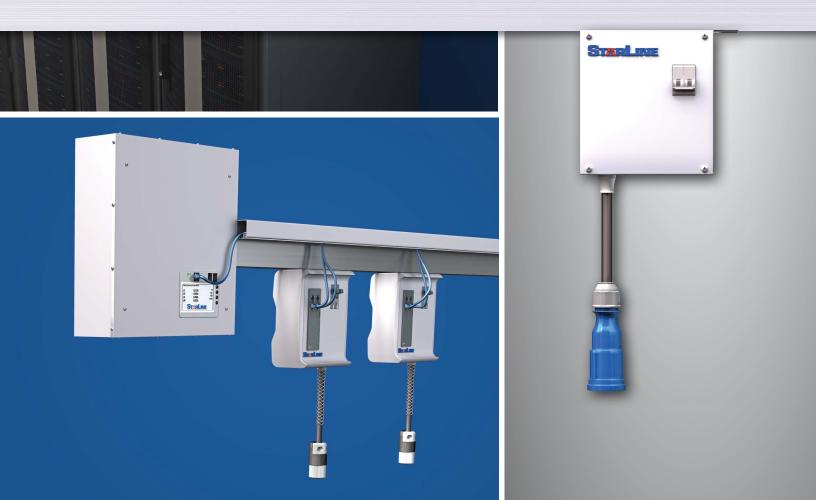




Plug-In Units





Plug-in Units Table of Contents

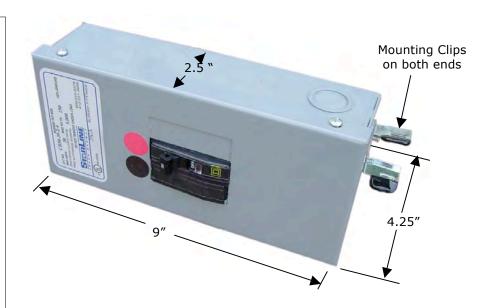
SYSTEM(S)	PAGE
B40, B50 & B60C Compact Systems	12.2-12.6
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B100A, B100N, B225, B100G, B100NG, B225G Systems	12.14-12.34
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CIRCUIT BREAKER PLUG-IN

Circuit Breaker

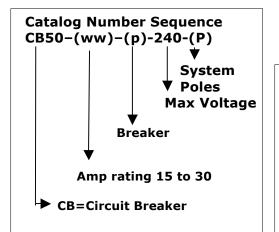
This plug-in consists of a fullsize junction box with hinged lid, plug head and an externally operated circuit breaker. The circuit breaker plug-in is inserted into the busway until mounting clips "snap" into place. The units are normally supplied with breakers installed. Units can be supplied with mounting plate only to allow installation of snap-on breakers in the field. Optional factoryinstalled receptacles can be added. Circuit breakers can be 15 to 30 amps, 240 volts, and 1, 2 or 3 poles. Units with UL Listed multiple breakers are available. Units include copper grounding lug in the box that fits up to #6 wire, mounting tabs and mounting hardware to secure unit to Busway. Units have 1/2" and 3/4" conduit knockouts on 3 sides.







Circuit Breaker installed on STARLINE



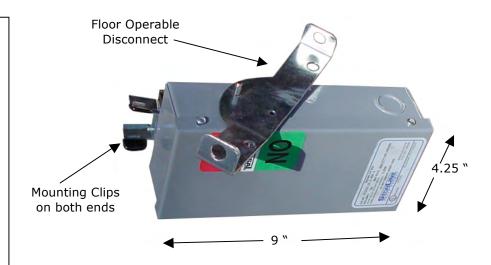
Catalog Number Selection				
Catalog Number	Description	Weight		
CB50-ww-1-240-2	1-pole Circuit Breaker, 2-pole Busway	3.3 lbs		
CB50-ww-1-240-4	1-pole Circuit Breaker, 4-pole Busway	3.3 lbs		
CB50-ww-2-240-4	2-pole Circuit Breaker, 4-pole Busway	3.3 lbs		
CB50-ww-3-240-4	3-pole Circuit Breaker, 4-pole Busway	4.2 lbs		



FUSED DISCONNECT PLUG-IN

Fused Disconnect

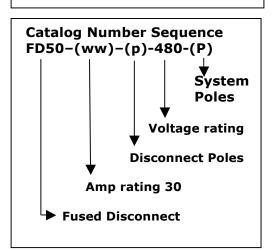
Units provide a 3-pole fuse block for Class CC fuses (ordered separately) with an external floor operable disconnect. The disconnect mechanism is floor operable with chains or a stick. Unit is rated at 30 Amps, 480/277 Volts.





Fused Disconnect installed on STARLINE





Catalog Number Selection

Catalog No. Description Weight FD50-30-3-480-4 Fused Disconnect, 30A, 3P, 480V 4.2 lbs for 4-pole Busway



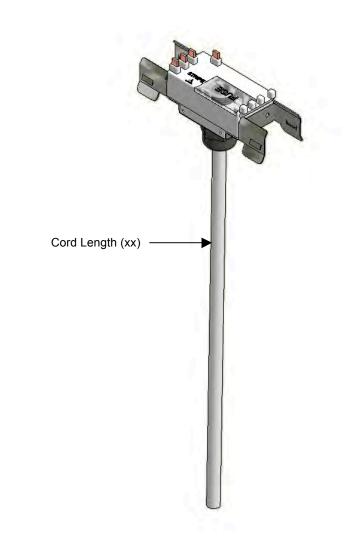
IP50 with CORD SET

IP50 Cord Set

Shipped assembled complete from the factory based on part number selection including cord, fuses, 10' length, and no wiring device. SJO cord is used in all assemblies.

The internal plug-in is ideal for applications where the plug head should not be visible such as light fixtures and retail/commercial areas. This Internal Plug "clicks" into the busway section and provides a mounting plate for light fixture connection. The unit inserts into the busway's continuous slot and snaps into place, making the mechanical, electrical and grounding connections. Units are polarized to inhibit reverse installation.

Internal plugs are available in ratings of 15 and 20 amps, 480/277 volts, fusible or nonfusible. The 15 amp version utilizes high temperature wire for ballast and fixture applications. A ground wire is also included with 15 amp fused units. Ground through the mounting plate for 20 amp internal plugs.



Catalog Number Sequence IP50-(zF)-Czz Cord set Up to 20 amps With fuse (z=A, B or C) For all 40, 50 & 60C Internal Plug

Catalog Number Examples

Catalog No.
IP50-AF-C15-5
Description
15A drop cord set, A phase fused,
10ft. cord, for 4-pole system

IP50-BF-C20-2
20A drop cord set, B phase fused,
10ft. cord, for 4-pole system

IP50-CF-C20
20A drop cord set, C phase fused
10ft. cord, for 4-pole system

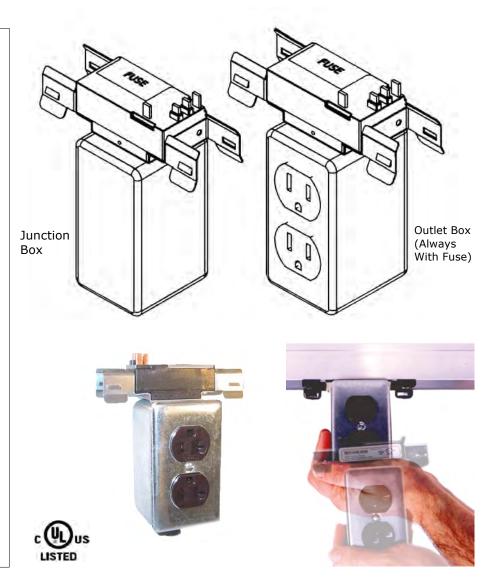
POWER PLUG-IN UNITS

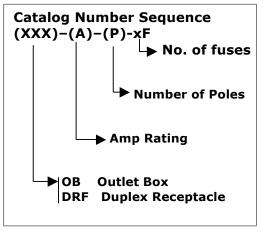


Outlet Plug-In units are used to tap off power from the Busway. All plug-in units are equipped with a special plug head called a "Starjack" which "snaps" into the Busway continuous slot to make the spring-loaded connection. The installer simply inserts the unit into the Busway until a "clicking" sound is heard on each side of the connector. The snap-in connector provides ground connection for the box and load. All plug-in units are polarized to inhibit reverse installation.

A. Junction Box
Standard unit consists of J-box
with connector, cover, ground
lug and wire nuts. Optional
Class CC fuseholders are
available.

B. Outlet Box Standard unit consists of J-box with connector, NEMA 5-15 or 5-20 duplex receptacles, Class CC fuse and fuseholder. Other NEMA configurations are also available.





Catalog Numbe	r Selection		
Catalog No.	Description	Weight	
OB50-30-2 OB50-30-4	Junction Box, 30A, 2-pole* Junction Box, 30A, 4-pole*	1.2 lbs 1.2 lbs	
OB50-30-4-xF	Junction Box, 30A, 4-pole*	1.3 lbs	
DRF50-20-A DRF50-20-B DRF50-20-C	Duplex, 20A, 2-pole, A-phase* Duplex, 20A, 2-pole, B-phase* Duplex, 20A, 2-pole, C-phase*	1.4 lbs 1.4 lbs 1.4 lbs	
* used in 40, 50 & 60C systems `x' = 1, 2 or 3 fuse holders			

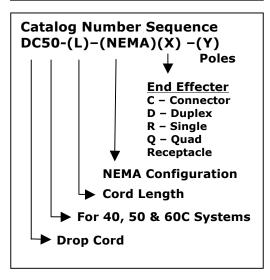


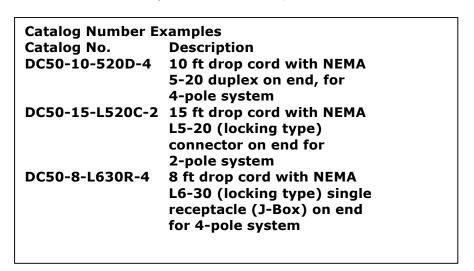
DROP CORD PLUG-IN

Drop Cord Assembly

Shipped assembled complete from the factory based on part number selection including cord, fuses, and wiring device. Drop Cord assemblies with connectors body type (C) wiring device include a wire mesh cord grip at outlet of plug-in box. All other assemblies include wire mesh cord grips at both end of the cord. SJO cord is used in all assemblies.







R - Single Receptacle

Q - Quad

D - Duplex

C - Connector

STARLINE TRACK BUSWAY

60 to 100 Amp Compact Same Units used in both Systems

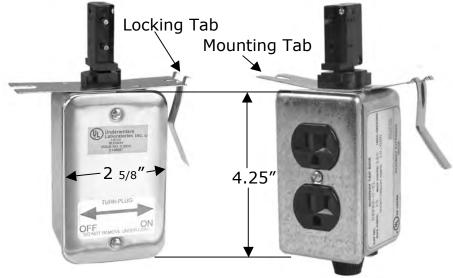
OUTLET PLUG-IN UNITS

Outlet Plug-In units are used to tap off power from the Busway. All plug-in units are equipped with a special plug head called a "Starjack" which inserts into the Busway's continuous slot and turns 90 degrees to make the spring-loaded connection. The installer squeezes the locking tab, inserts the unit into the Busway, turns 90 degrees, and releases the locking tab. Both the locking and the bolt-on mounting tab provide ground connection for the box and load. All plug-in units are polarized to inhibit reverse installation.

A. Junction Box
Standard unit consists of J-box
with Starjack, cover, ground lug
and wire nuts. Optional Class CC
fuseholders available.

B. Receptacle Unit Standard unit consists of J-box with Starjack, NEMA 5-15 or 5-20 duplex, Class CC fuse and fuseholder. Other NEMA configurations available.

Elbow Connector
Factory pre-assembled, elbow
connectors are used for making a
90-degree turn. Refer to Section 8
LAYOUT for polarization issues
before making final selection.



A. Junction Box **OB** Series

B. Outlet Box **DRF** Series





	_	mber Sequence A)-(P)
		→ No. of Poles
		→ Outlet Amp
	_ → Sy	ystem Size
_ >	OB DRF	Outlet Box Duplex Receptacle, Fused

Catalog Number Catalog No.	Selection (Typical) Description	Veight
OB60-L515-4 OB60-L520-4 OB60-L615-4 OB60-L620-4 OB60-L630-4	Outlet box with L5-15 Recpt/w fuse Outlet box with L5-20 Recpt/w fuse Outlet box with L6-15 Recpt/w fuse Outlet box with L6-20 Recpt/w fuse Outlet box with L6-30 Recpt/w fuse	1.4lbs 1.4lbs 1.4lbs 1.4lbs 1.4lbs
	Outlet box, 15 or 30 Amp, 2-pole Outlet box, 15 or 30 Amp, 4-pole for 1, 2 or 3 fuses)	1.1lbs 1.3lbs
(outlet box 300 volt	Duplex Outlet NEMA 5-15 rated, for 600 volt, add "-600" to number np. Add "-20" for 20 amp receptacle)	1.4lbs)

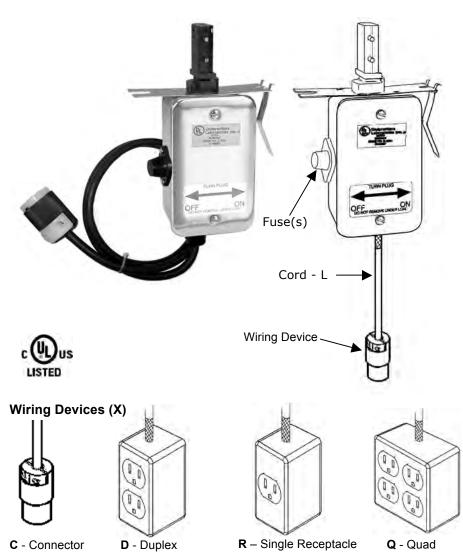
STARLINE TRACK BUSWAY

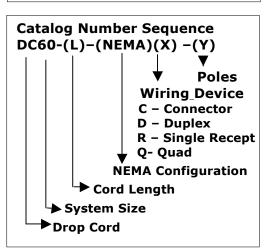
60 to 100 Amp Compact Same Units used in both Systems

DROP CORD PLUG-IN UNITS

Drop Cord Assembly

Shipped assembled complete from the factory based on part number selection including cord, fuses, and wiring device. **Drop Cord assemblies with** connector type (C) wiring device include a wire mesh cord grip at outlet of plug-in box. All other assemblies include wire mesh cord grips at both end of cord. SJO cord is used in all assemblies. Instead of normal fuse type circuit protection, 30 Amp max. circuit breakers can be provided using only E12 or CB60 enclosures. Other NEMA configurations available.





Catalog Number E	xamples	
Catalog No.	Description	
DC60-10-520D-4	10 ft Drop Cord with NEMA	
	5-20 Duplex on end, for	
	4-pole system	
DC60-15-L520C-2	15 ft Drop Cord with NEMA	
	L5-20 (locking type)	
	Connector on end, for	
	2-pole system	
DC60-8-L630R-4	8 ft Drop Cord with NEMA	
	L6-30 (locking type) single	
	Receptacle (J-Box) on end,	
	for 4-pole system	

STARLINE® TRACK BUSWAY

60 to 100 Amp Compact Same Units used in both Systems

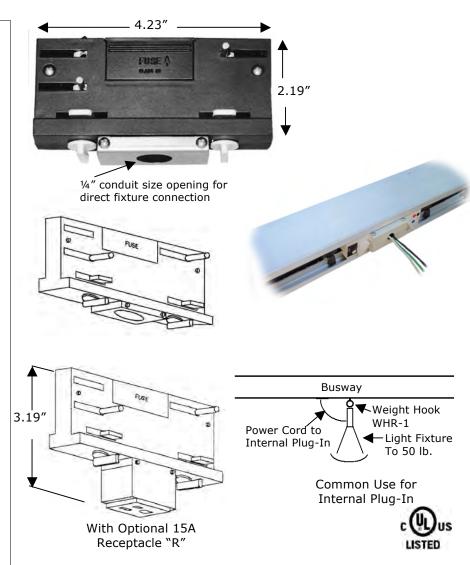
INTERNAL PLUG-IN UNITS

Ideal for applications where the plug head should not be visible such as light fixtures and retail/commercial areas. The unit inserts anywhere along the continuous slot in the STARLINE Track Busway and is energized by turning the two circuit selectors 90 degrees. A mounting plate with a 1/4in. conduit size opening is used for fixture connection. Small unit is rated 13A (for 16AWG wire), 300V max, single phase, fusible, (Class CC fuse not included) and wire nuts. For ballast or fixture applications, 200°C high temperature wire is available.

Internal plugs are also available in ratings of 25A, 300 volt, fusible or non-fusible. The 20 amp version utilizes high temperature wire for ballast and fixture applications.

Unit can also be supplied with a 3 meter SJO cord attached, and no mini box rated at 15A (14/3 SJO) or 20A (12/3 SJO). Units are available with basic cord grip or wire mesh cord grip.

Catalog Number Sequence IP60-(X)F → phase → Internal Plug-in for B60



0-4-1	NI I	C - I + '
Catalog	number	Selection

Catalog No.	Description	Weight
IP60-AF	Fused, Blue phase	0.5 lb
IP60-BF	Fused, Black phase	0.5 lb
IP60-CF	Fused, Red phase	0.5 lb
IP60-SF	Fused, selectable to blue or red phase	e 0.5 lb

* Add "H" for strain relief in mounting plate

"MB" for 25A with mini box

"C15" for 15A cord, 3M

"C20" for 20A cord, 3M

"L10" for high temperature fixture wire

"R" for built-in receptacle



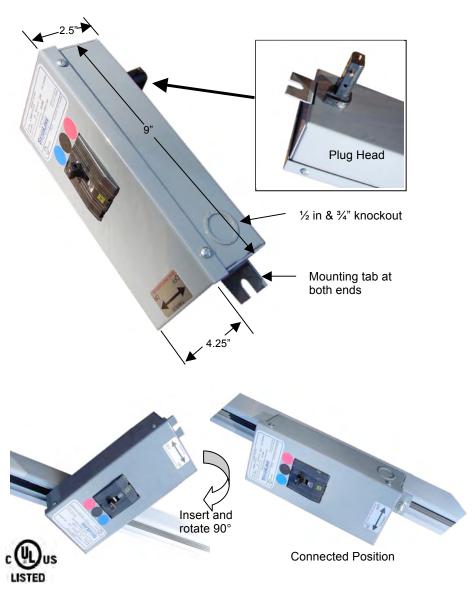
60 to 100 Amp Compact Same Units used in both Systems

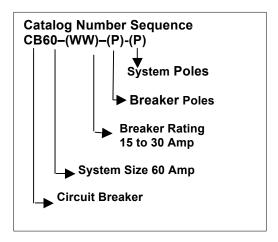
CIRCUIT BREAKER PLUG-IN UNITS

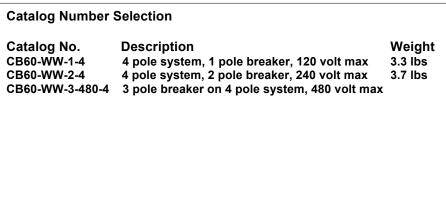
Circuit Breaker

Consists of a full-size junction box with hinged lid, plug head and an externally operated circuit breaker. Insert the plug head into the Busway and rotate 90 degrees to make electrical connections. The units are normally supplied with breakers installed. Optional factory-installed receptacles can be added.

Circuit breakers can be 15 to 30 amps, 250 to 480 volt max, and 1, 2 or 3 pole units. Units with UL Listed multiple breakers are available. For rating over 30 amps and multiple circuit breakers, consult factory. Units include copper grounding lug in the box that fits up to #6 wire, mounting tabs and mounting hardware to secure unit to Busway. UL Listed







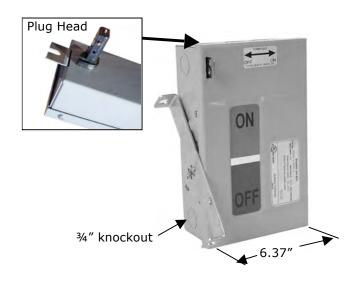


60 to 100 Amp Compact Same Units used in both Systems

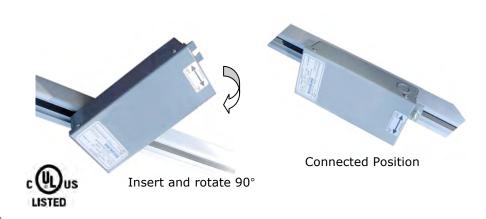
FUSED/DISCONNECT PLUG-IN

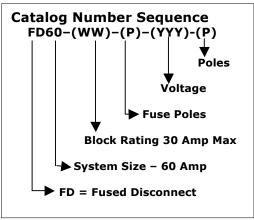
Fused Disconnect - FD

Consists of a full-size junction box with hinged lid, internal fuse block, plug-head and an externally operable disconnect switch. Rocker handle disconnects circuit before box can be opened. Phenolic fuse block is 3-pole, Class RK, 250 or 600 volt and 30 Amp max. All units include a copper grounding lug, mounting tabs and mounting hardware to secure unit to Busway. UL Listed.



External Disconnect - FD





Catalog Number Examples Catalog No. Description

FD60-30-4-250-4 Fused Disconnect unit, 3-pole +4W, 5.2 lbs 30A, 250V, 4-pole system

Weight

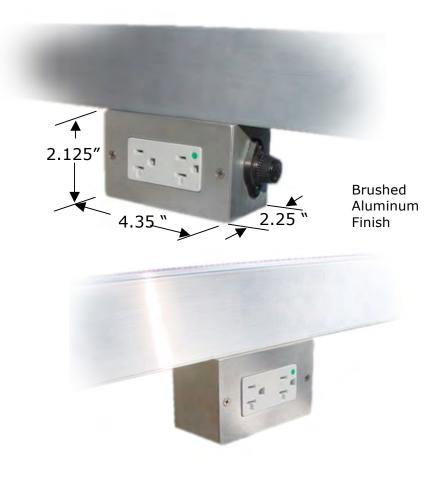


60 to 100 Amp Compact Same Units used in both Systems

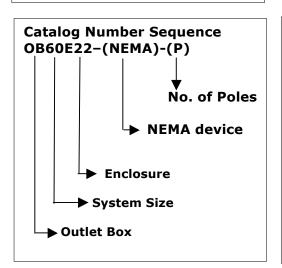
COMMERCIAL PLUG-IN

"Commercial" aluminum Outlet plug-in units are used to tap off power from the Busway. All Commercial plugin units are equipped with the plug head which inserts into the Busway continuous slot and turns 90 degrees to make the spring-loaded connection. The installer simply inserts the unit into the Busway, turns 90 degrees. The bolt-on mounting tab provides ground connection for the box and load. All plug-in units are polarized to inhibit reverse installation.

Standard unit consists of a brushed aluminum box with Starjack. Available with NEMA 5-15, 5-20 Duplex or L5-30, L6-20, L6-30 receptaice. Class CC fuse and fuseholder(s).







Catalog Number Selection Limited to 120/240Volt, 15, 20 or 30 Amp				
Catalog No.	Description	Weight		
OB60E22-515D-4 OB60E22-520D-4 OB60E22-L620-4	Outlet box , 5-15 Duplex/w fuse Outlet box, 5-20 Duplex/w fuse Unit w/L6-20 Recept w/2 fuses	1.4 lbs 1.4 lbs 1.4 lbs		



E12 ENCLOSURE

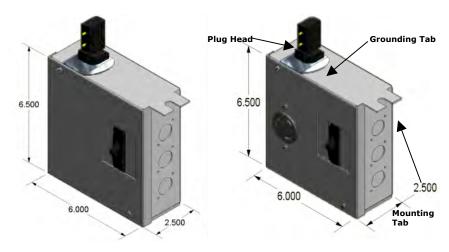
CIRCUIT BREAKER APPLICATIONS

Used to tap off power from the Busway with a wide variety of device configurations.
PREFERRED enclosure for CB units & OB units with breakers.

- PREFERRED enclosure for single or multiple Drop Cords
- Limited to 3 breaker positions.
- Possible combination:
 - NEMA L21-30 with three breaker positions.
 - Double Duplex with 2 breakers
 - Two Drop Cord Assemblies
- Consult factory for possible combinations.
- Maximum ratings of 30 amps, 240V, 10,000 AIC.
- Locked into position with a single bolt on mounting tab.

Normal position, breaker faces Busway label side

Rear position, must be ordered from factory

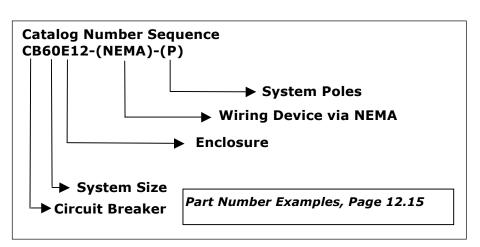


CB Junction Box

NEMA L5-20 Shown









E12 ENCLOSURE

CIRCUIT BREAKER PROTECTIN E12 ENCLOSURE

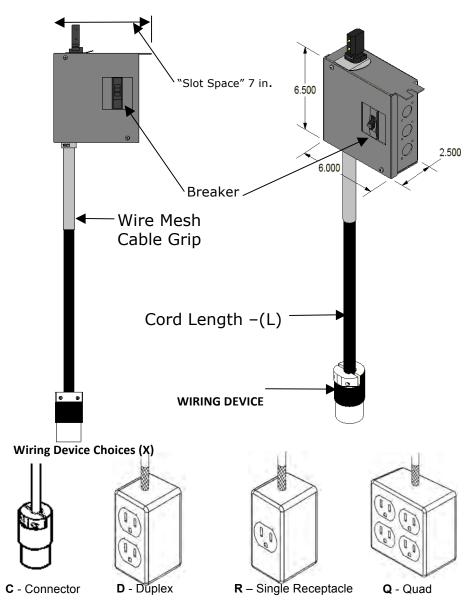
Drop Cord Assembly

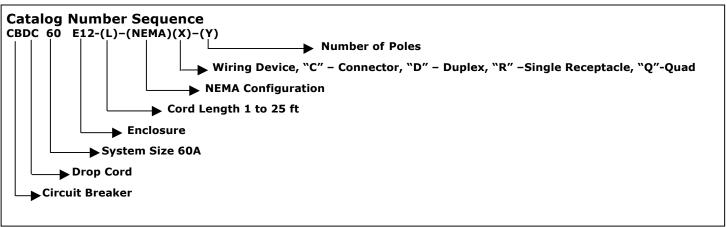
Used to tap off power from the Busway with a wide variety of device configurations. Plug head is reversible to face in opposite direction.

Shipped assembled complete from the factory based on part number selection including cord, breaker(s), and end effecter. Drop Cord assemblies with connector (C) end effecter include a wire mesh cord grip at outlet of plug-in box. All other assemblies include wire mesh cord grips at both ends of cord.

E12 General Use

- PREFERRED enclosure for single or multiple Drop Cords (up to three)
- Limited to 3 breaker positions.
- Consult factory for possible combinations.





B100A, B100N, B225, B100G, B100NG, B225G



PLUG-IN SELECTION

Units for use with B100A, B100N, and B225 systems
Units for use with B100G, B100NG, and B225G systems

Outlet Units Pages 12.18-12.22

Drop Cords Pages 12.23-12.24

Circuit Breakers Page 12.25-12.28



Circuit Breakers Page 12.29

Fused Disconnects Page 12.30-12.32



Terminal Blocks Page 12.33-12.34



100, 225 Amp B100A, B100N, B225, B100G, B100NG, B225G

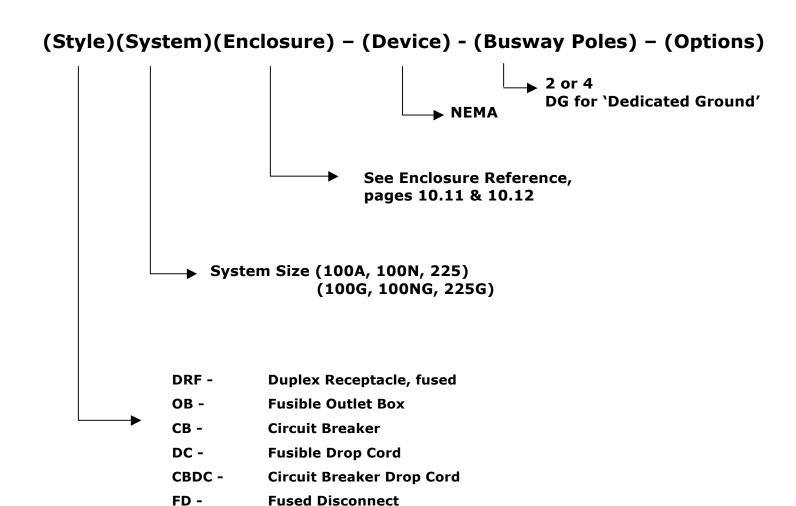


PLUG-IN SELECTION

Same Units to be used in ALL B100A, B100N, and B225 systems Similar Units to be used in ALL B100G, B100NG, and B225G systems

Basic Part Number Nomenclature

Although there are many custom units available, the units shown below are considered standard





100, 225 Amp Plug-Ins

B100, B225 SYSTEMS

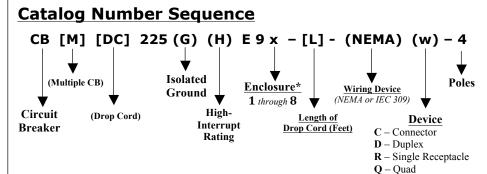
E90 ENCLOSURECircuit Breaker Applications

Next-generation, custom engineered enclosure that features a stylish exterior combined with a spacious interior and customizable body length to accommodate a wide variety of applications. The E90-Series enclosure is designed to tap off power from the busway. The option is available to have a reverse paddle such that the enclosure faces in the opposite direction when in the busway.

- Configurable unit length for multiple circuit breaker pole positions.
- Locks into position using a single, easy access bolt
- Maximum rating of 22kA at 480V for B100, 22kA at 240V for B225
- Consult factory for possible combinations*



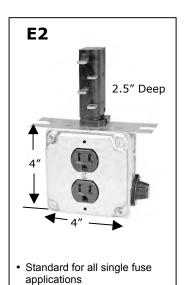




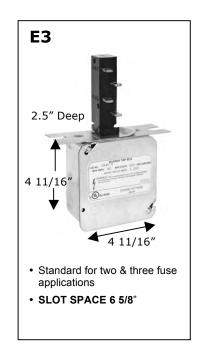
ENCLOSURE REFERENCE

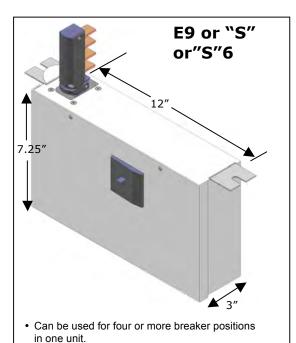


B100A, B100N, B225, B100G B100NG, B225G Systems Only

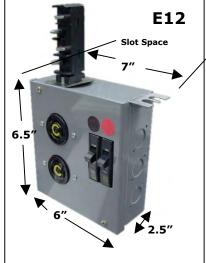


• SLOT SPACE 6 5/8"

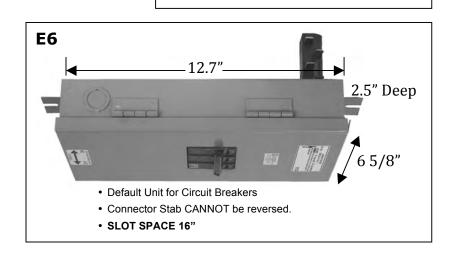




- Used as a "Mini-Panel" for multiple outlets.
 Connector stab faces away from face. Can be ordered with connector stab facing front. IMPORTANT for layout considerations.
 - SLOT SPACE 15" Consider using two E12 enclosures for less slot space



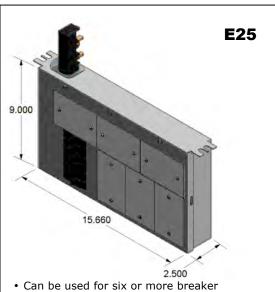
- PREFERRED Outlet Box or Drop Cord for Breaker applications up to 3 positions & 60 Amp/240V
- · Connector stab is field reversible.
- SLOT SPACE 7"



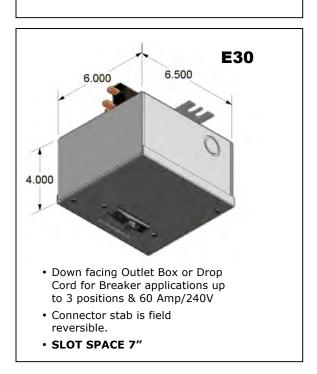
ENCLOSURE REFERENCE

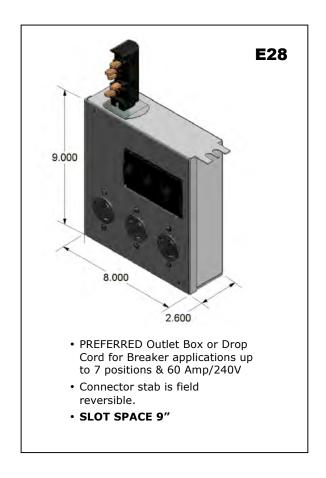


B100A, B100N, B225, B100G B100NG, B225G Systems Only



- positions in one unit.
- Used as a "Mini-Panel" for multiple outlets.
- Connector stab is field reversable
- SLOT SPACE 16.5". Consider using two E12 enclosures for less slot space





B100A, B100N, B160, B225, B100G, B100NG, B225G



E2 & E3 ENCLOSURES

FUSE APPLICATIONS

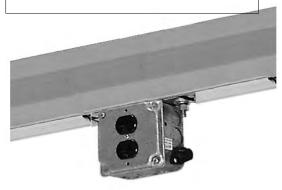
Plug-in units are used to tap off power from the Busway. All plug-in units are equipped with a plug head and grounding tab which inserts into the busway's continuous slot and turns 90 degrees to make the springloaded connection. The installer simply inserts the unit into the Busway, becomes automatically grounded and turns 90 degrees. Unit is locked into position with bolt-on mounting tabs. All plugin units are polarized to inhibit reverse installation. Refer to layout for further explanation.

OB Junction Box

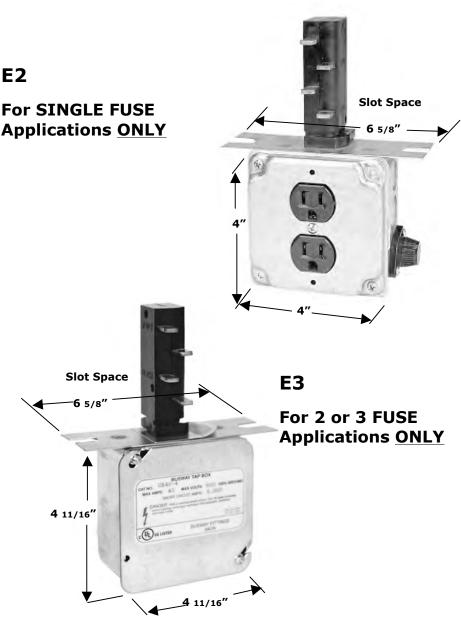
Standard unit consists of a 4" or 4-11/16" square junction box with plug-head. Optional Class CC fuse holders are available. 300V max volts for systems >100 amps, 600V max for 100 amp systems.

Duplex Receptacle Unit

Standard unit consists of box with plug-head, NEMA 5-15, 5-20 duplex, Class CC fuse and fuse holder.



E2 & E3 enclosures face parallel to busway on conductor side



Common Catalog Number Selection

Catalog No. Description OB100NE2-515D-4 Outlet Box,

OB100NE2-515D-4 Outlet Box, Duplex, NEMA 5-15
OB225E2-520D-4 Outlet Box, Duplex, NEMA 5-20
OB100AE3-520Q-4Q Outlet Box, Quad, NEMA 5-20

OB225E3-520Q-4-2F Outlet Box, Quad, NEMA 5-20, 2 Fuses

B100A, B100N, B225, B100G, B100NG, B225G



E4 FOR 480 VOLT

Plug-in units are used to tap off power from the Busway. All plug-in units are equipped with a plug head and grounding tab which inserts into the Busway continuous slot and turns 90 degrees to make the springloaded connection. The installer simply inserts the unit into the Busway. Unit is locked into position with bolt-on mounting tabs. All plug-in units are polarized to inhibit reverse installation.

OB Junction Box, E4

Rated to 600 volts for 160 and 225 amp systems. Standard unit consists of a 6 x 6 x4 in. box with plug-head, cover, ground lug and wire nuts. Uses Class CC fuseholders.

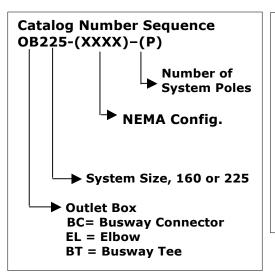


OB Junction Box (shown with two fuses)



Standard perpendicular facing outlet





Common Catalog Number Selection

Catalog No.	Description	Weight
OB225-30-4* OB225-30-3* OB225-60-4 OB225-60-3 OB225-30-4-3F	Outlet Box, 30 Amp, 4-pole Outlet Box, 30 Amp, 3-pole Outlet Box, 60 Amp, 4-pole Outlet Box, 60 Amp, 3-pole Outlet Box, 30A, 3 Fuseholders	4 lbs 4 lbs 4.2 lbs 4.2 lbs 4 lbs

* - add"-1F, -2F or 3F for Class CC fuseholders. Order Class CC fuses separately

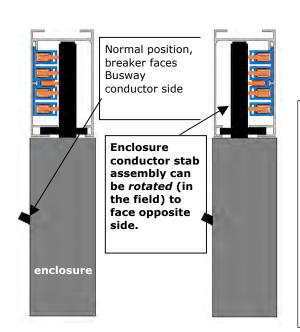
B100A, B100N, B225, B100G, B100NG, B225G



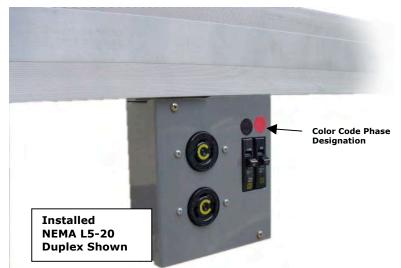
E12 ENCLOSURES CIRCUIT BREAKER APPLICATIONS

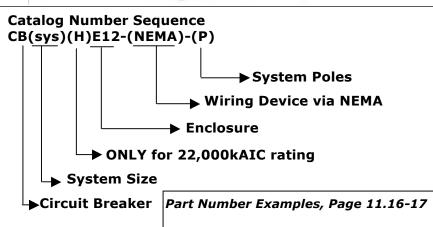
Used to tap off power from the Busway with a wide variety of device configurations. Plug head is reversible to face in opposite direction.

- PREFERRED enclosure for CB units & OB units with breakers.
- PREFERRED enclosure for single or multiple drop cords
- Limited to 3 breaker positions.
- Possible combination:
 - NEMA L21-30 with three breaker positions
 - Double duplex with 2 breakers
 - Two drop cord assemblies
- Consult factory for possible combinations.
- Maximum ratings of 60 amps, 240V, 22,000 AIC. ("H")
- Locked into position with a single bolt on mounting tab.









B100A, B100N, B225, B100G, B100NG, B225G



E12 ENCLOSURES

CIRCUIT BREAKERS APPLICATIONS

CATALOG NUMBER	FUSES		WIRING DEVISES	
	NUMBER	AMPERAGE	NEMA	QTY
OB225E12-30-4	NONE	30	NONE	
OB225E12-515D-4	1	15	5-15 DUPLEX	1
OB225E12-L515-4	1	15	L5-15 SINGLE	1
OB225E12-L515D-4	1	15	L5-15 DUPLEX	1
OB225E12-(3)L515-4	1	15	L5-15 SINGLE	3
OB225E12-520D-4	1	20	5-20 DUPLEX	1
OB225E12-520Q-4	1	20	5-20 DUPLEX	2
OB225E12-520Q-4-2F	2	20	5-20 DUPLEX	2
OB225E12-L520-4	1	20	L5-20 SINGLE	1
OB225E12-L520D-4	1	20	L5-20 DUPLEX	1
OB225E12-(3)L520-4	1	20	L5-20 SINGLE	3
OB225E12-L520-L620-4	3	20	L5-20 SINGLE L6-20 SINGLE	1 1
OB225E12-L530-4	1	30	L5-30 SINGLE	1
OB225E12-(3)L530-4	1	30	L5-30 SINGLE	3
OB225E12-L620-4	2	20	L6-20 SINGLE	1
OB225E12-L630-4	2	30	L6-30 SINGLE	1
OB225E12-L1530-4	3	30	L15-30 SINGLE	1

B100A, B100N, B225, B100G, B100NG, B225G



E12 ENCLOSURES

CIRCUIT BREAKERS APPLICATIONS

PART NUMBER EXAMPLES

CATALOG NUMBER	CIRCUIT BREAKER(S)		WIRING DEVICE		
	Number	Amperage	Poles	NEMA	QTY
CB225E12-15-1-240-4	1	15	1	NONE	
CB225E12-15-2-240-4	1	15	2	NONE	
CB225E12-15-3-240-4	1	15	3	NONE	
CB225E12-20-1-240-4	1	20	1	NONE	
CB225E12-20-2-240-4	1	20	2	NONE	
CB225E12-20-3-240-4	1	20	3	NONE	
CB225E12-30-1-240-4	1	30	1	NONE	
CB225E12-30-2-240-4	1	30	2	NONE	
CB225E12-30-3-240-4	1	30	3	NONE	
CBM225E12-1/20-3-240-4	3	20	1	NONE	
CB225E12-515D-4	1	15	1	5-15 Duplex	1
CB225E12-520D-4	1	20	1	5-20 Duplex	1
CB225E12-520Q-4	1	20	1	5-20 Duplex	2
CB225E12-L515-4	1	15	1	L5-15 Single	1
CB225E12-L515D-4	1	15	1	L5-15 Duplex	1
CB225E12-(3)L515-4	1	15	1	L5-15 Single	3
CB225E12-L520-4	1	20	1	L5-20 Single	1
CB225E12-L520D-4	1	20	1	L5-20 Single	2
CB225E12-(3)L520-4	1	20	1	L5-20 Single	3
CB225E12-L530-4	1	30	1	L5-30 Single	1
CB225E12-(3)L530-4	1	30	1	L5-30 Single	3
CB225E12-L620-4	1	20	2	L6-20 Single	1
CB225E12-L630-4	1	30	2	L6-30 Single	1
CBM225E12-L520-L620-4	1 1	20 20	1 2	L5-20 Single L6-20 Single	1
CB225E12-L1530-4	1	30	3	L15-30 Single	1
CB225E12-L2130-4	1	30	3	L21-30 Single	1

B100A, B100N, B225, B100G, B100NG, B225G



DROP CORD PLUG-IN

CIRCUIT BREAKERS PROTECTION E12 ENCLOSURE

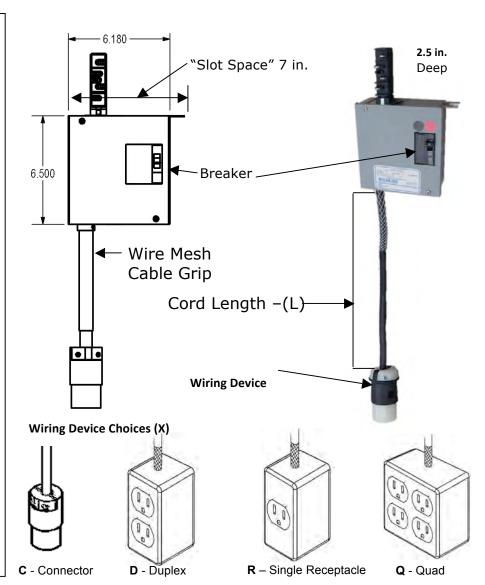
Drop Cord Assembly

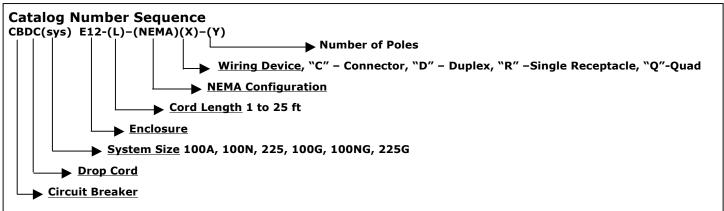
Used to tap off power from the Busway with a wide variety of device configurations. Plug head is reversible to face in opposite direction.

Shipped assembled complete from the factory based on part number selection including cord, breaker(s). Drop cord assemblies with connector (C) include a wire mesh cord grip at outlet of plug-in box. All other assemblies include wire mesh cord grips at both ends of cord.

E12 General Use

- PREFERRED enclosure for single or multiple Drop Cords (up to three)
- Limited to 3 breaker positions.
- Consult factory for possible combinations.





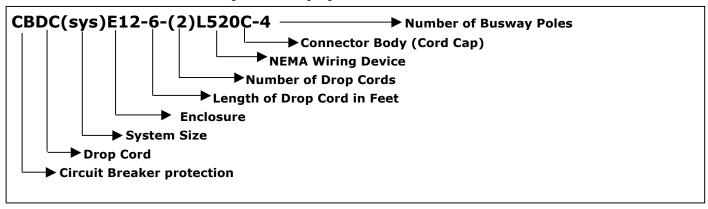
B100A, B100N, B225, B100G, B100NG, B225G



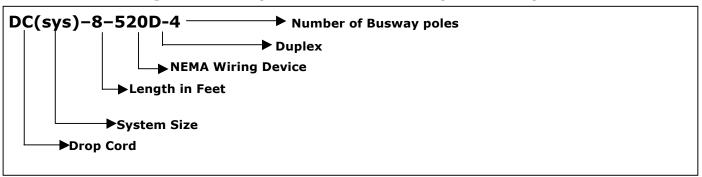
DROP CORD SELECTION

PART NUMBER EXAMPLES

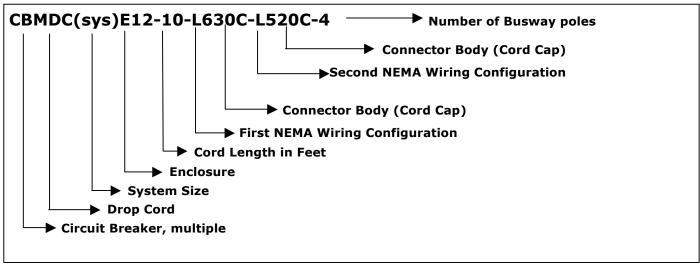
For B225 System, *Circuit Breaker protection* with two (2), 6 ft Drop Cords, NEMA L5-20 Connectors (Cord Caps)



For B100N, a single, 8 ft Drop Cord with 5-20 Duplex, fuse protection



For B225 System, Circuit Breaker protection with one 10 ft Drop Cord with NEMA L6-30 Connector and one 10 ft Drop Cord with L5-20 Connector



B100A, B100N, B225, B100G, B100NG, B225G



E25 CIRCUIT BREAKER PLUG-IN

VERTICAL (FRONT OPERABLE) TYPE

Vertical Circuit Breaker

Basic circuit breaker is front operable and comes with a circuit breaker base that will accommodate 1 thru 6-pole circuit breakers up to 240 volt. Basic unit is rated for 10kAIC with some breaker options for 22kAIC. Selection information for these units should include amp rating, number of breaker poles and Busway system poles. Units are very versatile and can also be ordered with various outlet configurations. Refer to 100 Amp Drop Cords for selection information.



CBM(sys)E25-(NEMA)(y)-(P) System Poles Wiring Device NEMA Configuration System Size

→Circuit Breaker, multiple

Catalog Number Sequence

Catalog Number Selection

Catalog No. Description Weight

CBM225E25-(x)-(NEMA) (y)-4 240V, 10kAIC, 4-pole Busway 12 lbs CBM225HE25-(x)-(NEMA) (y)-4 240V, 22kAIC, 4-pole Busway 12 lbs

x=length of cord

NEMA = NEMA Configuration

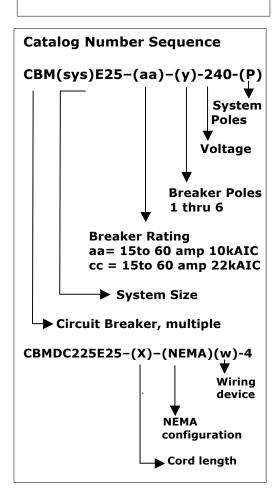
"D" - Duplex, "R" - Single Receptacle, "Q" - Quad

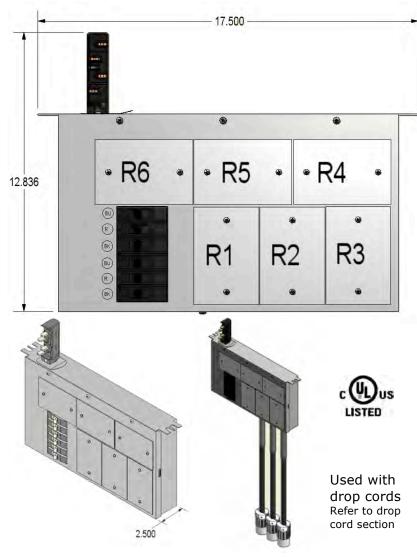
B100A, B100N, B225, B100G, B100NG, B225G

STARLINE TRACK BUSWAY

E25 CIRCUIT BREAKER PLUG-IN DROP CORD UNITS

Vertical Circuit Breaker Basic circuit breaker is front operable and comes with circuit breaker base that will accommodate 1, thru 6-pole circuit breakers up to 240 volt. Basic unit is rated for 10kAIC with some breaker options for 22kAIC. Selection information for these units should include amp rating, number of breaker poles and Busway system poles. Units are very versatile and can also be ordered with various outlet and drop cord configurations. Refer to Drop **Cord Units for selection** information.





Typical Catalog Number Selection			
Catalog No.	Description	Weight	
CBF225E25-60-6-240-4	240V, 10kAIC, 3/4-pole Busway	12 lbs	
CBM225E25-p/aa-x-240-4	240V, 10kAIC, 3/4-pole Busway	12 lbs	
CBM225AE25-p/cc-x-240-4	240V, 22kAIC, 3/4-pole Busway	12 lbs	
CBMDC225AE25-X-L620C-4	240V, 22kAIC, 3/4-pole Busway	12 lbs	
p=no. of poles, aa=15-60 Amp, 10kAIC, cc=15-60 Amp, 22kAIC			
x=total number of poles, 1-6, X=length of cord			

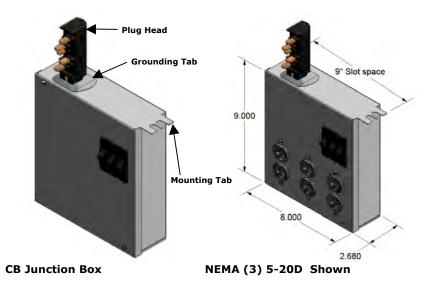
B100A, B100N, B225; B100G, B100NG, B225G

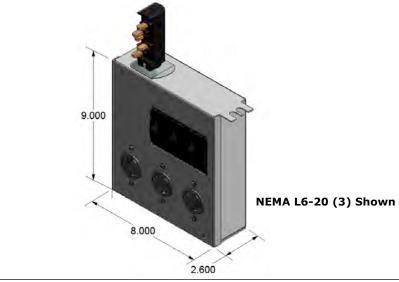


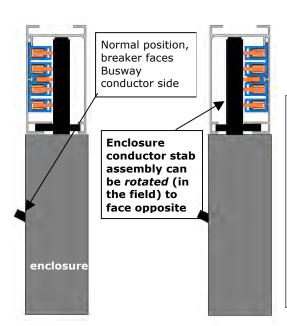
E28 ENCLOSURE CIRCUIT BREAKER APPLICATIONS

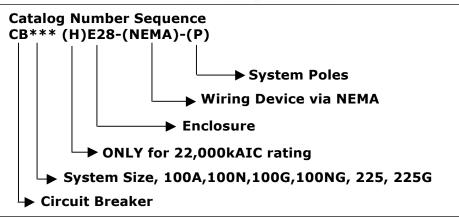
Used to tap off power from the Busway with a wide variety of device configurations. Plug head is reversible to face in opposite direction.

- Use only where E12 is insufficient
- Capable to 7 breaker positions and four receptacles
- Possible combination:
 - (3)NEMA L6-20 and one 5-20 duplex
 - (3) NEMA L6-30
- Consult factory for possible combinations.
- Maximum ratings of 100 total amps, 240V, 22,000 AIC. ("H")
- Locked into position with a single bolt on mounting tab.









B100A, B100N, B225; B100G, B100NG, B225G



DROP CORD PLUG-IN E28 CIRCUIT BREAKER PROTECTION E28 ENCLOSURE

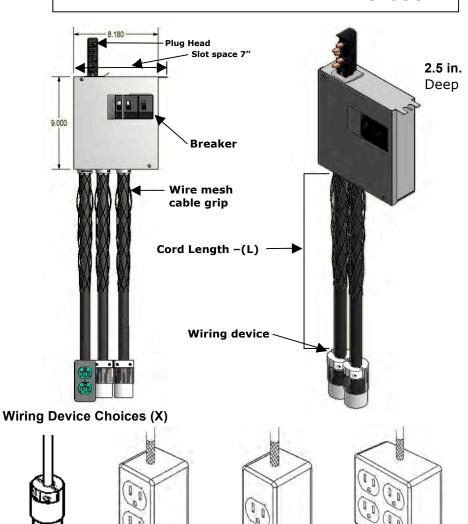
Drop Cord Assembly

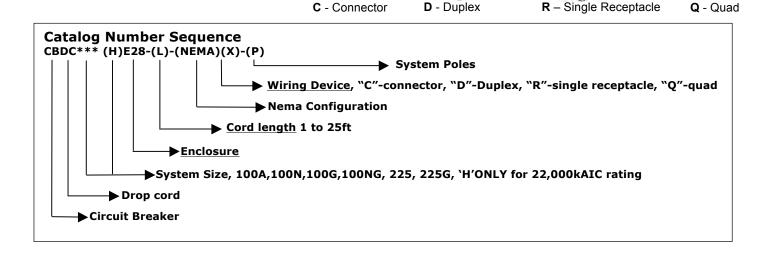
Used to tap off power from the Busway with a wide variety of device configurations. Plug head is reversible to face in opposite direction.

Shipped assembled complete from the factory based on part number selection including cord, breaker(s). Drop cord assemblies with connector (C) include a wire mesh cord grip at outlet of plug-in box. All other assemblies include wire mesh cord grips at both ends of cord.

E28 General Use

- Use where E12 in insufficient.
- Capable to 7 breaker positions. Drop Cords (up to three)
- Consult factory for possible combinations.





B100A, B100N, B160, B225; B100G, B100NG, B225G

STARLINE® TRACK BUSWAY

Drop Cord Assembly

Used to tap off power from the Busway with a wide variety of device (End Effecter) configurations. Plug head is not reversible to face in opposite direction.

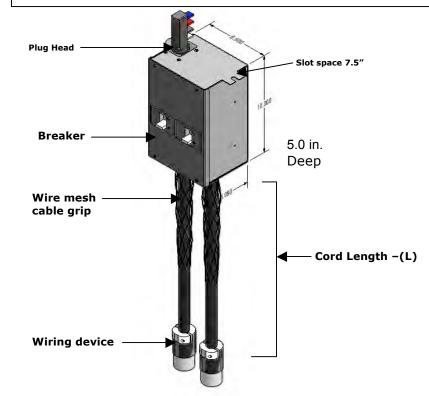
Shipped assembled complete from the factory based on part number selection including cord, breaker(s), and end effecter. Drop cord assemblies with connector (C) end effecter includes a wire mesh cord grip at outlet of plug-in box. All other assemblies include wire mesh cord grips at both ends of cord.

**This box faces the opposite of the E12 and E28 standard. **

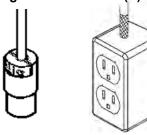
E37 General Use

- Use where 480V or 415V is needed.
- Capable to 6 breaker positions. Drop Cords (up to two)
- Consult factory for possible combinations.

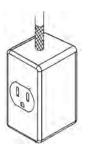
DROP CORD PLUG-IN E37 415V or 480V CIRCUIT BREAKER PROTECTION E37 ENCLOSURE



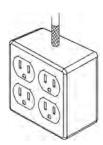




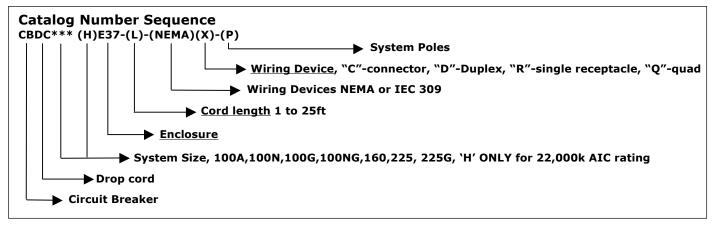




R - Single Receptacle



Q - Quad



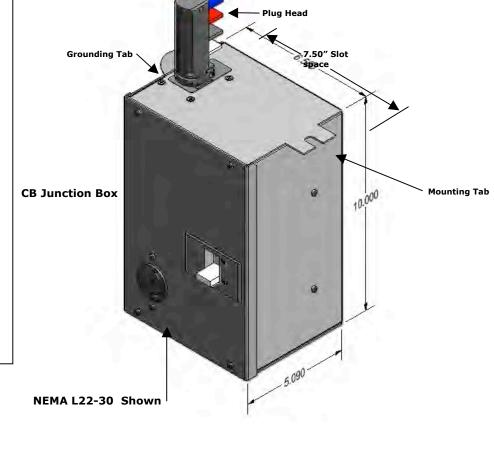
100, 225 Amp B100A, B100N, B225; B100G, B100NG

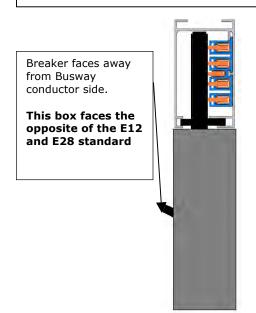


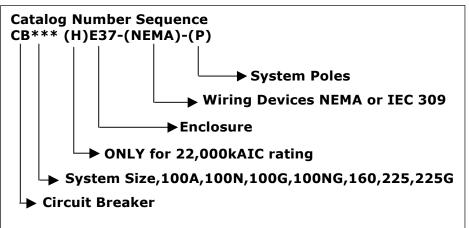
E37 ENCLOSURE 415V or 480V CIRCUIT BREAKER APPLICATIONS

Used to tap off power from the Busway with a wide variety of device configurations. Plug head is not reversible to face in opposite direction.

- PREFERRED enclosure for Circuit breaker units up to 60A/480V or 415V
- Capable to 3 breaker positions and three receptacles
- Example Combination:
 - (1) NEMA L22-30
 - (3) NEMA L7-30
- Consult factory for possible combinations.
- Maximum ratings of 225 total amps, 415V, 22,000 AIC. ("H")
- Locked into position with a single bolt on mounting tab.







B100A, B100N, B225, B100G, B100NG, B225G



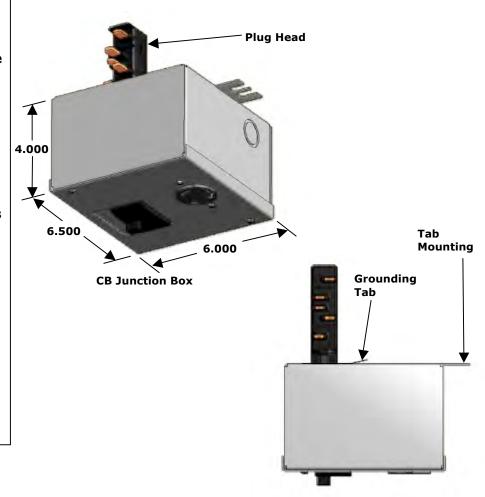
E30 ENCLOSURE

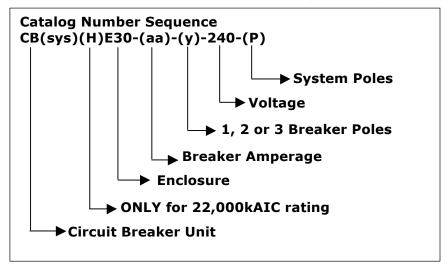
CIRCUIT BREAKER APPLICATIONS

Used to tap off power from the Busway for Circuit Breaker applications. Downward facing circuit breaker operation, device access.

PREFERRED enclosure for CB units & OB units with breakers.

- Use where access from below is essential
- Limited to 3 breaker positions
- Variety of drop cords or receptacles available.
- Consult factory for possible combinations.
- Maximum ratings of 60 amps, 240V, 22,000 AIC. ("H")
- Locked into position with a single bolt on mounting tab.



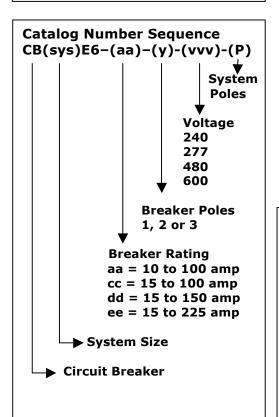


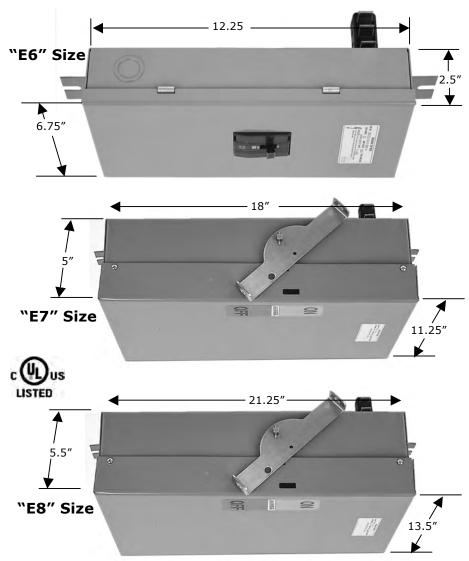
B100A, B100N, B225, B100G, B100NG, B225G



Circuit Breaker Plug-In E6, E7, E8 Enclosures

Basic circuit breaker plug-in faces downward and is available in a wide variety of ratings. Consult factory for assistance. Selection information for these units should include amp rating, voltage rating, number of breaker poles and Busway system poles. All circuit breakers are mounted internally. A floor operable external discount is also available with 240V units. **Enclosure size varies with** required ratings. Units can also be ordered with various drop cord configurations. This is the default circuit breaker enclosure unless specified otherwise.





Typical Catalog	Number Selection	
Catalog No.	Description	Weight
CB225E6-aa-y-240-4	240 Volt for 4-pole Busway	8 lbs
CB225E7-dd-1-277-4	1-Pole/277 Volt/4-pole Busway	19 lbs
CB225E7-dd-1-277-3	1-Pole/277 Volt/3-pole Busway	19 lbs
CB225E7-dd-3-480-4	3-Pole/480 Volt for 4-pole Busway 20 lbs	
CB225E8-ee-3-600-4	3-Pole/600 Volt for 4-pole Buswa	ay 29 lbs
	•	-
Add "DIS" suffix for F	loor Operated Disconnect for 240	/ Unite
	•	Oilles
Disconnect standard f	for ALL other units	

100, 60, 225 Amp B100A, B100N, B225, B100G, B100NG, B225G

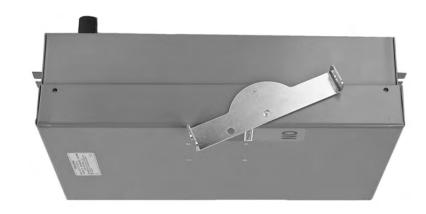


FUSED DISCONNECT PLUG-IN

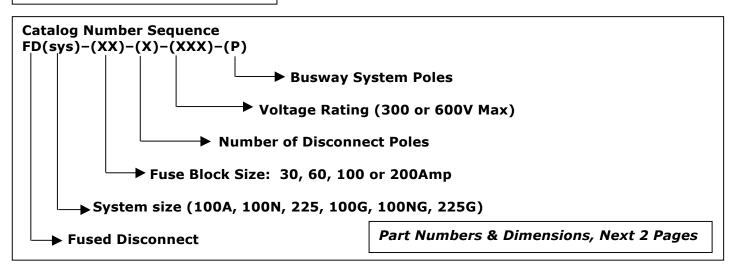
Fused Disconnect

Standard units include J-box, plug head, removable lid, fuse blocks rated at 30, 60, 100 or 200 Amp max, a floor operable disconnect rated at 300 or 600V. 240V and 100 series 600V fuse blocks take Class RL fuses. 160/225 series 600V take Class J Fuses. Fuses are not included and may be ordered separately.

All units include two mounting bolts and a ground lug. All 4-pole units include a neutral connection. Knockouts are provided on two sides. Drop cord assemblies are also available as needed.





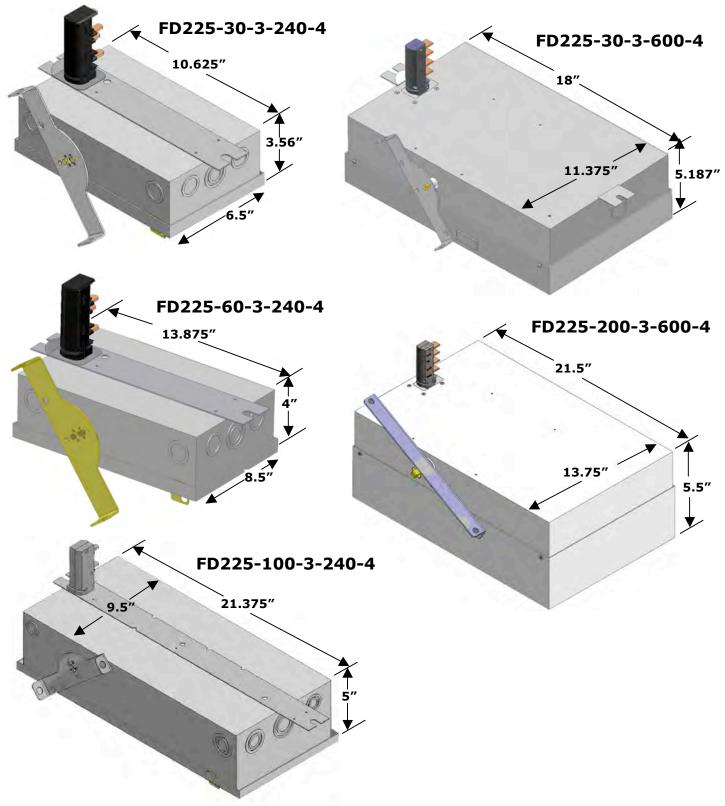


100, 225 Amp

B100A, B100N, B225, B100G, B100NG, B225G



FUSED DISCONNECT PLUG-IN

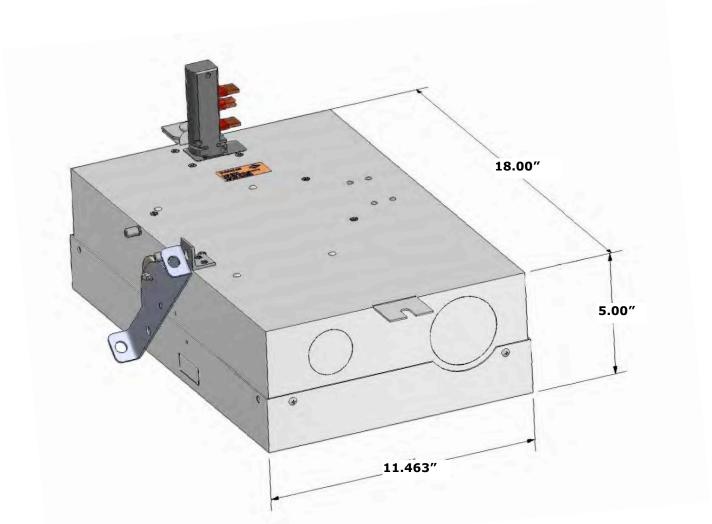


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100, 225 Amp B100A, B100N, B225, B100G, B100NG, B225G



FUSED DISCONNECT PLUG-IN



FD225-30-3-600-4

FD225-60-3-600-4

FD225-100-3-600-4

100, 225 Amp

B100A, B100N, B225, B100G, B100NG, B225G



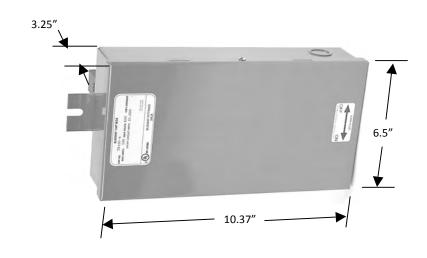
TERMINAL BLOCK PLUG-IN

Terminal Block - TB

Consist of a full-sized junction box with hinged lid, terminal block, and plug head. Insert plug head in the Busway, rotate 90 degrees to make electrical connection. Held in position by inserting bolt hangers (supplied) in mounting tabs on either side of unit.

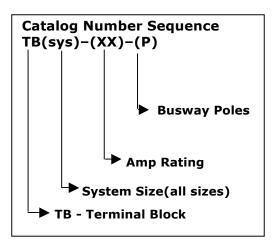
All units include a copper grounding lug for up to #6AWG. 4-pole unit includes neutral wire and wire nut or neutral block over 40 Amps. Units have ½ in. and ¾ in. conduit knockouts on 3 sides.

Rated to 40A or 100A/600V for 100A systems; Rated to 100A/300V for systems over 100A. Refer to page 11.28 for larger units.



TB – Terminal Block





Catalog Number Selection

Catalog No. Description Weight TB100A-40-3 Terminal Block, 40A, 600V, 3-pole 5.5 lbs TB225- 100-3 Terminal Block, 100A, 600V, 3-pole 6.0 lbs

100NG, 225 Amp

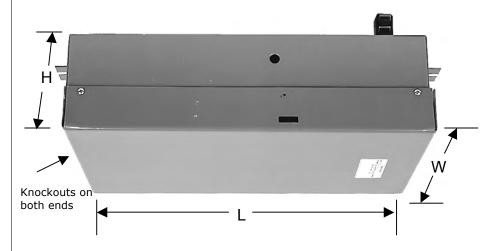
B100N, B100NG, B225 Systems



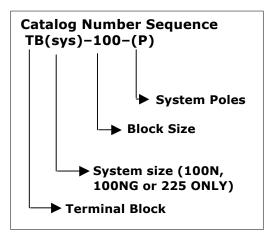
TERMINAL BLOCK PLUG-IN

Terminal Block

Plug-In units with a 3 or 4pole insulated terminal block,
rated at 100 Amps with 200%
neutral and 225 Amps are
used for direct wire tap off, or
for a bottom power feed. All
units include a ground block.
All 4-pole units include a
neutral block rated at 225
Amps. Units are NOT available
for B225G systems.







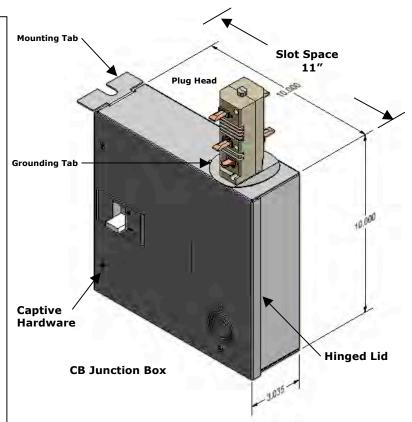
Catalog Numb	umber Selection				
Catalog No.	Description	Weight	L	Size W	н
TB100NG-100-4 TB225-225-4	100A/200%N, 300V,4P 225A, 600V, 4-pole	16 lbs 17 lbs	12.5" 18"	6.75″ 11.25″	

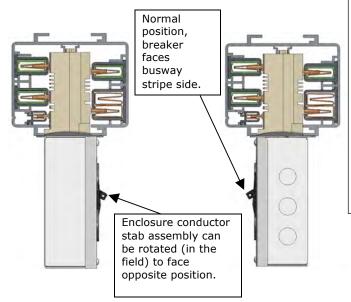


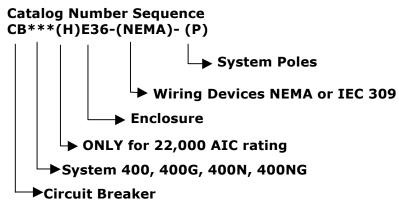
E36 ENCLOSURE 415V or 480V Circuit Breaker Applications

Used to tap off power from the Busway with a wide variety of device configurations. Plug head is reversible to face in opposite direction.

- PREFERRED enclosure for Circuit breaker units up to 100A/480V or 415V
- PREFERRED enclosure for single or multiple 415 or 480V receptacles
- Capable of up to 6 breaker positions.
- Consult factory for possible combinations.
- Maximum ratings of 100 amps, 480V, 22,000 AIC. ("H") typical
- Locked into position with a single bolt on mounting tab.









DROP CORD PLUG-IN 415V or 480V E36 ENCLOSURE CIRCUIT BREAKER DROP CORD APPLICATIONS

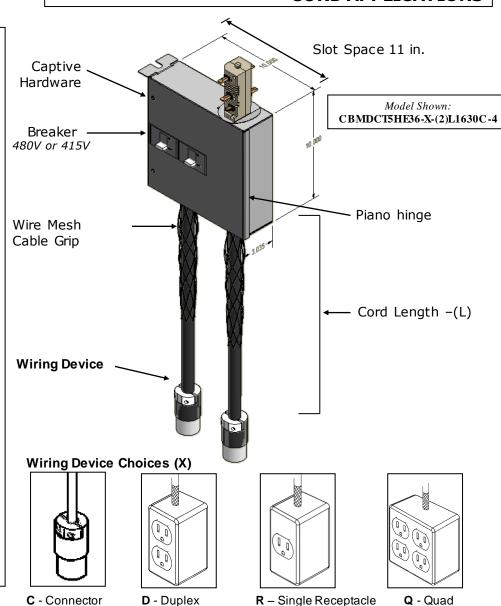
Drop Cord Assembly

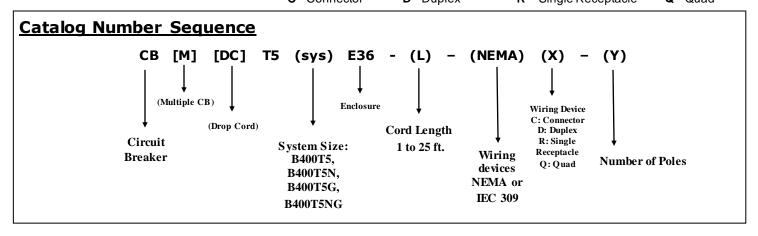
Used to tap off power from the Busway with a wide variety of device configurations. Plug head is reversible to face in opposite direction.

Shipped assembled complete from the factory based on part number selection including cord, breaker(s). Drop Cord assemblies with connectors (C) include a wire mesh cord grip at outlet of plug-in box. All other assemblies include wire mesh cord grips at both ends of cord.

E36 General Use

- PREFERRED enclosure for single or multiple Drop Cords (two cords max) up to 100A/480V or 415V.
- 6 breaker positions.
- Consult factory for possible combinations.

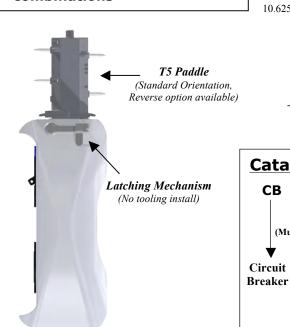






Next-generation, custom engineered enclosure that features a stylish exterior combined with a spacious interior and customizable body length to accommodate a wide variety of applications. The E50-Series enclosure is designed to tap off power from the busway and is compatible with all "T5" systems. The option is available to have a reverse T5 Paddle such that the enclosure faces in the opposite direction when in the busway.

- Configurable unit length for multiple circuit breaker pole positions.
- Locks easily and quickly into position using a "no tooling" latching mechanism
- Maximum rating of 35kA at 480V
- Consult factory for possible combinations*



T5 Series Plug-Ins

B250T5, B400T5, B800T5 SYSTEMS

E50 ENCLOSURE Circuit Breaker Applications

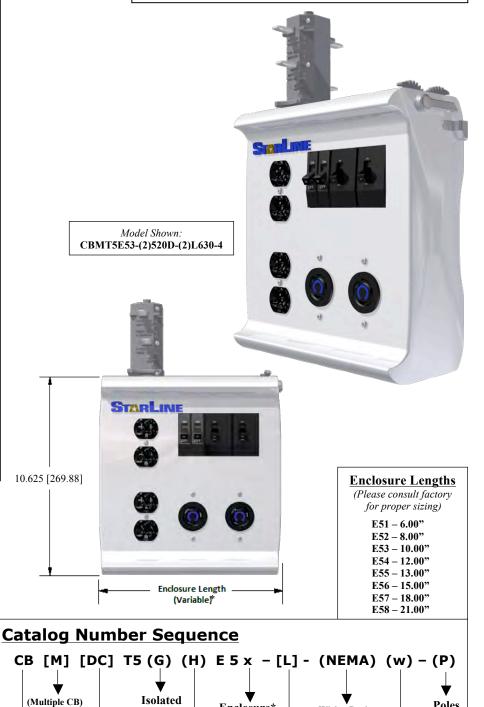
Poles

Device

C - Connector

D - Duplex R – Single Receptacle

 \mathbf{Q} – Quad



Enclosure*

1 through 8

Length of

Drop Cord (Feet)

Wiring Device

(NEMA or IEC 309)

(Drop Cord)

Ground

High-

Interrupt

Rating



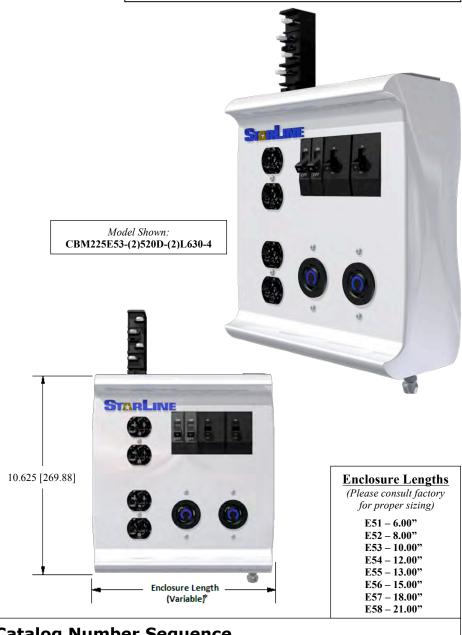
100, 225 Amp Plug-Ins

B100, B225 SYSTEMS

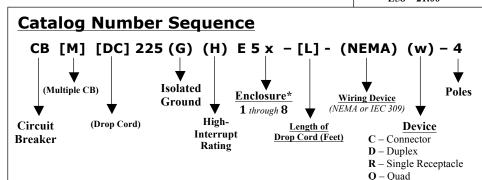
E50 ENCLOSURECircuit Breaker Applications

Next-generation, custom engineered enclosure that features a stylish exterior combined with a spacious interior and customizable body length to accommodate a wide variety of applications. The E50-Series enclosure is designed to tap off power from the busway. The option is available to have a reverse paddle such that the enclosure faces in the opposite direction when in the busway.

- Configurable unit length for multiple circuit breaker pole positions.
- Locks into position using a single, easy access bolt
- Maximum rating of 35kA at 480V for B100, 35kA at 240V for B225
- Consult factory for possible combinations*









Next-generation, custom engineered enclosure that features a stylish exterior combined with a spacious interior and customizable body length to accommodate a wide variety of applications. The E90-Series enclosure is designed to tap off power from the busway and is compatible with all "T5" systems. The option is available to have a reverse T5 Paddle such that the enclosure faces in the opposite direction when in the busway.

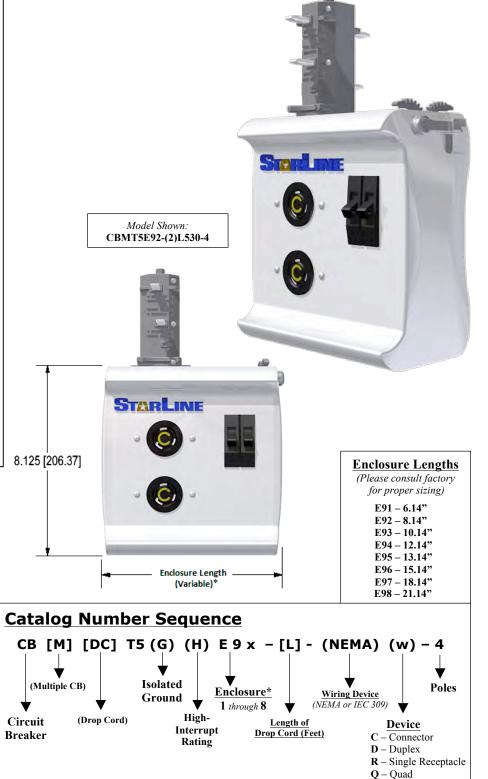
- Configurable unit length for multiple circuit breaker pole positions.
- Locks easily and quickly into position using a "no tooling" latching mechanism
- Maximum rating of 22kA at 480V
- Consult factory for possible combinations*



T5 Series Plug-Ins

B250T5, B400T5, B800T5 SYSTEMS

E90 ENCLOSURECircuit Breaker Applications



B250T5, B400T5, B800T5 SYSTEMS



DROP CORD PLUG-IN

E12 ENCLOSURE CIRCUIT BREAKER DROP CORD APPLICATIONS

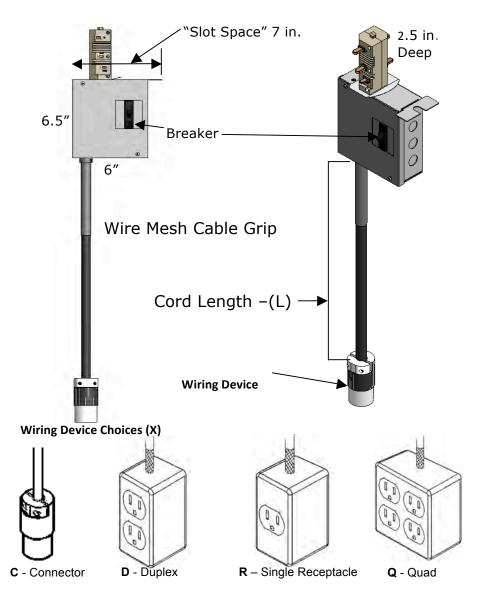
Drop Cord Assembly

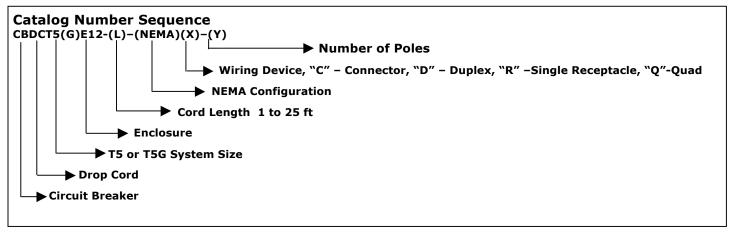
Used to tap off power from the Busway with a wide variety of device configurations. Plug head is reversible to face in opposite direction.

Shipped assembled complete from the factory based on part number selection including cord, breaker(s), and device. Drop Cord assemblies with connectors (C) include a wire mesh cord grip at outlet of plug-in box. All other assemblies include wire mesh cord grips at both ends of cord.

E12 General Use

- PREFERRED enclosure for single or multiple Drop Cords (up to three)
- Limited to 3 breaker positions.
- Consult factory for possible combinations.





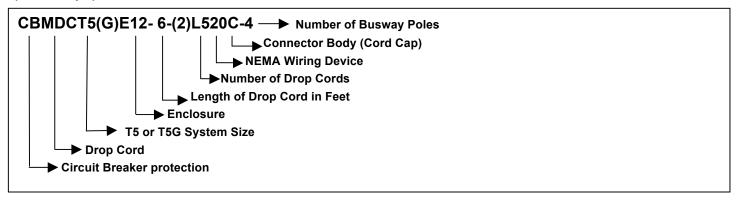
T5 Series Plug-Ins B250T5, B400T5, B800T5 SYSTEMS



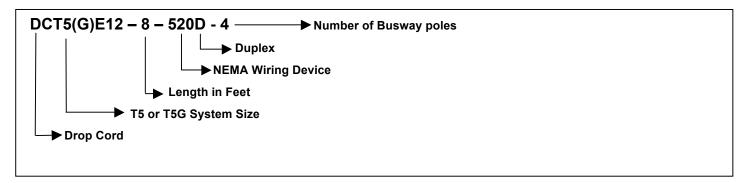
DROP CORD SELECTION

PART NUMBER EXAMPLES

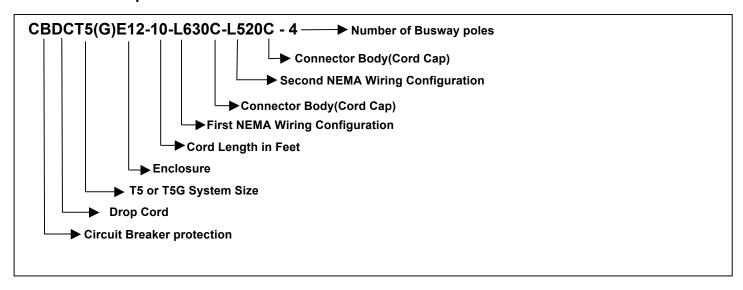
For any T5 System, *Circuit Breaker protection* with two(2), 6 ft Drop Cords, NEMA L5-20 Connectors (Cord Caps)



For any T5 System, a single, 8 ft Drop Cord with 5-20 Duplex, fuse protection



For any T5 System, *Circuit Breaker protection* with one 10 ft Drop Cord with NEMA L6-30 Connector and one 10 ft Drop Cord with L5-20 Connector



B250T5, B400T5, B800T5 SYSTEMS

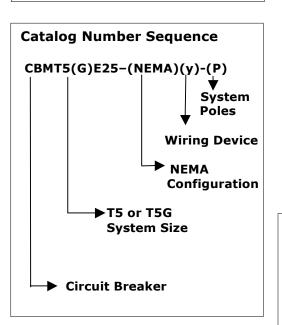


E25 CIRCUIT BREAKER PLUG-IN

VERTICAL (Front Operable Type)

Vertical Circuit Breaker

Basic circuit breaker is front operable and comes with circuit breaker base that will accommodate up to 6-circuit breaker poles, 240 volts, 125 total amps. Basic unit is rated for 10kAIC with some breaker options for 22kAIC. Selection information for these units should include amp rating, number of breaker poles and Busway system poles. Units are very versatile and can also be ordered with various outlet configurations.





Typical Catalog Number Selection

Catalog No. Description Weight

CBMT5E25-(x)-(NEMA) (y)-4 240V, 10kAIC, 4-pole Busway 12 lbs CBMT5HE25-(x)-(NEMA) (y)-4 240V, 22kAIC, 4-pole Busway 12 lbs CBMT5GE25-(x)-(NEMA) (y)-4DG 240V, Ded.Gnd.4P Busway 12 lbs

x=length of cord

NEMA= Nema Configuration

Y= "D" - Duplex, "R" - Single Receptacle, "Q" - Quad

B250T5, B400T5, B800T5 SYSTEMS

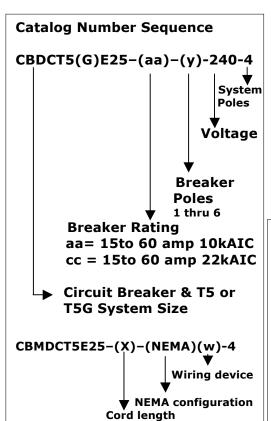


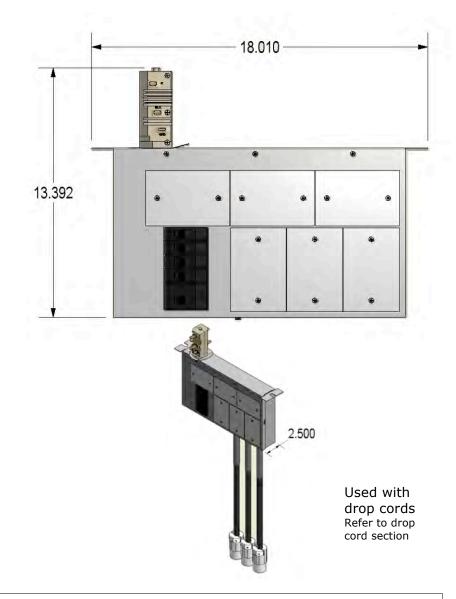
E25 CIRCUIT BREAKER PLUG-IN

DROP CORD UNITS

Vertical Circuit Breaker

Basic circuit breaker is front operable and comes with circuit breaker base that will accommodate up to 6 circuit breaker poles, 240 volt, 125 total amps. Basic unit is rated for 10kAIC with some breaker options for 22kAIC. Selection information for these units should include amp rating, number of breaker poles and **Busway system poles. Units** are very versatile and can also be ordered with various outlet and drop cord configurations. Refer to Drop Cord Units for selection information.





Standard Catalog Number Selection

*can be adjusted according to your system needs

CBFT5E25-60-6-240-4 240V, 10kAIC, 3/4-pole Busway 12 lbs CBMT5E25-p/aa-x-240-4 240V, 10kAIC, 3/4-pole Busway 12 lbs	Catalog No.	Description	Weight
CBMT5HE25-p/cc-x-240-4 240V, 22kAIC, 3/4-pole Busway 12 lbs CBMDCT5HE25-X-L620C-4 240V, 22kAIC, 3/4-pole Busway 12 lbs	CBMT5E25-p/aa-x-240-4 CBMT5HE25-p/cc-x-240-4	240V, 10kAIC, 3/4-pole Busway 240V, 22kAIC, 3/4-pole Busway	12 lbs 12 lbs

p=no. of poles, aa=15-60 Amp, 10kAIC, cc=15-60 Amp, 22kAIC

x=total number of poles, 1-6, X=length of cord

B250T5, B400T5, B800T5 SYSTEMS

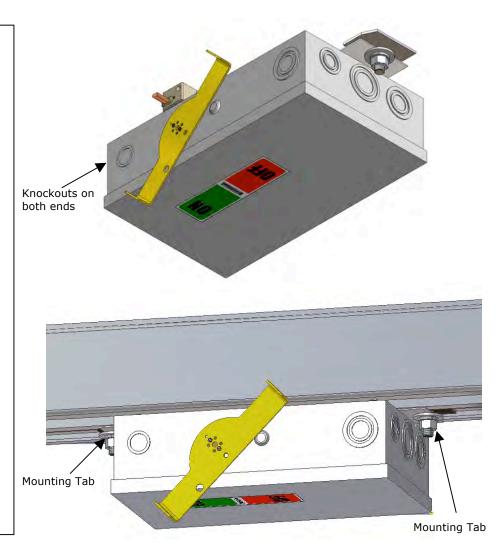


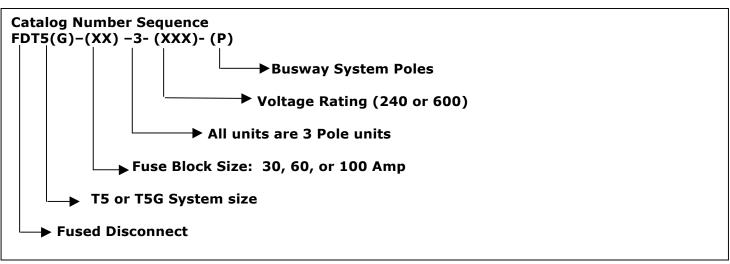
FUSED DISCONNECT PLUG-IN

Fused Disconnect

Standard units include J-box, plug head, hinged cover, fuse blocks rated at 30, 60, or 100 Amp max, 250VAC or 600 VAC max, and a floor operable disconnect mechanism. All units require Class RK Fuses. Fuses are not included and may be ordered separately.

All units include two mounting bolts and a ground lug. All 4pole units include a neutral connection. Knockouts are provided on two sides. Drop cord assemblies are also available as needed.

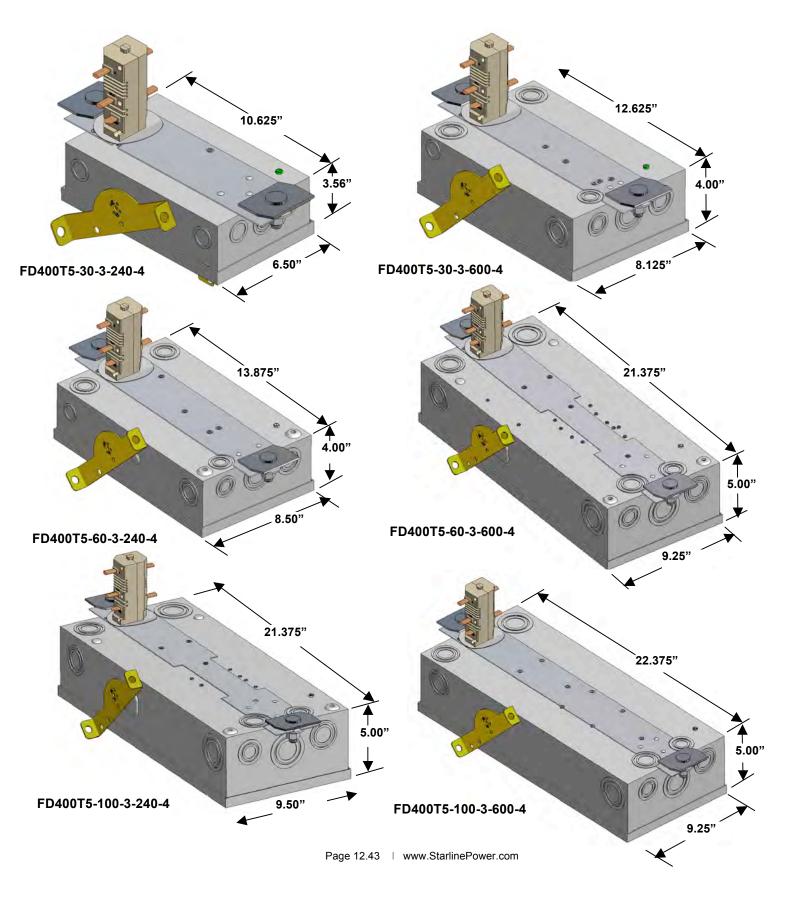




T5 Series Plug-Ins B250T5, B400T5, B800T5 SYSTEMS



FUSED DISCONNECT PLUG-IN



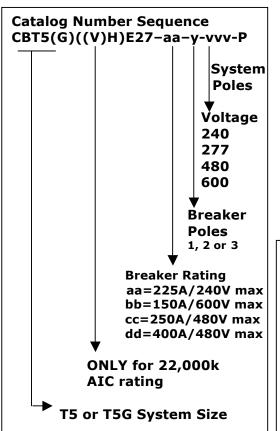
B250T5, B400T5, B800T5 SYSTEMS

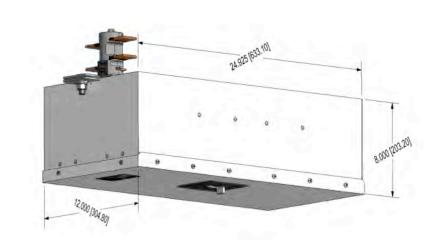


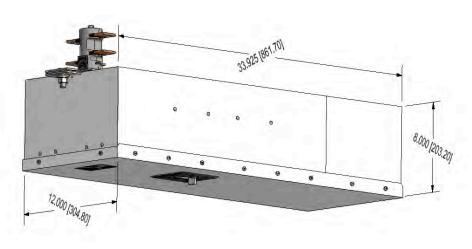
CIRCUIT BREAKER PLUG-IN HORIZONTAL (Down Facing) TYPE

Horizontal Circuit Breaker

Basic circuit breaker plug-in faces downward and is available in a wide variety of ratings: 480 volts up to 400 amps or 600 Volts up to 150 amps. Selection information for these units should include amp rating, voltage rating, number of breaker poles and Busway system poles. All circuit breakers are mounted internally. Units can also be ordered with various drop cord configurations. Refer to 400 **Amp Drop Cords for selection** information. Specify (H) for high AIC ratings of 22k/240V, 22k/480V or 18k/600V. Specify (VH) for high AIC ratings of 35k/480V.







Catalog Number	Selection
-----------------------	-----------

Catalog No.	Description	Weight
CBT5E27-100-3-240-4	100A/240V/3 pole	31 lbs
CBT5E27-20-1-277-4	20A/277V/1 pole	31 lbs
CBT5HE27-30-3-480-4	30A/480V/3 pole/22kAIC	32 lbs
CB250T5HE27-250-3-480-4	250A/480V/3 pole/35kAIC	33 lbs
CB400T5VHE27-400-3-480-4	400A/480V/3 pole/35kAIC	35 lbs
CBT5HE27-20-3-600-4	20A/600V/3 pole/18kAIC	32 lbs

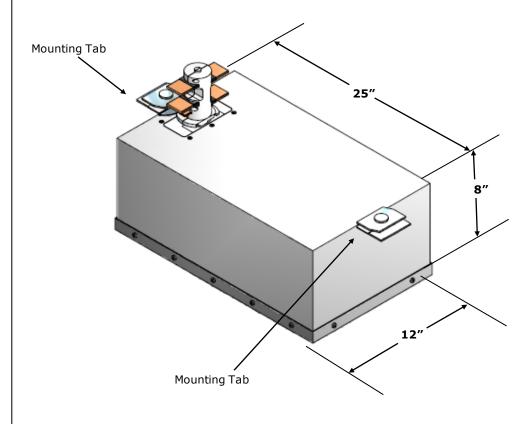
B250T5, B400T5, SYSTEMS

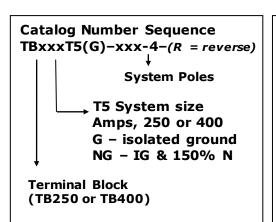


TERMINAL BLOCK PLUG-IN

Terminal Block

Plug-In units with mechanical lugs rated up to 400 Amps are used for direct wire tap off, or for a bottom power feed. All units include a ground lug. Isolated ground units include an isolated lug for this conductor.





Catalog Number Selection				
Catalog No.	Description	Weight		
TBxxxT5-xxx-4	4-Pole	25 lbs		
TBxxxT5-xxx-4R	4-Pole	25lbs		
TBxxxT5G-xxx-4	4-Pole/IG	25 lbs		
TBxxxT5G-xxx-4R	4-Pole/IG	25 lbs		
TBxxxT5N-xxx-4	4-Pole/oversized N	25 lbs		
TBxxxT5N-xxx-4R	4-Pole/oversized N	25 lbs		
TBxxxT5NG-xxx-4	4-Pole/IG/oversized N	25 lbs		
TBxxxT5NG-xxx-4R	4-Pole/IG/oversized N	25 lbs		



B250T5, B400T5, B800T5 SYSTEMS

Plug-Ins with Surge Protective Device

To protect electronic devices from transient voltage variations, we offer a T5 plug in unit that contains a surge protective device (SPD).

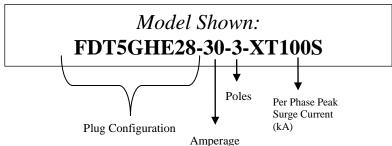
The SPD is rated up to 100kA peak surge current with wide range of voltage applications from 100 to 480 Vac.

This type of plug-in is protected by a Bussmann 3 Pole CCP fuse disconnect with J Class TCF fusing.

This product carries an ETL listing and can be used in a wide variety of different wiring systems: single phase, split phase, three-phase Wye, or three phase delta.

• Consult the factory for more information







Plug-In Accessories



CIRCUIT BREAKER OPERATING STICKS

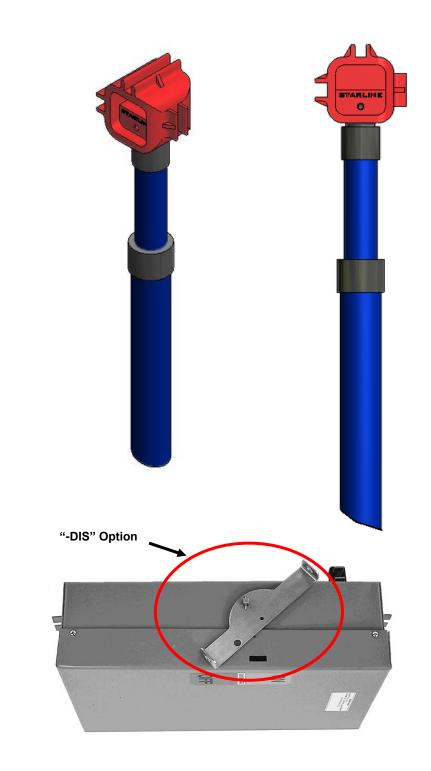
Circuit breaker units may be operated from the floor by use of an Operating Stick. Operating Sticks are fully insulated for safety and work on circuit breakers mounted in every orientation. Select from two lengths depending on the installation height. Standard stick length is 12 feet and the long stick is 23 feet.

Catalog Numbers:

CBOS-V

CBOS-V-23

"-DIS" OPTION
Also available for most circuit
breaker plug-in units is an operating
handle. This rocker arm style
handle may be easily operated by
means of a hook stick or chains.
Specify the '-DIS' option at end of
selected Part Number.





The Starline Critical Power Monitor (CPM) is a revenue grade metering system that enables current and power monitoring in busway systems. Each phase and neutral can be monitored independently. The CPM may be incorporated at a power feed point or directly into a plug-in unit.

CURRENT TRANSFORMERS:

Current transformers (CT's) are supplied with the unit for installation onto the customersupplied feeder cables. Sense leads from the CT's connect to the Meter.

METER MODULES:

Each unit is calibrated for accuracy and is within 0.5% to meet ANSI Revenue Grade Standards.

<u>CPM- ENHANCED PACKAGE</u> (M41/M43/M45/M47):

Provides current and voltage inputs, monitoring current, voltage, power, power factor, frequency, apparent power, energy kWh, reactive power, neutral current, power min. and max.

DISPLAY:

The bright, 4.9" LCD reports basic power measurements and alarms. Display buttons provide configuration and direct control to the active display screen. Large format display is easily readable at a distance and wide viewing angle.

COMMUNICATION:

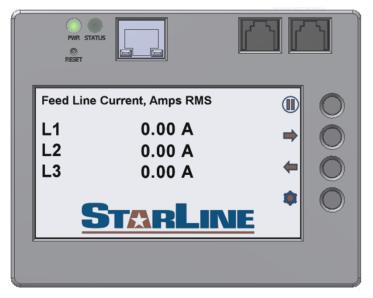
Ethernet and Modbus RTU ports are standard. Ethernet port provides an embedded web (HTTP) Interface & supports SNMP. Wi-Fi interface is optional, providing true versatility in the busway environment.

ALARMS:

When the defined alarm threshold is exceeded, a warning corresponding to that channel will turn ON and send an SNMP trap or an email to the user.

CRITICAL POWER MONITORING

M41/M43/M45/M47 DETAILS



Critical Power Monitor with the (optional) 4.9" Display



Critical Power Monitor (No Display)

The Critical Power Monitor can be used to manage and maximize power distribution within a three phase power system. It can be employed as a component to help balance three phase power distribution between each phase. This increases efficiency by reducing the power factor and enables a user to fully analyze the power supplied to them.

POWER FEED MONITORING

The CPM, incorporated in or near the power feed unit, provides load monitoring of the entire run of busway. These are used in conjunction with BMS systems to ensure busway is not overloaded as well as for general power management. Typically uses the CPM unit with display.

BRANCH CIRCUIT MONITORING

The CPM, incorporated into a plug-in unit, monitors individual branch circuits. These units are used in conjunction with BMS system for power management and revenue purposes at the rack or circuit level. The CPM is capable of monitoring the entire unit or monitoring up to 4 individual devices, limited to 6 solid core Current Transformers (CTs).

BUILDING MANAGEMENT INTERFACE

The Starline CPM is easily interfaced with BMS/BCIM systems. Many BMS/BCIM systems offer drivers for use with the Starline CPM. Contact your BMS/BCIM supplier or Starline Engineering for more information.



POWER FEED UNIT WITH CPM

B100/B225 Power Feed Units

End Feed with Installed Critical Power Monitor B100/B225

Standard End Power Feed units connect to the male end of the busway. Factory assembled unit consists of a 12" x 16" x 7.62" steel junction box, with removable sides, connected to a 1 foot section of busway. The assembly includes connection lugs, a ground lug, and shrink tubing for wires up to 300 MCM.

Integral CPM installed in the **End Feed provides power** monitoring and alarm capabilities. Nuisance tripping may be avoided using the current information to protect against overloading phases. The monitors also assist in the continuous challenge to balance the three phase loads. An automated email will be sent at 80% of full load as a warning to the user. This level may be changed in the field using the embedded webpage.

See Power Monitoring pages for more details.

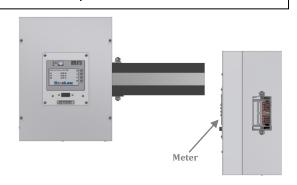
STANDARD END FEED

EFxxx-4-RT-MyyRz

EFxxxN-4-RT-MyyRz

EFxxxG-4-RT-MyyRz

EFxxxNG-4-RT-MyyRz



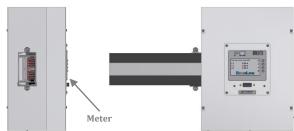
STANDARD 'LEFT LID' END FEED

EFxxx-4-L-MyyRz

EFxxxN-4-L-MyyRz

EFxxxG-4-L-MyyRz

EFxxxNG-4-L-MyyRz



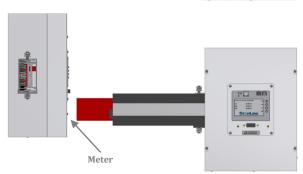
MALE END FEED

EFxxx-4M-L-MyyRz

EFxxxN-4M-L-MyyRz

EFxxxG-4M-L-MyyRz

EFxxxNG-4M-L-MyyRz



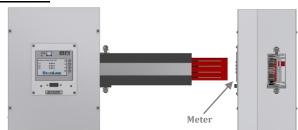
MALE 'RIGHT LID' END FEED

EFxxx-4M-RT-MyyRz

EFxxxN-4M-RT-MyyRz

EFxxxG-4M-RT-MyyRz

EFxxxNG-4M-RT-MyyRz



High Voltage Criteria: Catalog Number Sequence Delta System: ≥400V EF xxx (N) (G) - 4 (L/M/MR) - M yy R z **System Configuration** Wye System: ≥480V Please contact Engineering for assistance on selecting the appropriate Configuration **Orientation** <u>System</u> (See Above) 100 Meter Release **Meter Options Isolated** Double **41** – WiFi, Low Voltage **S** – Standard Unit F - "Featured" (Display + Alarm) Ground Neutral 43 - Low Voltage **D** - Display Unit E - "Enhanced" (Neutral + Alarm) 45 - WiFi, High Voltage **P** - "Professional" (Display + Neutral) (100 System **N** – Measured Neutral **End Feed** 47 - High Voltage Only) A - Audible Alarm **U** - "Ultimate" (Display + Neutral + Alarm)



POWER FEED UNIT WITH CPM

B250/B400/B800 Power Feed Units

End Feed with Installed Critical Power Monitor

B250/B400/B800

Standard End Power Feed units connect to the end of a Busway section. Factory assembled unit consists of a steel junction box with removable sides and is connected to a small section of busway. Reverse End Feed units for connection to opposite end of busway are also available. (For Frame specific information, see B250T5/B400T5/B800T5 pages.)

Integral CPM installed in the **End Feed provides power** monitoring and alarm capabilities. Nuisance tripping may be avoided using the current information to protect against overloading phases. The monitors also assist in the continuous challenge to balance the three phase loads. An automated email will be sent at 80% of full load as a warning to the user. This level may be changed in the field using the embedded webpage.

See Power Monitoring pages for more details.

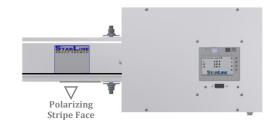
T5 STANDARD END FEED

EFxxxT5-4-L-MyyRz

EFxxxT5N-4-L-MyyRz

EFxxxT5G-4-L-MyyRz

EFxxxT5NG-4-L-MyyRz



T5 STANDARD 'RIGHT LID' END FEED

EFxxxT5-4-RT-MyyRz

EFxxxT5N-4-RT-MyyRz

EFxxxT5G-4-RT-MyyRz

EFxxxT5NG-4-RT-MyyRz



T5 REVERSED END FEED

EFxxxT5-4R-RT-MyyRz

EFxxxT5N-4R-RT-MyyRz

EFxxxT5G-4R-RT-MyyRz

EFxxxT5NG-4R-RT-MyyRz



T5 REVERSED 'LEFT LID' END FEED

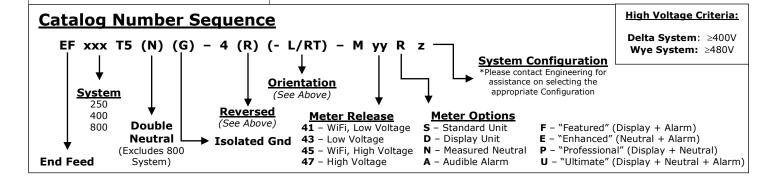
EFxxxT5-4R-L-MyyRz

EFxxxT5N-4R-L-MyyRz

EFxxxT5G-4R-L-MyyRz

EFxxxT5NG-4R-L-MyyRz





HINGED METER LID

M40 Series CPM End Feeds

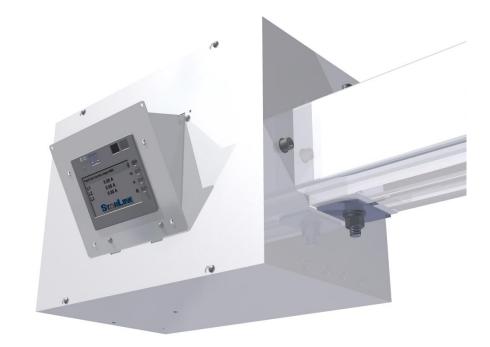


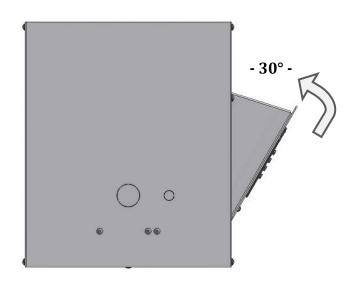
The hinged meter End Feed lid is an accessory that delivers the flexibility to change the viewing angle for Display Meters in an End Feed.

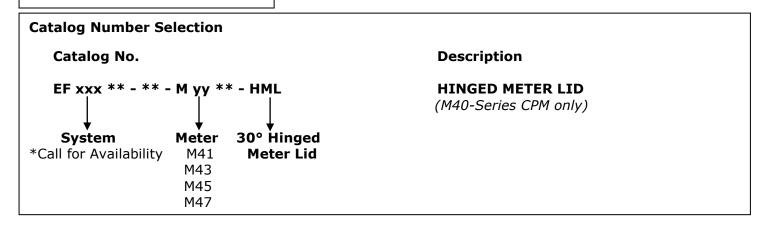
This enclosure allows for the Meter to be mounted flush to the End Feed lid or presented in an extended position at 30° from vertical. This presents a more comfortable and easier viewing angle when looking up at an End Feed unit to read the LCD screen.

The hinged enclosure can be quickly and easily repositioned by simply relocating two screws on the assembly and the enclosure is secured to prevent damage during installation.

This feature is available for most End Feed product lines with any M40 series CPM that contains a display. In addition, the angled enclosure is painted to match the desired End Feed color.









OUTLET BOX UNIT WITH CPM

Power Feed Current Monitoring

Outlet Box with Installed Critical Power Monitor

The CPM plug-in unit is installed within close proximity to the busway Power Feed. Current Transformers (CT) are installed around the feed wires and then cabled to the Outlet Box using factory provided 20 foot leads.

The CPM provides power monitoring of the busway run. The optional, 4.9" LCD screen displays the current level, voltage, and alarm status for each phase and neutral. Nuisance tripping may be avoided using the current information to protect against overloading phases. The monitors also assist in the continuous challenge to balance the three phase loads. An automated email will be sent at 80% of full load as a warning to the user. This level may be changed in the field using the embedded webpage.

Networking:

Ethernet

RS-485

Wi-Fi (Optional)

Protocols:

Web Interface

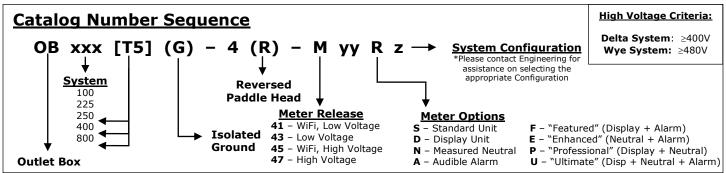
Modbus RTU

SNMP

Telnet

Modbus TCP/IP







M40 SERIES CIRCUIT BREAKER UNIT

Branch Circuit Monitoring

Circuit Breaker Unit with **Installed Critical Power Monitor**

MONITORING:

The Branch Circuit Monitoring unit has the capability of monitoring the energy of the entire unit (M-Meter) or monitoring up to 4 individual devices (V-Meter), limited to 6 solid core Current Transformers (CTs).

DISPLAY:

The optional, bright, 4.9" LCD reports basic power measurements and alarms. Display buttons provide configuration and direct control to the active display screen. Large format display is easily readable at a distance.

COMMUNICATIONS:

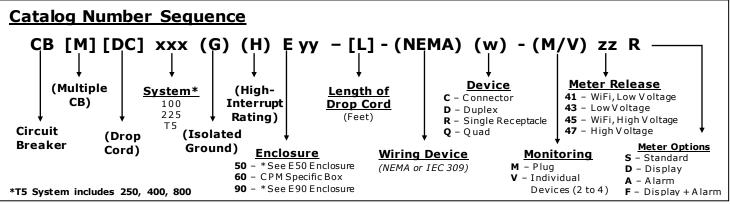
Ethernet and Modbus RTU ports are standard. Ethernet port provides an embedded web (HTTP) Interface & supports SNMP. Wi-Fi interface is optional, providing true versatility in the busway environment.

ALARMS:

When the defined alarm threshold is exceeded, a warning corresponding to that channel will turn ON and send an SNMP trap or an email to the user.

See Power Monitoring pages for more details.







The StarLine Critical Power Monitor (CPM) is a revenue grade metering system that enables current and power monitoring in busway systems. Each phase and neutral can be monitored independently. The CPM M50 series may be incorporated directly into a plug-in unit.

MONITORING:

The CPM is capable of monitoring the current of the entire unit (M-Meter) or monitoring up to 4 individual devices (V-Meter), limited to 6 solid core Current Transformers (CTs).

METER MODULES:

Each unit is calibrated for accuracy and is within 0.5% to meet ANSI Revenue Grade Standards.

CPM- ENHANCED PACKAGE (V51/V53/V58/V59):

Provides current and voltage inputs, monitoring current, voltage, power, power factor, frequency, apparent power, energy kWh, reactive power, neutral current, power min. and max.

COMMUNICATION:

V51 – Single Ethernet + Wi-Fi

V53 – Single Ethernet

V58 – Dual Ethernet

V59 - Dual Modbus + Dual Ethernet

ALARMS:

When the defined alarm threshold is exceeded, a warning corresponding to that channel will turn ON and send an SNMP trap or an email to the user.

FIRMWARE:

Download the latest version of Firmware from the website. Visit www.starlinepower.com/CPM for link and details.

Meter Specs:

Input Voltage - Up to 480V ac (Wve System) Current - Up to 125A

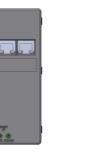
M50 SERIES: CRITICAL POWER MONITORING

V51/V53/V58/V59 DETAILS

Critical Power Monitor with Optional Display









w/Wi-Fi V51

Single Ethernet Single Ethernet Dual Ethernet V53

V58

Dual Modbus Dual Ethernet

The Critical Power Monitor can be used to manage and maximize power distribution within a three phase power system. It can be employed as a component to help balance three phase power distribution between each phase. This increases efficiency and enables a user to fully analyze the power supplied to them.

BRANCH CIRCUIT MONITORING

The CPM, incorporated into a plug-in unit, monitors individual branch circuits. These units are used in conjunction with a BMS for power management and revenue purposes at the rack or circuit level. The CPM is capable of monitoring the entire unit (M-Meter) or monitoring up to 4 individual devices (V-Meter), limited to 6 Current Transformers (CTs).

BUILDING MANAGEMENT INTERFACE

The Starline CPM is easily interfaced with BMS/DCIM systems. Many BMS/DCIM systems offer drivers for use with the Starline CPM. Contact your BMS/DCIM supplier or Starline Engineering for more information.

Circuit Breaker Unit with Installed Critical Power Monitor

MONITORING: The Branch Circuit Monitoring unit is capable of monitoring the energy of the entire unit (M-Meter) or monitoring up to 4 individual devices (V-Meter), limited to 6 solid core Current Transformers (CTs).

DISPLAY: The optional, bright, 3 digit, 7-segment display reports current, voltage, and power factor. The three measurements can be turned on or off via the web page.

The display shows the aggregate measurements of the circuit breaker unit (will not display measurements of individual outlets).

Daisy-Chain Ethernet: The dual Ethernet configuration (V58 and V59) allows users to implement a daisy-chain topology when wiring meters, thus saving on network switch ports within the facility.

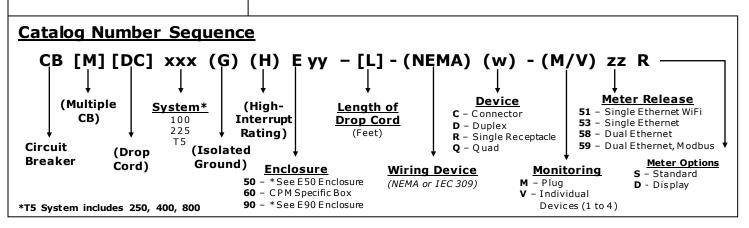
COMMUNICATIONS: A single Ethernet port is standard; choose between optional dual Ethernet, Modbus and Wi-Fi configurations. Ethernet port provides an embedded web (HTTP) interface & supports SNMP. Users can use Modbus and Ethernet ports simultaneously.

ALARMS: When the defined alarm threshold is exceeded, a warning corresponding to that channel will turn ON and send an SNMP trap or an email to the user.

M50 SERIES CIRCUIT BREAKER UNIT

Branch Circuit Monitoring







OUTLET BOX UNIT FOR POWER FEED CURRENT MONITORING

Outlet Box with Installed M26 Power Monitor

An E63 plug-in unit is installed within close proximity of the Busway power feed. Current Transformers (CT) are installed around the feed wires and then cabled to the Outlet Box. Split Core CTs are also available.

M26 meter provides 3 voltage measurement and 4 current measurement inputs; active power, apparent power, reactive power, power factor, effective energy, reactive energy and total harmonic distortion (THD) are also the measured parameters. Harmonic analysis up to the 40th order is available.

MEMORY

256 MB of flash memory

DISPLAY

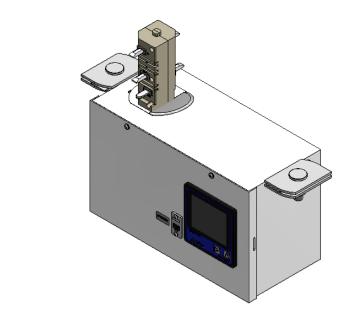
LCD display with backlight, displays all basic power measurements.

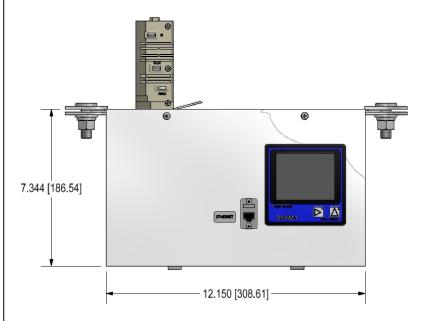
INTERFACES:

RS485, Ethernet (RJ 45)

PROTOCOLS:

Modbus RTU, Modbus Gateway, TCP/IP, SNMP, Webserver/e-mail





Catalog No. Description

OB250T5E63-M26DR250/3 CURRENT MONITOR PLUG-IN, PWR QLTY w/ETHERNET, 250A OB400T5E63-M26DR400/3 CURRENT MONITOR PLUG-IN, PWR QLTY w/ETHERNET, 400A OB800T5E63-M26DR800/3 CURRENT MONITOR PLUG-IN, PWR QLTY w/ETHERNET, 800A

POWER FEED UNIT with IR WINDOW



End Feed with Infrared (IR) Window

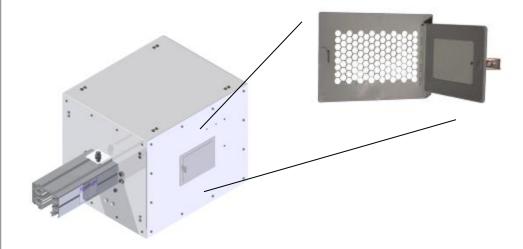
Standard End Power Feed units connect to the end of the Busway. Factory assembled unit consists of a steel junction box, with removable sides, connected to a section of Busway. The IR Window installed in the End Feed provides electrical connection information while the panel doors are safely closed.

IR windows offer:

- Enhanced electrical safety
- Increased compliance to NFPA 70E / CSA Z462
- Reduced PPE
- Closed-door infrared inspections
- Stable and consistent transmission over product life
- Largest field of view of any IR window
- Supports visual and infrared imaging for any IR camera

Contact sales for End Feed enclosure dimensions and catalog numbers. This accessory will be denoted with a "IRW" for the rectangular IR window, and a "IRH" for the circular window in the catalog number.

Circular windows can be used when there are external spatial restrictions as it has a smaller footprint.



IR Window Installed on Feed Unit

