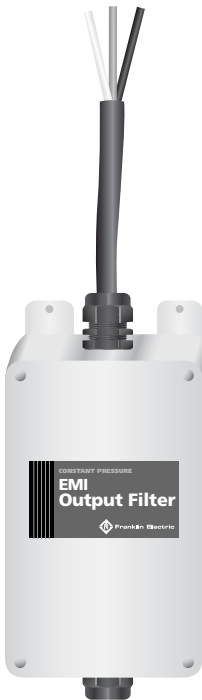


# EMI Output Filter

Kit 225300901 Install Guide



Franklin Electric

## Purpose

If it is not possible to follow all the recommendations in the SubDrive/MonoDrive Installation Manual, there is a slight possibility of interference, and added filtering can be effective. In the case of AM radio interference, the Output Filter is a possible remedy. This is accomplished by installing the Output Filter on the motor side of the SubDrive/MonoDrive. The Output Filter is intended for use with the following SubDrive/MonoDrive models when operating with a maximum output current of 10.9A:

Enclosure	SubDrive		MonoDrive	
	Order Number	Model Description	Order Number	Model Description
NEMA 1	5870203380 5870204100 5870204150	SubDrive75 SubDrive100 SubDrive150	5870203110 5870204110	MonoDrive MonoDriveXT
NEMA 3R	5870205103 5870205103C 5870205303 5870205303C 5870205403 5870205403C	SubDrive15 SubDrive15 Connect SubDrive20 SubDrive20 Connect SubDrive30 SubDrive30 Connect	5870205003 5870205003C 5870205203 5870205203C	MonoDrive MonoDrive Connect MonoDriveXT MonoDriveXT Connect
NEMA 4	5870203384 5870204104 5870204154	SubDrive75 SubDrive100 SubDrive150	5870203114 5870204114	MonoDrive MonoDriveXT

**Note:** This filter is not intended for use with the SubDrive50 Connect, SubDrive300 or SubDrive2W due to higher current levels.

### WARNING

Serious or fatal electric shock may result from failure to connect the motor, the SubDrive/MonoDrive Controller, the EMI Filter, any metal plumbing, and all other metal near the motor or cable to the power supply ground terminal, using wire no smaller than motor cable wires. To reduce the risk of electrical shock, disconnect power before working on or around the water system. Capacitors inside the controller can still hold a lethal voltage even after power has been removed. Do not use motor in swimming areas.

**Allow 10 minutes for dangerous internal voltage to discharge.**

### CAUTION

This product should **only** be used with Franklin Electric SubDrive/MonoDrive Controllers. Do not use power factor correction capacitors with the EMI Filter and controller as damage will result to both the motor and the controller.

### ATTENTION

This equipment is intended for installation only by technically qualified personnel. Failure to install it in compliance with national and local electrical codes and within Franklin Electric's recommendations may result in electrical shock or fire hazard, unsatisfactory performance, and equipment failure.

## TOOLS AND HARDWARE REQUIRED

Installation of the Constant Pressure Water EMI Output Filter requires a screwdriver, a crescent-type wrench, and four fasteners for mounting the Filter Box.

## Installation

### Location Selection

The EMI Output Filter is installed between the SubDrive/MonoDrive Controller and the motor leads.

The cable provided with the EMI Output Filter is approximately 60 cm (24 inches) long and should be connected directly to the controller output power terminal block.

The EMI Output Filter is mounted to a flat surface using fasteners provided by the installer through each of the exterior mounting tabs.

See Figure 1.



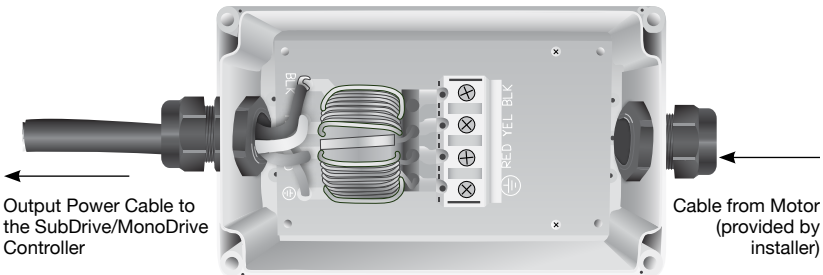
**Figure 1**

Four mounting tabs for wall mounting attachment



### Installation Procedure

1. Disconnect electrical power to the controller at the main breaker. If previously connected to the supply mains, wait ten (10) minutes for dangerous internal voltages within the controller to discharge.
2. Remove the EMI Output Filter cover and controller lid.
3. Attach the EMI Output Filter to a flat surface using four fasteners.
4. Route the preinstalled power cable from the EMI Output Filter to the output terminal block of the controller through the strain relief fitting that was provided with the controller. The green lead should be connected to the ground terminal, while the red, yellow, and black leads are connected to their respective terminals as labeled on the output circuit board of the controller.
5. Route the power leads from the motor through the strain relief on the unoccupied cable opening of the EMI Output Filter. The green lead should be connected to the ground terminal, while the red, yellow, and black motor leads are connected to their respective terminals as labeled on the circuit board of the EMI Output Filter.
6. Reattach the EMI Output Filter cover and the controller lid.
7. Upon completion, refer to the SubDrive/MonoDrive Installation Manual for start-up and operation procedures.



**Figure 2**

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**800-348-2420**



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