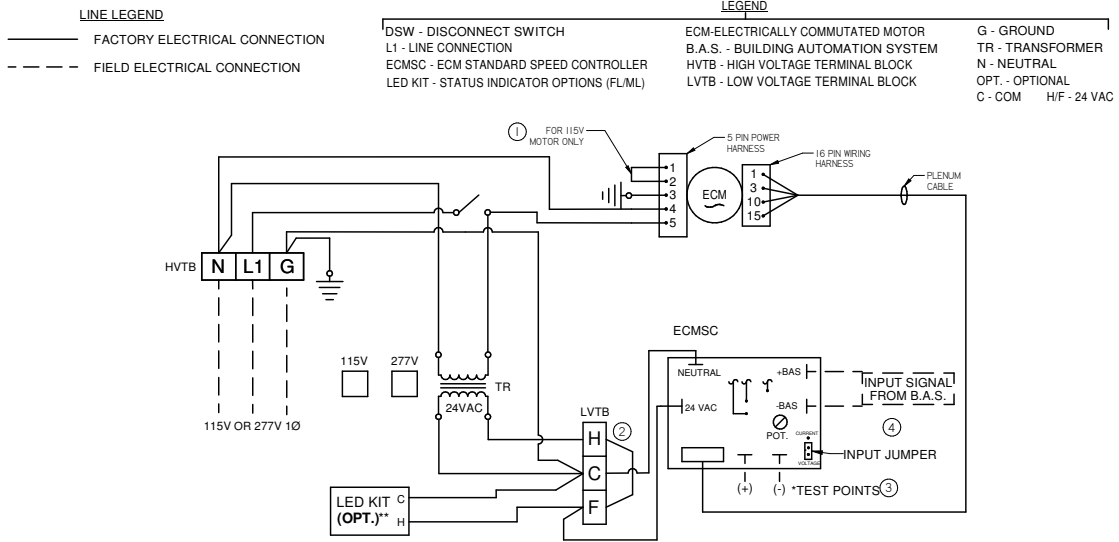


# FAN FILTER UNIT

## WIRING DIAGRAMS

### FFU Controls Wiring Diagrams

#### FFU - 115/277V, 1 $\phi$ ECM MOTOR W/ STANDARD ECM SPEED CONTROL (ECMSC) ▼

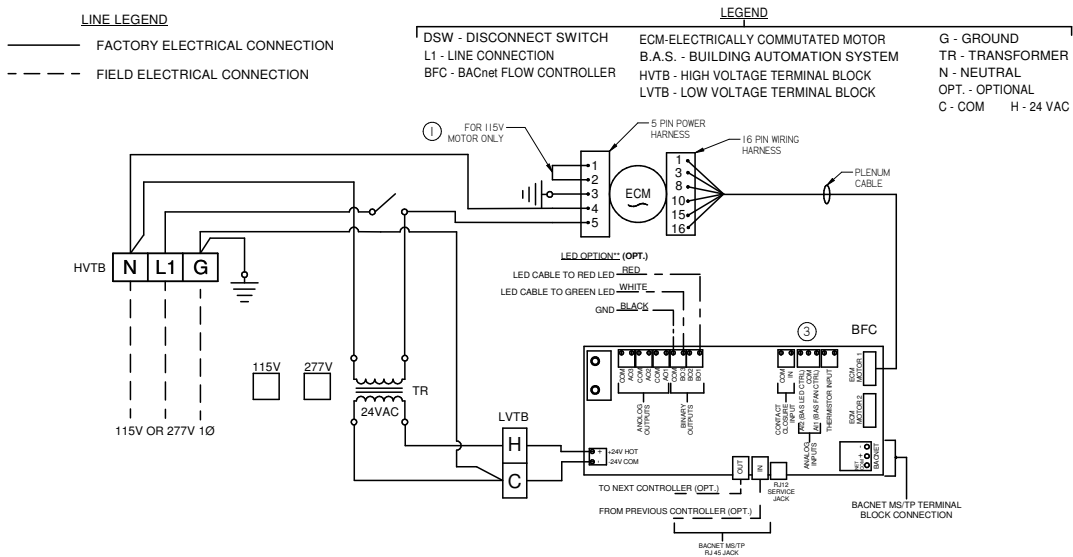


- LINE LEGEND**
- FACTORY ELECTRICAL CONNECTION
  - - - - - FIELD ELECTRICAL CONNECTION
- NOTES:**
- 115V MOTOR HAS JUMPER BETWEEN PINS 1 AND 2 ON MOTOR HARNESS. 277V MOTORS DO NOT HAVE THIS JUMPER.
  - FACTORY INSTALLED JUMPER. REMOVE AND REPLACE WITH RELAY FOR REMOTE ON/OFF CONTROL.
  - TEST POINTS FOR MONITORING MANUAL SPD. CONTROL SETTING:  
1-4.5 VDC = MINIMUM TO MAXIMUM AIRFLOW.  
0-1 VDC = FAN OFF

- LEGEND**
- DSW - DISCONNECT SWITCH
  - L1 - LINE CONNECTION
  - ECMSC - ECM STANDARD SPEED CONTROLLER
  - LED KIT - STATUS INDICATOR OPTIONS (FLML)
  - ECM-ELECTRICALLY COMMUTATED MOTOR
  - B.A.S. - BUILDING AUTOMATION SYSTEM
  - HVTB - HIGH VOLTAGE TERMINAL BLOCK
  - LVTB - LOW VOLTAGE TERMINAL BLOCK
  - G - GROUND
  - TR - TRANSFORMER
  - N - NEUTRAL
  - OPT. - OPTIONAL
  - C - COM HIF - 24 VAC
- 4 B.A.S. CONTROL**
- SPEED CONTROLLER MUST BE ENERGIZED AT ALL TIMES - USE JUMPER WIRE FROM NOTE 1
- THE BAS INPUT TO THE SPEED CONTROLLER IS JUMPER SELECTABLE FOR 0-10VDC OR 0-20 mA.
- BAS INPUT SIGNAL TO THE SPEED CONTROL:  
2-10 VDC (4-20mA) = MINIMUM TO MAXIMUM AIRFLOW.  
1-2 VDC (2-4mA) = BAS FAN OFF  
NO SIGNAL (0-1 VDC, 0-2 mA) = MANUAL SPEED ADJUSTMENT

- WIRING NOTES**
- INSTALLATION WORK AND ELECTRICAL WIRING MUST BE DONE BY QUALIFIED PERSON(S) IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS
  - USE COPPER 75 C MIN. RATED SUPPLY WIRE FOR FIELD CONNECTIONS.
  - FIELD LOW VOLTAGE WIRING INSULATION MUST HAVE 600V RATING.

#### FFU - 115/277V, 1 $\phi$ ECM MOTOR W/ BACNET FLOW CONTROL (BFC) ▼



- LINE LEGEND**
- FACTORY ELECTRICAL CONNECTION
  - - - - - FIELD ELECTRICAL CONNECTION
- NOTES:**
- 115V MOTOR HAS JUMPER BETWEEN PINS 1 AND 2 ON MOTOR HARNESS. 277V MOTORS DO NOT HAVE THIS JUMPER.
  - YELLOW LED INDICATOR LIGHT IS CREATED BY SIMULTANEOUS SIGNALS TO GREEN AND RED LED
- \*\* REFER TO DRAWING 266010 FOR LED KIT WIRING DIAGRAM

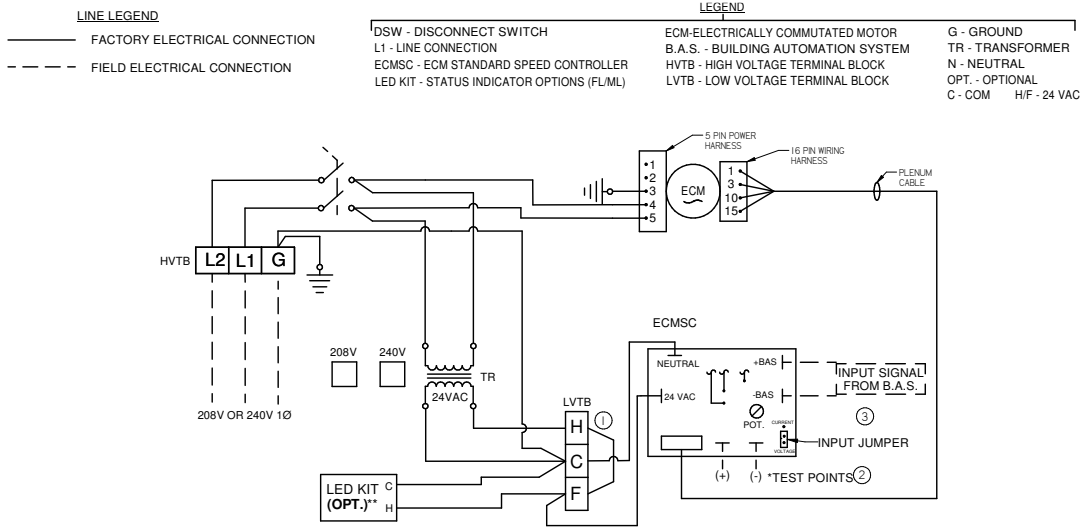
- LEGEND**
- DSW - DISCONNECT SWITCH
  - L1 - LINE CONNECTION
  - BFC - BACnet FLOW CONTROLLER
  - ECM-ELECTRICALLY COMMUTATED MOTOR
  - B.A.S. - BUILDING AUTOMATION SYSTEM
  - HVTB - HIGH VOLTAGE TERMINAL BLOCK
  - LVTB - LOW VOLTAGE TERMINAL BLOCK
  - G - GROUND
  - TR - TRANSFORMER
  - N - NEUTRAL
  - OPT. - OPTIONAL
  - C - COM H - 24 VAC
- 3 B.A.S. CONTROL**
- IF BAS CONTROL IS REQUIRED, FIELD WIRE CONNECTIONS TO ANALOG INPUTS (AI1/AI2 & COM)
- BAS INPUT SIGNAL TO THE SPEED CONTROL:  
2-10 VDC = MINIMUM TO MAXIMUM AIRFLOW.  
1-2 VDC = BAS FAN OFF  
NO SIGNAL (0-1 VDC) = MANUAL SPEED ADJUSTMENT
- NOTE: BACnet CONTROL OVERRIDES BAS INPUT SIGNAL

- WIRING NOTES**
- INSTALLATION WORK AND ELECTRICAL WIRING MUST BE DONE BY QUALIFIED PERSON(S) IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS
  - USE COPPER 75 C MIN. RATED SUPPLY WIRE FOR FIELD CONNECTIONS.
  - FIELD LOW VOLTAGE WIRING INSULATION MUST HAVE 600V RATING.
  - 3-WIRE CONNECTION IS REQUIRED FOR BACNET MS/TP TERMINAL BLOCK (+, -, NETCOM).

# FAN FILTER UNIT

## WIRING DIAGRAMS

### FFU - 240V, 1Ø ECM MOTOR W/ STANDARD ECM SPEED CONTROL (ECMSC) ▼

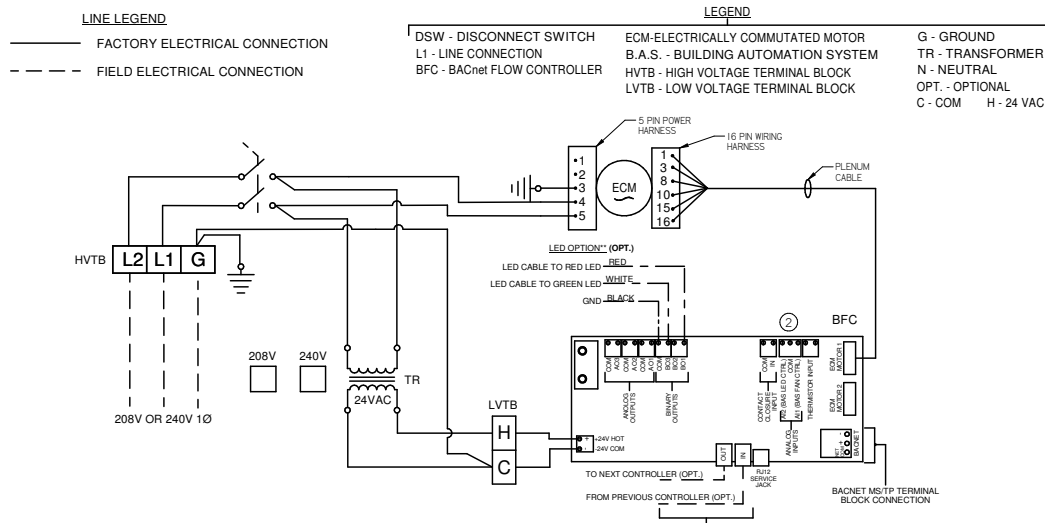


- NOTES:**
- ① FACTORY INSTALLED JUMPER, REMOVE AND REPLACE WITH RELAY FOR REMOTE ON/OFF CONTROL.
  - ② TEST POINTS FOR MONITORING MANUAL SPD. CONTROL SETTING:  
1-4.5 VDC = MINIMUM TO MAXIMUM AIRFLOW.  
0-1 VDC = FAN OFF

- ③ **B.A.S. CONTROL**  
SPEED CONTROLLER MUST BE ENERGIZED AT ALL TIMES - USE JUMPER WIRE FROM NOTE 1  
THE BAS INPUT TO THE SPEED CONTROLLER IS JUMPER SELECTABLE FOR 0-10VDC OR 0-20 mA.  
BAS INPUT SIGNAL TO THE SPEED CONTROL:  
2-10 VDC (4-20mA) = MINIMUM TO MAXIMUM AIRFLOW.  
1-2 VDC (2-4mA) = BAS FAN OFF  
NO SIGNAL (0-1 VDC, 0-2 mA) = MANUAL SPEED ADJUSTMENT

- WIRING NOTES**
1. INSTALLATION WORK AND ELECTRICAL WIRING MUST BE DONE BY QUALIFIED PERSON(S) IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS
  2. USE COPPER 75 C MIN. RATED SUPPLY WIRE FOR FIELD CONNECTIONS.
  3. FIELD LOW VOLTAGE WIRING INSULATION MUST HAVE 600V RATING.

### FFU - 240V, 1Ø ECM MOTOR W/ BACNET FLOW CONTROLLER (BFC) ▼



- NOTES:**
- ① YELLOW LED INDICATOR LIGHT IS CREATED BY SIMULTANEOUS SIGNALS TO GREEN AND RED LED  
\*\* REFER TO DRAWING 266010 FOR LED KIT WIRING DIAGRAM

- ② **B.A.S. CONTROL**  
IF BAS CONTROL IS REQUIRED, FIELD WIRE CONNECTIONS TO ANALOG INPUTS (AI1/AI2 & COM)  
BAS INPUT SIGNAL TO THE SPEED CONTROL:  
2-10 VDC = MINIMUM TO MAXIMUM AIRFLOW.  
1-2 VDC = BAS FAN OFF  
NO SIGNAL (0-1 VDC) = MANUAL SPEED ADJUSTMENT  
NOTE: BACnet CONTROL OVERRIDES BAS INPUT SIGNAL

- WIRING NOTES**
1. INSTALLATION WORK AND ELECTRICAL WIRING MUST BE DONE BY QUALIFIED PERSON(S) IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS
  2. USE COPPER 75 C MIN. RATED SUPPLY WIRE FOR FIELD CONNECTIONS.
  3. FIELD LOW VOLTAGE WIRING INSULATION MUST HAVE 600V RATING.
  4. 3-WIRE CONNECTION IS REQUIRED FOR BACNET MS/TP TERMINAL BLOCK (+, -, NET/COM).

**NOTE:** For details on installation and wiring of the **FFU with integrated LED lighting (UFFU)** please refer to the [URDC Ultra Remote Driver Cabinet Manual](#) on priceindustries.com

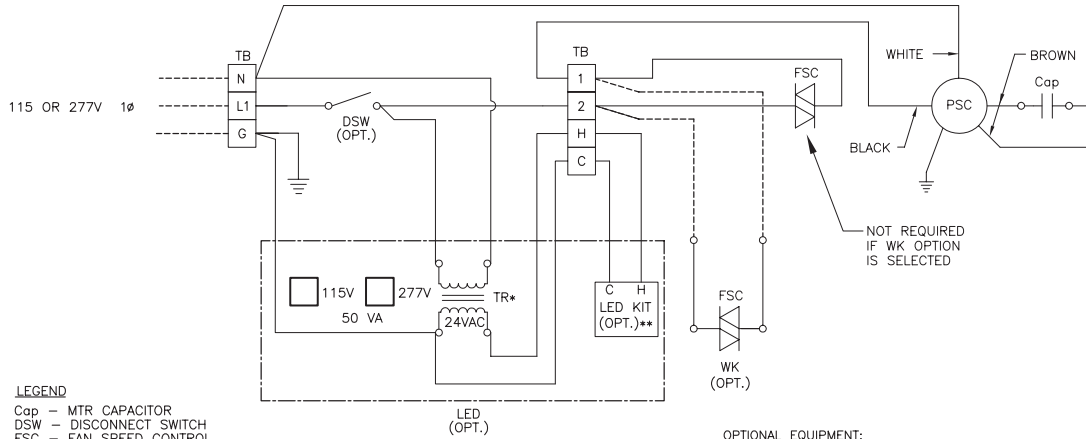
# FAN FILTER UNIT

## WIRING DIAGRAMS

### FFU - 115/277V, 1Ø PSC (STANDARD MOTOR) ▼

**LINE LEGEND**

- FACTORY ELECTRICAL WIRING
- FIELD ELECTRICAL WIRINGS



**LEGEND**

- Cap - MTR CAPACITOR
- DSW - DISCONNECT SWITCH
- FSC - FAN SPEED CONTROL
- L1 - LINE CONNECTION
- PSC - FAN MOTOR
- N - NEUTRAL
- OPT. - OPTIONAL
- TB - TERMINAL BLOCK
- WK - WALL MOUNTED SPEED CONTROLLER
- G - GROUND
- TR - TRANSFORMER
- H - HOT CONNECTION
- C - COMMON CONNECTION
- LED KIT - STATUS INDICATOR OPTIONS (FL/FBAS/ML/MBAS)

**OPTIONAL EQUIPMENT:**

- DISCONNECT SWITCH (DSW)
- WALL MOUNTED SPEED CONTROLLER (WK)
- LED (LED)

**NOTES**

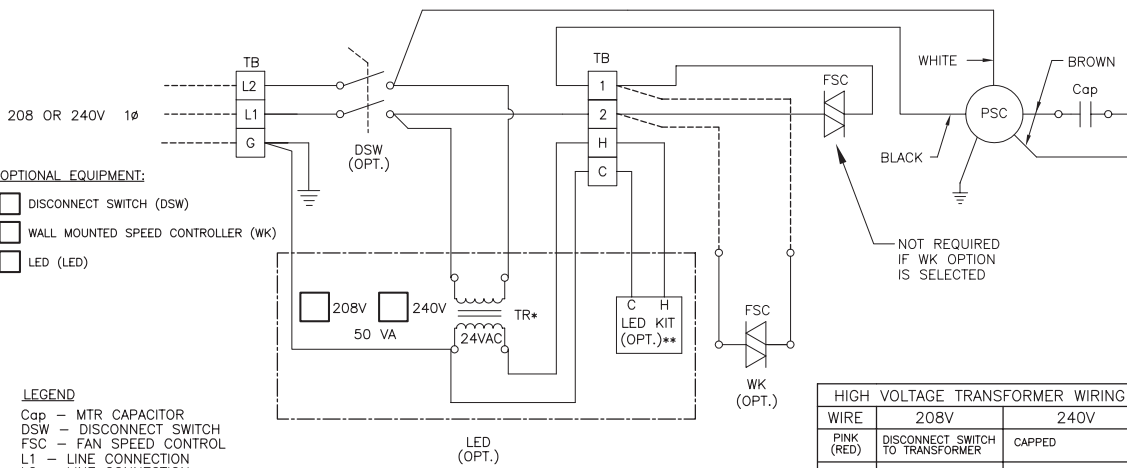
1. USE COPPER 75 C MIN. RATED SUPPLY WIRE FOR FIELD CONNECTIONS.
2. FIELD LOW VOLTAGE WIRING INSULATION MUST HAVE 600V RATING.
- \* TRANSFORMER INCLUDED ONLY WITH LED OPTION
- \*\* REFER TO DRAWING 266010 FOR LED KIT WIRING DIAGRAM

**ELECTRIC CONTROLS**

### FFU - 208/240V, 1Ø MOTOR (STANDARD/PSC) ▼

**LINE LEGEND**

- FACTORY ELECTRICAL WIRING
- FIELD ELECTRICAL WIRINGS



**OPTIONAL EQUIPMENT:**

- DISCONNECT SWITCH (DSW)
- WALL MOUNTED SPEED CONTROLLER (WK)
- LED (LED)

**LEGEND**

- Cap - MTR CAPACITOR
- DSW - DISCONNECT SWITCH
- FSC - FAN SPEED CONTROL
- L1 - LINE CONNECTION
- L2 - LINE CONNECTION
- PSC - FAN MOTOR
- OPT. - OPTIONAL
- TB - TERMINAL BLOCK
- WK - WALL MOUNTED SPEED CONTROLLER
- G - GROUND
- TR - TRANSFORMER
- H - HOT CONNECTION
- C - COMMON CONNECTION
- LED KIT - STATUS INDICATOR OPTIONS (FL/FBAS/ML/MBAS)

HIGH VOLTAGE TRANSFORMER WIRING		
WIRE	208V	240V
PINK (RED)	DISCONNECT SWITCH TO TRANSFORMER	CAPPED
ORANGE	CAPPED	DISCONNECT SWITCH TO TRANSFORMER

**NOTES**

1. USE COPPER 75 C MIN. RATED SUPPLY WIRE FOR FIELD CONNECTIONS.
2. FIELD LOW VOLTAGE WIRING INSULATION MUST HAVE 600V RATING.
- \* TRANSFORMER INCLUDED ONLY WITH LED OPTION
- \*\* REFER TO DRAWING 266010 FOR LED KIT WIRING DIAGRAM

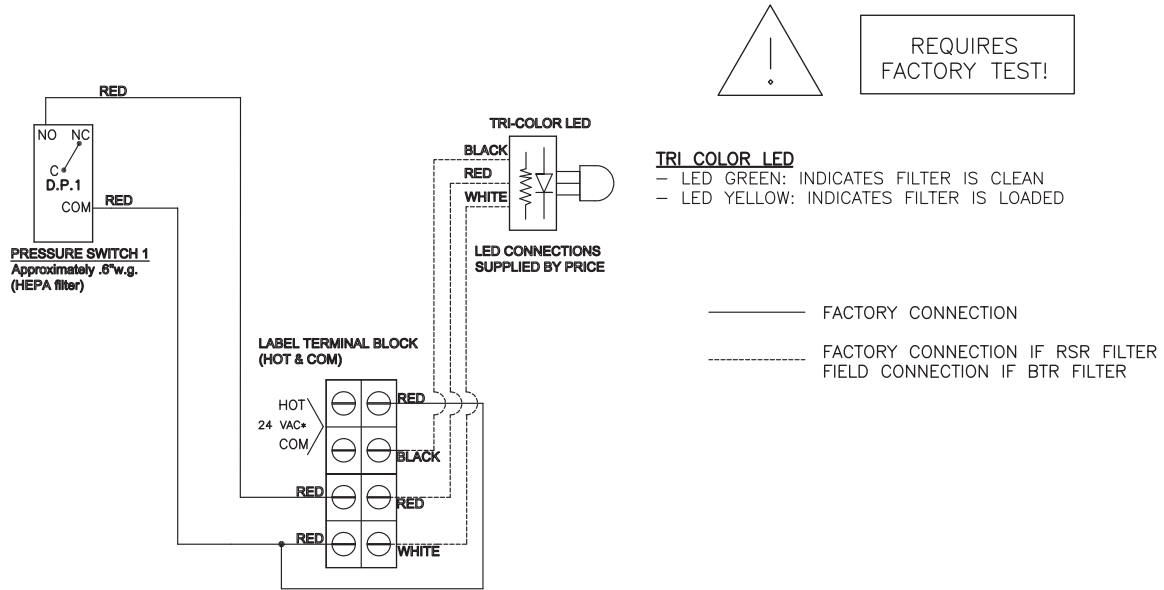
**ELECTRIC CONTROLS**

# FAN FILTER UNIT

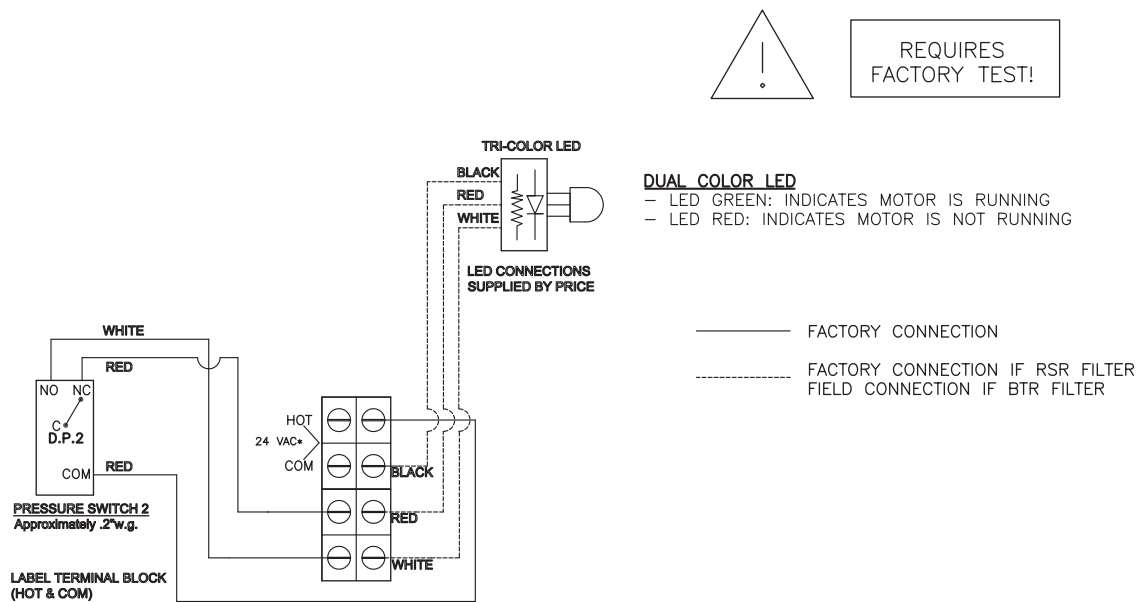
## WIRING DIAGRAMS

### FFU LED Wiring Diagrams

#### FFU LED - FILTER LOADING ▼



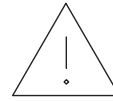
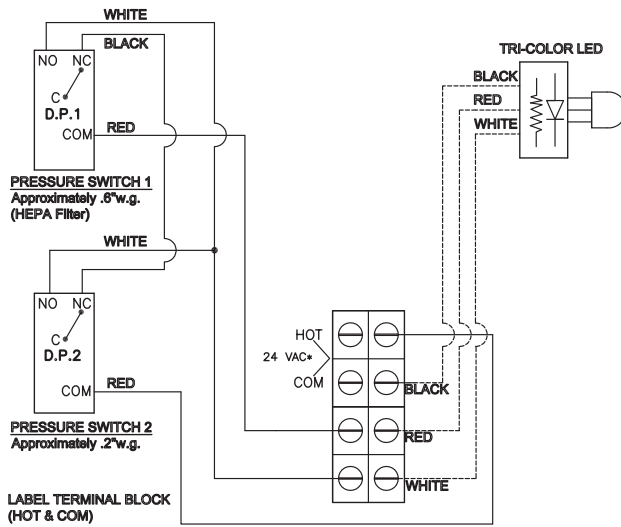
#### FFU LED - MOTOR LOADING ▼



# FAN FILTER UNIT

## WIRING DIAGRAMS

### FFU LED - MOTOR LOADING & FILTER LOADING ▼



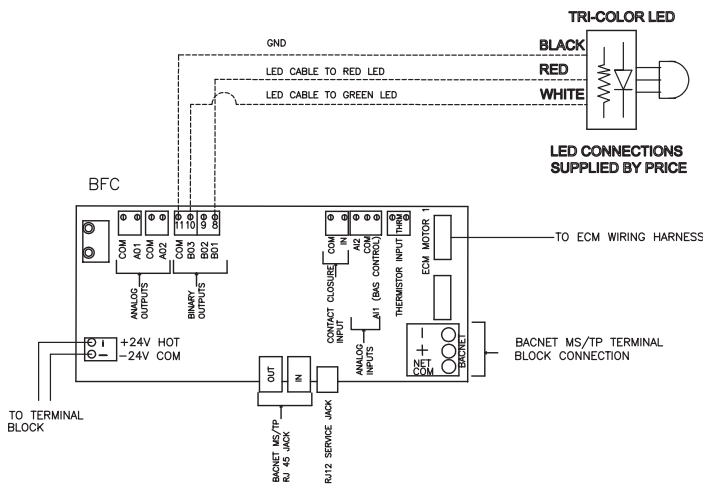
REQUIRES  
FACTORY TEST!

#### TRI COLOR LED

- LED GREEN: INDICATES MOTOR IS RUNNING, AND FILTER IS CLEAN
- LED RED: INDICATES WHEN MOTOR IS NOT RUNNING
- LED YELLOW: INDICATES FILTER IS LOADED

- FACTORY CONNECTION
- - - - - FACTORY CONNECTION IF RSR FILTER  
FIELD CONNECTION IF BTR FILTER

### FFU LED - MOTOR LOADING, FILTER LOADING, MOTOR BFC & FILTER BFC ▼



REQUIRES  
FACTORY TEST!

#### TRI COLOR LED

- LED GREEN: INDICATES MOTOR IS RUNNING, AND FILTER IS CLEAN
- LED SOLID RED: INDICATES MOTOR TURNED OFF
- LED BLINKING RED INDICATES MOTOR FAILURE
- LED YELLOW: INDICATES FILTER IS LOADED

- FACTORY CONNECTION
- - - - - FACTORY CONNECTION IF RSR FILTER  
FIELD CONNECTION IF BTR FILTER





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