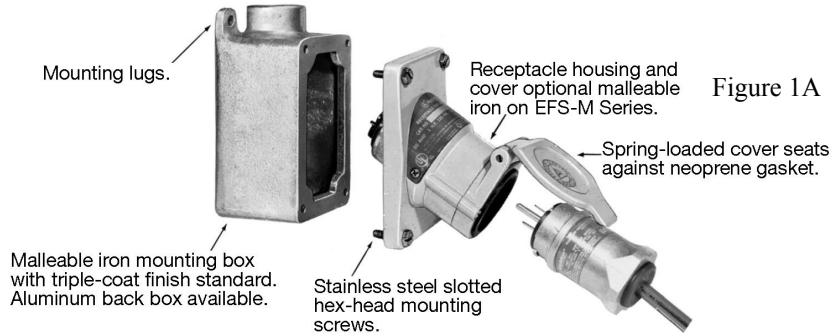


Class I, Div. 1 and 2
Groups B, C, D
Class II, Div. 1 and 2
Groups F, G
Class III
Type: 3RX

U-LINE®, CONTENDER® U-LINE®, EFS/EFSR/ENR SERIES
INSTALLATION AND MAINTENANCE INSTRUCTION



APPLICATION and FEATURES:

- U-Line®/Contender® U-Line® receptacles and ECP/NCP plugs combination are designed for use where power is to be supplied to portable electric equipment in locations which are hazardous due to the presence of flammable vapors and gases or locations where damp or corrosive conditions are encountered.
- These plugs and receptacles are for 15 or 20 ampere use at 125 volts AC and 20 ampere use at 250 volts AC.
- U-Line® receptacles mount on single or double-gang EFD series boxes. Contender® U-Line® receptacles mount on single or double-gang EDS series boxes.
- Receptacle is grounded through and extra pole as well as through the receptacle housing.

For Convenience...ECP Interchanger™ Plug fits ordinary location receptacles (NEMA 5-20 or 15 NEMA 620) and explosion proof U-Line® Receptacle as well as Killark® “UGR” Series and Crouse-Hinds® “ENR” Series.

INSTALLATION:

ELECTRICAL WARNING
Electrical power supply must be “OFF” before and during installation and maintenance. Failure to do so may result in serious or fatal injuries due to electrocution.

Note: Use minimum #12 copper or copper clad building wire

1. Mount receptacle back box in desired location. If receptacle is already mounted on the box, take out four mounting screws and remove receptacle. Pull in power source wiring to the box, making sure wire leads extend out of box far enough for proper connections to be made (See Figure 2).
2. Strip insulation from power lead 1/2". Connect power leads to receptacle terminals. Wiring must comply with applicable local codes (See Figure 3).
3. To make connections, loosen wire screws, slide stripped end of wire into contact and tighten wire screw to 20 in-lb torque (See Figure 4).
4. Apply a thin film of lubricant (supplied with receptacle) to the flange. Reinstall receptacle on the flange and tighten four mounting screws provided to 30 in-lb torque. Receptacle assembly is now complete and power may now be turned on.

Retain this instruction sheet for future reference.

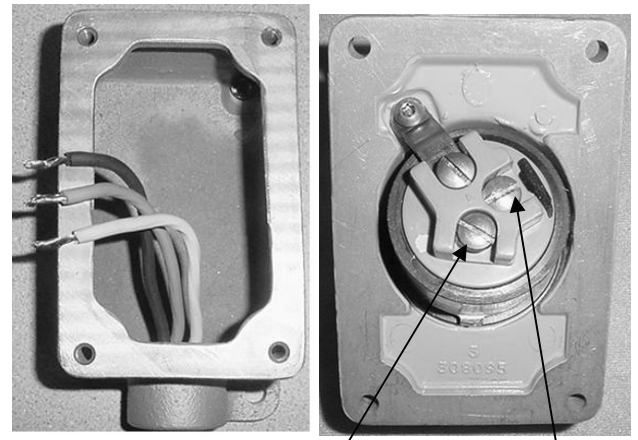


Figure 2

Figure 3

Grounded White Lead connection for 125V, Black Lead connection for 250V

Note: For 250V, there are 2 black wires, connect one to black lead and other to indicated white lead as shown.

CAUTION

The mating flat flange surfaces on both receptacle and back box are explosion-proof surfaces. Surfaces are not to be scratched and **MUST** be clean and flat before assembly. Gaskets, paint, or any other similar material must **NOT** be used in this joint.

OPERATION:

The U-Line®/Contender U-Line® receptacle is dead-front construction. Electrical connection between it and ECP/NCP plug is accomplished after plug fully inserts into receptacle and rotate clockwise.

1. Lift receptacle door and locate polarization on mating plug pin and receptacle face. Insert plug straight all the way into receptacle until it can not go further (see figure 5).
2. Rotate plug clockwise limit (37°), this closes internal contacts and completes circuit. This also mechanically locks plug into receptacle so it cannot be pulled out.
3. To remove plug, push plug inward and turn to counterclockwise, pull plug straight out.

MAINTAENANCE:

Electrical and mechanical inspection of all components must be performed on a regularly scheduled basic, determined by the environment and frequency of use. It is recommended that inspection be performed a minimum of once a year.

WARNING

Electrical power supply must be “OFF” before and during installation and maintenance. Installation and maintenance procedure must be performed by a trained and competent electrician.

WARNING

If any parts of the receptacle or plug appear to be missing, broken, or show signs or damage, **DISCONTINUE USE IMMEDIATELY**. Replace with the proper replacement part(s) before continuing service.

1. Inspect all contact wire terminals for tightness. Discoloration due to excessive heat is an indicator of a possible problem and should be thoroughly investigated and repaired as necessary.
2. Inspect contacts for signs of wear and replace if necessary.
3. Clean exterior surfaces making sure nameplates remain legible.
4. Check tightness of all screws before using.

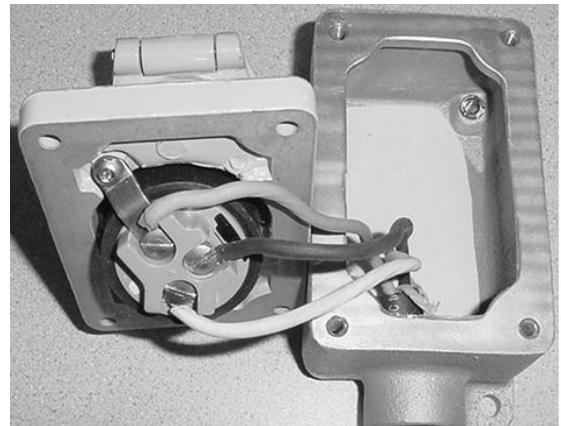


Figure 4 (mounting receptacle onto back box with hinge in UP position)



Figure 5 - Plug Inserts In Receptacle

Replacement Parts		
Catalog No.	Description	
125 V	250 V	
EFSR-2023	EFSR-20232	Receptacle cover (aluminum).
EFSR-2023K	EFSR-20232K	Receptacle for use on Killark SWB boxes
EFSR-2023M	EFSR-20232M	Receptacle cover (malleable iron)
ENR5201	ENR6202	Contender® receptacle cover (aluminum)
ULINE3RXXKIT	ULINE3RXXKIT	Screw cover kit
ULSCM	ULSCM	Flip cover & ring kit, malleable iron.
ULSCA	ULSCA	Flip cover & ring kit, aluminum.
59308097000	59308097000	Receptacle gasket

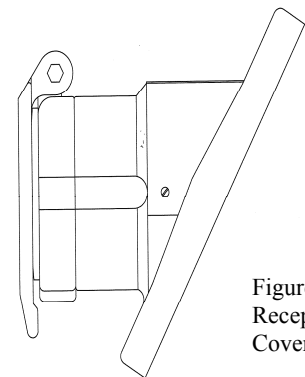
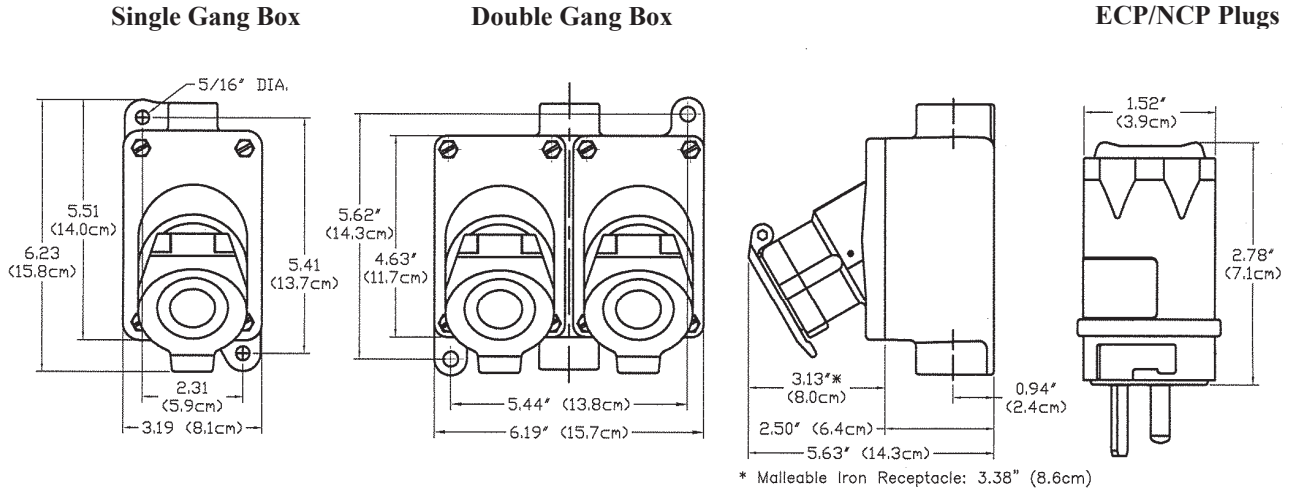


Figure 6
Receptacle
Cover

Dimensions: U-Line® EFS Receptacle and ECP/NCP Plugs



U-Line® EFS Receptacle Catalog Number

Aluminum Receptacle and Malleable Iron Mounting Box ◊

Class I, Groups C & D, Class II, Group F, G, Class III
 Suitable for Group B when external seals are used.

Single Gang-Factory Seal

Type	Hub Size	125V	250V
Dead-End	1/2	EFS150-2023	EFS150-20232
	3/4	EFS175-2023	EFS175-20232
	1	EFS110-2023	EFS110-20232
Feed-Thru	1/2	EFSC150-2023	EFSC150-20232
	3/4	EFSC175-2023	EFSC175-20232
	1	EFSC110-2023	EFSC110-20232

Malleable Iron Receptacle and Mounting Box

Class I, Groups C & D, Class II, Groups F, G Class III
 Suitable for Group B provided external seals are used.

Two Gang-Factory Seal

Class I, Group C and D, Class II, Group F, G, Class III

Type	Hub Size	125V	250V
Dead-End	1/2	EFS250-2023	EFS250-20232
	3/4	EFS275-2023	EFS275-20232
	1	EFS210-2023	EFS210-20232
Feed-Thru	1/2	EFSC250-2023	EFSC250-20232
	3/4	EFSC275-2023	EFSC275-20232
	1	EFSC210-2023	EFSC210-20232

Class I, Group C and D, Class II, Group F, G, Class III

Type	Hub Size	125V	250V
Dead-End	1/2	EFS250-2023M	EFS250-20232M
	3/4	EFS275-2023M	EFS275-20232M
	1	EFS210-2023M	EFS210-20232M
Feed-Thru	1/2	EFSC250-2023M	EFSC250-20232M
	3/4	EFSC275-2023M	EFSC275-20232M
	1	EFSC210-2023M	EFSC210-20232M

Malleable Iron Receptacle and Mounting Box With Factory Sealed Chamber

Class I, Groups B, C & D, Class II, Groups F, G Class III

No external seals required.

Single Gang-Factory Seal

Type	Hub Size	125V	250V
Dead-End	1/2	EFSB150-2023M	EFSB150-20232M
	3/4	EFSB175-2023M	EFSB175-20232M
Feed-Thru	1/2	EFSCB150-2023M	EFSCB150-20232M
	3/4	EFSCB175-2023M	EFSCB175-20232M

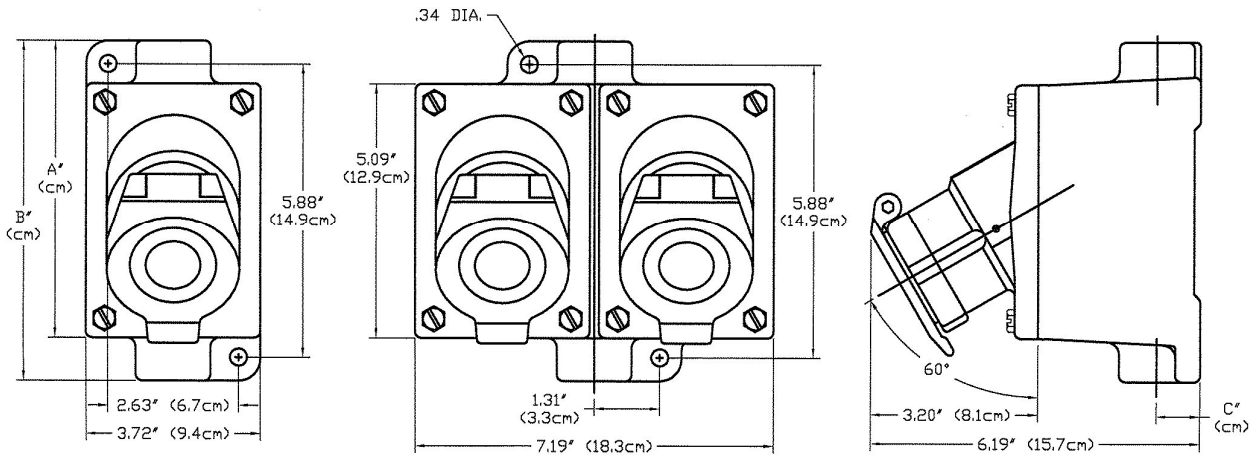
Rating Notes:

- ◊ Single gang aluminum EFSR receptacle cover and malleable iron EFD box suitable for Class I, Div. 1, Group B when external seals are used (seals must be placed adjacent to each conduit entrance).
- Single gang malleable iron EFSR receptacle and mounting EFD box suitable for Group B, no external seals required when using with sealing chamber.
- TYPE 3RX when the screw cover is installed and the cover is fully engaged. Apply lubricant provided in the bag on the cover and all flanges to keep water out.

Ordering Notes:

For aluminum box and receptacle cover, add suffix **A** (For Ex: Cat# **EFS150-2023A**).

Dimensions: Contender® U-Line® ENR Receptacle



UNILET TYPE	HUB SIZE (IN)	A"(cm)	B"(cm)	C"(cm)	UNILET TYPE	HUB SIZE (IN)	A"(cm)	B"(cm)	C"(cm)
1-GANG	1	6.17(15.7)	7.03(17.9)	1(2.5)	2-GANG	1	6.17(15.7)	7.03(17.9)	1(2.5)
	3/4	6.06(15.4)	6.81(17.3)	0.88(2.2)		1/2 & 3/4	6.06(15.4)	6.81(17.3)	0.88(2.2)
	1/2	6.06(15.4)	6.81(17.3)	0.75(1.9)					

Contender® U-Line® ENR Receptacle Catalog Number

Aluminum Receptacle and Malleable Iron Contender Series Mounting Box

Class I, Groups C & D, Class II, Group F, G, Class III

Single Gang-Factory Seal

Dead-End	1/2	ENR11201	ENR11202
	3/4	ENR21201	ENR21202
	1	ENR31201	ENR31202
Feed-Thru	1/2	ENRC11201	ENRC11202
	3/4	ENRC21201	ENRC21202
	1	ENRC31201	ENRC31202

Double Gang-Factory Seal

Class I, Groups C & D, Class II, Group F, G, Class III

Dead-End	1/2	ENR12201	ENR12202
	3/4	ENR22201	ENR22202
	1	ENR32201	ENR32202
Feed-Thru	1/2	ENRC12201	ENRC12202
	3/4	ENRC22201	ENRC22202
	1	ENRC32201	ENRC32202

Rating Notes:

TYPE 3RX when the screw cover is installed and the cover is fully engaged. Apply lubricant provided in the bag on the cover and all flanges to keep water out.

Ordering Notes:

Standard U-Line Contender catalog includes aluminum ENR receptacle and malleable iron EDS box. For aluminum box and receptacle cover, add suffix SA (For Ex: Cat# ENR11201SA)

Retain this instruction sheet for future reference.

U-Line® Intermateability Chart

The Appleton “ECP” Model “D” Plug and “EFS” and “ENR” Receptacles are UL Listed Combinations. The Appleton “ECP” Model “D” Plug with Killark® UL Listed “UGR” Series Receptacles or with Crouse-Hinds® UL Listed “ENR” Series Receptacles are UL Classified Combinations.

Appleton Plug Rating	Model D Appleton Plug Cat. No.	Receptacle Rating	U-Line® Receptacle Cat. No.	Contender® U-Line® Receptacle Cat. No.	Killark Receptacle Cat. No.	Crouse-Hinds Receptacle Cat. No.	No. of Conduit Openings	Hub Size, In.	No. of Gangs
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFSR-2023	ENR-5201	UGR0-20231	ENR-5201	–	–	–
125V,20A,1HP	ECP-2023								
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFS150-2023	ENR-11201	UGR1-20231	ENR-11201	1	1/2	1
125V,20A,1HP	ECP-2023								
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFS175-2023	ENR-21201	UGR2-20231	ENR-21201	1	3/4	1
125V,20A,1HP	ECP-2023								
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFS110-2023	ENR-31201	UGR3-20231	ENR-31201	1	1	1
125V,20A,1HP	ECP-2023								
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFSC150-2023	ENRC-11201	UGR4-20231	ENRC-11201	2	1/2	1
125V,20A,1HP	ECP-2023								
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFSC175-2023	ENRC-21201	UGR5-20231	ENRC-21201	2	3/4	1
125V,20A,1HP	ECP-2023								
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFSC110-2023	ENRC-31201	UGR6-20231	ENRC-31201	2	1	1
125V,20A,1HP	ECP-2023								
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFS250-2023	ENR-12201	UGR7-20231	ENR-12201	1	1/2	2
125V,20A,1HP	ECP-2023								
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFS275-2023	ENR-22201	UGR8-20231	ENR-22201	1	3/4	2
125V,20A,1HP	ECP-2023								
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFS210-2023	ENR-32201	UGR9-20231	ENR-32201	1	1	2
125V,20A,1HP	ECP-2023								
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFSC250-2023	ENRC-12201	UGR10-20231	ENRC-12201	2	1/2	2
125V,20A,1HP	ECP-2023								
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFSC275-2023	ENRC-22201	UGR11-20231	ENRC-22201	2	3/4	2
125V,20A,1HP	ECP-2023								
125V,15A,1HP	ECP-1523	125V,20A,1HP	EFSC210-2023	ENRC-32201	UGR12-20231	ENRC-32201	2	1	2
125V,20A,1HP	ECP-2023								
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFSR-20232	ENR-6202	UGR0-20232	ENR-6202	–	–	–
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFS150-20232	ENR-11202	UGR1-20232	ENR-11202	1	1/2	1
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFS175-20232	ENR-21202	UGR2-20232	ENR-21202	1	3/4	1
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFS110-20232	ENR-31202	UGR3-20232	ENR-31202	1	1	1
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFSC150-20232	ENRC-11202	UGR4-20232	ENRC-11202	2	1/2	1
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFSC175-20232	ENRC-21202	UGR5-20232	ENRC-21202	2	3/4	1
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFSC110-20232	ENRC-31202	UGR6-20232	ENRC-31202	2	1	1
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFS250-20232	ENR-12202	UGR7-20232	ENR-12202	1	1/2	2
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFS275-20232	ENR-22202	UGR8-20232	ENR-22202	1	3/4	2
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFS210-20232	ENR-32202	UGR9-20232	ENR-32202	1	1	2
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFSC250-20232	ENRC-12202	UGR10-20232	ENRC-12202	2	1/2	2
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFSC275-20232	ENRC-22202	UGR11-20232	ENRC-22202	2	3/4	2
250V,20A,2HP	ECP-20232	250V,20A,2HP	EFSC210-20232	ENRC-32202	UGR12-20232	ENRC-32202	2	1	2