



KILLARK®

HUBBELL INCORPORATED (Delaware)
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INSTALLATION, OPERATION & MAINTENANCE DATA FORM NO. K1224

VSQ-FS SERIES 30 AMPS INTERLOCKED SWITCHED RECEPTACLES

VSQ-FS SERIES INTERLOCKED SWITCHED RECEPTACLES TO BE USED IN CLASS I, GROUPS B,C,D; CLASS I ZONE 1, GROUPS IIB, IIA +H2; CLASS II, GROUPS F & G; & CLASS III HAZARDOUS LOCATION ENCLOSURE TYPES 3, 4, 4X & 12.

All Installations Must Comply With Applicable Local, National Electrical Codes and/or Canadian Electrical Code.

APPLICATIONS

- VSQ-FS are factory sealed units that eliminate the need for conduit sealing at the device.
- Designed for supplying power to fixed or portable electrical equipment.

ELECTRICAL RATING

- Maximum voltage - 600 VAC @ 50-400Hz. Continuous Current - 30Amperes.

INSTALLATION - Read and understand the following instructions carefully before installation & operation of this device.

NOTE - All Installations must comply with Applicable Local, National Electrical Code and/or Canadian Electrical Code.

Warning: Make sure the receptacle assembly is suitable for use in desired location per applicable local and/or National Electrical Code. Serious damage and/or injuries may result due to improper applications. Electrical power must be turned OFF before and during the installation & maintenance. Fatal injury and/or damage may result by not following these instructions.

Mounting Arrangement -

1. Receptacle assembly must be mounted securely on to column, wall, or other structure that shall be able to support the device and associated conduit system. Structure is to be prepared for use of four (4) 3/8" steel bolts (furnished by others) using lugs in the enclosure spaced as shown in fig.1.
2. For standard bottom feed positioning, removal of the cover is **NOT** necessary - all connection wiring is accessed via removal of the round chamber cover. For top feed, loosen the four device cover mounting bolts, rotate 180 degrees while taking care to protect wiring, and reinstall, torquing four bolts to 25 ft./lbs. each.

Conduit Installation -

1. 1 1/2" NPT conduit entries are provided on top and bottom of the housing.
2. Factory sealed devices (VSQ-FS series) are not required to have seal fittings.
3. Make sure conduit entries are clean before installing conduit/ close-up plugs/ reducers etc. Killark thread lubricant part number LUBG is recommended for this application.

To Prevent Ignition of Hazardous Atmospheres Do Not Use in Class II, Group E Locations that Contain Electrically Conductive Dusts.

Wiring

1. Develop and establish the wiring pattern for your system. Locations having different voltages and/or frequencies must not have interchangeable attachment plugs. Always test before energizing
2. This unit consists of two chambers; a device chamber & a wiring chamber. Wiring is to be completed in wiring chamber. Make sure to pull sufficient length of supply conductors to connect the wires in the wiring chamber. U.L. listed/ CSA certified wire nuts are suitable for the wire range indicated & are to be used for connecting supply leads to device leads in the wiring chamber.

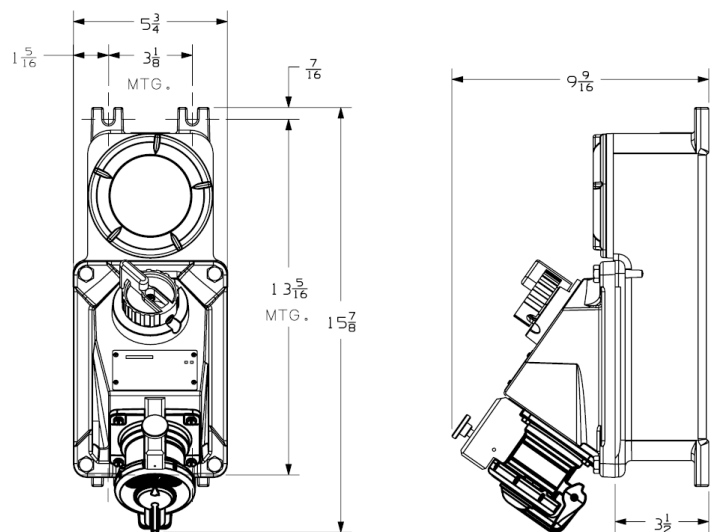
3. Strip the conductors to the length shown in table.
Warning: Use only copper cable or wire for the range indicated in table. **Use 75°C rated conductors (minimum).**

	Wire Range	Strip Length
Device	#10 - #8	0.500 inches
Ground	#16 - #6	0.500 inches

4. Connect the ground wire to the lug terminal securely and tighten to 20 lb in.

If opened, inspect & clean the machined flange flame joint surface of both the cover & box. Surface must be smooth, free of nicks, scratches, dirt, or any foreign particle build-up that would prevent a proper seal. Surfaces must seat fully against each other to provide proper explosion proof joint. Clean surfaces by wiping with a clean, lint free cloth.

FIG. 1



WARNING

Electrical power supply **MUST BE OFF** before and during installation and maintenance. **DISCONNECT** primary power source and **LOCK OUT**. Installation and maintenance procedure must be performed by a trained and competent electrician.

WARNING

If any parts of the plug, receptacle or switch appear to be missing, broken or show the signs of damage: **DISCONTINUE USE IMMEDIATELY!**

Apply a light coating of "LUBG" lubricant to flange surface and close the cover. Install and tighten all cover bolts to 25ft.lb. Make sure no cover bolts are omitted. Use only those bolts supplied with the device. Check bolted joint with .0015" feeler gauge. The gauge must not enter the joint more than 1/8" at any point.

CAUTION - Missing bolt or improper joint can result in an explosion, creating a potential for serious or fatal physical injury and/or property damage.

OPERATION

Caution: Operation switch cannot be turned on without fully inserting approved plug (see list below).

Plug cannot be inserted or withdrawn unless the switch is **OFF**.

Push button is designed to "release" plug when switch is off, but can be used to hold plug in "ready fo use" position, in addition to locking ring.

NOTE: 1. Switch cannot be operated when the push button is in the depressed position.

Switch can be turned on when pushbutton is in raised position from insertion of approved plug.

ELECTRICAL TEST BEFORE ENERGIZING

Do not connect to power before conducting the following electrical tests:

- Test continuity of wiring to verify correct polarity, phasing and grounding connections.
- Measure insulation resistance to be sure the system does not have any shorts or unwanted grounds.

MAINTENANCE

Electrical and mechanical inspection of all components must be performed regularly. It is recommended that inspection be perfomed a minimum of once a year.

- Inspect all contact wire box terminals for tightness (**Retorque**). Discoloration due to excessive heat is an indicator of possible problems and should be thoroughly investigated and repaired as necessary.
- Check grounding and bonding for correct installation ans secure connection (**Retorque**).

- Do not modify these devices in any way.** Replace with proper replacement part(s) supplied by Killark before continuing service. Failure to do so could cause serious or fatal personal injury and/or equipment damage.
- Check gaskets for deterioration and replace if necessary.
 - Clean exterior surfaces making sure nameplates remain legible.
 - Inspect clamp guide assembly and cable grip tightness to ensure proper cable gripping.
 - Torque all screws as described in instructions before reusing device.
 - Inspect housing parts and replace those which are broken or excessively worn.
 - Check housing parts and replace those which are broken or excessively worn.
 - Check contacts for signs of excessive arcing or burning and replace if necessary.
 - Check receptacle thread used for plug locking ring for proper lubrication. Apply Killark's "LUB-G" type lubrication or equivalent to thread surfaces as required to prevent galling between the receptacle and locking ring threads.

In addition to these required maintenance procedures, we recommend an Electrical Preventive Maintenance Program as described in the National Fire Protection Association Bulletin NFPA No. 70B.

Replacement Parts: (Cover Only)

- VSQ3023FS-COV
- VSQ3034FS-COV

INTERMATEABILITY FOR PLUGS

Device	Killark Plug	Crouse Hinds Plug	Appleton Plug
VSQ3023-FS	VP3385	APJ3385: NPJ3383: NPJ3384	ACP3023BC
VSQ3034-FS	VP3485	APJ3485: NPJ3483: NPJ3484	ACP3034BC