	–	XPIHNFGCX	XPIHNDCX	–	XPIHNDGCX
XPIHX Stainless steel - 4 1/16" ID	XPIHXFCX	–	XPIHXFGCX	XPIHXDCX	–	XPIHXDGCX

Instrument, equipment and meter enclosures
XPIH Series – Instrument housings

Quick reference chart for instrument housings

TNB Catalog #	Single or Double Sided	Diameter size relative	Throat Diameter ID	Glass Cover Viewing Diameter	UL	Canadian	FM	ATEX/ IECEx Exd	NEMA Type 4X & IP66	Dividing Wall Penetrate / Remove	Material
XPIHL	Single	Large	4.00"	3.31"	B, C, D	cUL, B, C, D	B. C. D	Yes - IIC	Both	N/A	Note 6
XPIHLD [1,2]	Double	Large	4.00"	3.31"	B, C, D	cUL, B, C, D	B. C. D	Yes - IIB+H2	Both	Yes -½" thick	Note 6
XPIHM	Single	Medium	3.56"[4]	2.63"	B, C, D	cUL, B, C, D	B. C. D	Yes - IIC	Both	N/A	Note 6
XPIHMD [1,2]	Double	Medium	3.63"	2.63"	B, C, D	cUL, B, C, D	B. C. D	Yes - IIB+H2	Both	Yes -½" thick	Note 6
XPIH	Single	Standard	3.19"	2.63"	B, C, D	cUL, B, C, D	B. C. D	Yes - IIC	Both	N/A	Note 6
XPIHD	Double	Standard	3.19"	2.63"	B, C, D	cUL, B, C, D	B. C. D	Yes - IIC	Both	Yes - ⅜" thick	Note 6
XPIH 2L3LUG	Single	Small-Medium	3.19"	2.63"	B, C, D	cUL, B, C, D	B. C. D	Yes - IIC	Both	N/A	Note 6
XPIHSD [2]	Double	Small	2.30"	1.80"	B, C, D	cUL, B, C, D	B. C. D	Yes - IIB+H2	Both	"Consult factory 3/16" thick"	Note 6
XPIHN	Single	Large	4.60"	3.31"	B, C, D	cUL, B, C, D	N/A	Yes - IIC	Both	N/A	Die Cast Aluminum
XPIHX	Single	Large	4.60"	3.31"	B, C, D	cUL, B, C, D	N/A	Yes - IIC	Both	N/A	Cast 316L Stainless Steel

Quick reference chart for instrument housings - continued

TNB Catalog #	Cast. Mtg. Feet	Powder Coat Std. / Finish	Power side terminal strip with sealed pass-through dividing wall	Interior Mounting Means	Exterior Mounting Means	Backwall Entry	Front Boss Entry	Conduit entry feed-through hubs, offset for maximum clearance and capacity	Front boss and/or back wall modifications
XPIHL	Yes	Yes	N/A	Versatile Thickwall	Note 3	NPT, NPSM	NPT, NPSM Metric	¾" NPT Metric	½" to 1" NPT, ½" to ¾" NPSM or 20mm for sensor, probe or conduit entry. Consult factory for other sizes.
XPIHLD [1,2]	No	Yes	Yes, 2- to 12-point, (add suffix “2T”, “4T”, “6T”, “8T”, “10T” or “12T” to catalog number)	Versatile Thickwall	Note 3	N/A	NPT, NPSM	¾" NPT See Note 4 Metric	½", ¾" or 1" NPT; ½", ¾" or 1" NPSM; or 20mm, 25mm or 30mm entry for sensor, probe or conduit available
XPIHM	Optional Note 5	Yes	N/A	Versatile Thickwall	Note 3	NPT	NPT, NPSM Metric	¾" NPT	½", ¾" or 1" NPT; ½", ¾" or 1" NPSM; or 20mm, 25mm or 30mm entry for sensor, probe or conduit
XPIHMD [1,2]	No	Yes	Yes, 2- to 8-point, (add suffix “2T”, “4T”, “6T” or “8T” to catalog number)	Versatile Thickwall	Note 3	N/A	NPT, NPSM	¾" NPT See Note 4 Metric	½", ¾" or 1" NPT; ½", ¾" or 1" NPSM; or 20mm or 25mm entry for sensor, probe or conduit
XPIH	Optional Note 5	Yes	N/A	Bosses @45°	Note 3	Consult Factory NPT (consult factory)	NPT, NPSM	½" or ¾" NPT entries available in place of standard ½"	½" or ¾" NPT & various NPSM & metric
XPIHD	No	Yes	Yes, 2- to 4-point, (add suffix “2T” or “4T” to catalog number)	Versatile Thickwall	Note 3	N/A	NPT, NPSM	¾" NPT Metric	½" NPT & various NPSM & metric entries available in place of standard ½" NPT (consult factory)
XPIH 2L3LUG	Yes 3 + Note 5	Yes	N/A	Bosses	Note 3	NPT NPT (consult factory)	Yes, Hub	½" or ¾" NPT entries available in place of standard ½"	½" or ¾" NPT & various NPSM & metric
XPIHSD [2]	No	Yes	Yes, 2 point, (add suffix “2T” to catalog number)	Versatile Thickwall	Note 3	N/A	NPT, NPSM Metric	½" NPT	½" or ¾" NPT & various NPSM & metric entries available in place of standard ½" NPT (consult factory)
XPIHN	Yes 2 + Optional 3rd	No - Natural	N/A	Removable Mtg. Pan mounting tabs, note 3	Two cast-on centered	NPT, Metric	NPT, NPSM Metric	2 - 3/4" standard up to 4 total	½", ¾" or 1" NPT & NPSM; or various metric entry for sensor, probe or conduit available
XPIHX	Yes 2 + Optional 3rd	No - Natural	N/A	Removable Mtg. Pan note 3	Two cast-on centered	NPT, Metric cUL, B, C, D	NPT, NPSM Metric	3 - 3/4" standard up to 5 total	½", ¾" or 1" NPT & NPSM; or various metric entry for sensor, probe or conduit available

1 - Internal wall can be modified (drilled and tapped) to suit design needs, or completely removed and still maintain approvals. Please consult factory.
2 - Power side (shallow side) cover options: Flat solid - standard; Dome glass - add suffix “A”; Flat Glass - add suffix “B”; Dome Solid - add suffix “C”.
3 - Four ¼ -20 UNC holes in front boss for bracket mounting (consult factory for other sizes).
4 - Front boss with ¾” NPT opening into instrument side for conduit, sensor or probe (see design options for other sizes).
5 - Mounting lugs with 5/16” holes - add sufffix “L´.
6 - Precision machined from sand-cast copper-free aluminum, stainless steel hardware.

Instrument, equipment and meter enclosures
XPIH Series – Instrument housings

Solid cover arrangements

Glass cover arrangements

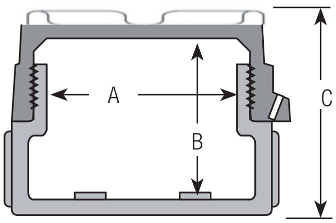


Fig. 1

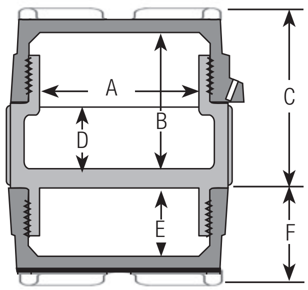


Fig. 2

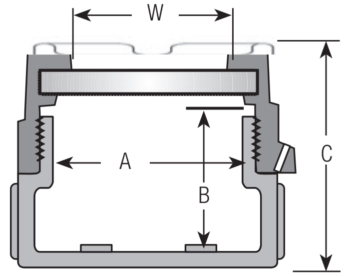


Fig. 3

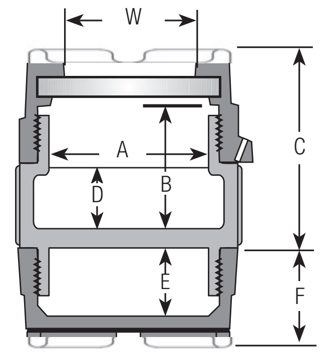


Fig. 4

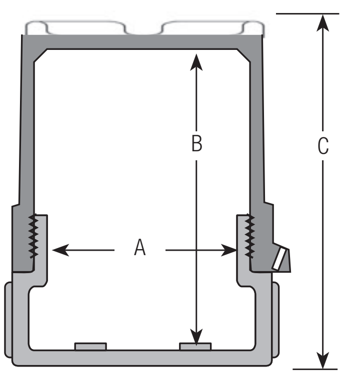


Fig. 5

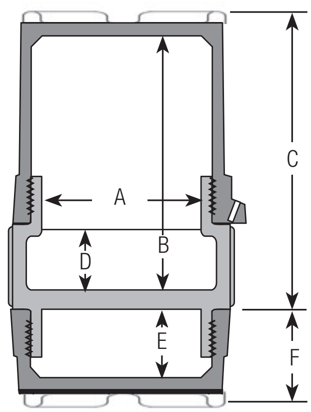


Fig. 6

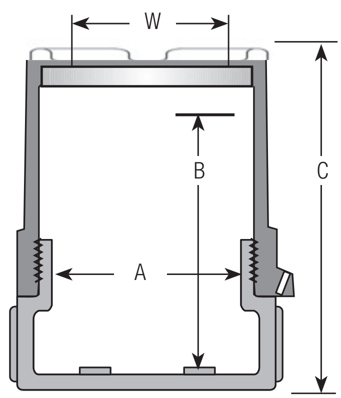


Fig. 7

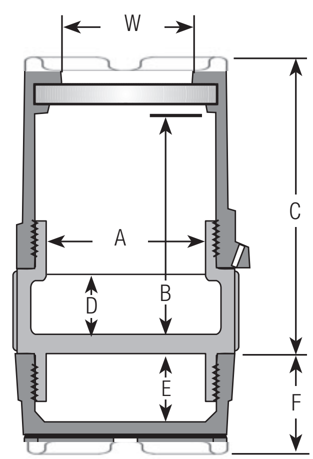


Fig. 8

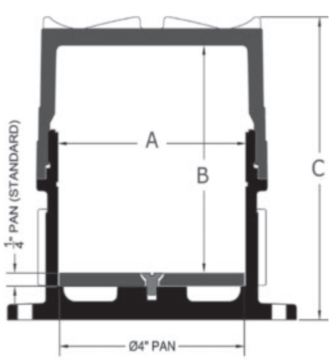


Fig. 9

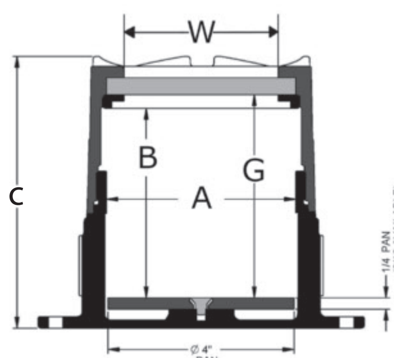


Fig. 10

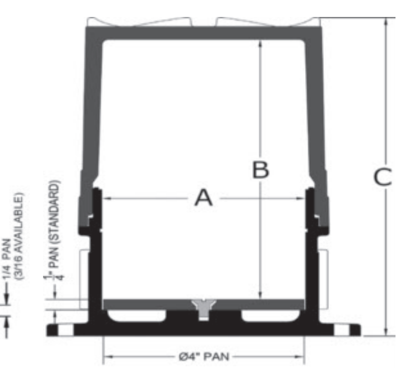


Fig. 11

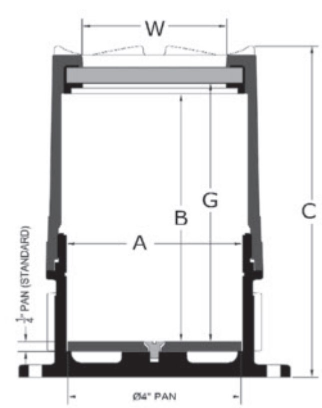


Fig. 12

XPIH Series – Instrument housings

Dimensions and ordering information

Catalog Part No.	Fig. No.	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	W (in.)
XPIHSDFCX	2	2 5/16	2 1/4	3	1 5/16	1	1 3/8	-
XPIHSDFGCX	4	2 5/16	2 1/2	3 3/4	1 5/16	1	1 3/8	1 13/16
XPIHSDDCX	6	2 5/16	2 15/16	3 3/4	1 5/16	1	1 3/8	-
XPIHSDDGCX	8	2 5/16	3 1/2	4 3/4	1 5/16	1	1 3/8	1 13/16
XPIHFCX2	1	3 3/16	2 9/16	3 7/16	-	-	-	-
XPIHFCX3	1	3 3/16	2 9/16	3 7/16	-	-	-	-
XPIHFGCX2	3	3 3/16	2 3/16	3 13/16	-	-	-	2 5/8
XPIHFGCX3	3	3 3/16	2 3/16	3 13/16	-	-	-	2 5/8
XPIHDCX2	5	3 3/16	4 15/16	5 13/16	-	-	-	-
XPIHDCX3	5	3 3/16	4 15/16	5 13/16	-	-	-	-
XPIHDGCX2	7	3 3/16	4 7/16	6	-	-	-	2 5/8
XPIHDGCX3	7	3 3/16	4 7/16	6	-	-	-	2 5/8
XPIHFCX2L3LUG	1	3 3/16	2 9/16	3 3/4	-	-	-	-
XPIHFGCX2L3LUG	3	3 3/16	2 3/16	4 1/8	-	-	-	2 5/8
XPIHDCX2L3LUG	5	3 3/16	4 15/16	6 1/8	-	-	-	-
XPIHDGCX2L3LUG	7	3 3/16	4 7/16	6 5/16	-	-	-	2 5/8
XPIHDFCX	2	3 3/16	2 11/16	3 1/2	3/4	1 5/16	1 7/8	-
XPIHDFGCX	4	3 3/16	2 5/16	3 7/8	3/4	1 5/16	1 7/8	2 5/8
XPIHDDCX	6	3 3/16	5 1/16	5 7/8	3/4	1 5/16	1 7/8	-
XPIHDDGCX	8	3 3/16	4 9/16	6 1/16	3/4	1 5/16	1 7/8	2 5/8
XPIHMFCX	1	3 9/16	3 5/16	4 1/4	-	-	-	-
XPIHMMCX	1	3 9/16	4	5 1/16	-	-	-	-
XPIHMFGCX	3	3 9/16	3 1/16	4 3/4	-	-	-	2 5/8
XPIHMDCX	5	3 9/16	6 11/16	7 5/8	-	-	-	-
XPIHMDGCX	7	3 9/16	4 3/4	6 3/8	-	-	-	2 5/8
XPIHMDFCX	2	3 5/8	3 5/8	4 5/16	1 3/16	1 7/16	1 15/16	-
XPIHMDMCX	2	3 5/8	4	5	1 3/16	1 7/16	1 15/16	-
XPIHMDFGCX	4	3 5/8	3 1/16	4 13/16	1 3/16	1 7/16	1 15/16	2 5/8
XPIHMDDCX	6	3 5/8	6 11/16	7 11/16	1 3/16	1 7/16	1 15/16	-
XPIHMDDGCX	8	3 5/8	4 3/4	6 7/16	1 3/16	1 7/16	1 15/16	2 5/8
XPIHLFCX	1	4	4	5 1/8	-	-	-	-
XPIHLFGCX	3	4	3 3/4	5 5/8	-	-	-	3 5/16
XPIHLDCX	5	4	6	7 1/8	-	-	-	-
XPIHLECX	5	4	6 15/16	8 1/16	-	-	-	-
XPIHLDGCX	7	4	5 3/4	7 5/8	-	-	-	3 5/16
XPIHLDFCX	2	4	4	5	1 3/16	2 1/8	2 5/8	-
XPIHLDFGCX	4	4	3 3/4	5 1/2	1 3/16	2 1/8	2 5/8	3 5/16
XPIHLDDCX	6	4	6	7	1 3/16	2 1/8	2 5/8	-
XPIHLDECX	6	4	6 15/16	7 15/16	1 3/16	2 1/8	2 5/8	-
XPIHLDGCX	8	4	5 3/4	7 1/2	1 3/16	2 1/8	2 5/8	3 5/16
XPIHNFCX	9	4 1/16	4 5/16	5 3/4	-	-	-	-
XPIHNFGCX	10	4 1/16	4 3/16	6 5/16	-	-	-	3 5/16
XPIHNDCX	11	4 1/16	6 5/16	7 3/4	-	-	-	-
XPIHNDGCX	12	4 1/16	6 3/16	8 5/16	-	-	-	3 5/16
XPIHXFCX	9	4 1/16	4 5/16	5 1/2	-	-	-	-
XPIHXFGCX	10	4 1/16	4 3/8	6	-	-	-	3 5/16
XPIHXDCX	11	4 1/16	6 5/16	7 1/2	-	-	-	-
XPIHXDGCX	12	4 1/16	6 3/8	8	-	-	-	3 5/16

Instrument, equipment and meter enclosures

XPIH Series – Instrument housings

2

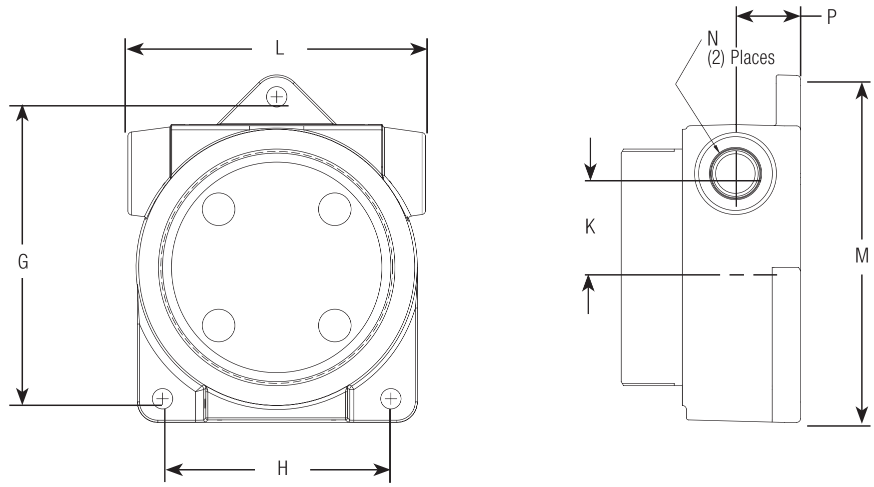


Fig. 13

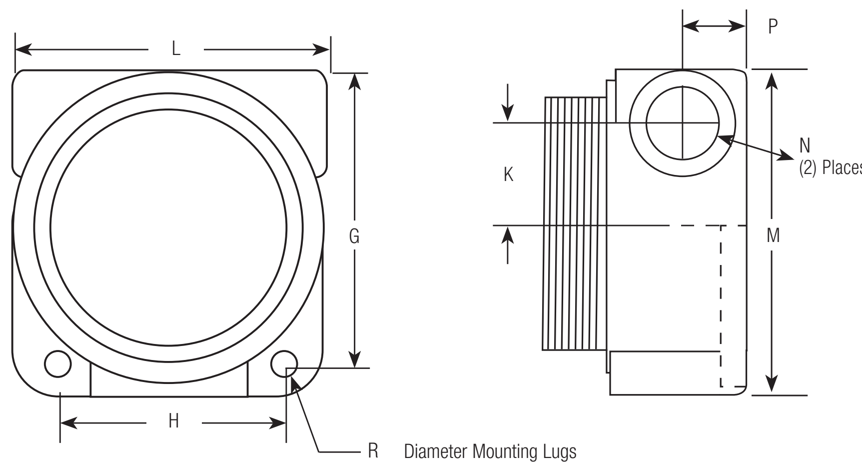


Fig. 14

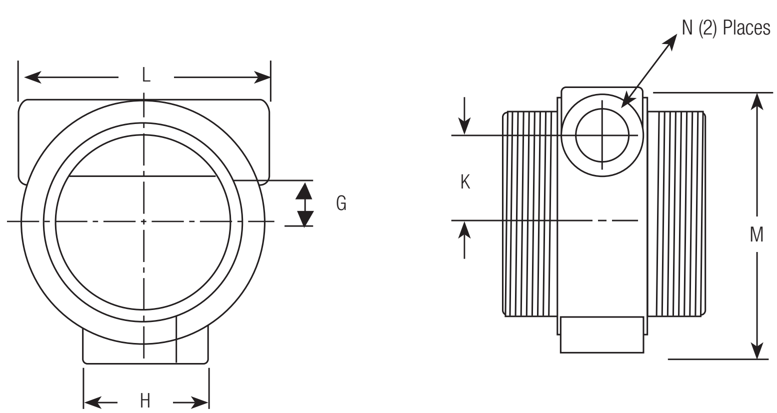


Fig. 15

Dimensions and ordering information

Catalog Part No.	Fig No.	G	H	K	L	M	N	P	R
XPIHSDFCX	15	1/2”	2 1/4”	1”	3 1/2”	3 13/16”	1/2-14	-	-
XPIHSDFGCX	15	1/2”	2 1/4”	1”	3 1/2”	3 13/16”	1/2-14	-	-
XPIHSDDCX	15	1/2”	2 1/4”	1”	3 1/2”	3 13/16”	1/2-14	-	-
XPIHSDDGCX	15	1/2”	2 1/4”	1”	3 1/2”	3 13/16”	1/2-14	-	-
XPIHFCX2	14	4 1/8”	3 1/4”	1 7/16”	4 1/2”	4 13/16”	1/2-14	3/4”	5/16” optional
XPIHFCX3	14	4 1/8”	3 1/4”	1 7/16”	4 1/2”	4 13/16”	3/4-14	3/4”	5/16” optional
XPIHFGCX2	14	4 1/8”	3 1/4”	1 7/16”	4 1/2”	4 13/16”	1/2-14	3/4”	5/16” optional
XPIHFGCX3	14	4 1/8”	3 1/4”	1 7/16”	4 1/2”	4 13/16”	3/4-14	3/4”	5/16” optional
XPIHDCX2	14	4 1/8”	3 1/4”	1 7/16”	4 1/2”	4 13/16”	1/2-14	3/4”	5/16” optional
XPIHDCX3	14	4 1/8”	3 1/4”	1 7/16”	4 1/2”	4 13/16”	3/4-14	3/4”	5/16” optional
XPIHDGCX2	14	4 1/8”	3 1/4”	1 7/16”	4 1/2”	4 13/16”	1/2-14	3/4”	5/16” optional
XPIHDGCX3	14	4 1/8”	3 1/4”	1 7/16”	4 1/2”	4 13/16”	3/4-14	3/4”	5/16” optional
XPIHFCX2L3LUG	13	4 5/8”	3 1/4”	1 7/16”	4 9/16”	5 5/16”	1/2-14	1”	5/16”
XPIHFGCX2L3LUG	13	4 5/8”	3 1/4”	1 7/16”	4 9/16”	5 5/16”	1/2-14	1”	5/16”
XPIHDCX2L3LUG	13	4 5/8”	3 1/4”	1 7/16”	4 9/16”	5 5/16”	1/2-14	1”	5/16”
XPIHDGCX2L3LUG	13	4 5/8”	3 1/4”	1 7/16”	4 9/16”	5 5/16”	1/2-14	1”	5/16”
XPIHDFCX	15	13/16”	2 1/4”	1 7/16”	4 1/2”	4 11/16”	3/4-14	-	-
XPIHDFGCX	15	13/16”	2 1/4”	1 7/16”	4 1/2”	4 11/16”	3/4-14	-	-
XPIHDDCX	15	13/16”	2 1/4”	1 7/16”	4 1/2”	4 11/16”	3/4-14	-	-
XPIHDDGCX	15	13/16”	2 1/4”	1 7/16”	4 1/2”	4 11/16”	3/4-14	-	-
XPIHMFCX	14	4 5/8”	3 7/8”	-	5”	5 1/4”	3/4-14	-	5/16” optional
XPIHMMCX	14	4 5/8”	3 7/8”	-	5”	5 1/4”	3/4-14	-	5/16” optional
XPIHMFGCX	14	4 5/8”	3 7/8”	-	5”	5 1/4”	3/4-14	-	5/16” optional
XPIHMDCX	14	4 5/8”	3 7/8”	-	5”	5 1/4”	3/4-14	-	5/16” optional
XPIHMDGCX	14	4 5/8”	3 7/8”	-	5”	5 1/4”	3/4-14	-	5/16” optional
XPIHMDFCX	15	1 1/8”	2 1/4”	-	5”	5 1/4”	3/4-14	-	-
XPIHMDMCX	15	1 1/8”	2 1/4”	-	5”	5 1/4”	3/4-14	-	-
XPIHMDFGCX	15	1 1/8”	2 1/4”	-	5”	5 1/4”	3/4-14	-	-
XPIHMDDCX	15	1 1/8”	2 1/4”	-	5”	5 1/4”	3/4-14	-	-
XPIHMDDGCX	15	1 1/8”	2 1/4”	-	5”	5 1/4”	3/4-14	-	-
XPIHLFCX	14	5”	4 1/16”	1 29/32”	5 7/16”	5 5/8”	3/4-14	1 3/32”	5/16” Dia
XPIHLFGCX	14	5”	4 1/16”	1 29/32”	5 7/16”	5 5/8”	3/4-14	1 3/32”	5/16” Dia
XPIHLDCX	14	5”	4 1/16”	1 29/32”	5 7/16”	5 5/8”	3/4-14	1 3/32”	5/16” Dia
XPIHLECX	14	5”	4 1/16”	1 29/32”	5 7/16”	5 5/8”	3/4-14	1 3/32”	5/16” Dia
XPIHLDGCX	14	5”	4 1/16”	1 29/32”	5 7/16”	5 5/8”	3/4-14	1 3/32”	5/16” Dia
XPIHLDFCX	15	1 5/16”	2 1/4”	1 27/32”	5 3/8”	5 5/8”	3/4-14	-	-
XPIHLDFGCX	15	1 5/16”	2 1/4”	1 27/32”	5 3/8”	5 5/8”	3/4-14	-	-
XPIHLDDCX	15	1 5/16”	2 1/4”	1 27/32”	5 3/8”	5 5/8”	3/4-14	-	-
XPIHLDECX	15	1 5/16”	2 1/4”	1 27/32”	5 3/8”	5 5/8”	3/4-14	-	-
XPIHLDGCX	15	1 5/16”	2 1/4”	1 27/32”	5 3/8”	5 5/8”	3/4-14	-	-

Instrument, equipment and meter enclosures
XPGUB Series – Threaded cover junction boxes

Applications
- Designed for installation in electrical conduit systems for hazardous environments
- Can be used as a wire pull box or for housing: apparatus, instruments, splices, taps, terminal blocks and other equipment
- Three designs: threaded solid cover, threaded dome cover, and threaded glass cover
- Indoors and outdoors

Features
- Threaded construction throughout permits use in hazardous areas
- Heavy wall sections are thick enough to provide the required five threads for the maximum conduit size as indicated
- Cast-on mounting lugs, ease of field installation
- Grounding screw standard
- NEMA 3, 4; Features installation of an O-ring gasket on cover
- Conduit openings drilled and tapped to customer requirements – can be field drilled & tapped
- Cast-on mounting buttons, bosses and pads available
- Additional feet can be added to two legged enclosures on orders of 10 or more (additional charges apply)
- Optional mounting pans available

Standard Materials
- Body – rugged sand-cast copper-free aluminum alloy, 0.3% max. copper content, with a tumblast natural finish
- O ring cover gasket – buna nitrile rubber, withstands a range of temperatures from -40 to 108 °C (-40 to 226 °F)

Certifications & Standards

Class I, Divisions 1 & 2, Groups B*, C, D
Class II, Divisions 1 & 2, Groups E, F, G
Class III
Enclosure NEMA Type 4, Type 4X, 7BCD, 9EFG
UL Standard 1203
UL Standard 50.
CSA C22.2 No. 25 & 30

* Group B available without gasket
** Dome covers are not Group B

Instrument, equipment and meter enclosures

XPGUB Series – Threaded cover junction boxes

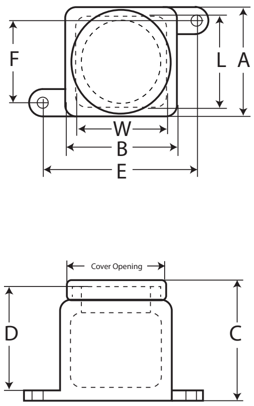


Fig. 1

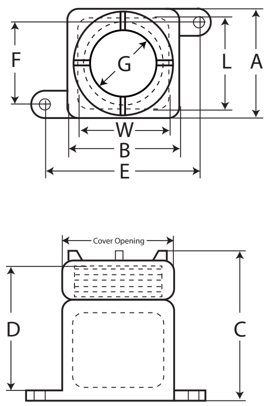


Fig. 1G

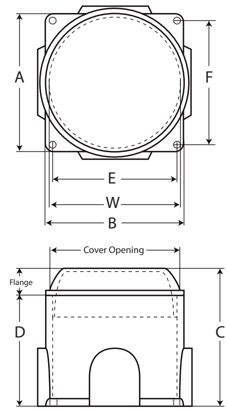


Fig. 2

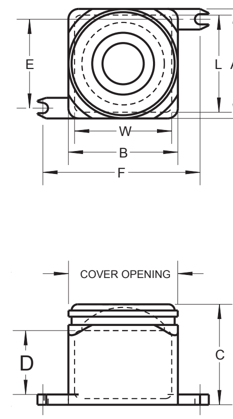


Fig. 3

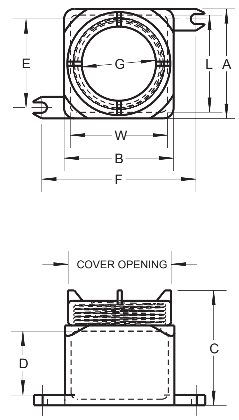


Fig. 3G

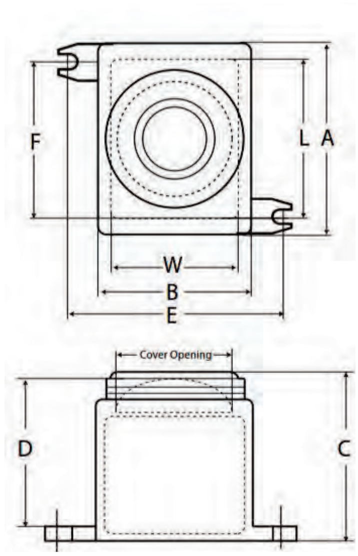


Fig. 4

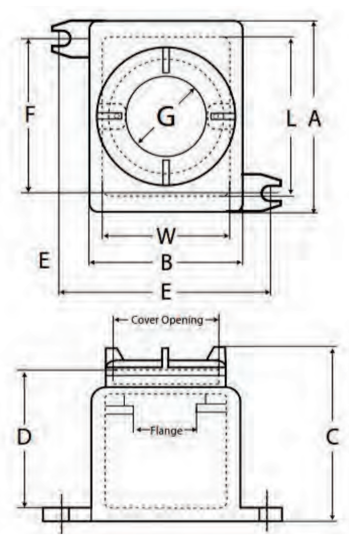


Fig. 4G

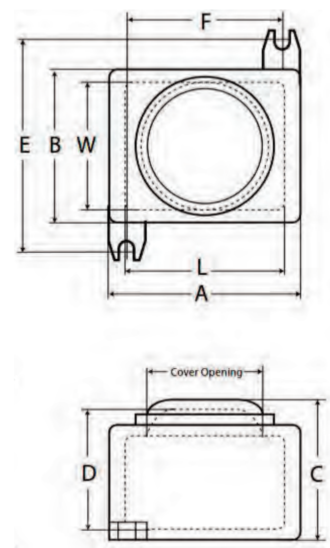


Fig. 5

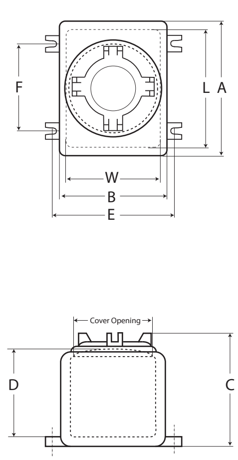


Fig. 6

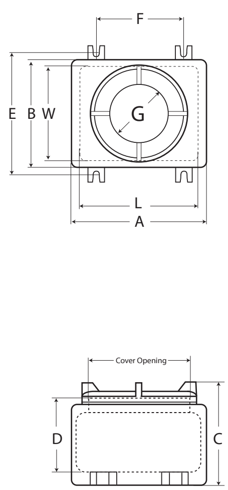


Fig. 6G

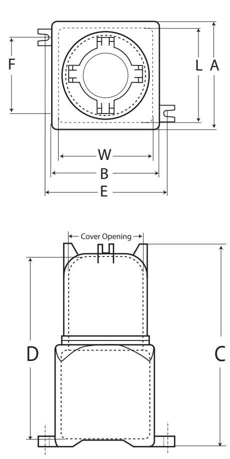


Fig. 7

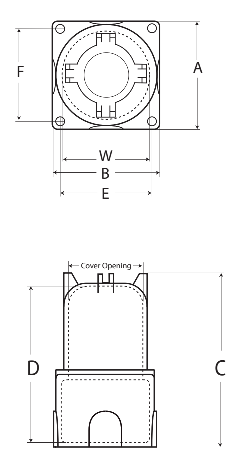


Fig. 8

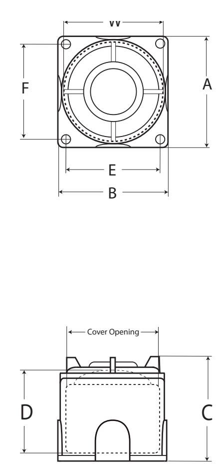


Fig. 9

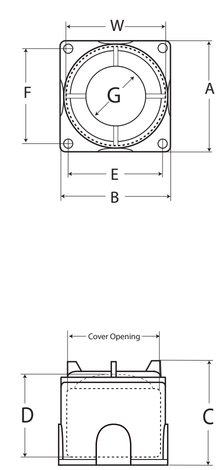


Fig. 9G

Instrument, equipment and meter enclosures

XPGUB Series – Threaded cover junction boxes

Dimensions and weights

Catalog Part No.	Diagram reference	Inside dimensions (in.)			Overall dimensions (in.)			Cast on mtg feet	Mounting CL to CL		Window dia.	Cover dia. opening (in.)	Conduit size (in.)	Flange opening (in.)	Mounting bolt size	Weight lbs
		W	L	D	A	B	C		E	F	G					
XPGUB2-402	Fig. 2	4 dia.	–	3 3/8	4 7/8	4 7/8	4 1/2	4	3 3/4	3 3/4	–	4	1	–	1/4	3
XPGUB1-443	Fig. 1	4 1/8	4 1/8	3 7/8	5 5/16	5 5/16	4 7/8	2	6 3/16	3 3/4	–	3 3/4	2	–	3/8	5 3/4
XPGUB1-444G2	Fig. 1G	4 1/8	4 1/8	4 1/16	5 5/16	5 5/16	5 9/16	2	6 3/16	3 3/4	3	2 7/8	2	2 3/4	3/8	6
XPGUB1-444G3	Fig. 1G	4 1/8	4 1/8	4 1/16	5 5/16	5 5/16	5 9/16	2	6 3/16	3 3/4	3	3 3/4	2	–	3/8	5
XPGUB3-443	Fig. 3	4 3/4	4 3/4	4 3/16	5 3/4	5 3/4	5 1/2	2	6 3/4	4 3/4	–	4 5/8	2	–	1/4	7
XPGUB3-443G4	Fig. 4G	4 3/4	4 3/4	3 5/16	5 3/4	5 3/4	5 3/8	2	6 3/4	4 3/4	3	4 5/8	2	–	1/4	7
XPGUB8-42D5	Fig. 8	4 7/8 dia.	–	5 5/16	5 11/16	5 11/16	6 7/8	4	4 1/2	4 1/2	–	4 7/8	1 1/4	–	1/4	5
XPGUB8-53D7	Fig. 8	5 3/8 dia.	–	7 9/16	6 3/8	6 3/8	8 7/8	4	5 1/8	5 1/8	–	5 3/8	2	–	5/16	9
XPGUB8-53D9	Fig. 8	5 3/8 dia.	–	9 1/16	6 3/8	6 3/8	10 3/8	4	5 1/8	5 1/8	–	5 3/8	2	–	5/16	9 1/2
XPGUB9-53	Fig. 9	5 3/8 dia.	–	3 13/16	6 3/8	6 3/8	5 1/8	4	5 1/8	5 1/8	–	5 3/8	2	–	5/16	8
XPGUB9-53G4	Fig. 9G	5 3/8 dia.	–	2 15/16	6 3/8	6 3/8	5 1/8	4	5 1/8	5 1/8	4	5 3/8	2	–	5/16	8
XPGUB4-564	Fig. 4	5 13/16	6 9/16	5 7/16	6 13/16	7 9/16	6 5/8	2	7 3/4	6	–	5 3/8	2	–	7/16	12 3/4
XPGUB4-564G4	Fig. 4G	5 13/16	6 9/16	4 5/16	6 13/16	7 9/16	6 5/8	2	7 3/4	6	4	5 3/8	2	4 1/8	7/16	13
XPGUB4-564G5	Fig. 4G	5 13/16	6 9/16	4 5/16	6 13/16	7 9/16	6 5/8	2	7 3/4	6	4	5 3/8	2	–	7/16	12
XPGUB3-663	Fig. 3	6	6	4 7/8	7	7	6 1/8	2	8 3/8	5 1/4	–	5 3/8	2	–	3/8	11
XPGUB3-663G5	Fig. 3G	6	6	3 7/8	7	7	6 3/16	2	8 3/8	5 1/4	4	5 3/8	2	–	3/8	11
XPGUB7-663D8	Fig. 7	6	6	8 9/16	7	7	9 7/8	2	8 3/8	5 1/4	–	5 3/8	2	–	3/8	12 1/4
XPGUB8-64D10	Fig. 8	6 5/8 dia.	–	10 1/8	7 15/16	7 15/16	11 5/8	4	6 3/8	6 3/8	–	7	2	–	3/8	14 3/4
XPGUB9-64	Fig. 9	6 5/8 dia.	–	4 3/8	7 15/16	7 15/16	5 15/16	4	6 3/8	6 3/8	–	7	2	–	3/8	11 1/2
XPGUB9-64G5	Fig. 9G	6 5/8 dia.	–	3 5/16	7 15/16	7 15/16	5 3/4	4	6 3/8	6 3/8	5 1/4	7	2	–	3/8	11 1/2
XPGUB6G-669	Fig. 6G	6 3/4	6 3/4	9 1/8	7 3/4	7 3/4	11 1/2	4	9 1/8	6 1/4	5 3/8	7	2	5 3/8	3/8	22 1/2
XPGUB5-663	Fig. 6	6 3/4	6 3/4	5 3/16	7 3/16	7 3/16	6 11/16	4	9 1/8	6 1/4	–	7	2	–	3/8	13 1/2
XPGUB5-663G4	Fig. 6G	6 3/4	6 3/4	4 1/8	7 13/16	7 13/16	6 1/2	4	9 1/8	6 1/4	5 1/4	7	2	5 3/8	3/8	13 3/4
XPGUB5-668	Fig. 6	6 3/4	6 3/4	10 3/16	7 3/4	7 3/4	11 11/16	4	9 1/8	6 1/4	–	7	2	–	3/8	22 1/2
XPGUB5-665	Fig. 6	6 13/16	6 13/16	7 3/16	7 3/16	7 3/16	8 11/16	4	9 1/8	6 1/4	–	7	2	–	3/8	17
XPGUB5-665G6	Fig. 6G	6 13/16	6 13/16	6 1/8	7 13/16	7 13/16	8 1/2	4	9 1/8	6 1/4	5 1/4	7	2	5 1/4	3/8	17
XPGUB4-794	Fig. 5	7 3/16	9 3/16	5 1/4	8 3/16	10 3/16	6 3/4	2	9 3/4	8 3/4	–	7	2	–	1/2	16 1/2
XPGUB5-794G7	Fig. 4G	7 3/16	9 3/16	4 3/16	8 3/16	10 3/16	6 9/16	2	9 3/4	8 3/4	5 1/4	7	2	–	1/2	16 1/2
XPGUB7-794D10	Fig. 7	7 3/16	9 3/16	11	8 3/16	10 3/16	12 7/16	2	9 3/4	8 3/4	–	7	2	–	1/2	19 3/4
XPGUB5-796	Fig. 6	7 1/4	9 1/8	7 1/4	8 3/8	10 1/4	8 13/16	4	9 3/4	8 7/8	–	7	2	–	1/2	22
XPGUB5-796G7	Fig. 6G	7 1/4	9 1/8	6 3/16	8 3/8	10 1/4	8 9/16	4	9 3/4	8 7/8	5 1/4	7	2	–	1/2	22
XPGUB5-7105	Fig. 6	7 3/4	10 5/16	6 3/16	8 7/8	11 7/16	7 3/4	4	10 1/4	7 3/4	–	7	2	–	1/2	23 1/2
XPGUB5-7105G7	Fig. 6G	7 3/4	10 5/16	5 1/8	8 7/8	11 7/16	7 9/16	4	10 1/4	7 3/4	5 1/4	7	2	–	1/2	23 1/2
XPGUB6-6610	Fig. 6	9 1/2	11 1/2	7 1/4	10 3/4	12 3/4	9 1/4	4	12 1/4	8	–	9	3	–	1/2	39 1/4
XPGUB6-9116G6	Fig. 6G	9 1/2	11 1/2	6 3/16	10 3/4	12 3/4	9 1/16	4	12 1/4	8	6 11/16	9	3	–	1/2	39 1/4
XPGUB6-9118G6	Fig. 6G	9 1/2	11 1/2	8 1/16	10 3/4	12 3/4	11	4	12 3/8	8	6 11/16	9	3	–	1/2	45 3/4
XPGUB6-9119	Fig. 6	9 1/2	11 1/2	9 1/18	10 3/4	12 3/4	11 3/16	4	12 3/8	8	–	9	3	–	1/2	45 3/4
XPGUB5-111212	Fig. 6	11 1/2	12 3/4	13 9/16	13 9/16	14 13/16	15 15/16	4	15 3/8	9	–	10 11/16	4	–	1/2	87 1/2
XPGUB5-111212G8	Fig. 6G	11 1/2	12 3/4	12 5/16	13 9/16	14 13/16	16	4	15 3/8	9	8	10 11/16	2	–	1/2	87 1/2
XPGUB5-11126	Fig. 6	11 1/2	12 3/4	7 7/16	13 3/8	14 5/8	9 13/16	4	15 3/8	9	–	10 11/16	4	–	1/2	60 1/2
XPGUB5-11126G8	Fig. 6G	11 1/2	12 3/4	6 3/16	13 3/8	14 5/8	9 7/8	4	15 3/8	9	8	10 11/16	2	–	1/2	60 1/2

2

Drilling and tapping guidelines

When drilling and tapping enclosures for conduit, proper installation requires the following:

– Must be tapped with at least 5 full NPT threads in enclosure back or sides only; min. ½“ conduit size for UL
– Tapping depth of NPT holes must be plus ½ turn min. to plus 1½ turns max. past standard NPT plug gage notch
– Inner end of conduit openings shall be smooth and well-rounded
– A minimum of (7) thread engagement, class 2 fit, required for Div. 1 Group B applications

Table 1. Minimum distance from conduit/cable center to edge of flat area

Size NPT (Metric)	5	4	3½	3 (M75)	2½ (M63)	2 (M50)	1½ (M40)	1¼ (M32)	1 (M25)	¾ (M20)	½ (M16)	¼ - ⅜
	2 13/16	2¼	2	1¾	1 7/16	1 3/16	1	⅞	11/16	9/16	½	½

Table 2. Minimum distance from auxiliary device center to edge of flat area

Size NPT (Metric)	5	4	3½	3 (M75)	2½ (M63)	2 (M50)	1½ (M40)	1¼ (M32)	1 (M25)	¾ (M20)	½ (M16)	¼ - ⅜
	2 13/16	2¼	2	1¾	1 7/16	1 3/16	1	⅞	11/16	9/16	½	½

Table 3. Minimum spacing between centers of conduit & cable entries

Size NPT	(Metric)	5	4	3½	3 (M75)	2½ (M63)	2 (M50)	1½ (M40)	1¼ (M32)	1 (M25)	¾ (M20)	½ (M16)	¼ - ⅜
1/16 - ⅜		4⅜	3⅝	3⅜	3	2⅝	2⅜	2	1⅞	1⅝	1⅜	1¼	1⅛
½	(M16)	4⅜	3⅝	3⅜	3	2⅝	2⅜	2	1⅞	1⅝	1⅜	1¼	–
¾	(M20)	4½	3¾	3½	3⅛	2¾	2½	2⅛	2	1¾	1½	–	–
1	(M25)	4⅝	3⅞	3⅝	3¼	2⅞	2¾	2¼	2⅛	1⅞	–	–	–
1¼	(M32)	4⅞	4⅛	3⅞	3½	3⅛	2⅞	2½	2⅜	–	–	–	–
1½	(M40)	5	4¼	4	3⅝	3¼	3	2⅝	–	–	–	–	–
2	(M50)	5⅜	4¾	4½	4	3⅝	3⅜	–	–	–	–	–	–
2½	(M63)	5½	4⅞	4⅝	4¼	3⅞	–	–	–	–	–	–	–
3	(M75)	5⅞	5¼	5	4⅝	–	–	–	–	–	–	–	–
3½		6¼	5¾	5½	–	–	–	–	–	–	–	–	–
4		6⅞	6	–	–	–	–	–	–	–	–	–	–
5		7⅜	–	–	–	–	–	–	–	–	–	–	–

Notes:

1. This information is compiled from data which we believe is reliable and is given in good faith. Because the methods of application and conditions under which these products are used are beyond our control, we are not able to guarantee the application and/or use of same. The user assumes all risks and liability in connection with the application and use of the products.
2. Double all minimum spacing for conduit entries in backwall.
3. All dimensions are in inches.

Drilling and tapping guidelines

When drilling and tapping enclosures for auxiliary devices and conduit entries, proper installation requires compliance with the following tables:

Table 1. Minimum distance between centers of auxiliary devices and conduit entries

Size		5 NPSM	4 NPSM	3½ NPSM	3 NPSM	2½ NPSM	2 NPSM	1½ NPSM	1¼ NPSM	1 NPSM	½-¾ NPSM	¼-⅜ NPSM	¼-1UN
¼ - ⅜ NPT		4⅜	3⅝	3⅜	3	2⅝	2⅜	2	1⅞	1⅝	1⅜	1¼	1⅛
½ NPT	M16	4⅜	3⅝	3⅜	3	2⅝	2⅜	2	1⅞	1⅝	1⅜	1¼	–
¾ NPT	M20	4½	3¾	3½	3⅛	2¾	2½	2⅛	2	1¾	1½	–	–
1 NPT	M25	4⅝	3⅞	3⅝	3¼	2⅞	2¾	2¼	2⅛	1⅞	–	–	–
1¼ NPT	M32	4⅞	4⅛	3⅞	3½	3⅛	2⅞	2½	2⅜	–	–	–	–
1½ NPT	M40	5	4¼	4	3⅝	3¼	3	2⅝	–	–	–	–	–
2 NPT	M50	5⅜	4¾	4½	4	3⅝	3⅜	–	–	–	–	–	–
2½ NPT	M63	5½	4⅞	4⅝	4¼	3⅞	–	–	–	–	–	–	–
3 NPT	M75	5⅞	5¼	5	4⅝	–	–	–	–	–	–	–	–
3½ NPT		6¼	5¾	5½	–	–	–	–	–	–	–	–	–
4 NPT		6⅞	6	–	–	–	–	–	–	–	–	–	–
5 NPT		7⅜	–	–	–	–	–	–	–	–	–	–	–

Table 2. Minimum distance between centers of auxiliary devices

Size	5 NPSM	4 NPSM	3½ NPSM	3 NPSM	2½ NPSM	2 NPSM	1½ NPSM	1¼ NPSM	1 NPSM	½-¾ NPSM	¼-⅜ NPSM	¼-1UN
¼ - 1 UN	4⅜	3⅝	3⅜	3	2⅝	2⅜	2	1⅞	1⅝	1⅜	1¼	1⅛
¼ - ⅜ NPSM	4⅜	3⅝	3⅜	3	2⅝	2⅜	2	1⅞	1⅝	1⅜	1¼	–
½ - ¾ NPSM	4½	3¾	3½	3⅛	2¾	2½	2⅛	2	1¾	1½	–	–
1 NPSM	4⅝	3⅞	3⅝	3¼	2⅞	2¾	2¼	2⅛	1⅞	–	–	–
1¼ NPSM	4⅞	4⅛	3⅞	3½	3⅛	2⅞	2½	2⅜	–	–	–	–
1½ NPSM	5	4¼	4	3⅝	3¼	3	2⅝	–	–	–	–	–
2 NPSM	5⅜	4¾	4½	4	3⅝	3⅜	–	–	–	–	–	–
2½ NPSM	5½	4⅞	4⅝	4¼	3⅞	–	–	–	–	–	–	–
3 NPSM	5⅞	5¼	5	4⅝	–	–	–	–	–	–	–	–
3½ NPSM	6¼	5¾	5½	–	–	–	–	–	–	–	–	–
4 NPSM	6⅞	6	–	–	–	–	–	–	–	–	–	–
5 NPSM	7⅜	–	–	–	–	–	–	–	–	–	–	–

Notes:

1. This information is compiled from data which we believe is reliable and is given in good faith. Because the methods of application and conditions under which these products are used are beyond our control, we are not able to guarantee the application and/or use of same. The user assumes all risks and liability in connection with the application and use of the products.
2. All dimensions are in inches.
3. Consult factory for extensive machining options, i.e. mounting of operators, thread type and size through wall, mounting pans.
4. Layout data sheets available.

T&B EX™ Motor control

Starters

For across-the-line, manual, or magnetic motor starting, motor disconnect, motor and line protection, and stop-start operations, these starters will perform in hazardous and adverse conditions.

Breakers and Switches

Our circuit breakers and switches are designed for use in hazardous locations. They provide disconnecting means and short circuit protection of heating, lighting, and power circuits.

Control Stations, Pilot Devices and Accessories

A comprehensive selection of pilot lights, push buttons, and selector switches used as local or remote wired - motor control, visual indication, or circuit selection and control. These stations are gasketed for maximum sealing carrying a NEMA 4 rating.

Starters

XPCMS Series – Combination motor starters

Applications

- For general motor control and circuit protection – indoors and outdoors – in damp, wet, dirty, dusty hazardous locations without the need for a protective shelter
- In areas where frequent washdowns are necessary or where heavy rain or water spray is prevalent
- For across-the-line starting, stopping, and reversing of polyphase AC induction motors
- To provide line disconnect means and short circuit protection
- To provide motor overload and undervoltage protection
- On switchracks or other assemblies where it is desired that motor control be centrally located
- NEMA rated / IEC sized starter assemblies provide for smaller enclosure selections

XPCMS Series combination motor starters and enclosures will accommodate both NEMA and IEC assemblies.

Features

- Latest generation thermomagnetic and electronic trip circuit breakers, with the possibility of interchangeability
- Available in frame sizes ranging from 15 to 800 Amperes
- Available as non-automatic circuit interrupters, without automatic overload trip elements for load switching and isolation
- Short circuit and overload must be provided by separate protection device
- Breakers available for magnetic trip only
- Comes standard with ABB components. Consult factory for other brands
- Ease of installation and maintenance
- All units are furnished with hinges
- Covers removable for clear access to internal components
- Front mounted circuit breaker handle is padlockable in either "on" or "off" positions

Electrical Ratings

- Motor starters – NEMA sizes 0-5
- Motor circuit protectors – 150, 250, 400 Ampere frame sizes 600 VAC
- Circuit Breakers – 100, 150, 225, 250, 400, 600 Ampere frame sizes

Standard Materials

- Body and cover – copper-free aluminum (0.3% max copper content), with natural tumblast aluminum finish
- Mounting plate – galvanized steel or optional aluminum
- Rotary actuating handle – copper-free aluminum
- Gasket – nitrile
- Cover bolts – Type 316L stainless steel
- Hinges – copper-free aluminum with stainless steel Type 316L hardware

Certifications & Standards

Class I, Divisions 1 & 2, Groups B, C, D
Class II, Divisions 1 & 2, Groups E, F, G
Class III
Enclosure NEMA Type 4, 7BCD, 9EFG
UL Standard 1203
UL Standard 50.
CSA C22.2 No. 30

Starters
XPCMS Series – Combination motor starters

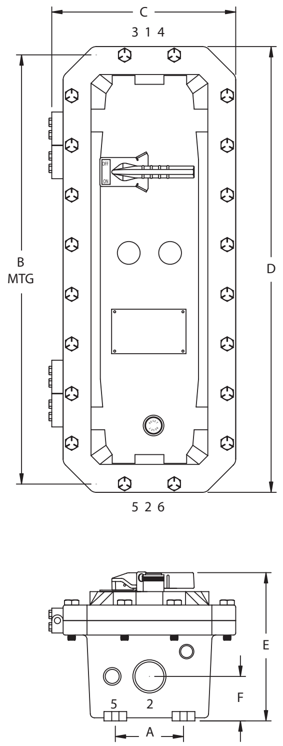


Figure A

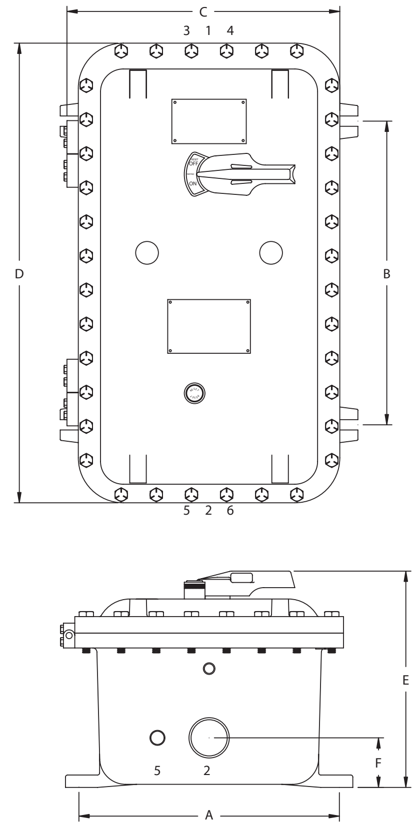


Figure B

Dimensions and weights

		Inside nom. dimensions (in.)			Overall dimensions (in.)							Ship Weight (lbs)	Conduit Size
Enclosure	**Fig.**	**W**	**L**	**D**	**A**	**B**	**C**	**D**	**E**	**F**	**G**		
XPCMSA	A	6	23	5	4 1/8	25 1/2	11 1/8	26 15/16	9 11/16	2 1/2	3 & 5	61	1 1/2
XPCMSB	A	7	27	6	4 3/4	29 7/8	11 13/16	31 1/8	10 1/2	2 13/16	3 & 5	87	1 1/2
XPCMSL	B	12	24	8	15 3/4	18 3/8	16 15/16	28 1/4	12 15/16	3	3 & 5	160	2
XPCMSM	B	12	36	8	15 3/4	29	16 15/16	40 1/4	13 3/8	3 5/8	3 & 5	260	2 1/2
XPCMSN	B	16	46	10	19 3/4	39	21 3/4	50 7/8	16 7/16	4 7/8	3 & 5	420	4
XPCMSRG	B	12	18	8	15 3/4	14 1/8	17	22 1/4	12 5/8	2 13/16	3 & 6	100	1 1/4
XPCMSRK	B	12	24	6	15 3/4	18 3/8	17	28 1/4	10 15/16	3 5/16	3 & 5	130	2
XPCMSRP	B	18	36	8	21 3/4	29	23 3/4	40 7/8	14 3/4	4 1/8	3 & 5	395	2

Notes: Standard conduit openings at locations 1 and 2, control circuit opening 3/4" NPT at locations shown in column "G". Each housing has one 1/2" NPT top & bottom for breather and drain.

XPCMS Series – Combination motor starters

Single-speed non-reversing with circuit breakers 3-pole 60 hertz, 600 VAC maximum thermal magnetic breaker/120 VAC coil

Motor Starter			Circuit Breaker		Enclosure	
Max. HP Polyphase	Line Volts	NEMA Size	Amp. Rating	Frame Volts	Without Breaker & Starter Cat. #	With Breaker & Starter Cat. #
2	240	0	15	240	XPCMSA	XPCMSA-2015
2	480	0	15	480	XPCMSA	XPCMSA-4015
2	600	0	15	600	XPCMSA	XPCMSA-6015
3	240	0	20	240	XPCMSA	XPCMSA-2020
5	480	0	20	480	XPCMSA	XPCMSA-4020
5	600	0	20	600	XPCMSA	XPCMSA-6020
5	240	1	30	240	XPCMSA	XPCMSA-2130
7 1/2	240	1	50	240	XPCMSA	XPCMSA-2150
10	480	1	30	480	XPCMSA	XPCMSA-4130
10	600	1	30	600	XPCMSA	XPCMSA-6130
10	240	2	70	240	XPCMSB	XPCMSB-2270
15	240	2	100	240	XPCMSB	XPCMSB-22100
25	480	2	70	480	XPCMSB	XPCMSB-4270
25	600	2	50	600	XPCMSB	XPCMSB-6250
20	240	3	100	240	XPCMSL	XPCMSL-23100
30	240	3	125	240	XPCMSL	XPCMSL-23125
30	480	3	70	480	XPCMSL	XPCMSL-4370
30	600	3	70	600	XPCMSL	XPCMSL-6370
50	480	3	100	480	XPCMSL	XPCMSL-43100
50	600	3	100	600	XPCMSL	XPCMSL-63100
40	240	4	175	240	XPCMSM	XPCMSM-24175
50	240	4	200	240	XPCMSM	XPCMSM-24200
75	480	4	175	480	XPCMSM	XPCMSM-44175
75	600	4	125	600	XPCMSM	XPCMSM-64125
100	480	4	200	480	XPCMSM	XPCMSM-44200
100	600	4	175	600	XPCMSM	XPCMSM-64175
60	240	5	225	240	XPCMSN	XPCMSN-25225
75	240	5	300	240	XPCMSN	XPCMSN-25300
100	240	5	400	240	XPCMSN	XPCMSN-25400
125	480	5	225	480	XPCMSN	XPCMSN-45225
125	600	5	200	600	XPCMSN	XPCMSN-65200
150	480	5	300	480	XPCMSN	XPCMSN-45300
150	600	5	225	600	XPCMSN	XPCMSN-65225
200	480	5	400	480	XPCMSN	XPCMSN-45400
200	600	5	400	600	XPCMSN	XPCMSN-65400

Starters
XPCMS Series – Combination motor starters

Single-speed non-reversing with motor circuit protectors 3-pole 60 Hertz, 600 VAC maximum

Motor Starter			Enclosure	
Max. HP Polyphase	Line Volts	NEMA Size	Without Breaker & Starter Cat. #	With Breaker & Starter Cat. #
1	600	0	XPCMSA	XPCMSA-M6003
2	600	0	XPCMSA	XPCMSA-M6007
5	600	0	XPCMSA	XPCMSA-M6015
10	600	1	XPCMSB	XPCMSB-M6130
25	600	2	XPCMSL	XPCMSL-M6250
50	600	3	XPCMSL	XPCMSL-M63100
100	600	4	XPCMSM	XPCMSM-M64150
200	600	5	XPCMSN	XPCMSN-M65400

Starters

XPCMS Series – Combination motor starters

Options

The following options are available from the factory by adding suffix to catalog number – suffixes are added alphanumerically.

Description	Suffix
Start/Stop Dual Pushbutton (1NO Start, 1NC Stop)	A
Green Start Pushbutton (1NO)	A1
Red Stop Pushbutton (1NC)	A2
Red Stop Pushbutton, Mushroom Head (1NC)	A3
Black Pushbutton (1NO, 1NC)	A4
Auxiliary Switch on Breaker (1A and 1B Contacts)	AS1
Auxiliary Switch on Breaker (2A and 2B Contacts)	AS2
Hand-Off-Auto Selector Switch	B
Selector Switch (2-Position) (1NO, 1NC)	B1
Bell Alarm Switch on Breaker (Specify No. of Contacts)	BA
Pilot Light with Guard 120 Volt AC (See Color Table)	CG1[1,2]
Push-to-Test Light 120 Volt AC (1NO, 1NC) (See Color Table)	CP1[1,2]
Breather/Drain - installed in bottom	E[3]
Breather and Drain installed	EE[3]
Auxiliary Contacts on Starter (+NO, -NC) (Specify no. of Contacts)	G(+-)
Time Delay Relay-On Delay (Specify Range)	H1
Time Delay Relay-Off Delay (Specify Range)	H2
8-Point Terminal Strip	K
Epoxy Coating External Only (Specify Color)	L1
Epoxy Coating External and Internal (Specify Color)	L2
Lamacoid Nameplate (Specify Legend)	NP
Overload Heaters (Specify Full Load Amp.)	OL
Control Relay (Description Required)	R
Space Heater (Specify Wattage)	S
Shunt Trip on Breaker (Specify Voltage)	ST
50 VA Control Transformer 480V Pri, 120V Sec. w/ Fuse Block	T1F
100 VA Control Transformer 480V Pri, 120V Sec. w/ Fuse Block	T2F
150 VA Control Transformer 480V Pri, 120V Sec. w/ Fuse Block	T3F
200 VA Control Transformer 480V Pri, 120V Sec. w/ Fuse Block	T4F
250 VA Control Transformer 480V Pri, 120V Sec. w/ Fuse Block	T5F
300 VA Control Transformer 480V Pri, 120V Sec. w/ Fuse Block	T6F
Other Control Transformer (Specify VA, Pri. and Sec.)	T7
Undervoltage Release on Breaker (Specify voltage rating)	UV
Internal Control Wiring	W
Other (Specify)	Z

Notes:

1. Refer to color table for color code.
2. Not available in Group B applications.
3. For Group B applications, add "H" to suffix.

Color Table

Color	Suffix
Red	R
Green	G
Amber	A
Blue	B
Clear	C
White	W

Starter with circuit breaker

XP CMS _ A 2 0 15 - B

- XP – eXplosion Proof
- CMS – Combination Motor Starter
- R – Reversing / Blank - Non-reversing
- A – Enclosure size (see dim. table: A, B, L, M, N)
- 2 – 2=240V; 4=480V; 6=600V
- 0 – NEMA size - 0, 1, 2, 3, 4, 5
- 15 – 15 Amps, breaker rating (15-400 see table)
- B – Options: B = Hand-off auto switch (see options table for additional choices)

Starter with motor circuit protector

XP CMS A M 6 5 400 - B

- XP – eXplosion Proof
- CMS – Combination Motor Starter
- A – Enclosure size (see dim. table: A, B, L, M, N)
- M – Motor Circuit Protector
- 6 – 2=240V; 4=480V; 6=600V
- 5 – NEMA size - 0, 1, 2, 3, 4, 5
- 400 – 15 Amps, breaker rating (15-400 see table)
- B – Options: B = Hand-off auto switch (see options table for additional choices)

Ordering instructions

To order any motor control product, use the catalog number followed by the suffix numbers separated by dashes.

Example: XPCMSA-4130-A-C1R

Combination starter with 480 Volt, 30 Amp. thermal magnetic breaker, NEMA size 1 starter with 120 Volt AC coil, start/stop dual pushbutton installed in cover, red 120 Volt pilot light installed in cover.

Starters
XPMS Series – Magnetic motor starters

XPMS Series of starter enclosures will accommodate both NEMA and IEC assemblies. Pictured closed, showing reset button and 2 drill & tapped -plugged operator openings in cover.

Applications
- For general motor control and circuit protection – indoors and outdoors – in damp, wet, dirty, dusty hazardous locations without the need for a protective shelter
- In areas where frequent washdowns are necessary or where heavy rain or water spray is prevalent
- To provide motor overload and undervoltage protection
- On switchracks or other assemblies where it is desired that motor control be centrally located

Features
- Starters are housed in enclosures suitable for hazardous environments, and are used for: across-the-line starting of motors, motor running protection, undervoltage protection
- Remote or manual starting and stopping
- Ease of installation and maintenance
- All units are furnished with hinges
- Covers removable for clear access to starters
- Reset located on cover
- Predrilled, tapped and plugged entries on cover for optional pilot device applications

Standard Materials
- Body and cover – copper-free Aluminum (0.3% max copper content)
- Mounting plate – galvanized steel or optional aluminum
- Gasket – nitrile
- Cover bolts – Type 316L stainless steel
- Hinge kits – copper-free aluminum with stainless steel 316L hardware

Standard Finishes
Tumblast, natural aluminum finish

Electrical Ratings
- NEMA sizes 0-5 (non-reversing), sizes 0-4 (reversing)

Certifications & Standards

Class I, Divisions 1 & 2, Groups B, C, D
Class II, Divisions 1 & 2, Groups E, F, G
Class III
Enclosure NEMA Type 4, 7BCD, 9EFG
UL Standard 1203
UL Standard 50
UL 1604
CSA C22.2 No. 30

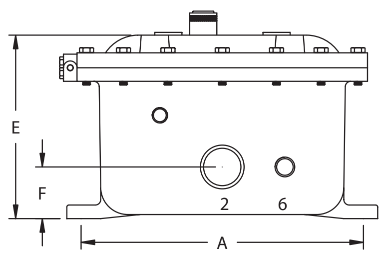
Starters
XPMS Series – Magnetic motor starters

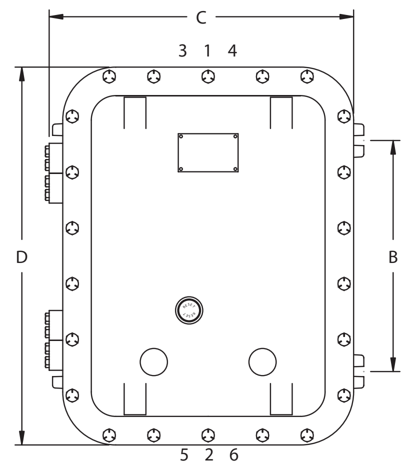
Non-reversing/120 VAC coil

Maximum HP			NEMA Size	Catalog Part No.	Enclosure only
240 V	480 V	600 V			
3	5	5	0	XPMSB-60	XPMSB
7½	10	10	1	XPMSB-61	XPMSB
15	25	25	2	XPMSD-62	XPMSD
30	50	50	3	XPMSH-63	XPMSH
50	100	100	4	XPMSH-64	XPMSH
100	200	200	5	XPMSQ-65	XPMSQ

Reversing/120 VAC coil

Maximum HP			NEMA Size	Catalog Part No.	Enclosure only
240 V	480 V	600 V			
3	5	5	0	XPMSB-60	XPMSRC
7½	10	10	1	XPMSB-61	XPMSRC
15	25	25	2	XPMSD-62	XPMSRF
30	50	50	3	XPMSH-63	XPMSRO
50	100	100	4	XPMSH-64	XPMSRO





Dimensions and weights

Enclosure	Inside nom. dimensions (in.)			Overall dimensions (in.)							Ship Weight lbs	Conduit Size
	W	L	D	A	B	C	D	E	F	G		
XPMSB	8	10	6	10¾	6½	12	13⅝	8¼	2¾	3 & 6	36	1
XPMSD	10	14	6	13	10⅝	14	17⅜	8⅜	2¾	3 & 6	55	1½
XPMSH	12	18	8	15¾	14½	17	22¼	10¾	3½	3 & 6	105	2½
XPMSQ	18	36	10	21¾	29	23¾	40⅞	14⅞	4⁵⁄₁₆	3 & 6	380	3
XPMSRC	10	14	6	10⅝	13	18	13⅜	8⅜	2¼	3 & 5	55	1
XPMSRF	12	12	6	8⅝	15¾	17	16¼	8¹⁵⁄₁₆	3	3 & 6	85	1½
XPMSRO	18	18	8	13	13	23¾	22⁷⁄₁₆	12⁷⁄₁₆	3⅞	3 & 6	190	2½

Note: Standard conduit openings at locations 1 and 2, control circuit opening 3/4" NPT at locations shown in column "G". Each housing has one 1/2" NPT top & bottom for breather and drain.

Starters

XPMS Series – Magnetic motor starters

Options

The following options are available from the factory by adding suffix to catalog number – suffixes are added alphanumerically.

Description	Suffix
Start/Stop Dual Pushbutton (1NO Start, 1NC Stop)	A
Green Start Pushbutton (1NO)	A1
Red Stop Pushbutton (1NC)	A2
Red Stop Pushbutton, Mushroom Head (1NC)	A3
Black Pushbutton (1NO, 1NC)	A4
Hand-Off-Auto Selector Switch	B
Selector Switch (2-Position) (1NO, 1NC)	B1
Pilot Light with Guard 120 Volt AC (*See Color Table)	CG1[1,2]
Push-to-Test Light 120 Volt AC (1NO, 1NC) (*See Color Table)	CP1[1,2]
Breather/Drain - installed in bottom	E[3]
Breather and Drain installed	EE[3]
Auxiliary Contacts on Starter (+NO, -NC) (Specify No. of Contacts)	G(+-)
Time Delay Relay-On Delay (Specify Range)	H1
Time Delay Relay-Off Delay (Specify Range)	H2
8-Point Terminal Strip	K
Epoxy Coating External Only (Specify Color)	L1
Epoxy Coating External and Internal (Specify Color)	L2
Lamacoid Nameplate (Specify Legend)	NP
Overload Heaters (Specify Full Load Amp.)	OL
Control Relay (Description Required)	R
Space Heater (Specify Wattage)	S
50 VA Control Transformer 480V Pri, 120V Sec. W/ Fuse Block	T1F
100 VA Control Transformer 480V Pri, 120V Sec. W/ Fuse Block	T2F
150 VA Control Transformer 480V Pri, 120V Sec. W/ Fuse Block	T3F
200 VA Control Transformer 480V Pri, 120V Sec. W/ Fuse Block	T4F
250 VA Control Transformer 480V Pri, 120V Sec. W/ Fuse Block	T5F
300 VA Control Transformer 480V Pri, 120V Sec. W/ Fuse Block	T6F
Other Control Transformer (Specify VA, Pri. And Sec.)	T7
Internal Control Wiring	W
Other (Specify)	Z

Notes:

1. Refer to color table for color code.
2. Not available in Group B applications.
3. For Group B applications, add "H" to suffix.

Color Table

Color	Suffix
Red	R
Green	G
Amber	A
Blue	B
Clear	C
White	W

Magnetic motor starter

XP MS B 6 1 B - C1R

- XP – eXplosion Proof
- MS – Motor Starter (non-reversing) (MRS = reversing)
- B – Enclosure size - B, D, H, Q
- 6 – 2=240V; 4=480V; 6=600V
- 1 – NEMA size - 0, 1, 2, 3, 4, 5
- B – Option (see table)
- C1R – Option (see table)

Ordering instructions

To order any motor control product, use the catalog number followed by the suffix numbers separated by dashes.

Example: XPMSB-61-B-C1R

Magnetic NEMA size 1 starter with 120 Volt AC coil, hand-off-auto selector switch installed in cover, red 120 Volt pilot light installed in cover.

XPMMS Series – Manual motor starters

Applications
- Simple, compact and economical alternative to conventional magnetic motor controllers for local control of a single motor
- For manual across-the-line starting of single and polyphase AC motors
- To provide motor running protection and manual starting and stopping
- In locations made hazardous due to the presence of flammable vapors, gases, or high combustible dusts
- For installation in petroleum refineries, chemical and petrochemical plants, and other process industry facilities.
- In damp, wet or corrosive locations
- In non-hazardous areas where sturdy, durable enclosures are required
- In conjunction with magnetic starters or contactors for remote control of motors

Features
- Type MS132 manual motor protectors suitable for use with single and three phase motors up to 25 HP
- Suitable as motor disconnect in single motor applications and group motor installations as outlined in NEC Article 430.53 (C)
- 15 thermal setting ranges from 0.16 to 32 Amperes, overload Class 10
- Versatile mounting footprint makes installation in any application fast and easy
- Front mounted starter handle is padlockable in either “on” or “off” positions
- Bolted flange design provides clear access to internal components
- Durable cast on mounting feet
- Watertight O-ring for NEMA 4X applications

XPMMS Series manual motor starter enclosures accommodate a wide range of ABB manual starters

Standard Materials
- Body and cover – copper-free aluminum (0.3% max copper content)
- Mounting inside – din rail, galvanized steel or optional aluminum when required
- Rotary actuating handle – copper-free aluminum
- Interior parts – sheet steel
- Gasket – nitrile
- Cover bolts – stainless steel

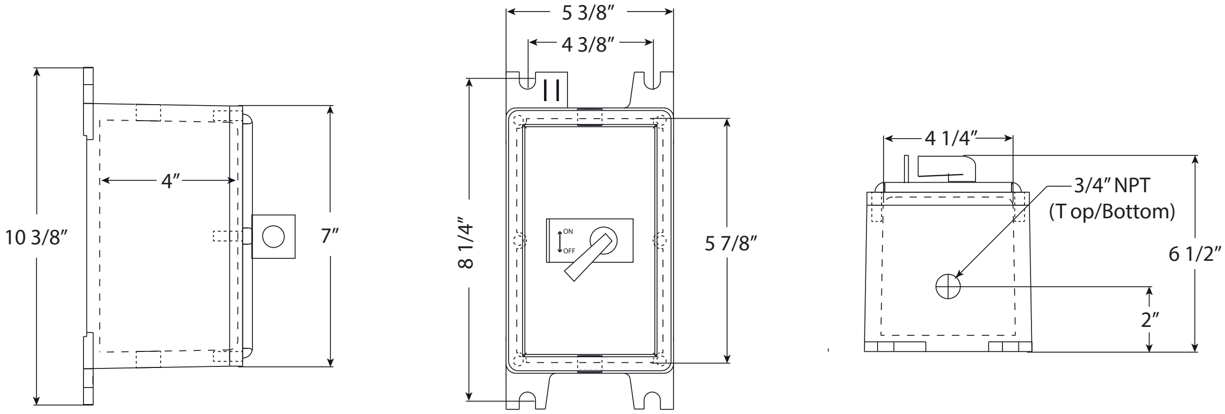
Standard Finishes
Copper-free aluminum – Tumblast, natural aluminum finish

Electrical Ratings
Single phase 120-240 VAC; Three phase 600 VAC
See table for Amperes

Weights
All enclosure sizes are 8.5 lbs

Certifications & Standards
Class I, Divisions 1 & 2, Groups C, D
Class II, Divisions 1 & 2, Groups E, F, G
UL Standard 1203 (Classified)
CSA C22.2 No. 30
Enclosure NEMA Type 4, 7BCD, 9EFG

Starters
XPMMS Series – Manual motor starters



Part numbers and electrical properties

Rated instantaneous short-circuit current setting I [A]	Rated current I / Conventional free-air thermal current I [A]	Motor Rating – Three Phase									Motor Rating – Single Phase						Enclosure with Starter Part No.	ABB Starter used
		220...240 V AC			440...480 V AC			550...600 V AC			120 V AC			220 ... 240 V AC				
		HP	FLA	LRA	HP	FLA	LRA	HP	FLA	LRA	HP	FLA	LRA	HP	FLA	LRA		
1.25 … 1.87	0.16	–	0.16	0.96	–	0.16	0.96	–	0.16	0.96	–	0.16	0.96	–	0.16	0.96	XPMMS1	MS132-0.16
1.95 … 2.92	0.25	–	0.25	1.5	–	0.25	1.5	–	0.25	1.5	–	0.25	1.5	–	0.25	1.5	XPMMS2	MS132-0.25
3.12 … 4.68	0.40	–	0.4	2.4	–	0.4	2.4	–	0.4	2.4	–	0.4	2.4	–	0.4	2.4	XPMMS3	MS132-0.4
4.91 … 7.37	0.63	–	0.63	3.78	–	0.63	3.78	–	0.63	3.78	–	0.63	3.78	–	0.63	3.78	XPMMS4	MS132-0.63
9.20 … 13.8	1.00	–	1	6	–	1	6	½	1	6	–	1	6	–	1	6	XPMMS5	MS132-1.0
14.7 … 22.1	1.60	–	1.6	9.6	¾	1.6	9.6	¾	1.6	9.6	–	1.6	9.6	⅒	1.6	9.6	XPMMS6	MS132-1.6
23.0 … 34.5	2.50	½	2.5	15	1	2.5	15	1½	2.5	15	–	2.5	15	⅙	2.5	15	XPMMS7	MS132-2.5
40.0 … 60.0	4.00	1	4	24	2	4	24	3	3.9	26	⅛	4	24	⅓	4	24	XPMMS8	MS132-4.0
63.0 … 94.5	6.30	1½	6.3	37.8	3	4.8	32	5	6.1	37	¼	6.3	37.8	½	6.3	37.8	XPMMS9	MS132-6.3
120 … 180	10.00	3	9.6	64	5	7.6	46	7½	9	51	½	9.8	58.8	1½	10	60	XPMMS10	MS132-10
144 … 216	12.00	3	9.6	64	7½	11	64	10	11	65	½	9.8	58.8	2	12	72	XPMMS11	MS132-12
192 … 288	16.00	5	15.2	92	10	14	81	10	11	65	1	16	96	2	12	72	XPMMS12	MS132-16
240 … 360	20.00	5	15.2	92	10	14	81	15	17	93	1½	20	120	3	17	92	XPMMS13	MS132-20
300 … 450	25.00	7½	22	127	15	21	116	20	22	116	2	24	144	3	17	127	XPMMS14	MS132-25
384 … 576	32.00	10	28	162	20	27	145	25	27	146	2	24	144	5	28	162	XPMMS15	MS132-32

* To order enclosure without starter, use part number: XPMMS-NS

Options

The following options are available from the factory by adding suffix to catalog number – suffixes are added alphanumerically.

Description	Suffix
Auxiliary Contacts (1NO, 1NC)	AC
Shunt Trip	ST1
Under Voltage Release	UV1
Breather / Drain Installed in Bottom	EE
Lockout Device on Switch	LD

Manual motor starter

XP MMS 1 EE

XP – eXplosion Proof

MMS – Manual Motor Starter

1 – Rated current (see table above)

EE – Option (see table opposite)

Breakers and switches
XPCB Series – Circuit breakers

Applications
- For general motor control and circuit protection – indoors and outdoors – in damp, wet, dirty, dusty hazardous locations without the need for a protective shelter
- In areas where frequent washdowns are necessary or where heavy rain or water spray is prevalent
- To provide line disconnect means and short circuit protection
- For service entrance, feeder or branch circuit protection for lighting, heating, appliance and motor circuits
- On switchracks or other assemblies where it's desired that motor control be centrally located

3

Features
- Available in frame sizes ranging from 15 to 600 Amperes
- Available as non-automatic circuit interrupters, without automatic overload trip elements for load switching and isolation
- Short circuit and overload must be provided by separate protection device
- Breakers available for magnetic trip only
- Supplied with ABB circuit breakers, others available on request
- Ease of installation and maintenance
- All units are furnished with hinges
- Covers removable for clear access to breakers
- Front mounted circuit breaker handle is padlockable in either "on" or "off" positions

XPCB Series circuit breaker with standard lockout handle

Standard Materials
- Body and cover – copper-free aluminum (0.3% max copper content)
- Mounting plate – galvanized steel
- Rotary actuating handle – copper-free aluminum
- Gasket – nitrile
- Cover bolts – stainless steel
- Hinges – copper-free aluminum with stainless steel hardware

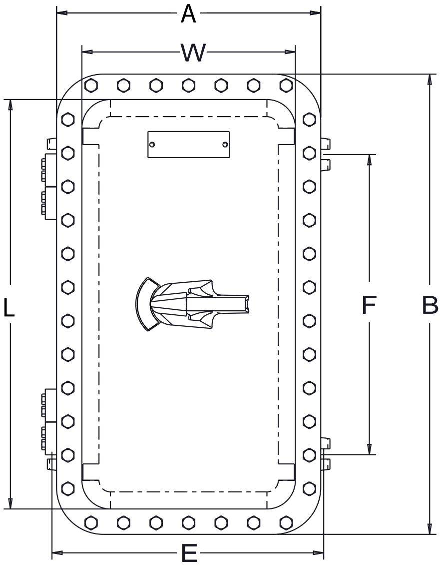
Standard Finishes
- Tumblast, natural aluminum finish

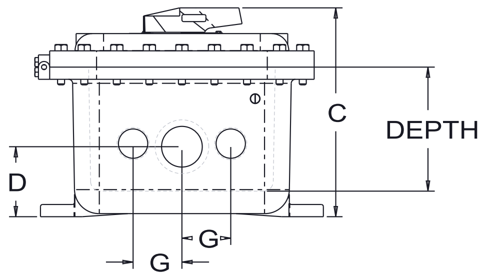
Electrical Ratings
- 600 VAC
- Circuit breakers – 15 through 400 Ampere

Certifications & Standards
Class I, Divisions 1 & 2, Groups B*, C, D
Class II, Divisions 1 & 2, Groups E, F, G
Class III
NEMA Type 4, Type 4X (w/SS cover bolts), 7BCD, 9EFG
UL Standard 1203
UL Standard 50
CSA C22.2 No. 25 & 30

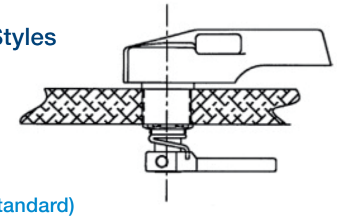
* Group B available without gasket

Breakers and switches
XPCB Series – Circuit breakers

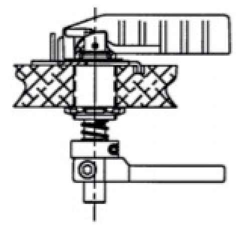




Handle Styles



XPCBH (Standard)
“Classic”, larger handle. Special 1“ – 11 1/2" NPSM opening required for installation.



XPBO (Standard)
Spring loaded, compact adjustable design, ease of assembly and less expensive. Standard 3/4 – 14 NPSM opening required for installation.

Dimensions and weights

	Inside nom. dimensions (in.)			Overall dimensions (in.)			Mounting Lug CL to CL		Mounting Bolt	Conduit Dimension				Ship Weight
Part No.	W	L	D	A	B	C	E	F	Size	D	G	Conduit #	Holes	lbs
XPCBA	6	11	5	9¼	14½	9	9⅛	7½	7/16	2½	-	1¼	1	28
XPCBB	6	13	5	9¼	16¼	9	9⅛	9½	⅜	2½	-	2	1	31
XPCBC	7	18	5	10⅝	21⅝	9	9¾	14½	⅜	2¾	-	2½	1	47
XPCBD	12	20	5	16¼	24¼	10	15¾	14⅜	½	3¼	-	2½	1	108
XPCBE	12	24	6	16¼	28¼	11	15¾	18⅜	½	3⅝	2⅞	3	2	131
XPCBF	12	36	8	16¼	40¼	13½	15¾	29	½	4½	3⅜	4	2	237

Options

The following options are available from the factory by adding suffix to catalog number – suffixes are added alphanumerically.

Description	Suffix	XPCB Enclosure only
Auxillary Switch 1A and 1B Contacts	AS1	
Auxillary Switch 2A and 2B Contacts	AS2	
Bell Alarm (Specify No. of Contacts)	BA	
Breather/Drain - Installed in bottom	E	•
Breather and Drain Installed	EE	•
High Interupting Capacity Breaker	HI	
Epoxy Coating (External), (Specify Color)	LI	•
Epoxy Coating (Internal and External), (Specify Color)	L2	•
Substitute MCP for Breaker	M	
Phenolic Nameplate (Specify Legend)	NP	•
Shunt Trip (Specify voltage rating)	ST	
Undervoltage Release (Specify voltage rating)	UV	
Other / Special	Z	

Circuit breakers

XP CB A 15 E 4 3 A - EE

XP	–	eXplosion Proof
CB	–	Circuit Breaker
A	–	Enclosure size (A, B, C, D, E, F)
15	–	Circuit Breaker rating: (15-200 Amp, see ordering info)
E	–	Breaker frame size: (E=100/150; JN=225/250; KN=400; L=600)
4	–	Voltage: 4 = 480 VAC; 6 = 600 VAC
3	–	3 Poles
A	–	ABB
EE	–	Options (Breather and drain installed)

Breakers and switches
XPCB Series – Circuit breakers

3

Molded case circuit breaker enclosures (breaker included)

Breaker Frame Size	Max Volts	Amp. Rating	Enclosure without Breaker	Part No. 3 Pole
100/150	480 Volt AC /	15	XPCBA	XPCBA-15E43
	250 Volt DC	20	XPCBA	XPCBA-20E43
		30	XPCBA	XPCBA-30E43
		40	XPCBA	XPCBA-40E43
		50	XPCBA	XPCBA-50E43
		60	XPCBA	XPCBA-60E43
		70	XPCBA	XPCBA-70E43
		80	XPCBB	XPCBB-80E43
		90	XPCBB	XPCBB-90E43
		100	XPCBB	XPCBB-100E43
		110	XPCBB	XPCBB-110E43
		125	XPCBB	XPCBB-125E43
		150	XPCBB	XPCBB-150E43
100/150	600 Volt AC /	15	XPCBA	XPCBA-15E63
	250 Volt DC	20	XPCBA	XPCBA-20E63
		30	XPCBA	XPCBA-30E63
		40	XPCBA	XPCBA-40E63
		50	XPCBA	XPCBA-50E63
		60	XPCBA	XPCBA-60E63
		70	XPCBA	XPCBA-70E63
		80	XPCBB	XPCBB-80E63
		90	XPCBB	XPCBB-90E63
		100	XPCBB	XPCBB-100E63
		110	XPCBB	XPCBB-110E63
		125	XPCBB	XPCBB-125E63
		150	XPCBB	XPCBB-150E63
225/250	600 Volt AC /	70	XPCBC	XPCBC-70JN3
	250 Volt DC	90	XPCBC	XPCBC-90JN3
		100	XPCBC	XPCBC-100JN3
		125	XPCBC	XPCBC-125JN3
		150	XPCBC	XPCBC-150JN3
400	600 Volt AC /	100	XPCBD	XPCBD-100KN3
	250 Volt DC	125	XPCBD	XPCBD-125KN3
		150	XPCBD	XPCBD-150KN3
		175	XPCBD	XPCBD-175KN3
		250	XPCBD	XPCBD-250KN3
600	600 Volt AC /	250	XPCBE	XPCBE-250L13
	250 Volt DC	300	XPCBE	XPCBE-300L13
		350	XPCBE	XPCBE-350L13
		400	XPCBE	XPCBE-400L13

* Units come with ABB equipment. Consult factory for other manufacturers.

Breakers and switches
XPDS Series – Disconnect switches

Applications
- Provides an explosionproof fused or non-fused disconnect switch assembly for use in hazardous area electrical systems
- Use for disconnect and over current protection, control of lighting and power circuits
- In locations made hazardous by the presence of flammable gases or vapors or ignitable dusts
- Indoors or outdoors in damp, wet and dirty locations, or in areas where frequent washdowns, heavy rain or water spray is prevalent
- On switchracks or other assemblies where it is desired that motor control be centrally located

Features
- Offer sufficient space for wire bending and ease of installation and maintenance
- Can be ordered as enclosure only, allowing for field installation of switch while maintaining product certification
- NEMA 4X breather and drain (EE) provides a moisture control solution in hose-down applications
- Furnished with stainless steel captive cover bolts

Standard Materials
- Body and cover – copper-free aluminum (0.3% max copper content)
- Mounting plate – galvanized steel
- Rotary actuating handle – copper-free aluminum
- Gasket – nitrile
- Cover bolts – stainless steel
- Hinges – copper free aluminum with stainless steel Type 316L hardware

Standard Finishes
- Tumblast, natural aluminum finish

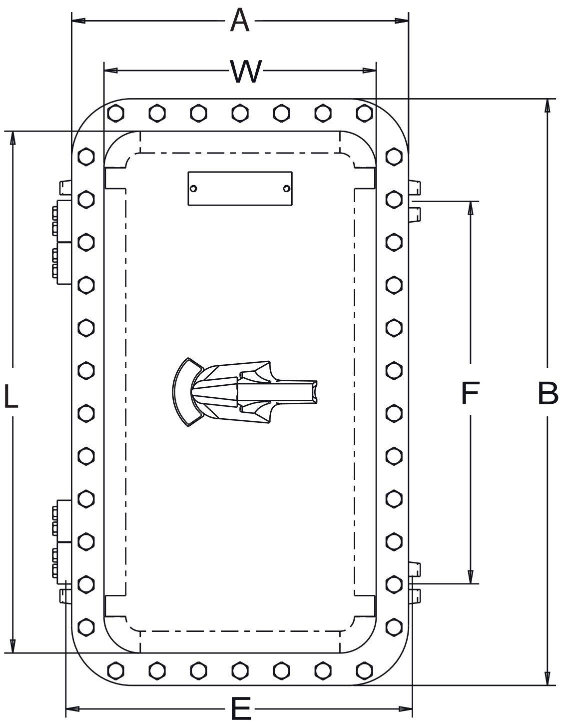
Electrical Ratings
- 600 VAC
- Switches - 30, 60, 100 and 200 Amp

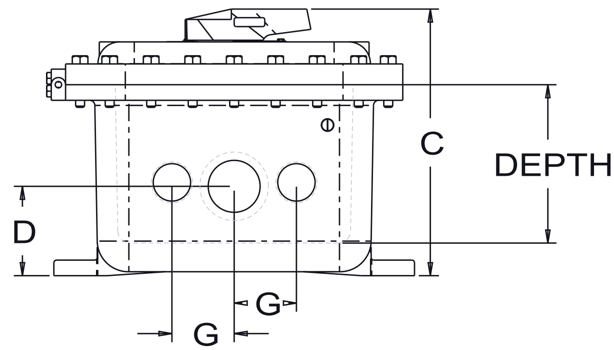
XPDS Series disconnect switch enclosures accommodate fused and non-fused switches.

Certifications & Standards
Class I, Divisions 1 & 2, Groups B*, C, D
Class II, Divisions 1 & 2, Groups E, F, G
Class III
Enclosure NEMA Type 4, Type 4X (w/SS cover bolts), 7BCD, 9EFG
UL Standard 1203
UL Standard 50
CSA C22.2 No. 25 & 30

* Group B available without gasket

Breakers and switches
XPDS Series – Disconnect switches





Dimensions and weights

Enclosure only Part No.	Inside nom. dimensions (in.)			Overall dimensions (in.)							Weight (lbs)	Weight (kg)
	W	L	D	A	B	C	D	E	F	G		
XPDSA	6	11	5	9¼	14¼	9	2½	9⅛	7½	–	28	12.70
XPDSB	6	13	5	9¼	16¼	9	2½	9⅛	9½	–	31	14.06

Breakers and switches

XPDS Series – Disconnect switches

	Max Horsepower Rating			Enclosure with Switch	Enclosure without Switch
Amp. Rating	**200/240 V**	**440/240 V**	**550/600 V**	**600 VAC Part No.**	**Part No.**
Non-Fused					
30	10	20	30	XPDSA-30N3	XPDSA
60	20	40	40	XPDSA-60N3	XPDSA
100	30	50	50	XPDSB-100N3	XPDSB
200	75	150	200	XPDSK-200N3	XPDSK
Fused					
30	7.5	15	20	XPDSA-30F3	XPDSA
60	15	30	50	XPDSA-60F3	XPDSA
100	30	60	75	XPDSB-100F3	XPDSB
200	60	125	150	XPDSK-200F3	XPDSK

Options

The following options are available from the factory by adding suffix to catalog number – suffixes are added alphanumerically.

Description	Suffix
Auxillary Switch 1A and 1B Contacts	AS1
Auxillary Switch 2A and 2B Contacts	AS2
Breather/Drain - Installed in bottom	E
Breather and Drain Installed	EE
Epoxy Coating (External), (Specify Color)	LI
Epoxy Coating (Internal and External), (Specify Color)	L2
Phenolic Nameplate (Specify Legend)	NP
Other / Special	Z

Disconnect switch

XP DS A 30 N 3 - EE

XP – eXplosion Proof
DS – Disconnect Switch
A – Enclosure size (A, B, C, D, E, F)
30 – Disconnect rating:
(30/60/100/200 Amp, see ordering info)
N – Non Fused/F=Fused
3 – 3 Poles
EE – Option (Breather and drain installed)
(see options table for additional choices)

Control stations, pilot devices and accessories
XPCS1, 2, 3 Series – Surface / Panel mount control stations

Applications
- Control stations are used as a remote means of circuit selection, visual indication of equipment operation, motor control, and control of circuits
- Remotely control the operation of an electric motor by hard wiring directly into the control circuit of the magnetic motor starter.
- Our control station and pilot device range are built for tough industrial environments. Cover gasket and integral device lock-nut gasket make these suitable for NEMA 4 environments.
- For use indoors or outdoors, in areas which are hazardous due to the presence of flammable gases, vapors, and combustible dusts.
- Used for separate or remote control of magnetic starters of contactors in conjunction with electrical apparatus such as motors.

Features
- T&B EX™ offers a complete range of 3/4“ pushbuttons, emergency stops, selector switches and signaling units.
- Lightweight, corrosion-resistant, copper-free aluminum alloy (0.3% max copper content)
- All operating shafts are stainless steel for corrosion resistance
- Durable cast on mounting feet
- Ground screw is highly visible and accessible
- Uniform wall thickness (not ribbed) for versatility of conduit openings assuring 5 full threads engagement and maximum available area for conduit drilling and tapping
- For Panel mounting operators may be mounted through back wall
- Box depth provides for the stacking of 2 contact blocks
- Anodized aluminum operators install easily in the field

Standard Materials
- Body and cover – copper-free aluminum (0.3% max copper content)
- Mounting plate – galvanized steel
- Gasket – nitrile O-Ring
- Cover bolts – zinc plated hardened steel (stainless steel optional)

Standard Finishes
Tumblast, natural aluminum finish

XPCS 1, 2, 3 Series Control Station Enclosures can be built to have from 1 to 18 operators in one enclosure

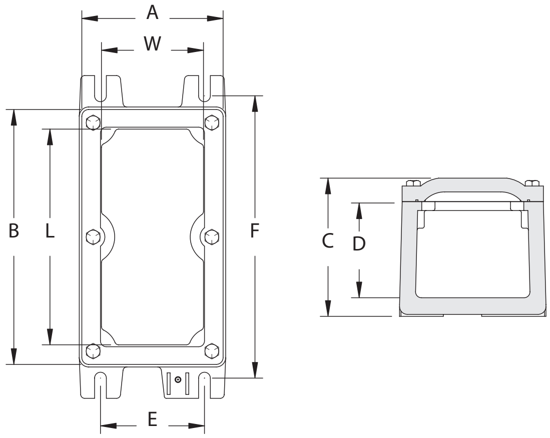
Certifications & Standards

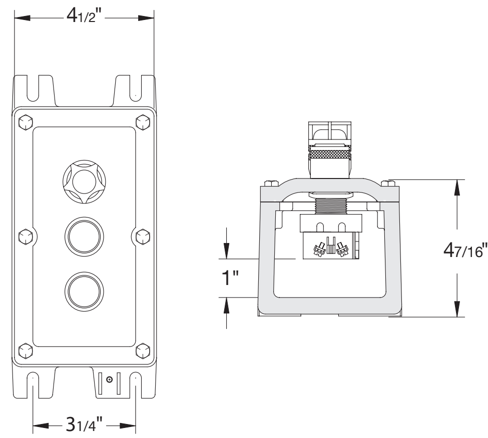
Class I, Divisions 1 & 2, Groups C, D
Class II, Divisions 1 & 2, Groups E, F, G
Enclosure NEMA Type 4, 7BCD, 9EFG
UL Standard 1203
UL Standard 50
CSA C22.2 No. 25 & 30

* CSA certified products require guarded pilot devices

Control stations, pilot devices and accessories

XPCS1, 2, 3 Series – Surface / Panel mount control stations

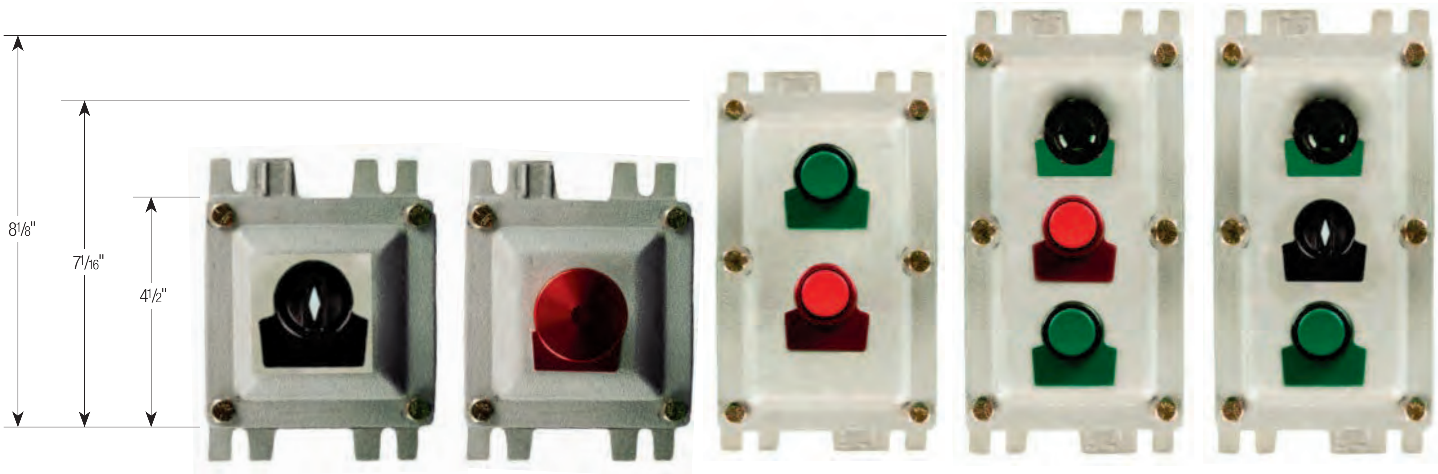




Dimensions and weights

Catalog Part No.	Inside nom. dimensions (in.)			Overall dimensions (in.)			MTG lug (in.)		MTG bolt size (in.)	Shipping weight. (lbs)	Panel Part No.	Panel dimensions (in.)	
	W	L	D	A	B	C	E	F				W	L
XPCS1	3 5/16	3 5/16	3 3/16	4 1/2	4 1/2	4 5/16	3 1/4	5 1/2	5/16	5	XPM0303	3	3
XPCS2	3 1/4	5 3/4	3	4 1/2	7 1/16	4 1/4	3 1/4	8	5/16	6 1/2	XPM0306	3	5 1/2
XPCS3	3 1/4	6 7/8	3	4 1/2	8 1/8	4 5/16	3 1/4	9	5/16	7 1/2	XPM0307	3	6 1/2
XPCS4	3 11/32	8 15/16	3	4 1/2	10 1/16	4 5/16	3 1/4	11	5/16	9 1/2	XPM0309	3	8 1/2
XPCS5	3 1/4	10 15/16	3	4 1/2	12	4 5/16	3 1/4	13	5/16	11	XPM0311	3	10 1/2
XPCS6	3 1/4	12 13/16	3	4 1/2	14 1/16	4 5/16	3 1/4	15	5/16	11 1/2	XPM0313	3	12 1/2
XPCS7	3 1/4	14 3/4	3 1/16	4 1/2	16	4 5/16	3 1/4	17	5/16	13	XPM0315	3	14 1/2

Control stations, pilot devices and accessories
XPCS1, 2, 3 Series – Surface / Panel mount control stations



XPCS1-6
XPCS1-135

XPCS1-462

XPCS2-442-447

XPCS3-421-447-442

XPCS3-421-135-442

Fully assembled control stations

Part No.	Description
XPCS2-442-447	2 hole - 2 pushbutton station (Start/Stop)
XPCS1-6	1 hole - 2 position selector switch (On/Off)
XPCS1-135	1 hole - 3 position selector switch (Hand-Off-Auto) spring return from right
XPCS1-462	1 hole - Mushroom Head push button maintained- (E-Stop) – XHPPM
XPCS3-421-447-442	3 hole - 1 PL Green LED wired, 1 PB Green, 1 PB Red
XPCS3-421-135-442	3 hole - PB (Start) - 3 position selector switch (Hand-Off-Auto) Spring Ret Center from R – PL (Red)

Control station ordering instructions

Step 1: Determine the number of operators and select your enclosure size from table 1.

Step 2: Select your devices from tables 2, 3, 4, in order from "top to bottom" as you want them installed in control station.

Step 3: Add legend plate engraving (table 5) in order from "top to bottom" as you want them installed (character limit is 20 per legend plate).

Box and suffix numbers

Table 1. Control station boxes

# of Operators	Surface Mount**	Panel Mount*	Std. Cond. Size (in.)
1	XPCS1	XPCSPM1	¾
2	XPCS2	XPCSPM2	¾
3	XPCS3	XPCSPM3	¾
4	XPCS4	XPCSPM4	1
5	XPCS5	XPCSPM5	1¼
6	XPCS6	XPCSPM6	1¼
7	XPCS7	XPCSPM7	1¼

* Panel mount: operators mounted in back, add “PM” to catalog number
** Surface mount: operators mounted in cover
Note: All operator holes are 3/4” - 14 NPSM.

Control stations, pilot devices and accessories

XPCS1, 2, 3 Series – Surface / Panel mount control stations

Table 2. Pilot lights (refer to page 3/37)

	Pilot Lights Guarded with terminal							
	LED/short barrel/terminals XLSxLT-GH		Incandescent/short barrel/terminals XLSxT-GH		LED/short barrel/wire leads XLSxL-GH		Incandescent/short barrel/wire leads XLSx-GH	
Lens Color	120V	24V	120V	24V	120V	24V	120V	24V
Amber	400	406	337	412	418	424	430	436
Blue	401	407	338	413	419	425	431	437
Clear	402	408	339	414	420	426	432	438
Green	403	409	340	415	421	427	433	439
Red	404	410	341	416	422	428	434	440
White	405	411	342	417	423	429	435	441

Table 3 - Selector Switches & Key Operated Selector Switches (Surface Mount)

			Suffix Nos. For Selector Switches					Suffix Nos. for Key operated Selector Switches			
Contact Block	Cam	CAM Contact Sequence	Standard Selector Switch XHSS	Selector Switch w/ Padlock XHSSPL	Spring Ret. Center from R & L XHSSC	Spring Ret. Center from R XHSSR	Spring Ret. Center from L XHSSL	Standard Key Switch XHKSS	Spring Ret. Center from R & L XHKSSC	Spring Ret. Center from R XHKSSR	Spring Ret. Center from L XHKSSL
BT1A-TBX/1	NO / NC	XO / OX	6	283	–	–	–	82	–	–	–
BT1B-TBC/1	NC / NO	OX / XO	7	284	–	–	–	83	–	–	–
BT2-TBX/1	NO / NO	OX / OX	8	285	–	–	–	84	–	–	–
BT3-TBX/1	NC / NC	XO / XO	9	286	–	–	–	85	–	–	–
BT2-TBX/3	NO / NO	XOO / OOX	10	293	111	135	159	86	229	249	269
BT1B-TBX/2	NC / NO	XOX / XXO	11	288	112	136	160	87	224	244	264
BT2-TBX/2	NO / NO	XOX / OOX	12	289	113	137	161	88	225	245	265
BT3-TBX/2	NC / NC	OXO / XXO	13	290	114	138	162	89	226	246	266
BT3-TBX/3	NC / NC	OXX / XXO	14	294	115	139	163	90	230	250	270
BT1A-TBX/2	NO / NC	OXO / OOX	15	287	116	140	164	91	223	243	263
BT1A-TBX/3	NO / NC	OXX / OOX	16	291	117	141	165	92	227	247	267
BT1B-TBX/3	NC / NO	XOO / XXO	17	292	118	142	166	93	228	248	268

Table 4. Suffix Nos. for Pushbuttons

Contact Block	Contact Style	Momentary Pushbutton (Black) XHPBS	Momentary Pushbutton (Green) XHPBS	Momentary Pushbutton (Red) XHPBS	Momentary Pushbutton w/Padlock (Black) XHPBSPL	Momentary Pushbutton w/Padlock (Green) XHPBSPL	Momentary Pushbutton w/Padlock (Red) XHPBSPL	Momentary Mushroom Head Pushbutton (Red) XHPBMS	Maintained (Push-Pull) Mushroom Head Pushbutton (Red) XHPPMS	Maintained (Push-Pull) Mushroom Head Pushbutton (Red) w/Guard	Momentary Dual Pushbutton (Green) "Start" & Red "Stop" XHDPBS
BT1A-TBX	1NO / 1NC	1	442	447	307	452	457	106	462	465	72
BT2-TBX	2NO / 2NO	2	443	448	308	453	458	107	463	466	73
BT3-TBX	2NC	3	444	449	309	454	459	108	464	467	74
BT4-TBX	1NO	4	445	450	310	455	460	109	–	468	–
BT5B-TBX	1NC	5	446	451	311	456	461	110	–	469	–

Notes:

1. Standard knob is red. Black and green available.
2. Standard with one green knob labeled “start” and one red knob labeled “stop”. Unlabeled black knobs available.
3. Pushbuttons furnished with black collars and knobs as standard. Optional knobs: green, red. Optional colors: blue, green, gold or red.

Control stations, pilot devices and accessories
XPCS1, 2, 3 Series – Surface / Panel mount control stations

Table 5. Standard marking

Push button / Pilot Lights			Selector Switches	
Blank	Slow	Reset	Run-Jog	Open-Off -Close
Start	Open	In	Hand-Auto	Fast-Off -Slow
Inch	Close	Out	Forward - Reverse	Run-Auto-Jog
Stop	Up	Left	Fast-Slow	Hand-Off -Auto
Run	Jog	Right	Open-Close	Forward-Off -Reverse
Forward	On	Low	Up-Down	1-Off -2
Reverse	Off	High	Off -On	Up-Off -Down
Fast	Back	Down		
		E-Stop		

Notes:
1. Legend plates are anodized aluminum with engraved letters on black background.
2. “Stop” has red and “Start” has green background.
3. Special engraved legend plates can be supplied.

Table 6. Contact ratings - Max Rating: Type BT contact blocks

		AC				DC			
Volts		110	220	440	550	24/28	120	240	600
Make & Emergency Interrupting Capacity	A	60	30	15	12	5.7	1.1	0.5	0.2
Normal Load Break	A	6	3	1.5	1.2	5.7	1.1	0.5	0.2
Continuous Current	A	10	10	10	10	5	10	10	10.5

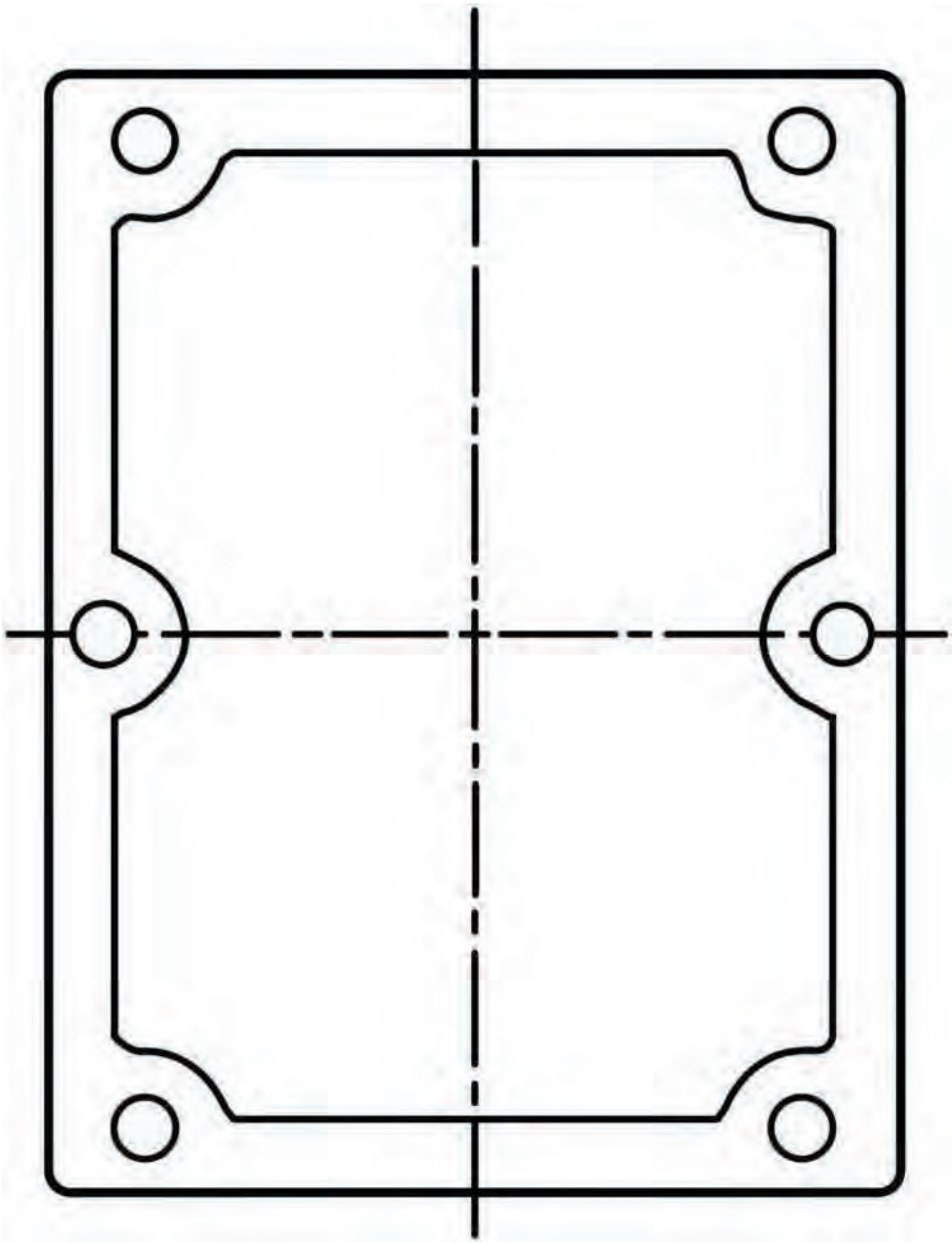
Customer design sheet

Cover layout

Design:

Cat # XPCS

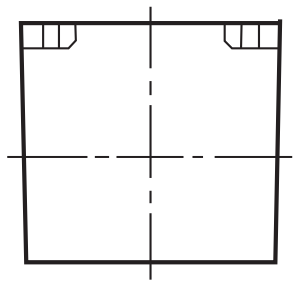
☐ Mounting Pan



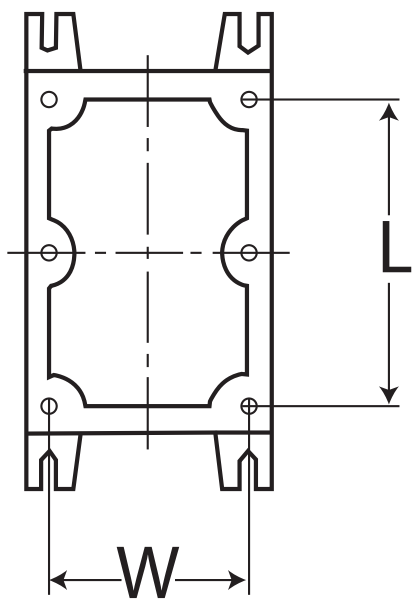
Customer design sheet

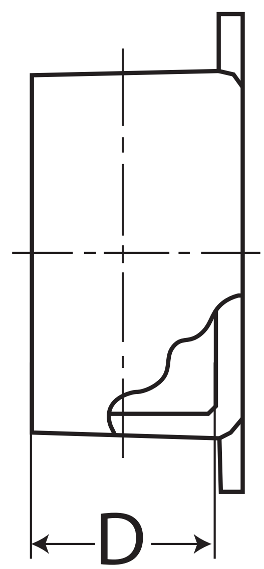
Box layout

Design:
Cat # XPCS
☐ Mounting Pan

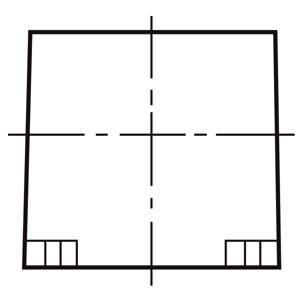


Top View





Right View



Bottom View

Control stations, pilot devices and accessories
XPCS2P Series – Pendant control stations with handles

Applications
- T&B EX™ offers a complete line of explosionproof pendant stations for pushbutton control & operation in rugged or hazardous locations
- Designed for use in Class I, Division 1 & 2 or Zone 1 & 2 locations, this cast aluminum enclosure and heavy duty operators provide a rugged solution for operating overhead cranes, hoists, lifts, and other remote controlled equipment
- Available in various hole configurations, the enclosures can be assembled with our quality line of explosionproof pushbuttons, emergency stop pushbuttons, pilot lights, and selector switches

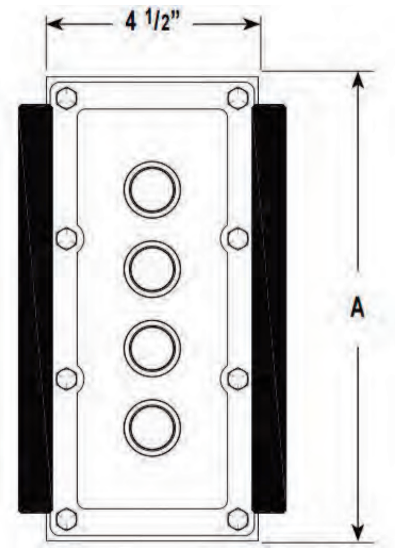
Features
- 10 standard sizes
- Standard feed through conduit entries
- Enclosures rated NEMA Type 4X, 7, 9
- Populated with NEMA 7-9 pushbuttons, pilot lights, selector switches or emergency stops
- Side handles
- Safety yellow coating for high visibility
- All operating shafts are stainless steel for corrosion resistance
- Box depth provides for the stacking of 2 contact blocks
- Optional hanging brackets and strain relief provide the necessary accessories for safe hanging and operation

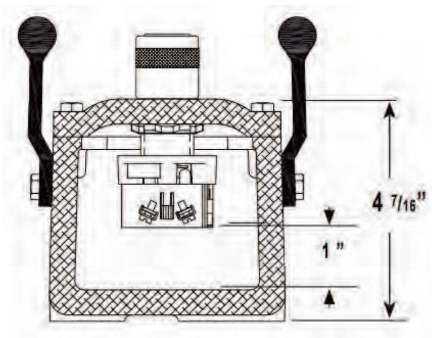
Standard Materials
- Body and cover – copper free cast aluminum (less than 0.3% max copper content) with yellow epoxy powdercoat finish
- Cover bolts – stainless Steel
- Cover gasket – nitrile O-Ring
- Handles – copper-free cast aluminum
- Legend plates – anodized aluminum with engraved letters on black background

Certifications & Standards	
Class I, Division 1, Groups C & D Class II, Groups E, F, G	CLASSIFIED c UL us

* CSA Certified products require guarded pilot devices

Control stations, pilot devices and accessories
XPCS2P Series – Pendant control stations with handles





Dimensions and weights

Part No.	Nom. Inside Dimension (in.)	Dim. A (in.)	Est. Weight (lbs)	Std. Conduit Size (in.)
XPCS2P	03 x 06 x 03	7¹⁄₁₆	7	¾
XPCS3P	03 x 07 x 03	8⅛	8	¾
XPCS4P	03 x 09 x 03	10¹⁄₁₆	10	1
XPCS5P	03 x 11 x 03	12¹⁄₁₆	11	1¼
XPCS6P	03 x 13 x 03	14¹⁄₁₆	12	1¼
XPCS7P	03 x 15 x 03	16	13	1¼
XPCS8P	03 x 18 x 03	19	16	1¼
XPCS12P	03 x 24 x 03	25¹⁄₁₆	21	1½
XPCS15P	03 x 30 x 03	31⅛	28	1½
XPCS18P	03 x 36 x 03	37¼	33	1½

Control stations, pilot devices and accessories
XHP, XLP, XHD, XRB Series – Pilot Devices

Features
- Die cast aluminum alloy. The barrels are all ¾” NPSM thread. Maximum installation thickness 1 15/16” long barrel, 3/4” short barrel
- For NEMA 4 application, add boot and special legend plate
- All devices come standard with gasketed locknuts

Pushbuttons – XHP + XHPBM Series
- Red Mushroom head buttons have a 1 3/4” diameter anodized aluminum head. Also available in black or green
- XHPBPL has padlock attachment on top of cap allowing operator to be locked with the push button depressed
- XHPPM/XHPPMS require 2“ minimum spacing
- XHPB pushbuttons are momentary
- XHPP pushbuttons are maintained

Reset button – XRB Series
- Used for resetting contactors, relays, etc. in explosionproof and weather-proof enclosures. Made with 3/4” NPSM threaded stem
- Standard operating shaft length 6” can be cut to length. Special lengths are also available. Use XRBL for wall thickness greater than 3/4”

Illuminated pushbuttons – XLPx-G Series
- Furnished standard with 120 Volt slide base lamp. Also available for 6, 12, 24, 28, 48 and 60 Volts.
  Specify when ordering
- One transformer required for each pilot light. Adapter furnished for mounting on threaded pilot light stem, or can be mounted to housing as space requires

Dual Pushbuttons – XHD Series

The flat shape of this dual push-button accommodates manual operation better than most designs and allows them to be easily depressed or pushed. These pushbuttons are also great compact alternatives to bulky mechanical switches

Standard Materials
Pushbuttons – XHP + XHPBM Series
- Operators – die cast aluminum alloy
- Buttons – nylon
- Mushroom button – anodized aluminum
- Exposed parts – black anodized aluminum

Certifications & Standards

Class I, Divisions 1 & 2, Groups B, C, D
Class II, Divisions 1 & 2, Groups E, F, G
Class III
NEMA 3, 4, 7, 9
UL Standard 698
CSA C22.2 No. 25 & 30

LISTED 437S LISTED

Applications
XHP Series
- Protective boots available for use with XHPB and XHPBS, for extremely wet and/or dirty locations
- Black molded nylon buttons come standard. The exposed metal parts are black anodized aluminum. For color coding we will furnish at no additional cost the following color combinations: Red buttons with red metal caps and green buttons with green metal caps. Metal caps are also available in blue, gold or clear with black buttons. Specify colors required

XLPx-G Series
- These illuminated pushbuttons perform very well in locations with poor indoor lighting or at night in outdoor applications

XHD Series
- These compact Dual Push buttons are Ideal when space on a control station or panel is essential

XRB Series
- These reset buttons provide an easy and hassle-free way of resetting a circuit

General Applications
- For use in any T&B EX™ enclosure.
- Can be used in wet, dirty or hazardous environments
- Ideal for indoor and outdoor use

* **Important** - for use with BT contact blocks. Contact blocks can be stacked up to 4, for multiple circuits, check box depth before ordering.

Control stations, pilot devices and accessories
Push button components and accessories

Operator Boot Features
– Molded silicone rubber, protective boots for use with explosion proof operators in extremely wet-dirty locations
– Makes operators suitable for NEMA Type 3, 4, 4X, 5, 7, 9, 12, 13 application
– Boot and metal collar are an integral assembly available as a factory adder or a field replacement
– Simple installation requires removal of existing cap and threading on the replacement

Pushbutton Lockout Features
– Operator locking caps and actuator devices can be adapted to existing explosion proof operators
– Simple installation requires removal of top cap and threading on the replacement unit

Close up Plug Features
– - Material – black anodized aluminum provides excellent corrosion resistance
– Covers plug unused operator openings maintaining enclosure integrity, allowing future operator installation
– Used as threaded device entry plug only (straight thread and a 30° internal chamfer)

Push button lockouts


XHDPL


XHPL

Push button lockouts

Part No.	Operator Description	Weight (lbs)
XHDPL	Padlock Device for Dual Push Button	½
XHPL	Padlock Device to activate Push Button	½
XHPLG	Padlockable Push Button Cover (Not Shown)	½

Push button boots


XBB


XBPC

Push Button Boots

Part No.	Operator Description	Weight (lbs)
XBB	Black Push Button Cap	1/16
XBG	Green Push Button Cap	1/16
XBR	Red Push Button Cap	1/16
XBPC	Clear Pilot Light Push Button Cap	1/16

Close up plugs


XPPH3-N4
Black anodised

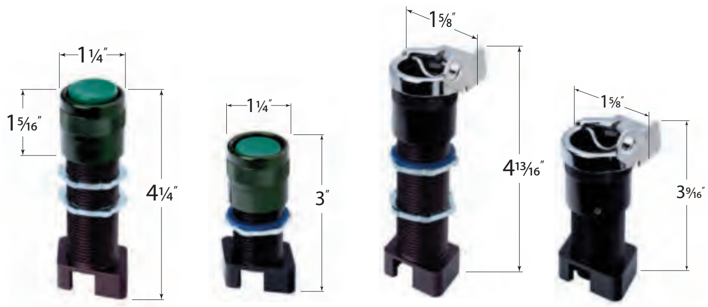
Close up Plugs

Part No.	Operator Description	Weight (oz.)
XPPLH3-N4	¾" NPSM Type 4	¾

Control stations, pilot devices and accessories

XHP, XHD, XRB Series – Pilot devices

Push buttons



XHPB XHPBS XHPBPL XHPBSPL

XHPBM XHPBMS XHPPM XHPPMS

XHP Series - Pushbuttons

Part No.	Operator Description	Weight each (lbs)
XHPB	Long Barrel	½
XHPBS	Short Barrel	½
XHPBPL	W/ Padlock devices, Long Barrel	¾
XHPBSPL	W/ Padlock devices, Short Barrel	¾
XHPBM	Red Mushroom Head, Long Barrel	½
XHPBMS	Red Mushroom Head, Short Barrel	½
XHPPM*	Push/Pull switches, Long Barrel	¾
XHPPMS*	Push/Pull switches, Short Barrel	¾

* Type BT1 contact blocks are included

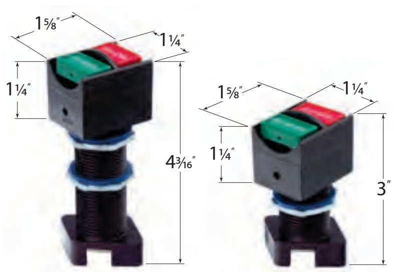
Note:

1· All operators require BT contact blocks. Contact blocks are not included and must be ordered ordered separately and can be stacked for multiple circuits. See page 3/31 for BT contact blocks.

2. Legend plate information is located on page 3/38.

3. For extremely wet - dirty locations, XHPB and XHPBS series are available to be used with protective boots.

Dual push buttons



XHDPB
XHDMC

XHDPBS
XHDMCS

XHD Series - Dual Pushbuttons

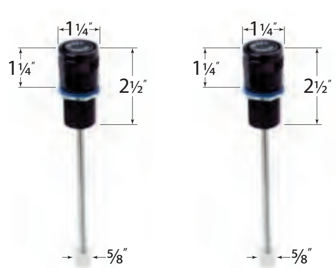
Part No.	Operator Description	Weight each (lbs)
XHDPB	Panel mount - momentary*	½
XHDPBS	Surface mount - momentary*	½
XHDMC	Maintained contact, panel mount	½
XHDMCS	Maintained contact, surface mount	¾

* Two contacts in the BT contact block are actuated independently

Note:

1. Legend plate information is located on page 3/38.
2. See page 3/31 for BT contact blocks.

Reset Button



XRB XRBL

XRB Series - Reset Buttons

Part No.	Operator Description	Weight (lbs)
XRB	Reset Button - Short	½
XRBL	Reset Button - Long	½

Control stations, pilot devices and accessories

XLP, XHD Series – Pilot devices

Illuminated push buttons

XLP Long Series XLPS Short Series

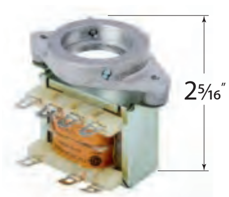
XLP Series - Short and Long Barrel Illuminated Pushbuttons

Operator Lens Colour	Long Barrel Part No. (Standard)	Long Barrel Part No. (Guarded)	Weight each (lbs)	Short Barrel Part No. (Standard)	Short Barrel Part No. (Guarded)	Weight each (lbs)
Amber	XLPA	XLPA-G	¾	XLPAS	XLPAS-G	½
Blue	XLPB	XLPB-G	¾	XLPBS	XLPBS-G	½
Clear	XLPC	XLPC-G	¾	XLPCS	XLPCS-G	½
Green	XLPG	XLPG-G	¾	XLPGS	XLPGS-G	½
Red	XLPR	XLPR-G	¾	XLPRS	XLPRS-G	½
White	XLPW	XLPW-G	¾	XLPWS	XLPWS-G	½

Notes:

1. Legend plate information is located on page 3/38.
2. Contact block information located below.

Pilot light transformers



Pilot Light Transformer

XLT Series - XLP Transformers

Part No. (Standard)	Operator Description	Weight each (lbs)
XLT 240	240 to 120 Volt	1
XLT480	480 to 120 Volt	1

Notes:

1. Appropriate stepdown transformers required for each pilot light.
2. Adapter furnished for mounting on threaded pilot light stem or can be mounted to housing as space requires.

BT Contact Block

BT Series*

Part No.	Contact Block	Push Button	Selector Switch	Weight (lbs)
BT1A-TBX	One open and one closed	1 NO / 1 NC	See chart	1/10
BT1B-TBX	One closed and one open	1 NC / 1 NO	See chart	1/10
BT2-TBX	Two open	1 NO / 1 NO	See chart	1/10
BT3-TBX	Two closed	1 NC / 1 NC	See chart	1/10
BT4-TBX	One open	1 NO	Specify cam and contact block	1/10
BT5-TBX	One closed	1 NC		1/10
BT44-TBX	Two open / Two closed	1 NC / 1 NO, 1 NO / 1 NC		1/10

Notes:

1. Each BT Series block adds ⁷⁄₈" beyond operator length.
2. BT Blocks are used on all push buttons and selector switches.
3. Contact blocks can be stacked.

Control stations, pilot devices and accessories
XHS, XHKS, XPO Series – Selector switches

Features
- Die cast aluminum alloy
- Barrels are all ¾” NPSM thread
- Maximum installation thickness $1\frac{15}{16}$” long barrel, ¾” short barrel
- For NEMA 4 application, add boot and special legend plate

Selector Switches – XHS + XHSS Series
- Specify 2 position or 3 position. For 3-position, order must specify cam (see contact block table for contact sequence chart)
- Contact blocks are not included with the operators. Select contact block and sequence operating cam from contact block table

Keyed Selector Switches – XHKS + XHKSS Series
- Selector switch operators can be used as 2 position or 3 position by removal of knob and rotating knob 180°
- The actuator cam which operates the plungers on the contact blocks can be readily changed for various contact sequences.
- For 3 position, orders must state cam number
- Contact blocks are not included with operators. Select contact block and sequence operating cam from contact block table

Potentiometer & Switch Operators – XPO Series
- 1/4” diameter shafts
- XPO - XPOS have knob and dial marked 1 to 100. Two dial sizes are available
- XPOC - XPOCS have 15 turn counting dial
- Operators include 3 pc. coupling and device mounting bracket
- Potentiometers not furnished, consult factory

Standard Materials
Pushbuttons – XHP + XHPBM Series
- Operators – Black molded nylon knobs
- Exposed parts – black anodized aluminum

Certifications & Standards
Class I, Groups B, C, D Class II, Groups E, F and G NEMA Type 3, 4, 7, & 9


XHS SERIES


XHKS SERIES


XPO SERIES

Applications
Selector Switches – XHS + XHSS Series
- A rotary knob is turned to select one of 2 or 3 positions. Selector switches will rest in any of their positions or can contain spring-return mechanisms for momentary operation

Keyed Selector Switches – XHKS + XHKSS Series
- Same as our selector switch but require a factory provided key to secure operation and prohibit tampering with circuit control

Potentiometer & Switch Operators – XPO Series
- Potentiometers are commonly used to control electrical devices such as volume controls on audio equipment
- Potentiometers not furnished, consult factory

General Applications
- For use in any T&B EX™ enclosure
- Can be used in wet, dirty or hazardous environments.
- Ideal for indoor and outdoor use

* **Important** - for use with BT contact blocks. Contact blocks can be stacked up to 4, for multiple circuits, check box depth before ordering.

Control stations, pilot devices and accessories
Selector switch components and accessories

Operator Boot Features
- Molded silicone rubber, protective boots for use with explosion proof operators in extremely wet-dirty locations.
- Makes operators suitable for NEMA Type 3, 4, 4X, 5, 7, 9, 12, 13 application
- Boot and metal collar are an integral assembly available as a factory adder or a field replacement

Close up Plug Features
- Material – black anodized aluminum provides excellent corrosion resistance
- Covers plug unused operator openings maintaining enclosure integrity, allowing future operator installation.
- Used as threaded device entry plug only (straight thread and a 30° internal chamfer)

Selector switch lockouts


XHSPL

Selector Switch Lockouts

Part No.	Operator Description	Weight (lbs)
XHSPL	Padlockable Device for Selector Switch	½

Selector switch boots


XBSB

Selector Switch Boots

Part No.	Operator Description	Weight (lbs)
XBSB	Black Selector Switch Cap	1⁄16
XBSG	Green Selector Switch Cap	1⁄16
XBSR	Red Selector Switch Cap	1⁄16

Close up plugs


XPPH3-N4
Black anodised

Close up Plugs

Part No.	Operator Description	Weight (oz.)
XPPLH3-N4	¾" NPSM Type 4	¾

Control stations, pilot devices and accessories

XHS, XHKS, XPO Series – Selector switches

XHSS Series

XHSSS Series

XHKSS

XHKSSS

XHS & XHK Series - Selector Switches

Plain Switch		Keyed Switch					
Long Barrel	Short Barrel	Long Barrel	Short Barrel	CAM	# Pos.	Operator Description	Weight (lbs)
XHSS	XHSSS	XHKSS	XHKSSS		2/3	Standard	½
XHSC*	XHSSC*	XHKSC*	XHKSSC*		3	Spring return to center from right and left	½
XHSR2	XHSSR2	XHKSR2	XHKSSR2	2	2	Spring return to left from right	½
XHSR	XHSSR	XHKSR	XHKSSR		3	Spring return to center from right, maintain left	½
XHSL2	XHSSL2	XHKSL2	XHKSSL2	4	2	Spring return to right from left	½
XHSL	XHSSL	XHKSL	XHKSSL		3	Spring return to center from left, maintain right	½

* 3 position only

Notes:

1. Contact blocks are not included with the operators. Select contact block and sequence operating cam from contact block table on page 3/35.
2. Legend plate information is located on page 3/38.

XHSPL

XHSSPL
XHSSSPL

XHS Series - Padlockable Selector Switches

Part No.	Operator Description	Weight (lbs)
XHSPL	W/ padlock device (long barrel)	¾
XHSSPL	W/ padlock device panel mount (short barrel)	¾
XHSSSPL	W/ padlock device surface mount (short barrel)	¾

Notes:

1. Contact blocks are not included with the operators. Select contact block and sequence operating cam from contact block table on page 3/35.
2. For extremely wet - dirty location applications, use protective boots (excludes padlock devices).

Potentiometer & switch operators

XPO Series - Potentiometer & Switch Operators

Part No.	Operator Description	Mounting	Weight (lbs)
XPO	Plain dial	Long barrel	½
XPOL	Plain dial, large size	Long barrel	½
XPOC	Counting dial	Long barrel	¾
XPOS	Plain dial	Short barrel	½
XPOSL	Plain dial, large size	Short barrel	½
XPOCS	Counting dial	Short barrel	½

BT Contact Block

BT Series*

Part No.	Contact Block	Push Button	Selector Switch	Weight (lbs)
BT1A-TBX	One open and one closed	1 NO / 1 NC	See chart	1/10
BT1B-TBX	One closed and one open	1 NC / 1 NO	See chart	1/10
BT2-TBX	Two open	1 NO / 1 NO	See chart	1/10
BT3-TBX	Two closed	1 NC / 1 NC	See chart	1/10
BT4-TBX	One open	1 NO	Specify cam and contact block	1/10
BT5-TBX	One closed	1 NC		1/10
BT44-TBX	Two open / Two closed	1 NC / 1 NO, 1 NO / 1 NC		1/10

Notes:
1. Each BT Series block adds ⅞" beyond operator length.
2. BT Blocks are used on all push buttons and selector switches.
3. Contact blocks can be stacked.

Max. Rating: Type BT Contact Blocks

		AC				DC			
Volts		110	220	440	550	24/28	120	240	600
Make & Emergency Interrupting Capacity	A	60.	30.	15.	12.	5.7	1.1	0.5	0.2
Normal Load Break	A	6.	3.	1.5	1.2	5.7	1.1	0.5	0.2
Continuous Current	A	10.	10.	10.	10.	5.	10.	10.	10.5

Contact Sequence Chart

Part No.	Contact Block No.		Cam 1 Contact Sequence	Cam 2 Contact Sequence	Cam 3 Contact Sequence	Cam 4 Contact Sequence	Cam 5 Contact Sequence	Cam 6 Contact Sequence
0 = Contact Open X = Contact Closed								
Normally Closed (NC)	BT1A	Circuit A	X 0	0 X 0	0 X X	X 0 0	0 X X	X 0 0
Normally Open (NO)		Circuit B	0 X	0 0 X	0 0 X	0 X 0	X X 0	0 X 0
Normally Closed (NC)	BT1B*	Circuit B	X 0	X X 0	X X 0	X 0 X	0 0 X	0 0 X
Normally Open (NO)		Circuit A	0 X	X 0 X	X 0 0	0 X X	X 0 0	0 0 X
Normally Open (NO)	BT2	Circuit A	0 X	X 0 X	X 0 0	0 X X	X 0 0	0 0 X
Normally Open (NO)		Circuit B	0 X	0 0 X	0 0 X	0 X 0	X X 0	0 X 0
Normally Closed (NC)	BT3	Circuit A	X 0	0 X 0	0 X X	X 0 0	0 X X	X 0 0
Normally Closed (NC)		Circuit B	X 0	X X 0	X X 0	X 0 X	0 0 X	0 0 X

Control stations, pilot devices and accessories
XL Series – Pilot lights

Features

Pilot Lights – XLx-GH +XLxS-GH Series (x = color)

- Explosionproof pilot lights are suitable for long barrel or short barrel applications
- Sealed construction and can be relamped from the front by removal of lens cap
- Made with 3/4” NPSM threads
- 8” flexible leads, other lengths on special order, or screw terminal (suffix "T")
- All lens caps are black anodized aluminum finish
- Maximum installation thickness: 1 13/16” on long series, 5/8” on short series
- **Standard Series** - Equipped with candelabra base receptacles and 6 watt 120 Volt 6S6 Clear 1500 hr. avg. lamps. Also available with 6, 12, 24, 30, 50, 75 and 135 Volt lamps. Specify voltage desired
- **Slide Base Series** - Equipped with slide base receptacles and 120 Volt 5000 hr. avg. lamps with slide base. Also available with 6, 12, 24, 48 and 60 Volt lamps. Specify voltage desired

LED Pilot Lights – XLxL-GH + XLSxL-GH Series (x = color)

- Suitable for panel or surface mount applications. All candelabra base LED lights can be relamped from the front by removal of the lens cap
- Made with 3/4” NPSM threads
- All LED pilot lights have 8” flexible leads, other lengths on special order, or screw terminal
- Add suffix "T" to P/N for screw terminal
- All lens caps are black anodized aluminum finish with colored glass lens
- Maximum installation thickness: 1 13/16” on long barrel (long series), 5/8” on short barrel (short series)

General Features

- Die cast aluminum alloy. The barrels are all ¾” NPSM thread. Maximum installation thickness 1 15/16” long barrel, 3/4” short barrel
- For NEMA 4 application, add boot and special legend plate

Standard Materials

Pilot lights – XL Series

- Operators – die cast aluminum alloy
- Exposed parts – black anodized aluminum

Certifications & Standards

Class I, Divisions 1, Groups B, C, D
Class II, Groups E, F, G
NEMA 3, 4, 7, 9

LISTED 437S LISTED

XLRT-GH

XLSRLT-GH

Applications

Pilot Lights – XLx-GH +XLxS-GH Series (x = color)

- To visually indicate at a remote location that the desired function is being performed
- In areas which are hazardous due to the presence of flammable vapors, gases or highly combustible dusts
- For installation at petroleum refineries, chemical and petrochemical plants and other process industry facilities where similar hazards exist

LED Pilot Lights – XLxL-GH + XLSxL-GH Series (x = color)

- 10 Year/100,000 hour service life under normal ambient conditions
- Up to 4x more energy efficient
- Improved resistance to shock and vibration
- LEDs operate significantly cooler than traditional lamps
- Ultra bright cluster LEDs

General Applications

- For use in any T&B EX™ enclosure
- Can be used in wet, dirty or hazardous environments
- Ideal for indoor and outdoor use

Pilot lights for Group B applications

XL Long Series
(Panel mount)

XLS Short Series
(Surface mount)

Standard Series

Pilot Light Color	Standard Series		Slide Base Series		LED Series				
	Long Barrel	Short Barrel Cat #	Long Barrel Cat #	Short Barrel Cat #	Long Barrel Cat #	Short Barrel Cat #	Weight Cat #	(lbs.)	Weight Replacement Cap (lbs.)
Amber Lens	XLA-GH	XLSA-GH	XLAS-GH	XLSAS-GH	XLAL-GH	XLSAL-GH	½	XLA-GCH	⅛
Blue Lens	XLB-GH	XLSB-GH	XLBS-GH	XLSBS-GH	XLBL-GH	XLSBL-GH	½	XLB-GCH	⅛
Clear Lens	XLC-GH	XLSC-GH	XLCS-GH	XLSCS-GH	–	–	½	XLC-GCH	⅛
Green Lens	XLG-GH	XLSG-GH	XLGS-GH	XLSGS-GH	XLGL-GH	XLSGL-GH	½	XLG-GCH	⅛
Red Lens	XLR-GH	XLSR-GH	XLRS-GH	XLSRS-GH	XLRL-GH	XLSRL-GH	½	XLR-GCH	⅛
White Lens	XLW-GH	XLSW-GH	XLWS-GH	XLSWS-GH	XLWL-GH	XLSWL-GH	½	XLW-GCH	⅛

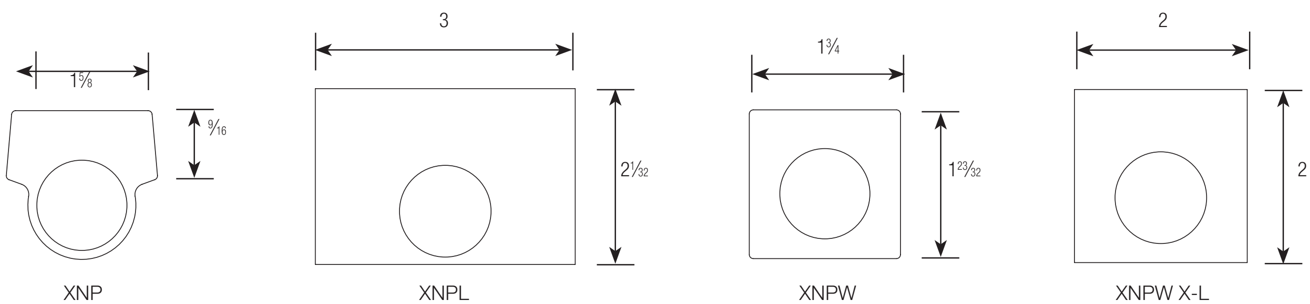
* Add suffix “T” to P/N for screw terminal (Example: XLAT-GH)

3

Legend plates

Features

- Legend plates are anodized aluminum with engraved letters on black background (XNP)
- "Stop" has red and "Start" has green background
- Special engraved legend plates can be supplied
- Legend plate has foam gasket backing for use with protective boots for sealing
- Engraving one line only



Legend Plates

Part No.	Operator Description	Weight (oz.)
XNP	Specify Legend	1
XNPL	Specify Legend	1
XNPWB	Black Blank Legend Plate	1
XNPWG	Green Blank Legend Plate	1
XNPWR	Red Blank Legend Plate	1
XNPW XL	Specify Legend Plate	1

Standard Legend Plate Marking

For Push Button			For Selector Switches	
(Blank)	Slow	Reset	Run-Jog	Open-Off-Close
Start	Open	In	Hand-Auto	Fast-Off-Slow
Inch	Close	Out	Fwd-Rev	Run-Auto-Jog
Stop	Up	Left	Fast-Slow	Hand-Off-Auto
Run	Jog	Right	Open-Close	Fwd-Off-Rev
Forward	On	Low	Up-Down	1-Off-2
Reverse	Off	High	Off-On	Up-Off-Down
Fast	Back	Down		
Emergency Stop				

Control stations, pilot devices and accessories
XMO Series – Miniature pilot device operators

Features

Push Button – XMOB + XMOBS Series

- Reduce size of control enclosure requirements in hazardous environments
- Mount on 1” centers vs. standard operators requiring $2^{1}/_{2}$” centers
- No special enclosures required; can be installed in most T&B EX ™ standard explosionproof enclosures
- All devices have $^{3}/_{8}$”-16 UNC thread size body
- Black anodized body, cap, button
- Two lengths available: Long Series Accommodates up to $1^{9}/_{16}$” enclosure wall thickness. Short series accommodates up to $^{13}/_{16}$” enclosure wall thickness
- Stainless steel actuator shaft
- Optional red or green button (push button operator only)

Selector Switch – XMOS + XMOSS Series

- Selector switches provided with internal adjustable stop
- Silver contacts rated 150 m.a. at 30 VAC, NEC CL 2 circuit
- Insulation resistance 10,000 Megohms minimum
- Furnished with contact block having solder type wire connectors

Indicator Light – XMOLx Series (x = color)

- Up to 100,000 hours lamp life
- Standard 12 VDC furnished. Optional 24 VDC or 12, 24, 120 VAC available
- Black anodized body and lens cap
- $^{3}/_{8}$” - 16 UNC thread size body
- One length-accommodates up to $1^{5}/_{16}$” enclosure wall thickness
- Furnished with 8” flexible wire leads, other lengths available

General Features

- Die cast aluminum alloy. The barrels are all $^{3}/_{8}$” – 16UNC thread size body
- For NEMA 4 application, add boot and special legend plate

Certifications & Standards
Class I, Divisions 1, Groups B, C, D Class II, Groups E, F, G NEMA 3, 4, 7, 9

XMOB

XMOS

XMOL

Applications

Push Button – XMOB + XMOBS Series

Selector Switch – XMOS + XMOSS Series

Indicator Light – XMOLx Series (x = color)

General Applications

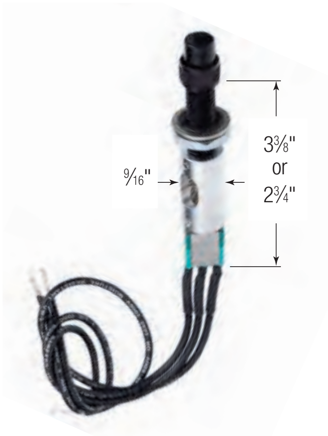
- All of these units are space conscious for panel boards or controls that require reduced size operators

Standard Materials

- Operators – die cast aluminum alloy
- Exposed parts – black anodized aluminum
- Actuator shaft – stainless steel

Control stations, pilot devices and accessories
XMO Series – Miniature pilot device operators

Push buttons

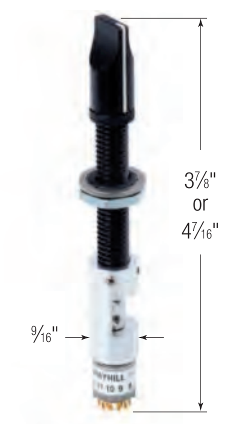


Push Buttons

Long Barrel Part No.	Short Barrel Part No.	Contact Configs.	Weight (oz.)
XMOB-1	XMOBS-1	SPDT maintained	1
XMOB-2	XMOBS-2	SPDT momentary	1
XMOB-3*	XMOBS-3*	DPDT maintained	1
XMOB-4	XMOBS-4	DPDT momentary	1

* Not UL or CSA approved

Selector switches



Selector Switches

Long Barrel Part No.	Short Barrel Part No.	Contact Configs.	Weight (oz.)
XMOS-1	XMOSS-1	Single Pole, 12 position	1
XMOS-2	XMOSS-2	Double Pole, 5 position	1
XMOS-3	XMOSS-3	Three Pole, 3 position	1

LED pilot lights

Pilot Lights

Part No.	Operator Description	Weight (oz.)
XMOLR	Red Indicator Light	1
XMOLA	Amber Indicator Light	1
XMOLG	Green Indicator Light	1

Control stations, pilot devices and accessories

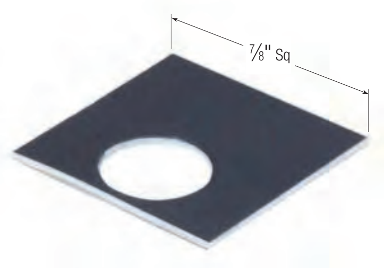
Miniature device accessories

Close up plug

Close Up plug

Part No.	Weight (oz.)
XMPP	1/2

Legend plate



Legend Plate

Part No.	Operator Description	Weight (oz.)
XMNP	Specify legend	1/2

Standard Marking

For Push Button				For Selector Switches
(Blank)	Slow	Reset	Start	Run-Jog
Open	In	Inch	Close	Hand-Auto
Out	Stop	Up	Left	Fwd-Rev
Run	Jog	Right	Forward	Fast-Slow
On	Low	Reverse	Off	Off-On
High	Fast	Back		Open-Close
				Up-Down

Control stations, pilot devices and accessories
SSCS Series – Increased safety control stations

Applications
- The most up-to-date approvals to the most current standards and can be customized to meet most requirements
- In areas where frequent washdowns are necessary or where heavy rain or water spray is prevalent
- From one hole stations to custom configurations, flexible solutions for control station applications operating in hazardous locations
- Industrial applications

Features
- 10 standard sizes with 4” or 6” depth
- Hole configurations from 1 to 16 holes
- Vertical in-line configurations from 1 to 4 holes
- Gasket provides ingress protection against water and dust
- Welded on external mounting brackets
- Captive hex head / slotted cover bolts
- Drilled cover entries for 30.5 mm operators
- Internal / external earth stud
- Box and cover ground stud

Options
- Mounting panels or universal rail mount system
- Drilled entries and cut-outs
- Stopping plugs
- Gland plates on 6” deep enclosures
- Increased Safety operators
- Terminal block assemblies
- Legend plates
- Breather or drain
- Internal earth bar

Standard Materials
- Enclosure and cover – 14 gauge (.075) stainless steel Type 316L or 304
- Gland plates – 10 gauge (.1345) stainless steel
- Cover Gasket – 1/4” bisco silicone with acrylic PSA
- Gland plate gasket – ⅛” bisco silicone with acrylic PSA

Standard Finishes
Stainless steel – #3/4 brush finish

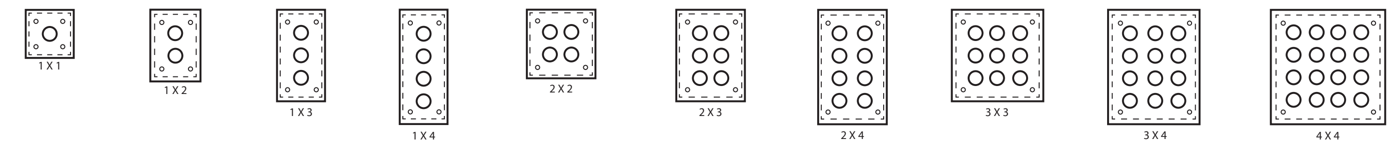
Electrical Ratings
600 VAC

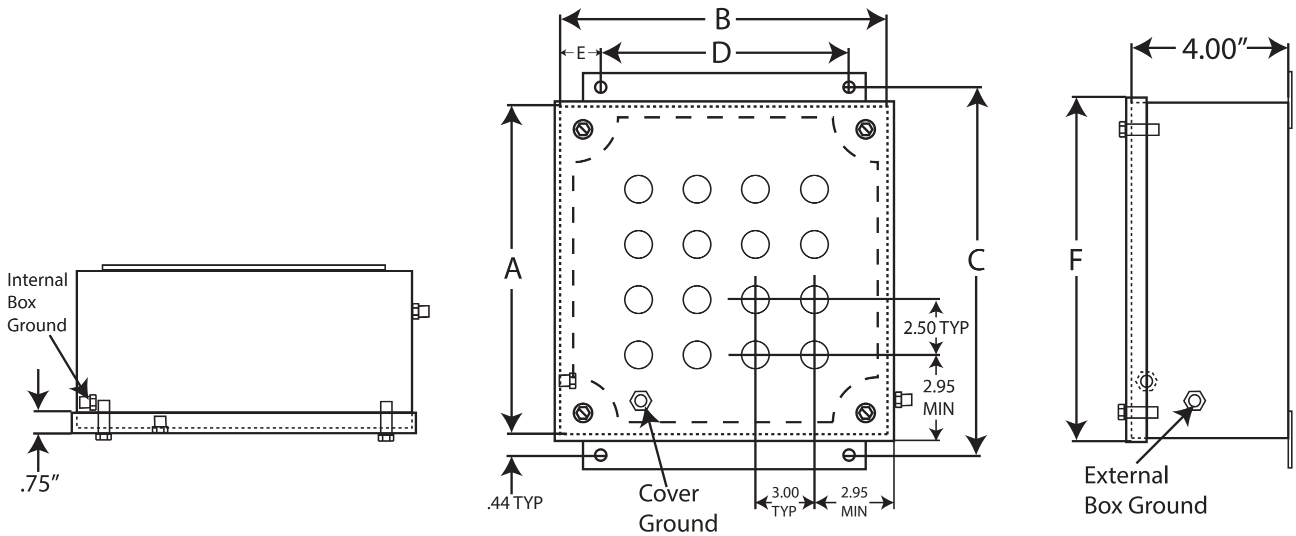
Certifications & Standards

Class I, Divisions 2, Groups A, B, C, D
Class II, Divisions 2, Groups F, G
Class I, Zone 1, AEx d e mb IIC T6 (T5:Ta<+55°C)
Enclosure NEMA Type 4X,

SSCS Series – Increased safety control stations

Figure A Figure B Figure C Figure D Figure E Figure F Figure G Figure H Figure J Figure K





Dimensions

Enclosure Part No.		Holes	Figure	A	B	C	D	E	F	G
SSCS050504	1x1	1	A	5.50	5.50	6.25	4.00	0.75	5.90	5.90
SSCS050506	1x1 w/ Terminal Blocks	1	A	5.50	5.50	6.25	4.00	0.75	5.90	5.90
SSCS080504	1x2	2	B	8.00	5.50	8.75	4.00	0.75	8.40	5.90
SSCS080506	1x2 w/ Terminal Blocks	2	B	8.00	5.50	8.75	4.00	0.75	8.40	5.90
SSCS100504	1x3	3	C	10.50	5.50	11.25	4.00	0.75	10.90	5.90
SSCS100506	1x3 w/ Terminal Blocks	3	C	10.50	5.50	11.25	4.00	0.75	10.90	5.90
SSCS130504	1x4	4	D	13.00	5.50	13.75	4.00	0.75	13.40	5.90
SSCS130506	1x4 w/ Terminal Blocks	4	D	13.00	5.50	13.75	4.00	0.75	13.40	5.90
SSCS080804	2x2	4	E	8.00	8.50	8.75	6.00	1.25	8.40	8.90
SSCS080806	2x2 w/ Terminal Blocks	4	E	8.00	8.50	8.75	6.00	1.25	8.40	8.90
SSCS100804	2x3	6	F	10.50	8.50	11.25	6.00	1.25	10.90	8.90
SSCS100806	2x3 w/ Terminal Blocks	6	F	10.50	8.50	11.25	6.00	1.25	10.90	8.90
SSCS130804	2x4	8	G	13.00	11.50	13.75	6.00	1.25	13.40	8.90
SSCS130806	2x4 w/ Terminal Blocks	8	G	13.00	11.50	13.75	6.00	1.25	13.40	8.90
SSCS101104	3x3	9	H	10.50	11.50	11.25	10.00	0.75	10.90	11.90
SSCS101106	3x3 w/ Terminal Blocks	9	H	10.50	11.50	11.25	10.00	0.75	10.90	11.90
SSCS131104	3x4	12	J	13.00	11.50	13.75	10.00	0.75	13.40	11.90
SSCS131106	3x4 w/ Terminal Blocks	12	J	13.00	11.50	13.75	10.00	0.75	13.40	11.90
SSCS131404	4x4	16	K	13.00	14.50	13.75	12.00	1.25	13.40	14.90
SSCS131406	4x4 w/ Terminal Blocks	16	K	13.00	14.50	13.75	12.00	1.25	13.40	14.90

Control stations, pilot devices & accessories
EL, EH Series – Increased safety pilot devices

Features

EL, EHP, ELP Devices

- Designed to fit into a standard 30.5mm opening and constructed for rugged, industrial applications
- Pilot lights and illuminated pushbuttons come in various color LED blubs for a wide range of applications
- Pushbuttons available in black, green or red
- Mushroom head pushbuttons available in red and black with momentary actuation or in red as a push/pull actuation
- Various contact block arrangements are available for pushbuttons

EHS, EHKS Devices

- 2 or 3 position selector switches and keyed switches are available as maintained or spring return with various CAM and contact sequences
- Designed to fit into a standard 30.5mm opening and constructed for rugged, industrial applications
- Keyed selector switches provide protection against unwanted access from unauthorized personnel

Applications

- Used in control circuits functioning in Class I Division 2 and Class I Zone 1 rated environments

Standard Materials

- Body and cap – anodized aluminum
- Contact block – nylon
- Button – nylon
- Selector knob – nylon
- Mushroom head button – anodized aluminum

EL

ELP

EHPB

EHPBM

EHKS

EHS

Certifications & Standards

EL Series

Class I, Divisions 2, Groups A, B, C, D
Class II, Groups E, F, G (Canada Only)
Class I, Zone 1, AEx de IIC T6 -55°C ≤Ta≤ +60°C

EHP, EHS, EHKS Series

Class I, Divisions 2, Groups A, B, C, D
Class II, Groups E, F, G (Canada Only)
Class I, Zone 1, AEx de IIC T6 -55°C ≤Ta≤ +60°C

ELP Series

Class I, Divisions 2, Groups A, B, C, D
Class II, Groups E, F, G (Canada Only)
NEMA Type 4, 4X, 12, 13
Class I, Zone 1, AEx d e mb IIC T6-55°C < Tamb <+60°C

Control stations, pilot devices and accessories
EL, EH Series – Increased safety pilot devices

Push buttons

Pushbuttons

Part No.	Cap Color	Button Color
EHPB-B	Black	Black
EHPB-G	Black	Green
EHPB-R	Black	Red

Mushroom Head Pushbuttons

Part No.	Cap Color	Button Style
EHPBM-R	Red	Momentary
EHPBM-B	Black	Momentary
EHPPM	Red	Push/Pull

Illuminated Pushbuttons

Part No.	Color	Voltage AC/DC	Watts
ELPA120	Amber	120	1.5
ELPG120	Green	120	1.5
ELPR120	Red	120	1.5
ELPW120	White	120	1.5
ELPA12	Amber	12	0.3
ELPG12	Green	12	0.3
ELPR12	Red	12	0.3
ELPW12	White	12	0.3
ELPA24	Amber	24	0.6
ELPG24	Green	24	0.6
ELPR24	Red	24	0.6
ELPW24	White	24	0.6

Pilot Lights

Pilot lights

8" Flexible Leads Part No.	Terminal Board Part No.	Color	Voltage
ELA120	ELAT120	Amber	120
ELG120	ELGT120	Green	120
ELR120	ELRT120	Red	120
ELW120	ELWT120	White	120
ELA12	ELAT12	Amber	12
ELG12	ELGT12	Green	12
ELR12	ELRT12	Red	12
ELW12	ELWT12	White	12
ELA24	ELAT24	Amber	24
ELG24	ELGT24	Green	24
ELR24	ELRT24	Red	24
ELW24	ELWT24	White	24

Selector switches

Selector switches

Part No.	Cam	# Pos.	Type
EHSS	1	2	2 POSITION - Maintained
EHSS	2-6	3	3 POSITION - Maintained
EHSC	2-6	3	Spring return center from right and left
EHSR2	1	2	Spring return to left from right
EHSR	2-6	3	Spring return center from right, maintain left
EHSL2	1	2	Spring return to right from left
EHSL	2-6	3	Spring return center from left, maintain right

Keyed selector switches

Part No.	Cam	# Pos.	Type
EHKSS	1	2	2 POSITION - Maintained
EHKSS	2-6	3	3 POSITION - Maintained
EHKSC	2-6	3	Spring return center from right and left
EHKSR2	1	2	Spring return to left from right
EHKSR	2-6	3	Spring return center from right, maintain left
EHKSL2	1	2	Spring return to right from left
EHKSL	2-6	3	Spring return center from left, maintain right

Contact Sequence Chart

Circuit of Contact Block	Mounting Position	Cam 1 Contact Sequence	Cam 2 Contact Sequence	Cam 3 Contact Sequence	Cam 4 Contact Sequence	Cam 5 Contact Sequence	Cam 6 Contact Sequence
0 = Contact Open X = Contact Closed							
Normally Closed (NC)	A	X 0	X X 0	X X 0	X 0 X	0 0 X	0 0 X
Normally Open (NO)	A	0 X	0 0 X	0 0 X	0 X 0	X X 0	0 X 0
Normally Closed (NC)	B	X 0	0 X 0	0 X X	X 0 0	0 X X	X 0 0
Normally Open (NO)	B	0 X	X 0 X	X 0 0	0 X X	X 0 0	0 0 X

Control stations, pilot devices and accessories
ECD Series – Drains / Breathers

Drains / Breathers

The Thomas & Betts Universal drain/breather fittings can be used as drains or breathers depending on the installation.

– To use as a drain, the product must be installed in the bottom of the enclosure or the lowest point where an NPT threaded opening exists. It can also be used in a seal fitting or a “T” conduit body. These must be in a lower section of the conduit system. This will enable moisture inside the conduit system to drain out

– To use as a breather, installation should be done at the top of an enclosure or in upper sections of conduit systems. This will permit air exchange and keep moisture accumulation inside the conduit system to minimum. Thomas & Betts recommends the use of at least two devices (one drain and one breather) for maximum efficiency

Certifications & Standards
Cl. I, Div. 1 & 2, Groups B, C, D
Cl. II, Div. 1, Groups E, F, G
Cl. III, Div. 1 & 2

Dimensions

Part No.	Hub Size	A
ECD15*	½”	.975
ECD384	⅜”	.407
ECD284	¼”	.327

* NEMA 4X rated.

T&B EX™ Panelboards

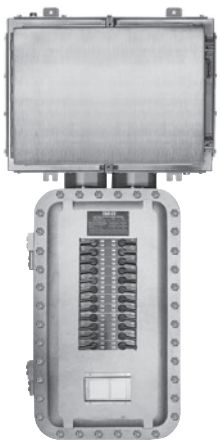
Factory Sealed Panelboards — Class I, Division 2

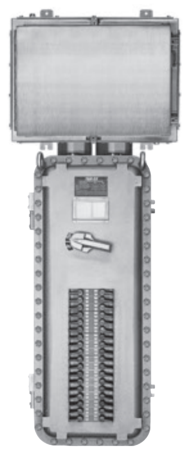
No seals are required for any branch connections going to the separate terminal enclosures on these XP2PB panelboards, saving on installation time and cost.

Explosionproof panelboards — Class I, Division 1

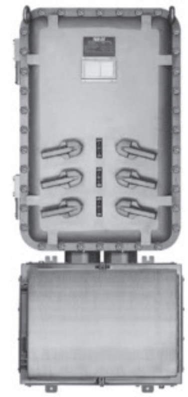
These robust panelboards are designed to work your distribution project requirements. They all include a copper buss, isolated neutral and ground bar. Gasketed covers provide IP66 and NEMA 4/4X rated protection for a watertight seal, and stainless steel cover bolts, removable hinges, and breather/drain are included as standard features.

Factory sealed panelboards – Class I, Division 2
XP2PB Series


Main Lug Only


Vertical Main Breakers


Back Fed Main Breakers


Power Panels, Main Lug Only

Applications
- Designed for use in Class I, Division 2 and Class I, Zone 2 areas such as petroleum refineries, chemical or petrochemical facilities
- To control lighting & appliances, power circuits & power distribution in applications requiring branch power distribution, over current, and short circuit protection

Standard Materials
Panelboard enclosure
- Casting – copper-free cast aluminum alloy with tumblast finish
- Cover bolts – stainless steel
- Cover gasket – nitrile O-Ring
- Breaker handles – copper-free cast aluminum alloy with stainless steel shafts
- Hinges – extruded aluminum alloy with stainless steel pins & bolts

Terminal enclosure
- Enclosure – stainless steel 316L with #3 - #4 brush finish
- Hardware – stainless steel
- Gaskets – silicone

Features
- Factory sealed, no external seals required
- Fully wired from panelboard enclosure to terminal enclosure
- External operating handles can be padlocked either in the "on" or "off" positions
- Spring-loaded operator handles allow cover to close with handles in any position
- Copper buss is standard
- Isolated neutral and ground bar provided
- Available with GFI or EPD breakers, not available on Power Panels
- NEMA Type 4/4X and IP66 gasketing provided for water and dust-tight seal
- Breather and drain provided for each enclosure
- Removable gland plates for field installation of conduit entries
- Terminal enclosure has folded lip around the door opening to provide complete and maximum gasket contact, and to prevent liquids from dripping into the enclosure when the door is open
- Terminal enclosure has continuously welded seams ground to a smooth finish
- Ample wire bending space allows for easy terminal connection

Certifications & Standards

Panelboard enclosure	Terminal enclosure
Class I, Divisions 1 & 2, Groups B, C, D	Class I, Divisions 2, Groups B, C, D
Class II, Divisions 1 & 2, Groups F, G	Class II, Divisions 2, Groups F, G
Class III	Class I, Zone 1, AE x e II T6
Class I, Zone 1, IIB+H2	Class I, Zone 1, AE x e II T5 Tamb +55°C
NEMA 4x & 13	NEMA Type 4X, 12 & 13
IP66	IP66

Electrical ratings

Series	Copper Buss	Rating	Branch Circuits MLO	VMB	BFMB
XP2PB1 (Pow-R-Line C™ 1a Panelboard)	100 or 225 Amp Copper Buss, top or bottom fed	1Ø-3W 120/240V	12, 24, 30, 36, 42	12, 24, 36, 42	10, 16, 22
		3Ø-4W 120/208V	12, 24, 30, 36, 42	12, 24, 36, 42	9, 15, 21
XP2PB2 (Pow-R-Line C™ 2a Panelboard)	100 or 225 Amp Copper Buss, top or bottom fed	3Ø-4W 277/480V	12, 24, 30, 36, 42	12, 24, 36, 42	9, 15, 21
XP2PB3 (Pow-R-Line C™ 3a Panelboard)	225 Amp Copper Buss, top or bottom fed	3Ø-3W 480V	4, 6, 8, 10	–	–
		3Ø-4W 480V	4, 6, 8, 10	–	–
		3Ø-3W 600V	4, 6, 8, 10	–	–
		3Ø-4W 600V	4, 6, 8, 10	–	–

* Pow-R-Line C is a trademark of Eaton Corp.

Factory sealed panelboards – Class I, Division 2
XP2PB series

Accessories

Branch Circuit Operating Handles and Plugs

Part No.	Description
XP2PB1-H1	Single Pole PL1A Breaker Handle
XP2PB1-H2	Two Pole PL1A Breaker Handle
XP2PB1-H3	Three Pole PL1A Breaker Handle
XP2PB1-H	PL2A Breaker Handle (ALL POLES)
XP2PB1-HGL1	Single Pole PL1A GFI/EPD Breaker Handle - Left Hand
XP2PB1-HGR1	Single Pole PL1A GFI/EPD Breaker Handle - Right Hand
XP2PB1-HGL2	Two Pole PL1A GFI/EPD Breaker Handle - Left Hand
XP2PB1-HGR2	Two Pole PL1A GFI/EPD Breaker Handle - Right Hand
XP2PB-MB	PL1A/PL2A Vertical Main Breaker Assembly
XP2P3-H	PL3A Circuit Breaker Handle
XP15562-7	PL1A/PL2A Branch Space Hole Plug
XP18023	PL3A Branch Space Hole Plug

Branch Circuit Breakers, GFI and EPD

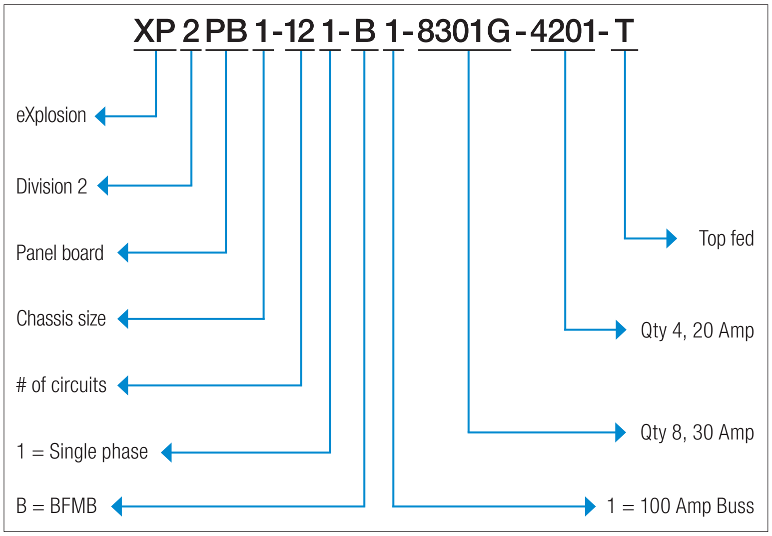
Part No.	Description
XP2PB1-1*	1 Pole, 120/240 Volt, Branch Breaker (10-70, 100 Amp.)
XP2PB1-2*	2 Pole, 120/240 Volt, Branch Breaker (10-125 Amp.)
XP2PB1-3*	3 Pole, 240 Volt, Branch Breaker (10-100 Amp.)
XP2PB2-1*	1 Pole, 277/480 Volt, Branch Breaker (15-100 Amp.)
XP2PB2-2*	2 Pole, 277/480 Volt, Branch Breaker (15-100 Amp.)
XP2PB2-3*	3 Pole, 277/480 Volt, Branch Breaker (15-100 Amp.)
XP2BP1-1GFCI*	1 Pole, 120 Volt, 5mA, Ground Fault Circuit Breaker (15-40 Amp.)
XP2BP1-2GFCI*	2 Pole, 120/240 Volt, 5mA, Ground Fault Circuit Breaker (15-40 Amp.)
XP2BP1-1GFEPD*	1 Pole, 120 Volt, 30mA, Ground Fault Equipment Protector (15-40 Amp.)
XP2BP1-1GFEPD*	2 Pole, 120/240 Volt, 30mA, Ground Equipment Protector (15-40 Amp.)
XP2PB3-43*	3 Pole, 480 Volt, Branch Breaker (10-100 Amp.)
XP2PB3-63*	3 Pole, 600 Volt, Branch Breaker (10-100 Amp.)

* Add the Ampere rating of the branch breaker when ordering

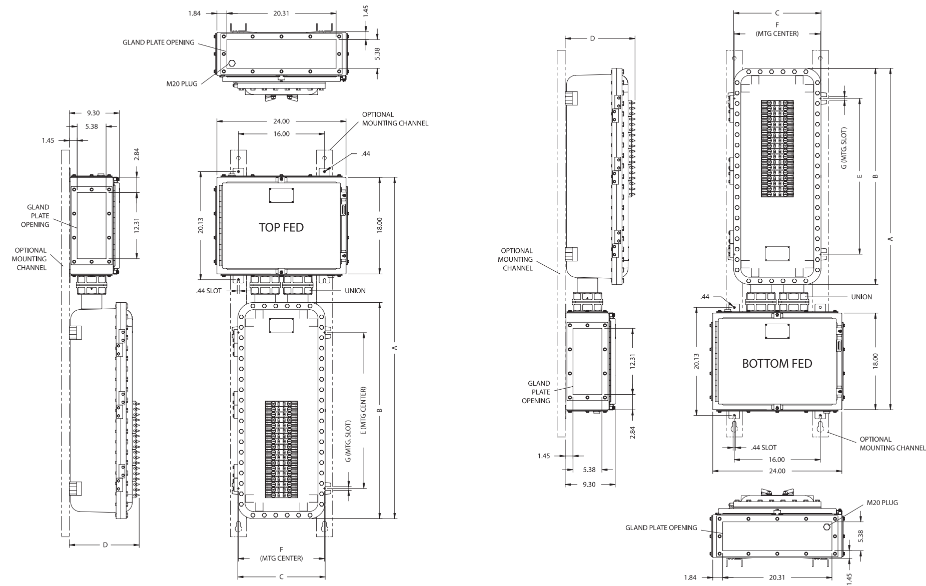
How to order

1. Specify panel catalog number, i.e. XP2PB1-121-B1
2. Starting with Circuit #2, specify quantity, ampacity, number of poles, and circuit breaker type, i.e. 8301G-4201
3. Note:
   - Handles will be provided for each breaker specified
   - Unused spaces will be plugged
   - For blank spaces requiring handles, attach layout sheet
4. Specify conduit entries, if any are required. Attach layout sheet

Factory sealed selector



Factory sealed panelboards – Class I, Division 2
Main Lug Only (MLO)



Dimensions

	Overall dimensions (in.)						
Part No.	**A**	**B**	**C**	**D**	**E**	**F**	**G**
XP2PB1-121-L1_	45.48	22.25	16.25	12.03	14.13	15.75	0.5
XP2PB1-241-L1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB1-241-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1-301-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1-361-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1-421-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1-123-L1_	45.48	22.25	16.25	12.03	14.13	15.75	0.5
XP2PB1-243-L1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB1-243-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1-303-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1-363-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1-423-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB2-123-L1_	45.48	22.25	16.25	12.03	14.13	15.75	0.5
XP2PB2-243-L1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB2-243-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB2-303-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB2-363-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB2-423-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
GFI/EPD Enclosures							
XP2PB1-121G-L1_	45.48	22.25	16.25	12.03	14.13	15.75	0.5
XP2PB1-241G-L1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB1-241G-L2	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1-301G-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1-361G-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1-421G-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1-123G-L1_	45.48	22.25	16.25	12.03	14.13	15.75	0.5
XP2PB1-243G-L1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB1-243G-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1-303G-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68
XP2PB1G-363-L2_	63.66	40.25	16.25	13.38	29	15.75	0.68

Factory sealed panelboards – Class I, Division 2
Main Lug Only (MLO)

Lighting Panels

Part No.	# Branch Breakers	Pow-R-Line C Panelboards*		Chassis Type
		Electrical Rating	Buss Amp.	
XP2PB1-121-L1_	12	1Ø-3W 120/240V	100	PRL1A
XP2PB1-241-L1_	24	1Ø-3W 120/240V	100	PRL1A
XP2PB1-241-L2_	24	1Ø-3W 120/240V	225	PRL1A
XP2PB1-301-L2_	30	1Ø-3W 120/240V	225	PRL1A
XP2PB1-361-L2_	36	1Ø-3W 120/240V	225	PRL1A
XP2PB1-421-L2_	42	1Ø-3W 120/240V	225	PRL1A
XP2PB1-123-L1_	12	3Ø-4W 120/208V	100	PRL1A
XP2PB1-243-L1_	24	3Ø-4W 120/208V	100	PRL1A
XP2PB1-243-L2_	24	3Ø-4W 120/208V	225	PRL1A
XP2PB1-303-L2_	30	3Ø-4W 120/208V	225	PRL1A
XP2PB1-363-L2_	36	3Ø-4W 120/208V	225	PRL1A
XP2PB1-423-L2_	42	3Ø-4W 120/208V	225	PRL1A
XP2PB2-123-L1_	12	3Ø-4W 277/480V	100	PRL2A
XP2PB2-243-L1_	24	3Ø-4W 277/480V	100	PRL2A
XP2PB2-243-L2_	24	3Ø-4W 277/480V	225	PRL2A
XP2PB2-303-L2_	30	3Ø-4W 277/480V	225	PRL2A
XP2PB2-363-L2_	36	3Ø-4W 277/480V	225	PRL2A
XP2PB2-423-L2_	42	3Ø-4W 277/480V	225	PRL2A

* Pow-R-Line C is a trademark of Eaton Corp.

Lighting Panels - W/GFI/EPD Branch Circuit Protectors

Part No.	# Branch Breakers	Max.GFI/ EPD Breakers	Pow-R-Line C Panelboards*		Chassis Type
			Electrical Rating	Buss Amp	
XP2PB1-121G-L1_	12	12	1Ø-3W 120/240V	100	PRL1A
XP2PB1-241G-L1_	24	24	1Ø-3W 120/240V	100	PRL1A
XP2PB1-241G-L2_	24	24	1Ø-3W 120/240V	225	PRL1A
XP2PB1-301G-L2_	30	19	1Ø-3W 120/240V	225	PRL1A
XP2PB1-361G-L2_	36	13	1Ø-3W 120/240V	225	PRL1A
XP2PB1-421G-L2_	42	7	1Ø-3W 120/240V	225	PRL1A
XP2PB1-123G-L1_	12	12	3Ø-4W 120/208V	100	PRL1A
XP2PB1-243G-L1_	24	24	3Ø-4W 120/208V	100	PRL1A
XP2PB1-243G-L2_	24	18	3Ø-4W 120/208V	225	PRL1A
XP2PB1-303G-L2_	30	12	3Ø-4W 120/208V	225	PRL1A
XP2PB1-363G-L2_	36	6	3Ø-4W 120/208V	225	PRL1A

* Pow-R-Line C is a trademark of Eaton Corp.

Branch Breakers

PRL1A	PRL2A
BAB	
QBGF	GHB
QBGFEP	

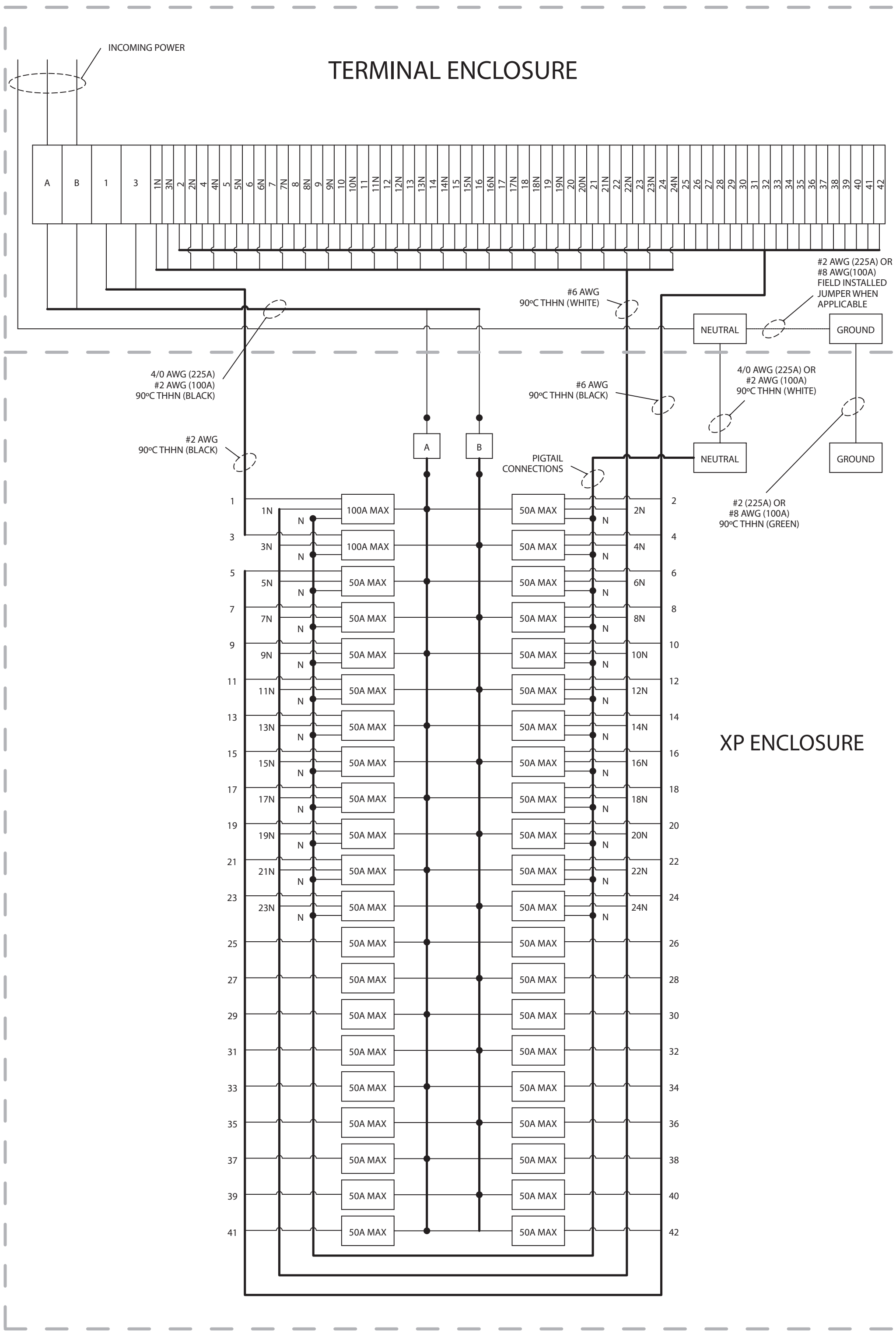
Notes:
1. For bottom fed model, add suffix “B”.
2. For top fed model, add suffix “T”.
3. 10kA maximum interrupting capacity (sym.).

Factory sealed panelboards – Class I, Division 2

Main Lug Only (MLO)

4

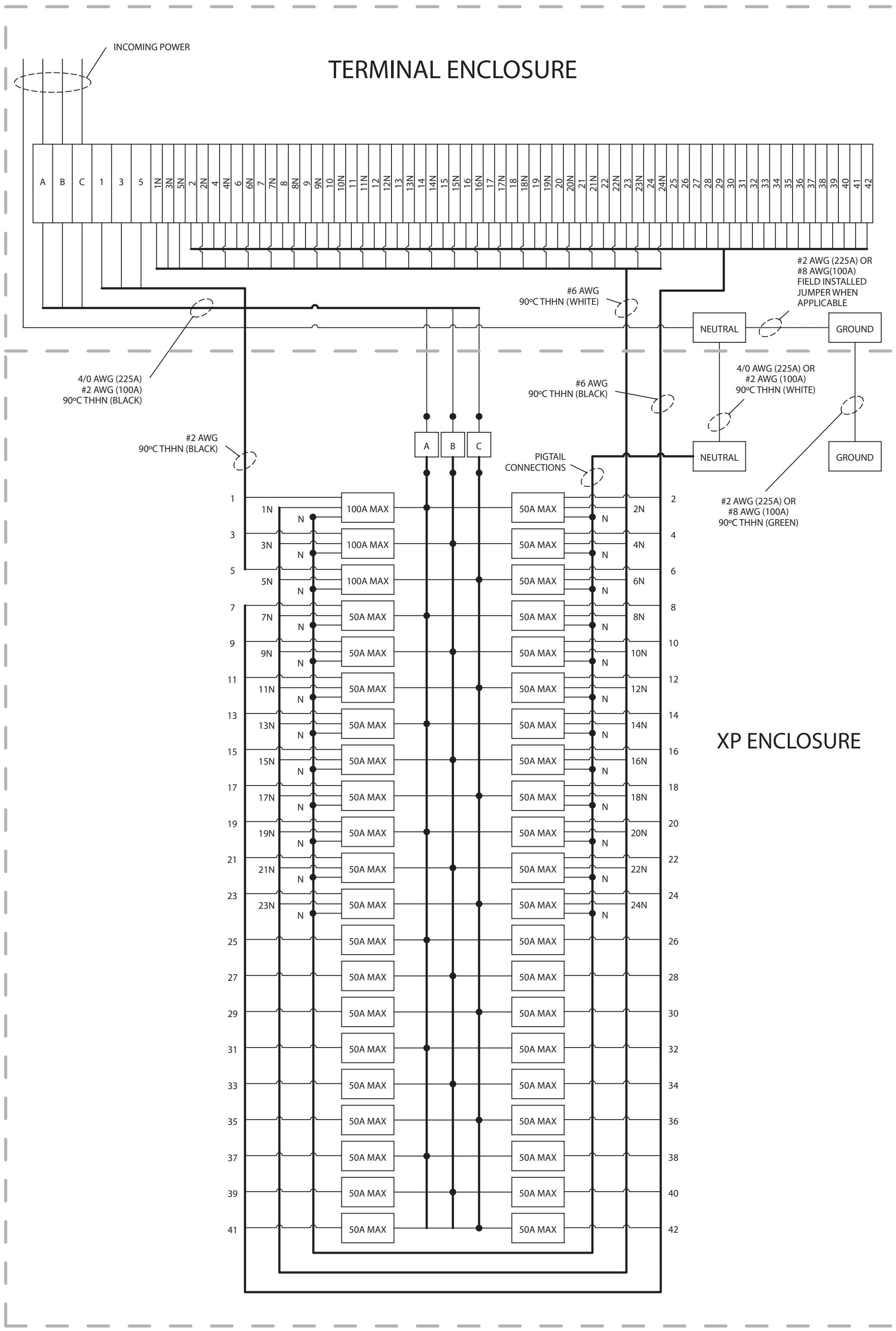
Wiring diagram



1 PHASE - 3 WIRE

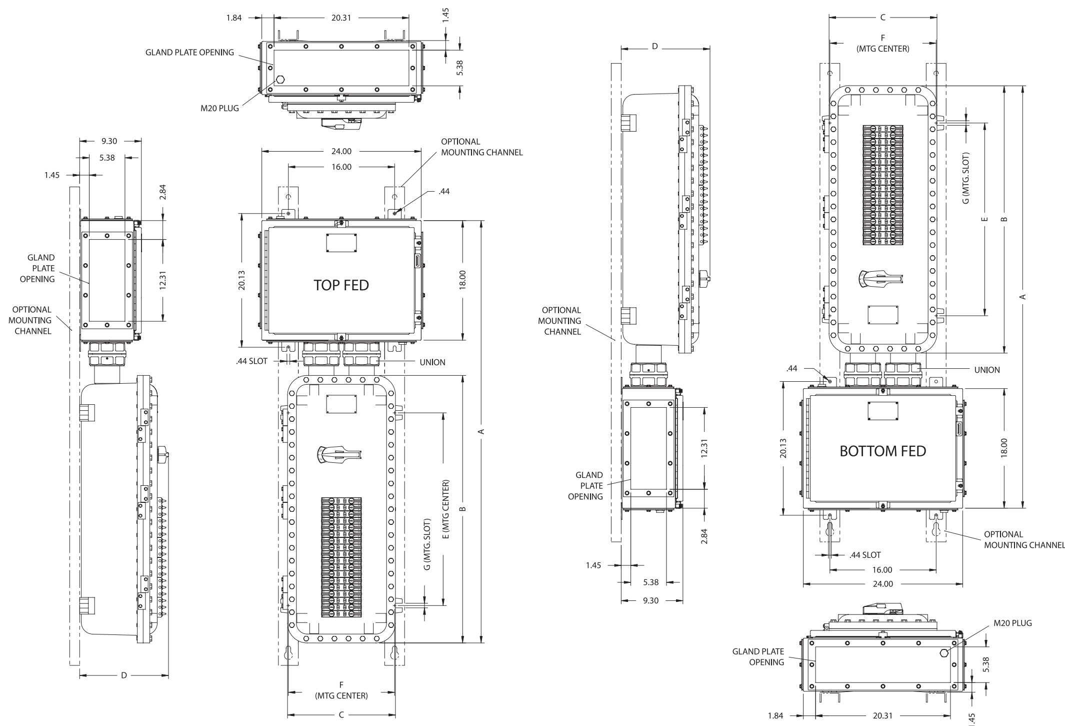
Factory sealed panelboards – Class I, Division 2
Main Lug Only (MLO)

Wiring diagram



3 PHASE - 4 WIRE

Factory sealed panelboards – Class I, Division 2
Vertical Main Breakers (VMB)



Dimensions

	Overall dimensions (in.)						
Part No.	**A**	**B**	**C**	**D**	**E**	**F**	**G**
XP2PB1-121-M1_	51.49	28.25	16.25	12.94	18.38	15.75	0.63
XP2PB1-241-M1_	63.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB1-241-M2_	63.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB1-361-M2_	73.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB1-421-M2_	73.66	50.25	16.25	12.94	39.00	15.75	0.68
XP2PB1-123-M1_	51.49	28.25	16.25	13.38	18.38	15.75	0.63
XP2PB1-243-M1_	63.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB1-243-M2_	63.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB1-363-M2_	73.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB1-423-M2_	73.66	50.25	16.25	13.38	39.00	15.75	0.68
XP2PB2-123-M1_	51.49	28.25	16.25	12.94	18.38	15.75	0.63
XP2PB2-243-M1_	63.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB2-243-M2_	63.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB2-363-M2_	73.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB2-423-M2_	73.66	50.25	16.25	13.38	39.00	15.75	0.68
GFI/EPD Enclosures							
XP2PB1-121G-M1_	51.49	28.25	16.25	12.94	18.38	15.75	0.63
XP2PB1-241G-M1_	63.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB1-241G-M2_	63.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB1-361G-M2_	73.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB1-421G-M2_	73.66	50.25	16.25	13.38	39.00	15.75	0.68
XP2PB1-123G-M1_	51.49	28.25	16.25	12.94	18.38	15.75	0.63
XP2PB1-243G-M1_	63.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB1-243G-M2_	63.66	40.25	16.25	13.38	29.00	15.75	0.68
XP2PB1-363G-M2_	73.66	40.25	16.25	13.38	29.00	15.75	0.60

Factory sealed panelboards – Class I, Division 2
Vertical Main Breakers (VMB)

Lighting Panels

		Pow-R-Line C Panelboards*			
Part No.	# Branch Breakers	Electrical Rating	Main Breaker Type	Buss Amp.	Chassis Type
XP2PB1-121-M1_	12	1Ø-3W 120/240V	EHD2100	100	PRL1A
XP2PB1-241-M1_	24	1Ø-3W 120/240V	EHD2100	100	PRL1A
XP2PB1-241-M2_	24	1Ø-3W 120/240V	FD2225	225	PRL1A
XP2PB1-361-M2_	36	1Ø-3W 120/240V	FD2225	225	PRL1A
XP2PB1-421-M2_	42	1Ø-3W 120/240V	FD2225	225	PRL1A
XP2PB1-123-M1_	12	3Ø-4W 120/208V	EHD2100	100	PRL1A
XP2PB1-243-M1_	24	3Ø-4W 120/208V	EHD2100	100	PRL1A
XP2PB1-243-M2_	24	3Ø-4W 120/208V	FD2225	225	PRL1A
XP2PB1-363-M2_	36	3Ø-4W 120/208V	FD2225	225	PRL1A
XP2PB1-423-M2_	42	3Ø-4W 120/208V	FD2225	225	PRL1A
XP2PB2-123-M1_	12	3Ø-4W 277/480V	EHD3100	100	PRL2A
XP2PB2-243-M1_	24	3Ø-4W 277/480V	EHD3100	100	PRL2A
XP2PB2-243-M2_	24	3Ø-4W0 277/480V	FD3225	225	PRL2A
XP2PB2-363-M2_	36	3Ø-4W 277/480V	FD3225	225	PRL2A
XP2PB2-423-M2_	42	3Ø-4W 277/480V	FD3225	225	PRL2A

* Pow-R-Line C is a trademark of Eaton Corp.

Lighting Panels - W/GFI/EPD Branch Circuit Protectors

			Pow-R-Line C Panelboards*			
Part No.	# Branch Breakers	Max.GFI/ EPD Breakers	Electrical Rating	Main Breaker Type	Buss Amp.	Chassis Type
XP2PB1-121G-M1_	12	12	1Ø-3W 120/240V	EHD2100	100	PRL1A
XP2PB1-241G-M1_	24	24	1Ø-3W 120/240V	EHD2100	100	PRL1A
XP2PB1-241G-M2_	24	24	1Ø-3W 120/240V	FD2225	225	PRL1A
XP2PB1-361G-M2_	36	13	1Ø-3W 120/240V	FD2225	225	PRL1A
XP2PB1-421G-M2_	42	7	1Ø-3W 120/240V	FD2225	225	PRL1A
XP2PB1-123G-M1_	12	12	3Ø-4W 120/208V	EHD3100	100	PRL1A
XP2PB1-243G-M1_	24	24	3Ø-4W 120/208V	EHD3100	100	PRL1A
XP2PB1-243G-M2_	24	18	3Ø-4W 120/208V	FD3225	225	PRL1A
XP2PB1-363G-M2_	36	6	3Ø-4W 120/208V	FD3225	225	PRL1A

* Pow-R-Line C is a trademark of Eaton Corp.

Branch Breakers

PRL1A	PRL2A
BAB	
QBGF	GHB
QBGFEP	

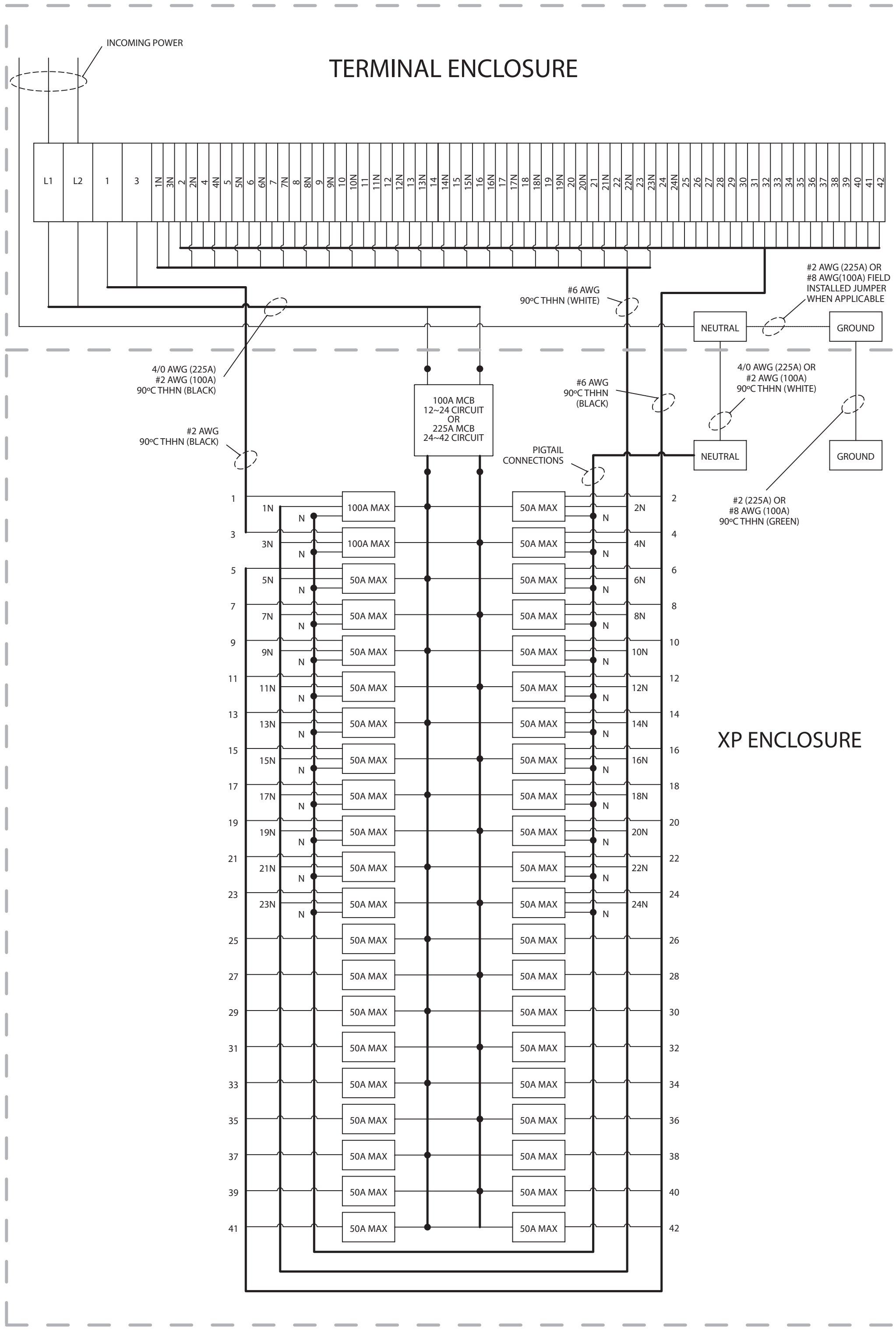
Notes:
1. For bottom fed model, add suffix “B”.
2. For top fed model, add suffix “T”.
3. 10kA maximum interrupting capacity (sym.).

Factory sealed panelboards – Class I, Division 2

Vertical Main Breakers (VMB)

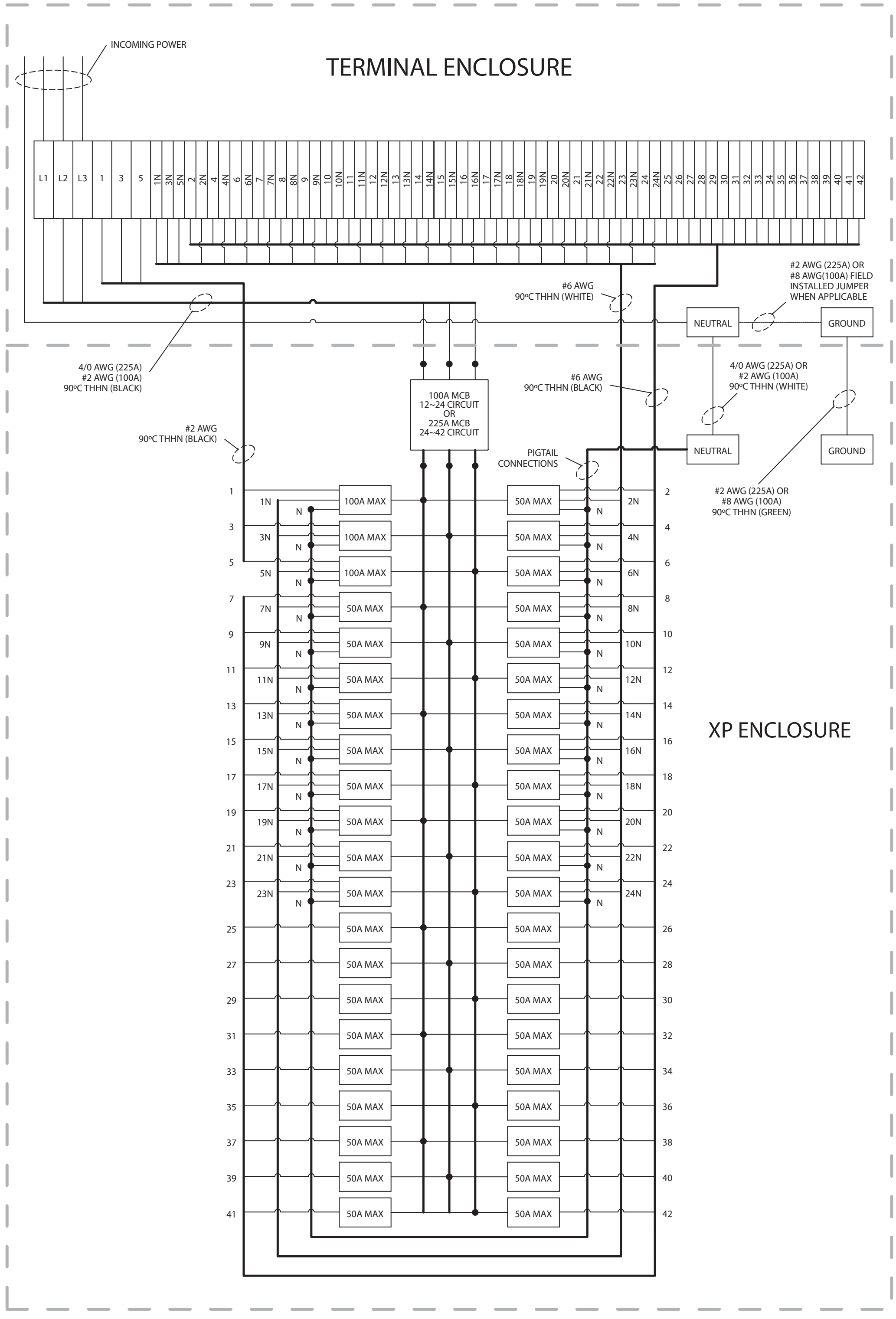
4

Wiring diagram



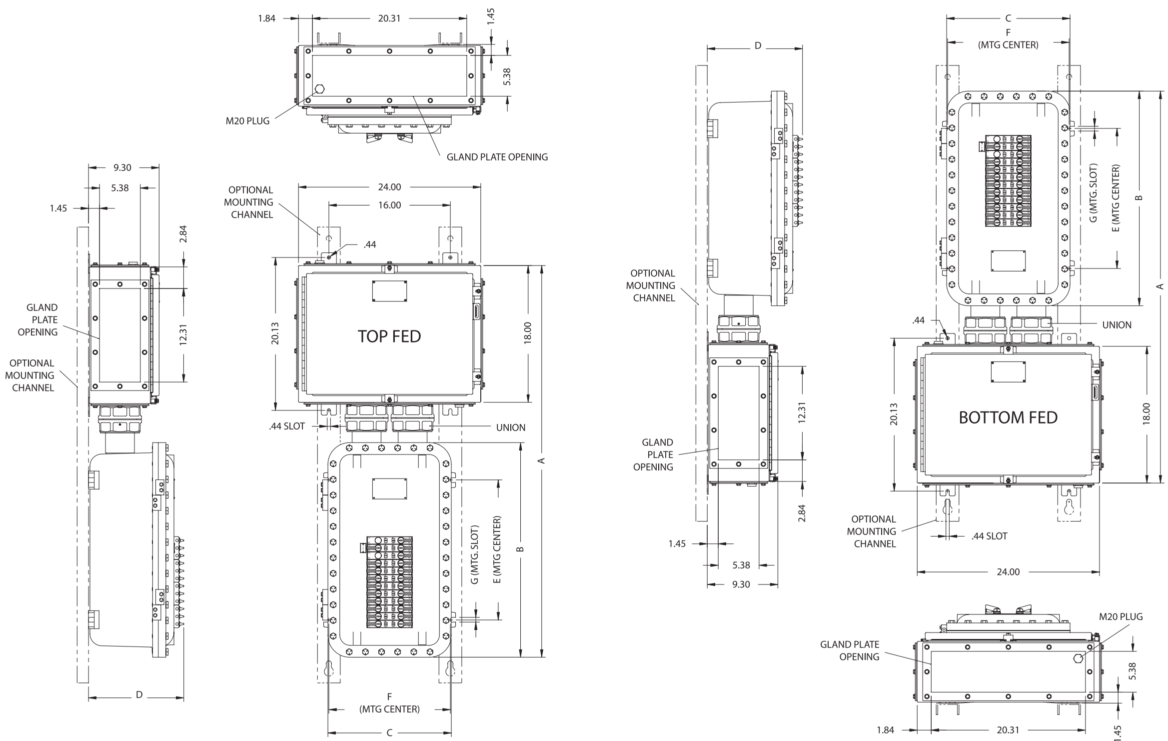
1 PHASE - 3 WIRE

Wiring diagram



3 PHASE - 4 WIRE

Factory sealed panelboards – Class I, Division 2
Back Fed Main Breakers (BFMB)



Dimensions

	Overall dimensions (in.)						
Part No.	**A**	**B**	**C**	**D**	**E**	**F**	**G**
XP2PB1-121-B1_	45.48	22.25	16.25	12.03	14.13	15.75	0.50
XP2PB1-181-B1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB1-241-B1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB1-123-B1_	45.48	22.25	16.25	12.03	14.13	15.75	0.50
XP2PB1-183-B1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB1-243-B1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB2-123-B1_	45.48	22.25	16.25	12.03	14.13	15.75	0.50
XP2PB2-183-B1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB2-243-B1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
GFI/EPD Enclosures							
XP2PB1-121G-B1_	45.48	22.25	16.25	12.03	14.13	15.75	0.50
XP2PB1-181G-B1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB1-241G-B1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB1-123G-B1_	45.48	22.25	16.25	12.03	14.13	15.75	0.50
XP2PB1-183G-B1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63
XP2PB1-243G-B1_	51.49	28.25	16.25	12.54	18.38	15.75	0.63

Factory sealed panelboards – Class I, Division 2
Back Fed Main Breakers (BFMB)

Lighting Panels

Part No.	# Branch Breakers	Pow-R-Line C Panelboards*			Chassis Type
		Electrical Rating	Main Breaker Type	Buss Amp.	
XP2PB1-121-B1_	10	1Ø-3W 120/240V	BAB2100	100	PRL1A
XP2PB1-181-B1_	16	1Ø-3W 120/240V	BAB2100	100	PRL1A
XP2PB1-241-B1_	22	1Ø-3W 120/240V	BAB2100	100	PRL1A
XP2PB1-123-B1_	9	3Ø-4W 120/208V	BAB3100H	100	PRL1A
XP2PB1-183-B1_	15	3Ø-4W 120/208V	BAB3100H	100	PRL1A
XP2PB1-243-B1_	21	3Ø-4W 120/208V	BAB3100H	100	PRL1A
XP2PB2-123-B1_	9	3Ø-4W 277/480V	GHB3100	100	PRL2A
XP2PB2-183-B1_	15	3Ø-4W 277/480V	GHB3100	100	PRL2A
XP2PB2-243-B1_	21	3Ø-4W 277/480V	GHB3100	100	PRL2A

* Pow-R-Line C is a trademark of Eaton Corp.

Lighting Panels - W/GFI/EPD Branch Circuit Protectors

Part No.	# Branch Breakers	Max.GFI/ EPD Breakers	Pow-R-Line C Panelboards*			Chassis Type
			Electrical Rating	Main Breaker Type	Buss Amp	
XP2PB1-121G-B1_	10	10	1Ø-3W 120/240V	BAB2100	100	PRL1A
XP2PB1-181G-B1_	16	16	1Ø-3W 120/240V	BAB2100	100	PRL1A
XP2PB1-241G-B1_	22	22	1Ø-3W 120/240V	BAB2100	100	PRL1A
XP2PB1-123G-B1_	9	9	3Ø-4W 120/208V	BAB3100H	100	PRL1A
XP2PB1-183G-B1_	15	15	3Ø-4W 120/208V	BAB3100H	100	PRL1A
XP2PB1-143G-B1_	21	21	3Ø-4W 120/208V	BAB3100H	100	PRL1A

*Pow-R-Line C is a trademark of Eaton Corp.

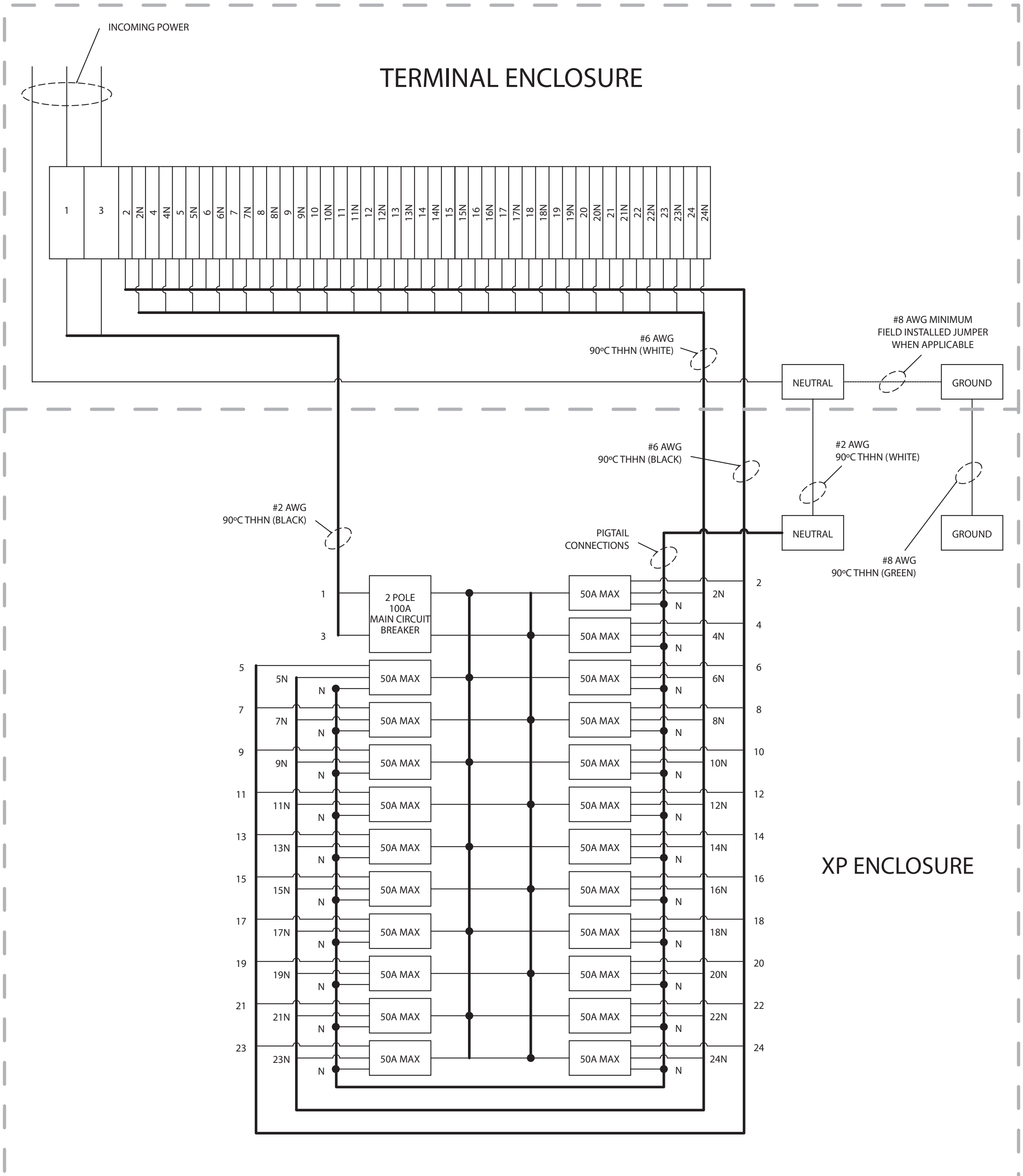
Branch Breakers

PRL1A	PRL2A
BAB	
QBGF	GHB
QBGFEP	

Notes:
1. For bottom fed model, add suffix “B”.
2. For top fed model, add suffix “T”.
3. 10kA maximum interrupting capacity (sym.).

Factory sealed panelboards – Class I, Division 2
Back Fed Main Breakers (BFMB)

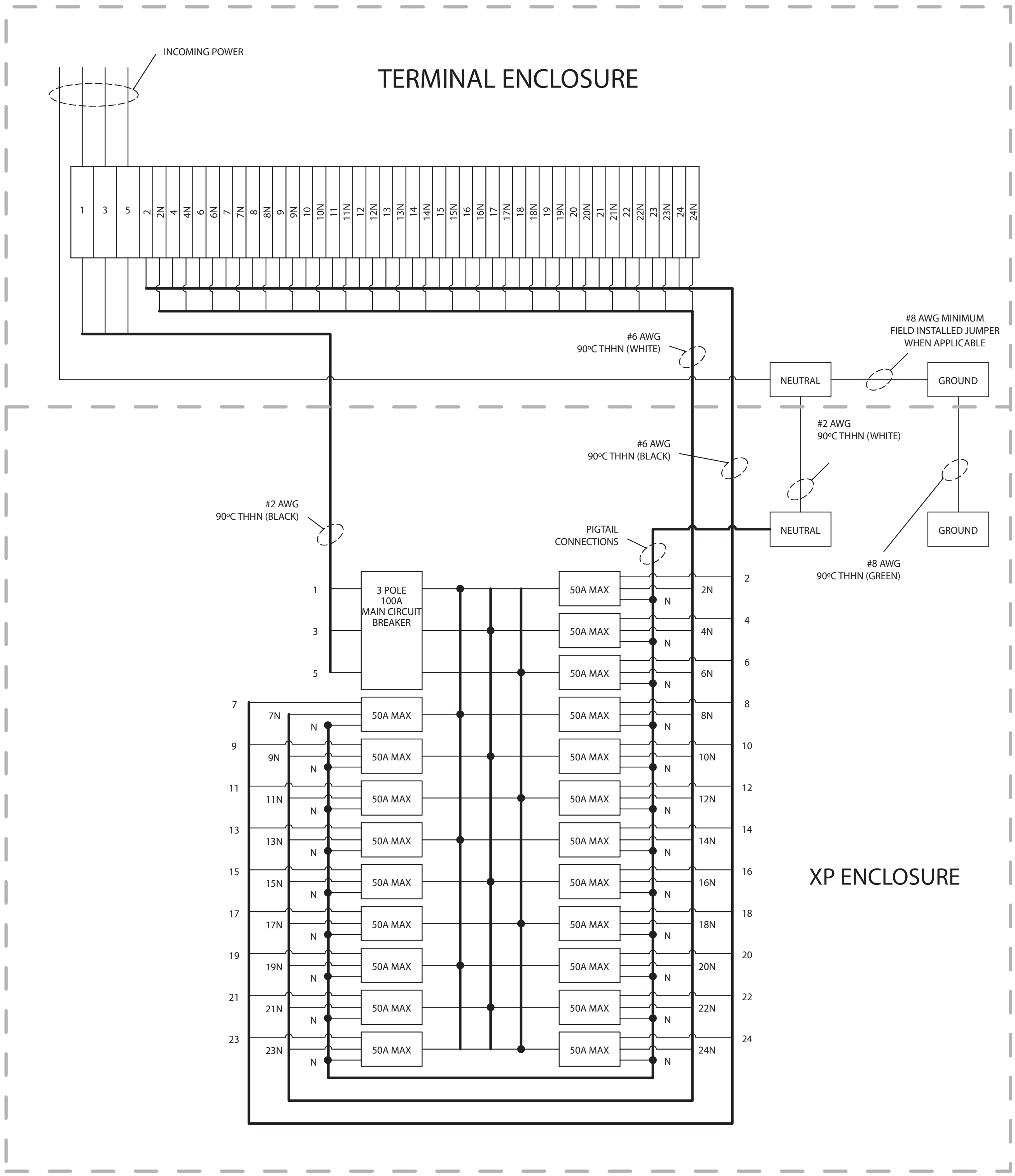
Wiring diagram



1 PHASE - 3 WIRE

Factory sealed panelboards – Class I, Division 2
Back Fed Main Breakers (BFMD)

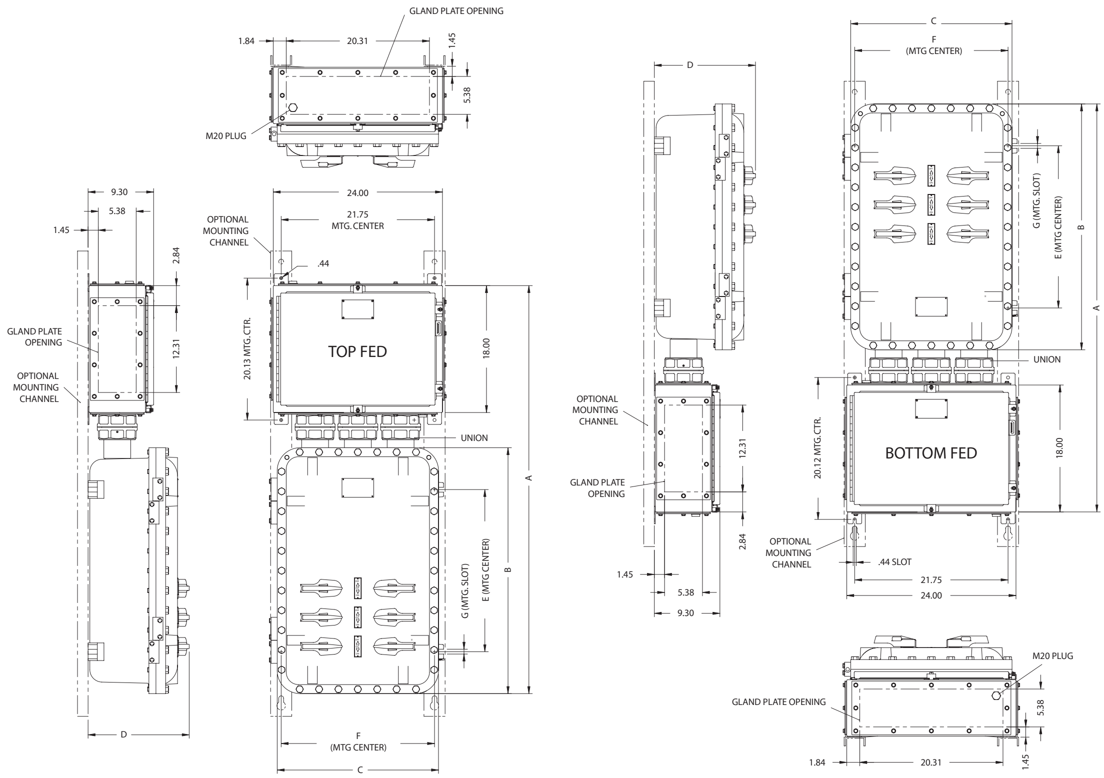
Wiring diagram



3 PHASE - 4 WIRE

Factory sealed panelboards – Class I, Division 2

Power panels – Main Lug Only (MLO)



Dimensions

	Overall dimensions (in.)						
Part No.	**A**	**B**	**C**	**D**	**E**	**F**	**G**
XP2PB3-4	51.97	28.88	22.88	14.46	18.38	21.75	0.69
XP2PB3-6	57.97	34.88	22.88	14.35	23 .00	21.75	0.69
XP2PB3-8	57.97	34.88	22.88	14.35	23 .00	21.75	0.69
XP2PB3-10	63.68	40.88	22.88	14.54	29 .00	21.75	0.69

Factory sealed panelboards – Class I, Division 2
Power panels – Main Lug Only (MLO)

Power Panels

		Pow-R-Line C Panelboards*		
Part No.	# Branch Breakers	Electrical Rating	Buss Amp.	Chassis Type
XP2PB3-434-L2_	4	3Ø-3W 480V	225	PRL3A
XP2PB3-634-L2_	6	3Ø-3W 480V	225	PRL3A
XP2PB3-834-L2_	8	3Ø-3W 480V	225	PRL3A
XP2PB3-1034-L2_	10	3Ø-3W 480V	225	PRL3A
XP2PB3-444-L2_	4	3Ø-3W 480V	225	PRL3A
XP2PB3-644-L2_	6	3Ø-4W 480V	225	PRL3A
XP2PB3-844-L2_	8	3Ø-4W 480V	225	PRL3A
XP2PB3-1044-L2_	10	3Ø-4W 480V	225	PRL3A
XP2PB3-436-L2_	4	3Ø-3W 600V	225	PRL3A
XP2PB3-636-L2_	6	3Ø-3W 600V	225	PRL3A
XP2PB3-836-L2_	8	3Ø-3W 600V	225	PRL3A
XP2PB3-1036-L2_	10	3Ø-3W 600V	225	PRL3A
XP2PB3-446-L2_	4	3Ø-4W 600V	225	PRL3A
XP2PB3-646-L2_	6	3Ø-4W 600V	225	PRL3A
XP2PB3-846-L2_	8	3Ø-4W 600V	225	PRL3A
XP2PB3-1046-L2_	10	3Ø-4W 600V	225	PRL3A

* Pow-R-Line C is a trademark of Eaton Corp.

Branch Breakers

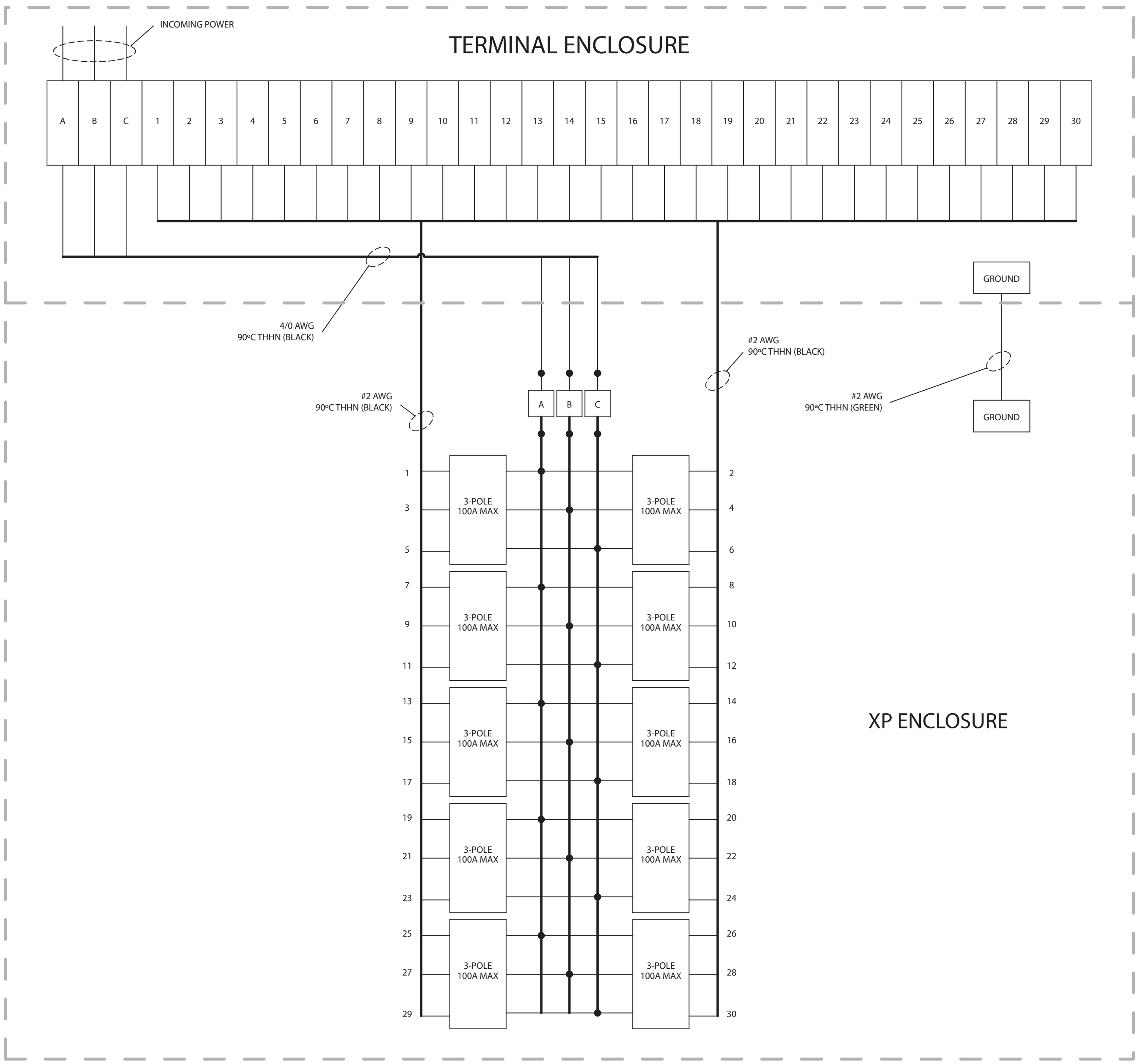
Volts	Type
480	EHD
600	FDB

Notes:
1. For bottom fed model, add suffix “B”.
2. For top fed model, add suffix “T”.
3. 10kA maximum interrupting capacity (sym.).

Factory sealed panelboards – Class I, Division 2

Power panels – Main Lug Only (MLO)

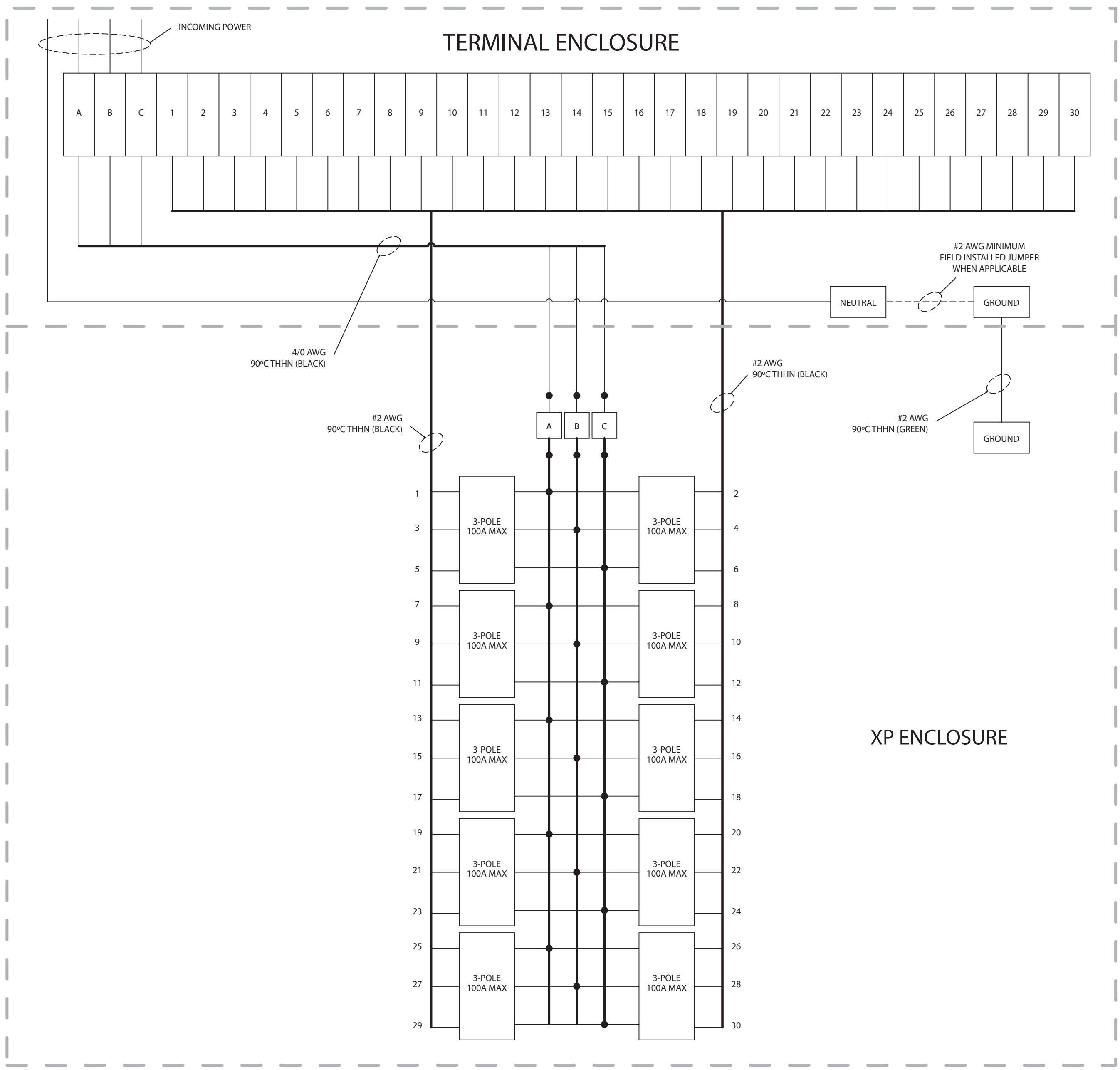
Wiring diagram



3 PHASE - 3 WIRE

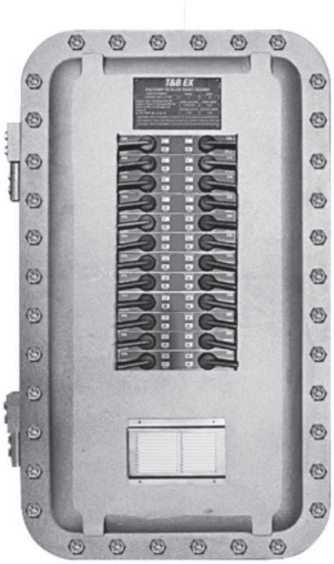
Factory sealed panelboards – Class I, Division 2
Power panels – Main Lug Only (MLO)

Wiring diagram

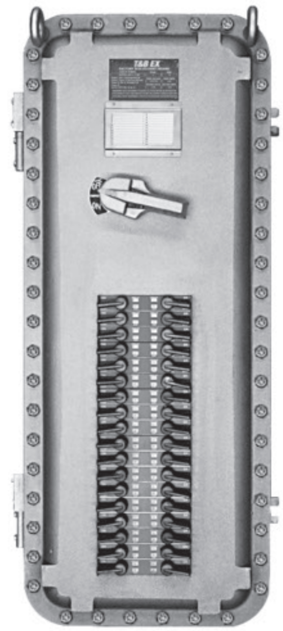


3 PHASE - 4 WIRE

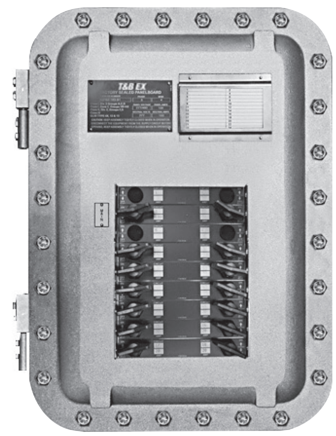
Explosionproof panelboards – Class I, Division 1
XP1PB Series



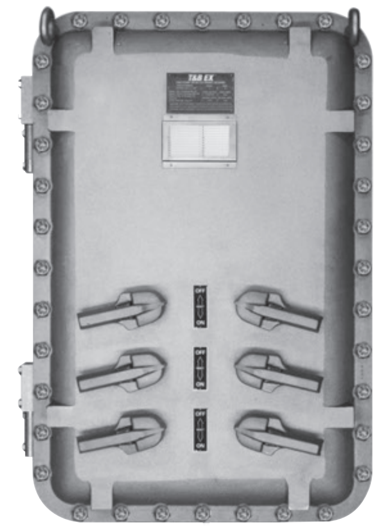
Main Lug Only



Vertical Main Breakers



Back Fed Main Breakers



Power Panels
Main Lug Only

Applications
- Designed for use in Class I, Division 1, Zone 1 areas such as petroleum refineries, chemical or petrochemical facilities
- To control lighting and appliances, power circuits and power distribution in applications requiring branch power distribution, over current and short circuit protection

Certifications & Standards
Class I, Divisions 1 & 2, Groups B, C, D
Class II, Divisions 1 & 2, Groups F, G
Class III
Class I, Zone 1, IIB+H2
NEMA 4X, 7, 9
IP66

Features
- External operating handles can be padlocked either in the “on” or “off” positions
- Spring-loaded operator handles allow cover to close with handles in any position
- Copper buss is standard
- Isolated neutral and ground bar provided
- Available with optional GFI or EPD breakers, not available for power panels
- NEMA Type 4/4X and IP66 gasketing provides for a water and dust-tight seal
- Breather and drain provided for each enclosure

Standard Materials
- Casting – copper-free cast aluminum alloy with tumblast finish
- Cover bolts – stainless steel
- Cover gasket – nitrile O-Ring
- Breaker handles – copper-free cast aluminum alloy with stainless steel shafts
- Hinges – extruded aluminum alloy with stainless steel pins & bolts

Electrical ratings

Series	Copper Buss	Rating	Branch Circuits MLO	VMB	BFMB
XP1PB1 (Pow-R-Line C™ 1a Panelboard)	100 or 225 Amp , top or bottom fed	1Ø-3W 120/240V	12, 24, 30, 36, 42	12, 24, 36, 42	10, 16, 22
		3Ø-4W 120/208V	12, 24, 30, 36, 42	12, 24, 36, 43	9, 15, 21
XP1PB2 (Pow-R-Line C™ 2a Panelboard)	100 or 225 Amp, top or bottom fed	3Ø-4W 277/480V	12, 24, 30, 36, 42	12, 24, 36, 44	9, 15, 22
XP1PB3 (Pow-R-Line C™ 3a Panelboard)	100 or 225 Amp, top or bottom fed	3Ø-3W 480V	4, 6, 8, 10	–	–
		3Ø-4W 480V	4, 6, 8, 11	–	–
		3Ø-3W 600V	4, 6, 8, 12	–	–
		3Ø-4W 600V	4, 6, 8, 13	–	–

*Pow-R-Line C is a trademark of Eaton Corp.

Explosionproof panelboards – Class I, Division 1
XP1PB Series

Accessories

Branch Circuit Operating Handles and Plugs

Part No.	Description
XP1PB1-H1	Single Pole PL1A Breaker Handle
XP1PB1-H2	Two Pole PL1A Breaker Handle
XP1PB1-H3	Three Pole PL1A Breaker Handle
XP1PB1-H	PL2A Breaker Handle (ALL POLES)
XP1PB1-HGL1	Single Pole PL1A GFI/EPD Breaker Handle - Left Hand
XP1PB1-HGR1	Single Pole PL1A GFI/EPD Breaker Handle - Right Hand
XP1PB1-HGL2	Two Pole PL1A GFI/EPD Breaker Handle - Left Hand
XP1PB1-HGR2	Two Pole PL1A GFI/EPD Breaker Handle - Right Hand
XP1PB-MB	PL1A/PL2A Vertical Main Breaker Assembly
XP1P3-H	PL3A Circuit Breaker Handle
XP15562-7	PL1A/PL2A Branch Space Hole Plug
XP18023	PL3A Branch Space Hole Plug

Branch Circuit Breakers, GFI and EPD

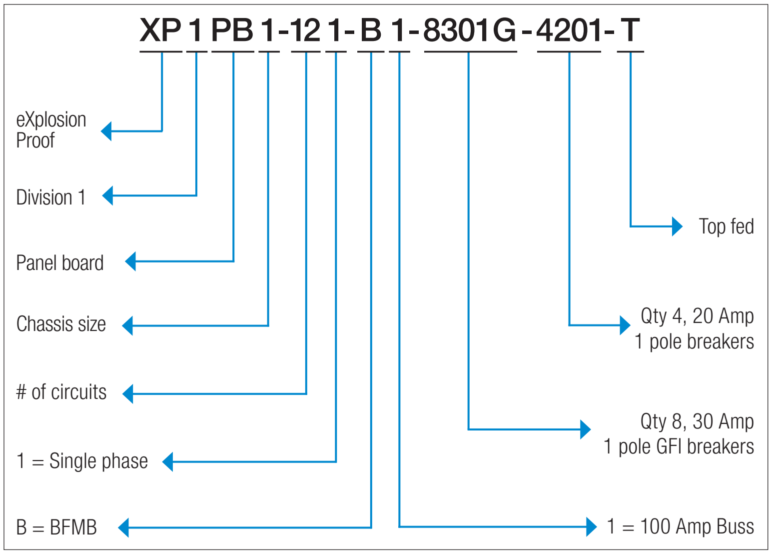
Part No.	Description
XP1PB1-1*	1 Pole, 120/240 Volt, Branch Breaker (10-70, 100 Amp.)
XP1PB1-2*	2 Pole, 120/240 Volt, Branch Breaker (10-125 Amp.)
XP1PB1-3*	3 Pole, 240 Volt, Branch Breaker (10-100 Amp.)
XP1PB2-1*	1 Pole, 277/480 Volt, Branch Breaker (15-100 Amp.)
XP1PB2-2*	2 Pole, 277/480 Volt, Branch Breaker (15-100 Amp.)
XP1PB2-3*	3 Pole, 277/480 Volt, Branch Breaker (15-100 Amp.)
XP1PB1-1GFCI*	1 Pole, 120 Volt, 5mA, Ground Fault Circuit Breaker (15-40 Amp.)
XP1BP1-2GFCI*	2 Pole, 120/240 Volt, 5mA, Ground Fault Circuit Breaker (15-40 Amp.)
XP1BP1-1GFEPD*	1 Pole, 120 Volt, 30mA, Ground Fault Equipment Protector (15-40 Amp.)
XP1BP1-1GFEPD*	2 Pole, 120/240 Volt, 30mA, Ground Equipment Protector (15-40 Amp.)
XP1PB3-43*	3 Pole, 480 Volt, Branch Breaker (10-100 Amp.)
XP1PB3-63*	3 Pole, 600 Volt, Branch Breaker (10-100 Amp.)

* Add the Ampere rating of the branch breaker when ordering.

How to order

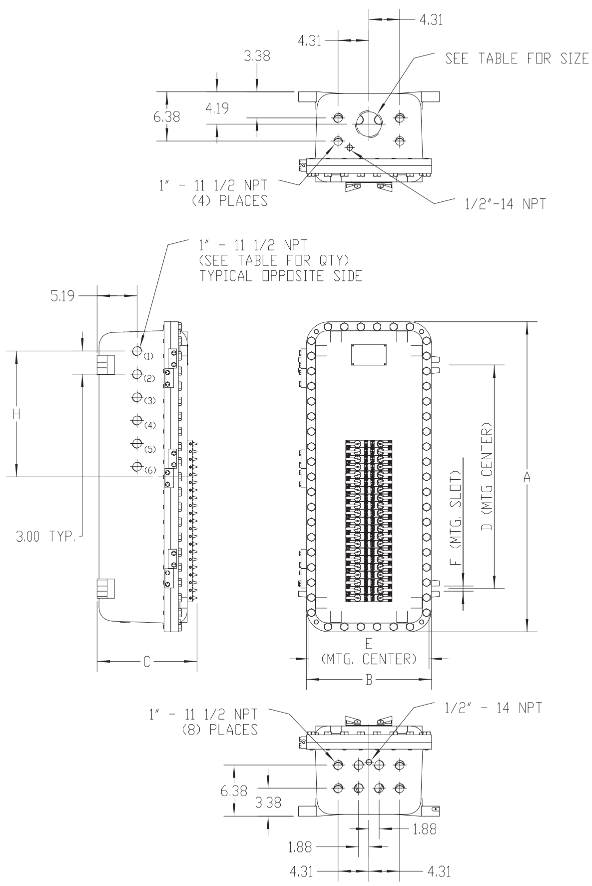
1. Specify panel catalog number, i.e. XP2PB1-121-B1
2. Starting with Circuit #2, specify quantity, ampacity, number of poles, and circuit breaker type, i.e. 8301G-4201
3. Note:
   - Handles will be provided for each breaker specified
   - Unused spaces will be plugged
   - For blank spaces requiring handles, attach layout sheet
4. Specify conduit entries, if any are required. Attach layout sheet

Explosionproof panelboard

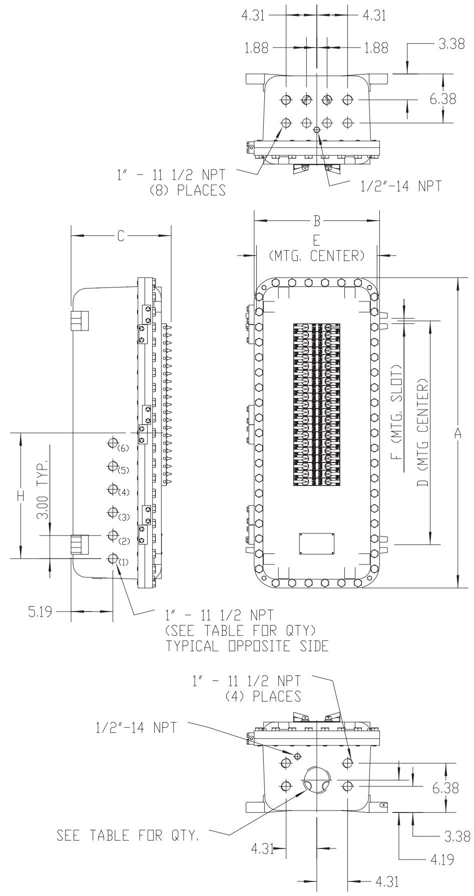


Explosionproof panelboards – Class I, Division 1
Main Lug Only (MLO)

4



Top Fed



Bottom Fed

Dimensions

	Overall dimensions (in.)									
Part No.	**A**	**B**	**C**	**D**	**E**	**F**	**Main Conduit Fed Size**	**H**	**Left & right side Hole Locations and Qty**	**XP Enclosure**
XP1PB1-121-L1_	22.25	16.25	12.03	14.13	15.75	0.50	2"	7.00	1 Through 3	XPCJ121808
XP1PB1-241-L1_	28.25	16.25	12.54	18.38	15.75	0.63	2.5"	10.00	1 Through 4	XPCJ122408
XP1PB1-241-L2_	40.25	16.25	13.38	29.00	15.75	0.68	3"	16.00	1 Through 4	XPCJ123608
XP1PB1-301-L2_	40.25	16.25	13.38	29.00	15.75	0.68	3"	16.00	1 Through 5	XPCJ123608
XP1PB1-361-L2_	40.25	16.25	13.38	29.00	15.75	0.68	3"	16.00	1 Through 6	XPCJ123608
XP1PB1-421-L2_	40.25	16.25	13.38	29.00	15.75	0.68	3"	16.00	1 Through 6	XPCJ123608
XP1PB1-123-L1_	22.25	16.25	12.03	14.13	15.75	0.50	2"	7.00	1 Through 3	XPCJ121808
XP1PB1-243-L1_	28.25	16.25	12.54	18.38	15.75	0.63	2.5"	10.00	1 Through 4	XPCJ122408
XP1PB1-243-L2_	40.25	16.25	13.38	29.00	15.75	0.68	3"	16.00	1 Through 4	XPCJ123608
XP1PB1-303-L2_	40.25	16.25	13.38	29.00	15.75	0.68	3"	16.00	1 Through 5	XPCJ123608
XP1PB1-363-L2_	40.25	16.25	13.38	29.00	15.75	0.68	3"	16.00	1 Through 6	XPCJ123608
XP1PB1-423-L2_	40.25	16.25	13.38	29.00	15.75	0.68	3"	16.00	1 Through 6	XPCJ123608
XP1PB2-123-L1_	22.25	16.25	12.03	14.13	15.75	0.50	2"	7.00	1 Through 3	XPCJ121808
XP1PB2-243-L1_	28.25	16.25	12.54	18.38	15.75	0.63	2.5"	10.00	1 Through 4	XPCJ122408
XP1PB2-243-L2_	40.25	16.25	13.38	29.00	15.75	0.68	3"	16.00	1 Through 4	XPCJ123608
XP1PB2-303-L2_	40.25	16.25	13.38	29.00	15.75	0.68	3"	16.00	1 Through 5	XPCJ123608
XP1PB2-363-L2_	40.25	16.25	13.38	29.00	15.75	0.68	3"	16.00	1 Through 6	XPCJ123608
XP1PB2-423-L2_	40.25	16.25	13.38	29.00	15.75	0.68	3"	16.00	1 Through 6	XPCJ123608

Explosionproof panelboards – Class I, Division 1
Main Lug Only (MLO)

Lighting Panels

Part No.	# Branch Breakers	Pow-R-Line C* Electrical Rating	Buss Amp.	Chassis Type
XP1PB1-121-L1_	12	1Ø-3W 120/240V	100	PRL1A
XP1PB1-241-L1_	24	1Ø-3W 120/240V	100	PRL1A
XP1PB1-241-L2_	24	1Ø-3W 120/240V	225	PRL1A
XP1PB1-301-L2_	30	1Ø-3W 120/240V	225	PRL1A
XP1PB1-361-L2_	36	1Ø-3W 120/240V	225	PRL1A
XP1PB1-421-L2_	42	1Ø-3W 120/240V	225	PRL1A
XP1PB1-123-L1_	12	3Ø-4W 120/208V	100	PRL1A
XP1PB1-243-L1_	24	3Ø-4W 120/208V	100	PRL1A
XP1PB1-243-L2_	24	3Ø-4W 120/208V	225	PRL1A
XP1PB1-303-L2_	30	3Ø-4W 120/208V	225	PRL1A
XP1PB1-363-L2_	36	3Ø-4W 120/208V	225	PRL1A
XP1PB1-423-L2_	42	3Ø-4W 120/208V	225	PRL1A
XP1PB2-123-L1_	12	3Ø-4W 277/480V	100	PRL2A
XP1PB2-243-L1_	24	3Ø-4W 277/480V	100	PRL2A
XP1PB2-243-L2_	24	3Ø-4W 277/480V	225	PRL2A
XP1PB2-303-L2_	30	3Ø-4W 277/480V	225	PRL2A
XP1PB2-363-L2_	36	3Ø-4W 277/480V	225	PRL2A
XP1PB2-423-L2_	42	3Ø-4W 277/480V	225	PRL2A

* Pow-R-Line C is a trademark of Eaton Corp.

Branch Circuit Operating Handles and Plugs

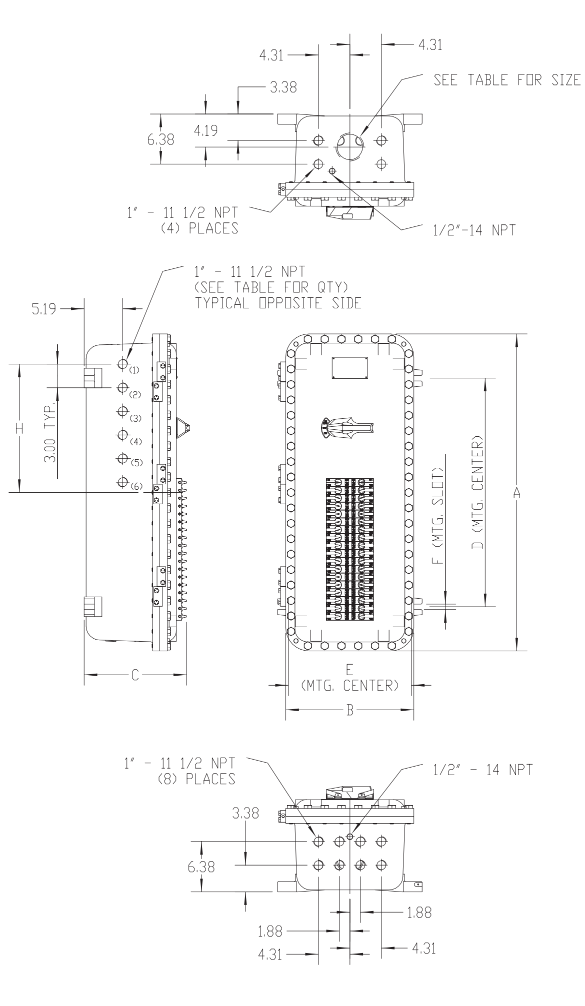
Part No.	Description
XP1PB1-H1	Single Pole PL1A Breaker Handle
XP1PB1-H2	Two Pole PL1A Breaker Handle
XP1PB1-H3	Three Pole PL1A Breaker Handle
XP1PB2-H	PL2A Breaker Handle (All Poles)
XP1PB1-HGL1	Single Pole PL1A GFI/EPD Breaker Handle - Left Hand
XP1PB1-HGR1	Single Pole PL1A GFI/EPD Breaker Handle - Right Hand
XP1PB1-HGL2	Two Pole PL1A GFI/EPD Breaker Handle - Left Hand
XP1PB1-HGR2	Two Pole PL1A GFI/EPD Breaker Handle - Right Hand
XP15562-7	Branch Space Plug

Branch Breakers

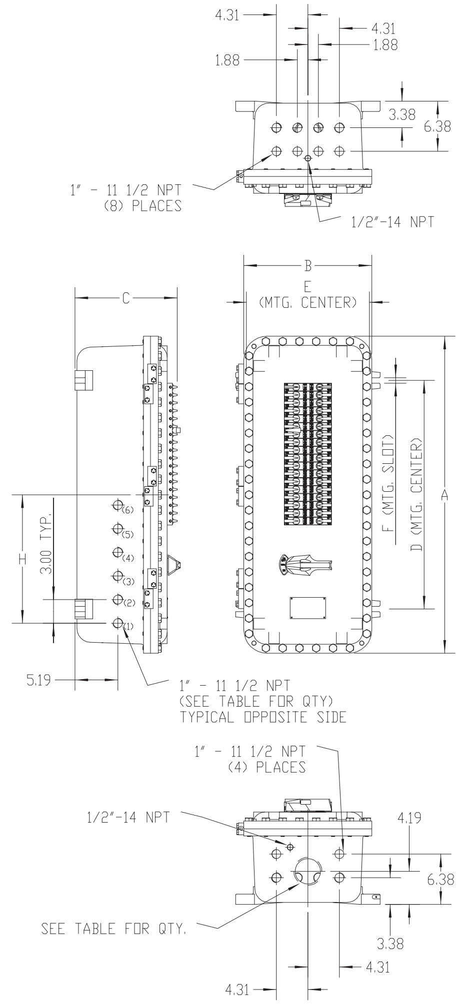
PRL1A	PRL2A
BAB	
QBGF	GHB
QBGFEP	

Notes:
1. For bottom fed model, add suffix “B”.
2. For top fed model, add suffix “T”.
3. 10kA maximum interrupting capacity (sym.).

Explosionproof panelboards – Class I, Division 1
Vertical Main Breakers (VMB)



Top Fed



Bottom Fed

Dimensions

	Overall dimensions (in.)									
Part No.	**A**	**B**	**C**	**D**	**E**	**F**	**H**	**Main Conduit Fed Size**	**Left & right side Hole Locations and Qty**	**XP Enclosure**
XP1PB1-121-M1_	28.25	16.25	12.94	18.38	15.75	0.63	10.00	2"	1 Through 3	XPCJ122408
XP1PB1-241-M1_	40.25	16.25	13.38	18.38	15.75	0.68	16.00	2.5"	1 Through 4	XPCJ123608
XP1PB1-241-M2_	40.25	16.25	13.38	29.00	15.75	0.68	16.00	3"	1 Through 4	XPCJ123608
XP1PB1-361-M2_	50.25	16.25	13.38	39.00	15.75	0.68	21.00	3"	1 Through 6	XPCJ124608
XP1PB1-421-M2_	50.25	16.25	13.38	39.00	15.75	0.68	21.00	2"	1 Through 6	XPCJ124608
XP1PB1-123-M1_	28.25	16.25	12.94	18.38	15.75	0.63	10.00	2.5"	1 Through 3	XPCJ122408
XP1PB1-243-M1_	40.25	16.25	13.38	18.38	15.75	0.68	16.00	2.5"	1 Through 4	XPCJ123608
XP1PB1-243-M2_	40.25	16.25	13.38	29.00	15.75	0.68	16.00	3"	1 Through 4	XPCJ123608
XP1PB1-363-M2_	50.25	16.25	13.38	39.00	15.75	0.68	21.00	3"	1 Through 6	XPCJ124608
XP1PB1-423-M2_	50.25	16.25	13.38	39.00	15.75	0.68	21.00	2"	1 Through 6	XPCJ124608
XP1PB2-123-M1_	28.25	16.25	12.94	18.38	15.75	0.63	10.00	2"	1 Through 3	XPCJ122408
XP1PB2-243-M1_	40.25	16.25	13.38	18.38	15.75	0.68	16.00	2.5"	1 Through 4	XPCJ123608
XP1PB2-243-M2_	40.25	16.25	13.38	29.00	15.75	0.68	16.00	2.5"	1 Through 4	XPCJ123608
XP1PB2-363-M2_	50.25	16.25	13.38	39.00	15.75	0.68	21.00	3"	1 Through 6	XPCJ124608
XP1PB2-423-M2_	50.25	16.25	13.38	39.00	15.75	0.68	21.00	3"	1 Through 6	XPCJ124608

Explosionproof panelboards – Class I, Division 1
Vertical Main Breakers (VMB)

Lighting Panels

Part No.	# Branch Breakers	Pow-R-Line C*			Chassis Type
		Electrical Rating	Main Breaker Type	Buss Amp.	
XP1PB1-121-M1_	12	1Ø-3W 120/240V	EHD2100	100	PRL1A
XP1PB1-241-M1_	24	1Ø-3W 120/240V	EHD2100	100	PRL1A
XP1PB1-241-M2_	24	1Ø-3W 120/240V	FD2225	225	PRL1A
XP1PB1-361-M2_	36	1Ø-3W 120/240V	FD2225	225	PRL1A
XP1PB1-421-M2_	42	1Ø-3W 120/240V	FD2225	225	PRL1A
XP1PB1-123-M1_	12	3Ø-4W 120/208V	EHD2100	100	PRL1A
XP1PB1-243-M1_	24	3Ø-4W 120/208V	EHD2100	100	PRL1A
XP1PB1-243-M2_	24	3Ø-4W 120/208V	FD2225	225	PRL1A
XP1PB1-363-M2_	36	3Ø-4W 120/208V	FD2225	225	PRL1A
XP1PB1-423-M2_	42	3Ø-4W 120/208V	FD2225	225	PRL1A
XP1PB2-123-M1_	12	3Ø-4W 277/480V	EHD3100	100	PRL2A
XP1PB2-243-M1_	24	3Ø-4W 277/480V	EHD3100	100	PRL2A
XP1PB2-243-M2_	24	3Ø-4W 277/480V	FD3225	225	PRL2A
XP1PB2-363-M2_	36	3Ø-4W 277/480V	FD3225	225	PRL2A
XP1PB2-423-M2_	42	3Ø-4W 277/480V	FD3225	225	PRL2A

* Pow-R-Line C is a trademark of Eaton Corp.

Branch Circuit Operating Handles and Plugs

Part No.	Description
XP1PB1-H1	Single Pole PL1A Breaker Handle
XP1PB1-H2	Two Pole PL1A Breaker Handle
XP1PB1-H3	Three Pole PL1A Breaker Handle
XP1PB2-H	PL2A Breaker Handle (All poles)
XP1PB1-HGL1	Single Pole PL1A GFI/EPD Breaker Handle - Left Hand
XP1PB1-HGR1	Single Pole PL1A GFI/EPD Breaker Handle - Right Hand
XP1PB1-HGL2	Two Pole PL1A GFI/EPD Breaker Handle - Left Hand
XP1PB1-HGR2	Two Pole PL1A GFI/EPD Breaker Handle - Right Hand
XP15562-7	Branch Space Plug
XP1PB-MB	Vertical Main Breaker Handle Assembly

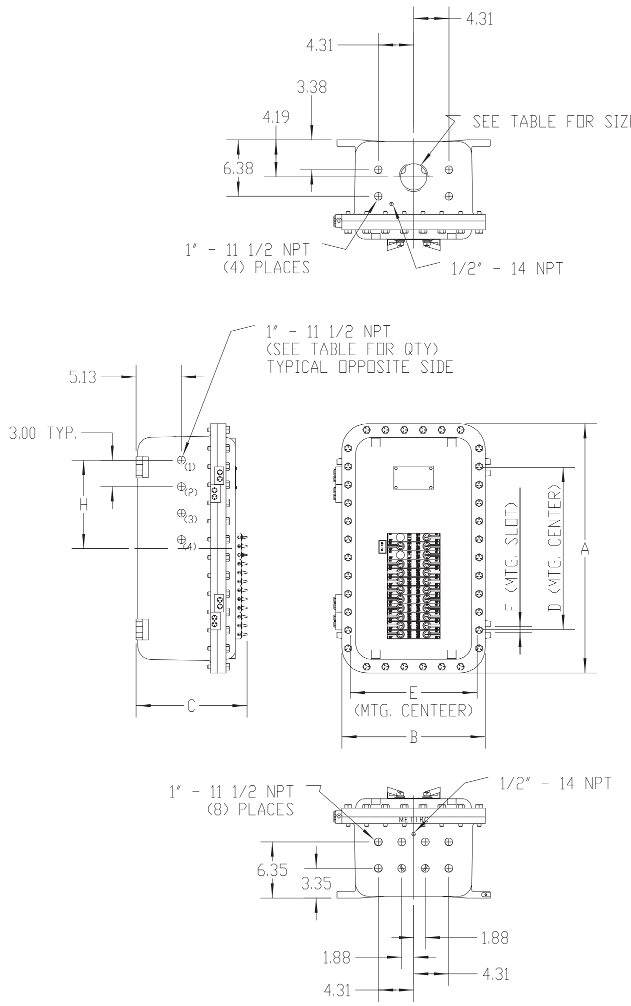
Branch Breakers

PRL1A	PRL2A
BAB	
QBGF	GHB
QBGFEP	

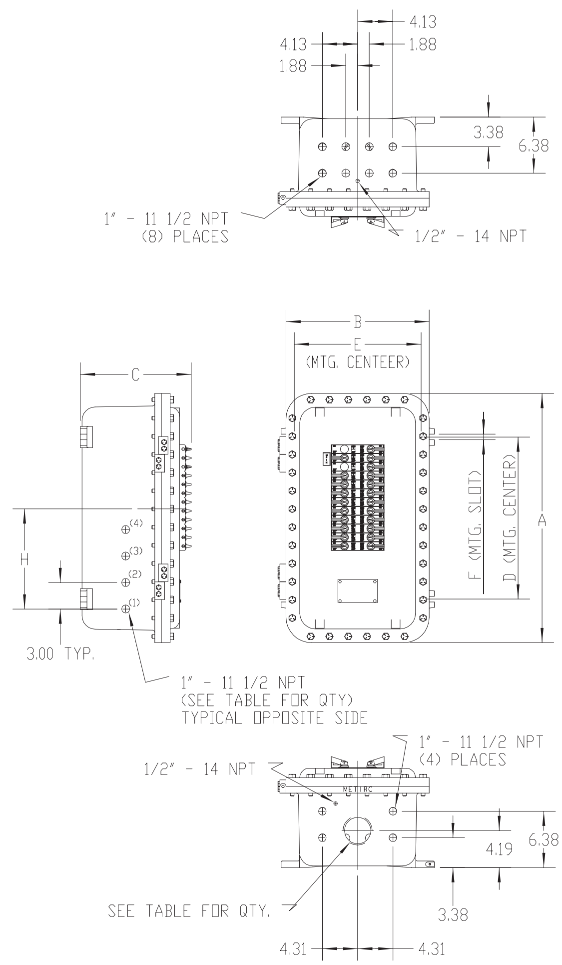
Notes:
1. For bottom fed model, add suffix “B”.
2. For top fed model, add suffix “T”.
3. 10kA maximum interrupting capacity (sym.).

Explosionproof panelboards – Class I, Division 1

Back Fed Main Breakers (BFMB)



Top Fed



Bottom Fed

Dimensions

	Overall dimensions (in.)									
Part No.	**A**	**B**	**C**	**D**	**E**	**F**	**H**	**Main Conduit Fed Size**	**Left & right side Hole Locations and Qty**	**XP Enclosure**
XP1PB1-121-B1_	22.25	16.25	12.03	14.13	15.75	0.50	7.00	2”	1 Through 3	XPCJ121808
XP1PB1-181-B1_	28.25	16.25	12.54	18.38	15.75	0.63	10.00	2.5”	1 Through 4	XPCJ122408
XP1PB1-241-B1_	28.25	16.25	12.54	18.38	15.75	0.63	16.00	2.5”	1 Through 4	XPCJ122408
XP1PB1-123-B1_	22.25	16.25	12.03	14.13	15.75	0.50	16.00	2”	1 Through 3	XPCJ121808
XP1PB1-183-B1_	28.25	16.25	12.54	18.38	15.75	0.63	16.00	2.5”	1 Through 4	XPCJ122408
XP1PB1-243-B1_	28.25	16.25	12.54	18.38	15.75	0.63	16.00	2.5”	1 Through 4	XPCJ122408
XP2PB2-123-B1_	22.25	16.25	12.03	14.13	15.75	0.50	7.00	2”	1 Through 3	XPCJ121808
XP2PB2-183-B1_	28.25	16.25	12.54	18.38	15.75	0.63	10.00	2.5”	1 Through 4	XPCJ122408
XP1PB2-243-B1_	28.25	16.25	12.54	18.38	15.75	0.63	16.00	2.5”	1 Through 4	XPCJ122408

Explosionproof panelboards – Class I, Division 1
Back Fed Main Breakers (BFMB)

Lighting Panels

		Pow-R-Line C*			
Part No.	**# Branch Breakers**	**Electrical Rating**	**Main Breaker Type**	**Buss Amp.**	**Chassis Type**
XP1PB1-121-B1_	10	1Ø-3W 120/240V	BAB2100	100	PRL1A
XP1PB1-181-B1_	16	1Ø-3W 120/240V	BAB2100	100	PRL1A
XP1PB1-241-B1_	22	1Ø-3W 120/240V	BAB2100	100	PRL1A
XP1PB1-123-B1_	9	1Ø-3W 120/208V	BAB3100H	100	PRL1A
XP1PB1-183-B1_	15	1Ø-3W 120/208V	BAB3100H	100	PRL1A
XP1PB1-243-B1_	21	1Ø-3W 120/208V	BAB3100H	100	PRL1A
XP1PB2-123-B1_	9	3Ø-4W 277/480V	GHB3100	100	PRL2A
XP1PB2-183-B1_	15	3Ø-4W 277/480V	GHB3100	100	PRL2A
XP1PB2-243-B1_	21	3Ø-4W 277/480V	GHB3100	100	PRL2A

* Pow-R-Line C is a trademark of Eaton Corp.

Branch Circuit Operating Handles and Plugs

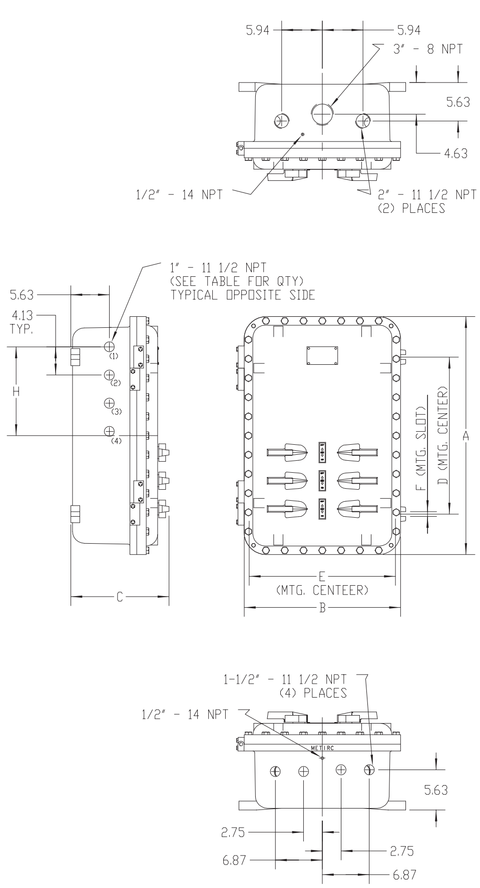
Part No.	Description
XP1PB1-H1	Single Pole PL1A Breaker Handle
XP1PB1-H2	Two Pole PL1A Breaker Handle
XP1PB1-H3	Three Pole PL1A Breaker Handle
XP1PB2-H	PL2A Breaker Handle (All poles)
XP1PB1-HGL1	Single Pole PL1A GFI/EPD Breaker Handle - Left Hand
XP1PB1-HGR1	Single Pole PL1A GFI/EPD Breaker Handle - Right Hand
XP1PB1-HGL2	Two Pole PL1A GFI/EPD Breaker Handle - Left Hand
XP1PB1-HGR2	Two Pole PL1A GFI/EPD Breaker Handle - Right Hand
XP15562-7	Branch Space Plug

Branch Breakers

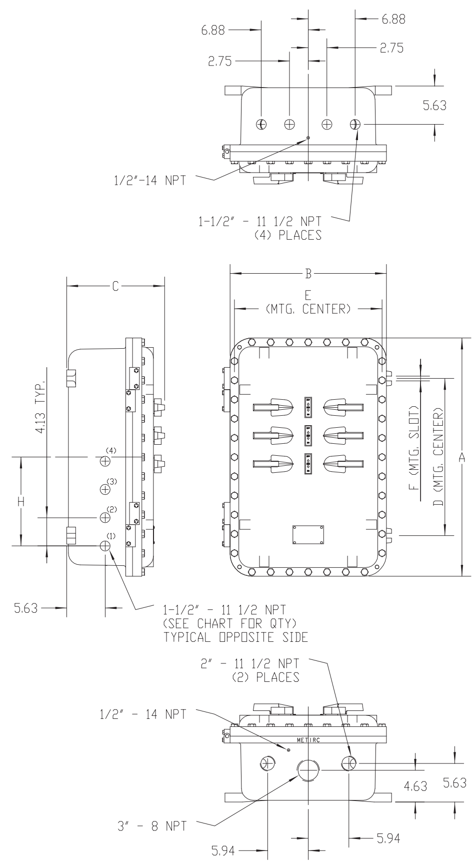
PRL1A	PRL2A
BAB	
QBGF	GHB
QBGFEP	

Notes:
1. For bottom fed model, add suffix "B".
2. For top fed model, add suffix "T".
3. 10kA maximum interrupting capacity (sym.).

Explosionproof panelboards – Class I, Division 1
Power Panels – Main Lug Only (MLO)



Top Fed



Bottom Fed

Dimensions

	Overall dimensions (in.)								
Part No.	**A**	**B**	**C**	**D**	**E**	**F**	**H**	**Left & right side Hole Locations and Qty**	**XP Enclosure**
XP1PB3-4	28.88	22.88	14.46	18.38	15.75	0.69	10.00	1 & 2	XPCJ182408
XP1PB3-6	34.88	22.88	14.35	23.00	15.75	0.69	13.00	1 Through 3	XPCJ183008
XP1PB3-8	34.88	22.88	14.35	23.00	15.75	0.69	13.00	1 Through 3	XPCJ183008
XP1PB3-10	40.88	22.88	14.54	29.00	15.75	0.69	16.00	1 Through 4	XPCJ183608

Explosionproof panelboards – Class I, Division 1
Power Panels – Main Lug Only (MLO)

Power panels

Part No.	# Branch Breakers	Pow-R-Line C* Electrical Rating	Pow-R-Line C* Buss Amp.	Chassis Type
XP1PB3-434-L2_	4	3Ø-3W 480V	225	PRL3A
XP1PB3-634-L2_	6	3Ø-3W 480V	225	PRL3A
XP1PB3-834-L2_	8	3Ø-3W 480V	225	PRL3A
XP1PB3-1034-L2_	10	3Ø-3W 480V	225	PRL3A
XP1PB3-444-L2_	4	3Ø-4W 480V	225	PRL3A
XP1PB3-644-L2_	6	3Ø-4W 480V	225	PRL3A
XP1PB3-844-L2_	8	3Ø-4W 480V	225	PRL3A
XP1PB3-1044-L2_	10	3Ø-4W 480V	225	PRL3A
XP1PB3-436-L2_	4	3Ø-3W 600V	225	PRL3A
XP1PB3-636-L2_	6	3Ø-3W 600V	225	PRL3A
XP1PB3-836-L2_	8	3Ø-3W 600V	225	PRL3A
XP1PB3-1036-L2_	10	3Ø-3W 600V	225	PRL3A
XP1PB3-446-L2_	4	3Ø-4W 600V	225	PRL3A
XP1PB3-646-L2_	6	3Ø-4W 600V	225	PRL3A
XP1PB3-846-L2_	8	3Ø-4W 600V	225	PRL3A
XP1PB3-1046-L2_	10	3Ø-4W 600V	225	PRL3A

*Pow-R-Line C is a trademark of Eaton Corp.

Branch Circuit Operating Handles and Plugs

Part No.	Description
XP1P3-H	PL3A Circuit breaker handle
XP18023	PL3A Branch space hole plug

Branch Breakers

PRL1A	PRL2A
Volts	**Type**
480	EHD
600	FDB

Notes:
1. For bottom fed model, add suffix “B”.
2. For top fed model, add suffix “T”.
3. 10kA maximum interrupting capacity (sym.).

Additional information

Basics of hazardous locations
World standards

5

World standards and what they mean. In this Section we will outline the different Standards used throughout the world and what they mean for products specified for use in Hazardous Areas. Below is a map of the world which illustrates the Standards that are generally used in these regions.

Product Approvals

UL	CSA	IECEx	ATEX	EurAsian	INMETRO
CLASS & DIV	CLASS & ZONES	GROUPS & ZONES			

UL (America) & CSA (Canada)

NFPA 70 produces the National Electric Code (NEC). It is referenced as the world's most widely used and accepted code for electrical installations. Chapter 5 of the National Electrical Code (NEC) focuses on special occupancies including those for hazardous locations. The products in the T&B EX™ catalog are designed for use in specific areas referenced in the NEC.

Underwriters Laboratories Inc. (UL), Canadian Standards Association (CSA), Factory Mutual (FM), and Intertek (ETL), are independent organizations that test for public safety. Their purpose is to determine whether or not devices and equipment submitted to them are safe and can be used in the NEC category for which they were designed. To do this, these agencies maintain extensive laboratory and testing facilities. It is not the function of these agencies to perform actual enforcement of the National Electric Code. However, as previously indicated, inspection authorities use the certifications and listings from these agencies in carrying out their inspections of hazardous areas.

The NEC has been adopted for electrical wiring in the United States and other countries. Other jurisdictions that use the NEC are Mexico, Costa Rica, Venezuela, Colombia and Saudi Aramco in the Middle East.

The Canadian Electrical Code, CE code, or CSA C22.1 is a standard published by the Canadian Standards Association pertaining to the installation and maintenance of electrical equipment in Canada.

Also, a reference is "Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class I, Division I and Division 2" published as API 500, (American Petroleum Institute).

National Electrical Code®, NEC® symbol and NEC® are Registered Trademarks of the National Fire Protection Association, Inc., Quincy, MA. 02269

Basics of hazardous locations
World standards

The ATEX Europe Directives
ATEX requires employers to eliminate or control risks from dangerous substances and to classify areas where explosive atmospheres may occur into zones, as laid down in regulations. ATEX Directives are designed to protect employees, the public and the environment from accidents owing to explosive atmospheres and since July 1st 2006 all existing sites, as well as new sites, must be fully ATEX compliant.

The directive ATEX 94/9/CE (2014/34/UE as of April 20th 2016), applies to equipment suppliers and manufacturers and ATEX 99/92/CE applies to end users. These directives compliment each other, but have different purposes. ATEX 94/9/CE covers both electrical and non-electrical products for use in hazardous areas.

Any product sold within the European Union designed for use in hazardous areas must be ATEX certified and bear the ATEX marking in conjunction with CE marking. This obligation is placed upon the manufacturer of the product is aimed at facilitating movement of goods within the EU.

IECEx (International certification system)
The IECEx issues an international certificate of conformity for products used in a hazardous area.

This system provides:
a) A single certification of conformity for manufacturers to comply that includes:
b) Testing and assessment of products to IEC standards including a full test report.
c) Ongoing surveillance of manufacturers' premises.
d) A fast-track process for countries where regulations still require the issuing of national Ex certificates or approvals.

This certification system is in the process of being adopted worldwide by all the known standards across the world but countries are all working to various timelines.

EurAsian Conformity Mark (Customs Union)
EurAsian Conformity Mark follows similar rules to that of IECEx as far as the breakdown of the zones and other criteria are concerned.

EurAsian Conformity Mark is the standard for the Customs Union which includes the Russian Federation, Kazakhstan, Belarus and Armenia.

INMETRO (Brazil)
The National Institute of Metrology, Standardization and Industrial Quality (INMETRO) is the government body responsible for the implementation of measurement, safety and quality standards for electrical and electronic products.
It guides the activities of accreditation, inspection, testing and certification bodies in Brazil which issue the products' certificates.

PCEC (China)
Products placed on the Chinese market shall be certified according to the national regulations in force.

PCEC is accredited by CNAS (Chinal National Accreditation Service for Conformity Assessment) for product testing and issuance of certificates of conformity of products used in hazardous areas.

Electrical materials for use in potentially explosive atmospheres must conform to major certification standards: IEC, EN, NEC and CEC.

Basics of hazardous locations
Hazardous area classifications

Hazardous location - An area where the possibility of explosion and fire is created by the presence of flammable gases, vapors, dust, fibers or flyings.

5

Class I - Gas

Class I - Class I locations are those in which flammable gases, flammable liquid-produced vapors or combustible liquid-produced vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

Typical Class I Locations:

- Petroleum refineries and gasoline storage and dispensing areas
- Industrial firms that use flammable liquids in dip tanks for parts cleaning or other operations
- Petrochemical companies that manufacture chemicals from gas and oil
- Dry cleaning plants where vapors from cleaning fluids can be present
- Companies that have spraying areas where they coat products with paint or plastics
- Aircraft hangars and fuel serving areas
- Utility gas plants and operations involving storage and handling of liquified petroleum gas or natural gas

Class II - Dust

Class II - Class II locations are those that are hazardous because of the presence of combustible dust.

Typical Class II Locations:

- Grain elevators, flour and feed mills
- Plants that manufacture, use or store magnesium or aluminum powders
- Plants that have chemical or metallurgical processes: producers of plastics, medicines and fireworks, etc.
- Producers of starch or candies
- Spice-grinding plants, sugar plants and cocoa plants
- Coal preparation plants and other carbon handling or processing areas

Class III - Fibers

Class III - Class III locations are those that are hazardous because of the presence of easily ignitable fibers or where materials producing combustible flyings are handled, manufactured or used, but in which such fibers/flyings are not likely to be in suspension in the air in quantities sufficient to produce ignitable mixtures.

Typical Class III Locations:

- Textile mills, cotton gins, cotton seed mills and flax processing plants
- Any plant that shapes, pulverizes or cuts wood and creates sawdust or flyings

Note: Fibers and flyings are not likely to be suspended in the air but can collect around machinery or on lighting fixtures and a spark or hot metal can ignite them.

Division 1 - Normally Hazardous

Division 1 - Hazardous gases or dusts are present under normal operation conditions or during frequent repair and maintenance activity.

Groups A, B, C and D - The gases and vapors of Class I locations are broken into four groups by the code A, B, C and D. These materials are grouped according to the ignition temperature of the substance, its explosion pressure and other flammable characteristics.

Groups E, F, G - Class II dust locations groups E, F and G are classified according to the ignition temperature and the conductivity of the hazardous substance.

Division 2 - Not Normally Hazardous

Division 2 - Hazardous gases or dusts are not present under normal operating conditions.

Area classification: comparing Divisions and Zones

Continuous Hazard	Intermittent Hazard	Hazard under Abnormal Conditions
Zone 0	Zone 1	Zone 2
Division 1		Division 2

Note: These are simplified definitions. Complete data is in the referenced 2017 NEC®

Basics of hazardous locations

Ignition temperatures and group classifications for flammable gases and vapors

Material	Group	Auto-Ignition Temperature	
		˚F	˚C
Acetaldehyde	C	347	175
Acetic Acid	D	867	464
Acetic Anhydride	D	600	316
Acetone	D	869	465
Acetone Cyanohydrin	D	1270	688
Acetonitrile	D	975	524
Acetylene	A	581	305
Acrolein (Inhibited)	B (C)	455	285
Acrylic Acid	D	820	438
Acrylonitrile	D	898	481
Allyl Alcohol	C	713	378
Allyl Chloride	D	905	485
Alpha-Methyl Styrene	D	1066	574
Ammonia	D	928	498
n-Amyl Acetate	D	680	360
Aniline	D	1139	615
Benzene	D	928	498
Benzyl Chloride	D	1085	585
1.3-Butadiene	B (D)	788	420
Butane	D	550	288
1-Butanol	D	650	343
2-Butanol	D	761	405
n-Butyl Acetate	D	790	421
n-Butyl Acrylate (Inhibited)	D	559	293
Butylamine	D	594	312
Butylene	D	725	385
n-Butyraldehyde	C	425	218
n-Butyric Acid	D	830	443
Carbon Disulfide	*	194	90
Carbon Monoxide	C	1128	609
Chlorobenzene	D	1099	593
Cresol	D	1038–1110	559–599
Crotonaldehyde	C	450	232
Cumene	D	795	424
Cyclohexane	D	473	245
Cyclohexanol	D	572	300
Cyclohexanone	D	473	245
Cyclohexene	D	471	244
Cyclopropane	D	938	503
p-Cymene	D	817	436
n-Decanol	D	550	288
Decene	D	455	235
Di-Isobutyl Ketone	D	745	396
Di-Isobutylene	D	736	391
Di-N-Propylamine	C	570	299
Diacetone Alcohol	D	1118	603
o-Dichlorobenzene	D	1198	647
1.1-Dichloroethane	D	820	438

Material	Group	Auto-Ignition Temperature	
		˚F	˚C
1.2-Dichloroethylene	D	860	460
Dicylopentadiene	C	937	503
Diethyl Benzene	D	743–842	395–450
Diethyl Ether	C	320	160
Diethylamine	C	594	312
Diethylene Glycol Monobutyl Ether	C	442	228
Diethylene Glycol Monomethyl Ether	C	465	241
n-n-Dimethyl Aniline	C	700	371
Dimethyl Formamide	D	833	455
Dimethyl Sulfate	D	370	188
Dimethylamine	C	752	400
1,4-Dioxane	C	356	180
Dipentene	D	458	237
Dodecene	D	491	255
Du-Isopropylamine	C	600	316
Epichlorohydrin	C	772	411
Ethane	D	882	472
Ethanol	D	685	363
Ethyl Acetate	D	800	427
Ethyl Acetate (Inhibited)	D	702	372
Ethyl Benzene	D	810	432
Ethyl Chloride	D	966	519
Ethyl Formate	D	851	455
2-Ethyl Hexanol	D	448	231
2-Ethyl Hexyl Acrylate	D	485	252
Ethyl Mercaptan	C	572	300
Ethylamine	D	725	385
Ethylene	C	842	450
Ethylene Chlorohydrin	D	797	425
Ethylene Dichloride	D	775	413
Ethylene Glycol Monobutyl Ether	C	460	238
Ethylene Glycol Monobutyl Ether Acetate	C	645	340
Ethylene Glycol Monoethyl Ether	C	455	235
Ethylene Glycol Monoethyl Ether Acetate	C	715	379
Ethylene Glycol Monomethyl Ether	D	545	285
Etheylene Oxide	B (C)	804	429
Ethylenediamine	D	725	385
Ethylenimine	C	608	320
2-Ethylehexaldehyde	C	375	191
Formaldehyde (Gas)	B	795	429
Formic Acid (90%)	D	813	434
Fuel Oils	D	410–765	210–407
Furfural	C	600	316
Furfuryl Alcohol	C	915	490
Gasoline	D	536–880	280–471
Heptane	D	399	204
Heptene	D	500	260
Hexane	D	437	225

*Carbon Disulfide has characteristics which require safeguards beyond those required for any of the above groups

Basics of hazardous locations

Ignition temperatures and group classifications for flammable gases and vapors

Material	Group	Auto-Ignition Temperature °F	°C
2-Hexanone	D	795	424
Hexenes	D	473	245
Hydrazine	C	74–518	23–270
Hydrogen	B	968	520
Hydrogen Cyanide	C	1000	538
Hydrogen Sulfide	C	500	260
Iso-Butyl Acetate	D	790	421
Iso-Octyl Aldehyde	C	387	197
Isoamyl Acetate	D	680	360
Isoamyl Alcohol	D	662	350
Isobutyl Acrylate	D	800	427
Isobutyraldehyde	C	385	196
Isophorone	D	860	460
Isoprene	D	428	220
Isopropyl Acetate	D	860	460
Isopropyl Ether	D	830	443
Isopropylamine	D	756	402
Kerosene	D	410	210
Liquified Petroleum Gas	D	761–842	405–450
Mesityl Oxide	D	652	344
Methane	D	999	537
Methanol	D	725	385
Methyl Acetate	D	850	454
Methyl Acrylate	D	875	468
Methyl Ether	C	662	350
Methyl Ethyl Ketone	D	759	404
Methyl Formal	C	460	238
Methyl Formate	D	840	449
Methyl Isobutyl Ketone	D	840	449
Methyl Isocyanate	D	994	534
Methyl Methacrylate	D	792	422
Methyl N-Amyl Ketone	D	740	393
2-Methyl-1-Propanol	D	780	416
2-Methyl-2-Propanol	D	892	478
Methylamine	D	806	430
Methylcyclohexane	D	482	250
Methylcyclohexanol	D	565	296
Monoethanolamine	D	770	410
Monoisopropanolamine	D	705	374
Monomethyl Aniline	C	900	482
Monomethyl Hydrazine	C	382	194
Morpholine	C	590	310
Naphtha (Coal Tar)	D	531	277
Naphtha (Petroleum)	D	550	288
Nitrobenzene	D	900	482
Nitroethane	C	778	414
Nitromethane	C	785	418
2-Nitropropane	C	802	428

5

Material	Group	Auto-Ignition Temperature °F	°C
1-Nitropropane	C	789	421
Nonane	D	401	205
Octane	D	403	206
Octene	D	446	230
Pentane	D	470	243
1-Pentanol	D	572	300
2-Pentanone	D	846	452
1-Pentene	D	527	275
Propane	D	842	450
2-Propanol	D	750	399
1-Propanol	D	775	413
Propionaldehyde	C	405	207
Proprionic Acid	D	870	466
Proprionic Anhydride	D	545	285
N-Propyl Acetate	D	842	450
N-Propyl Ether	C	419	215
Propyl Nitrate	B	347	175
Propylene	D	851	455
Propylene Dichloride	D	1035	537
Propylene Oxide	B (C)	840	449
Pyridine	D	900	482
Styrene	D	914	490
Tetrahydrofuran	C	610	321
Tetrahydronapthalene	D	725	385
Toluene	D	896	480
Turpentine	D	488	253
Unsymmetrical Dimethyl Hydrazine (Udmh)	C	480	249
Valeraldehyde	C	432	222
Vinyl Acetate	D	756	402
Vinyl Chloride	D	882	472
Vinyl Toluene	D	921	494
Vinylidene Chloride	D	1058	570
Xylenes	D	867–984	464–529

Panelboards
Main breaker or main lug

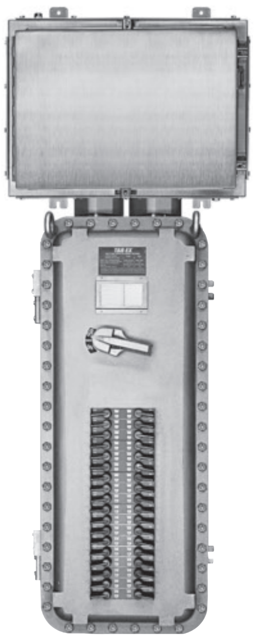
Panelboards are the gateways for all power distribution in a facility's electrical system, housing the breakers that protect connected circuits from the damage electrical faults can cause.

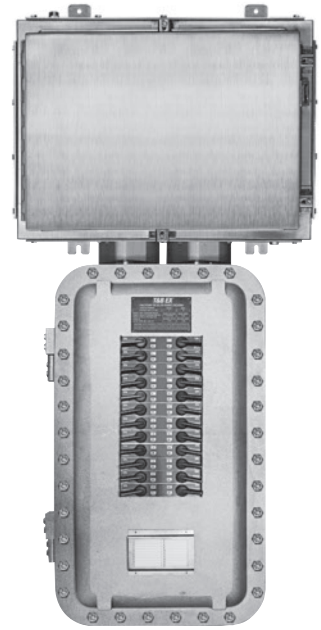
Panelboards or load centers come in two varieties, those with main breakers and those with main lugs. There is an important difference in capabilities that needs to be understood.

Main breakers can be located at the incoming electrical-service and, along with individual branch circuit breakers, these units feature a main breaker capable of disconnecting the entire load center, including all connected circuits, at a single switch point. Main lugs, however, don't include a main breaker switch, only individual branch circuit breakers.

Because main lugs lack primary overload protection, they are typically used as distribution panels downstream of a main breaker. As such, manufacturers and contractors alike might also refer to them as add-on, secondary or downstream panels. Applications typically include lighting, convenience receptacles, or other discreet areas where connected loads are large enough to require their own circuits.

Panels can be requested with a back-fed main circuit breaker to use existing spaces in a main lug load center to serve as a main breaker. Alternatively, some manufacturers offer load centers designed for easy conversion from one style device to the other. For example, Siemens PL series load centers can be converted from main lug to main breaker, and back again. The company's ES series load centers also can be converted to main lugs (but main lugs in this series cannot be converted to main breakers).





Index

Index

Index

Index

Index

Index

Index

Warranty

Warranty, disclaimer, and remedies

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