

# USES® SHUNT EFFICIENCY SYSTEM

## INSTALLATION INSTRUCTIONS

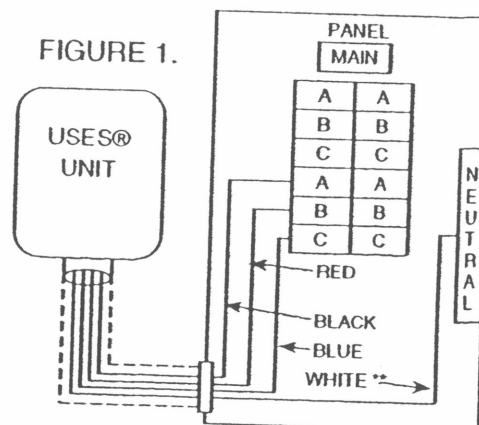
MODELS: BLM-3Y (240) BLM-3Y (250)  
BLM-3D (240) BLM-3D (250)

### PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 20 amp, 3 pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #10 THHN single conductor

FIGURE 1.



\*\* WHITE wire in "Y" models only.



CAUTION: DEENERGIZE ALL ELECTRICAL POWER TO THE PANEL AND EQUIPMENT BEFORE COMMENCING INSTALLATION.

CAUTION: The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.

CAUTION: Confirm all phase-to-phase and all phase-to-neutral voltages match those listed in Table 1 for the model being installed before commencing installation.

CAUTION: USES® unit must be installed by a licensed electrician. Installer is responsible to ensure all aspects of installation comply with the NEC and local electrical codes. All foreign country installations must comply with their electrical codes

CAUTION: USES® unit must be installed on the line side of a variable speed drives, magnetic motor controllers and frequency control drives. If put on the load side equipment damage may occur.

### INSTALLATION:

1. Install the circuit breaker in the electrical panel. \*
2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductors and the neutral wire (if present) into the panel.
4. Connect neutral wire (if present) to neutral bar in the panel.
5. Connect conductor wires to the circuit breaker.

### OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the lights on the side of the USES® unit. All should be lit and equally bright. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-phase and phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the lights were not lit or equally bright.
3. Confirm that the current on the conductors from the USES® unit to the circuit breaker as listed in Table 1 ( $\pm 20\%$ ) for the model being installed.
4. Periodically verify the indicator lights are lit and equally bright. Contact your USES dealer if they are not.

TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
BLM-3Y (240)	240	120	6.0
BLM-3D (240)	240	N/A	11.2
BLM-3Y (250)	250	250	6.0
BLM-3D (250)	250	N/A	11.2

\* If breaker space is not available in an electrical panel or if the USES® unit is being installed local to a load, a circuit breaker disconnect may be used provided it meets NEC requirements. The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.

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## INSTALLATION INSTRUCTIONS

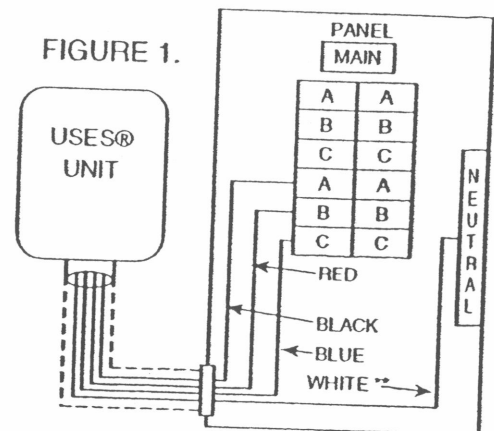
MODELS: BLM-3Y (380)  
BLM-3D (380)

### PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 20 amp, 3 pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #10 THHN single conductor

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2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductors and the neutral wire (if present) into the panel.
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5. Connect conductor wires to the circuit breaker.

### OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the lights on the side of the USES® unit. All should be lit and equally bright. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-phase and phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the lights were not lit or equally bright.
3. Confirm that the current on the conductors from the USES® unit to the circuit breaker as listed in Table 1 ( $\pm 20\%$ ) for the model being installed.
4. Periodically verify the indicator lights are lit and equally bright. Contact your USES dealer if they are not.

TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
BLM-3Y (380)	380	220	6.0
BLM-3D (380)	380	N/A	9.0

\* If breaker space is not available in an electrical panel or if the USES® unit is being installed local to a load, a circuit breaker disconnect may be used provided it meets NEC requirements. The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.

# USES® SHUNT EFFICIENCY SYSTEM

# INSTALLATION INSTRUCTIONS

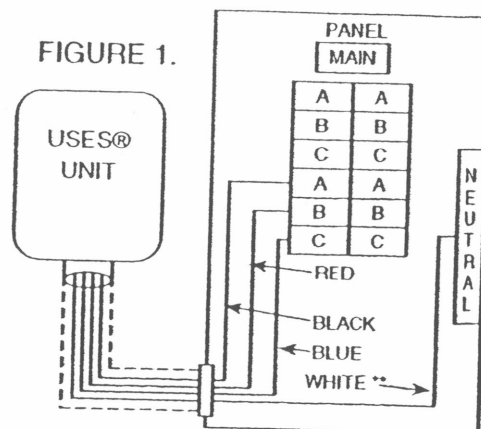
MODELS: BLM-3Y BLM-3Y (480)  
BLM-3D BLM-3D (480)

## PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 20 amp, 3 pole (SWD rated)
2. PVC pipe (size/quantity as required)
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4. PVC LB (size/quantity as required)
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## INSTALLATION:

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2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductors and the neutral wire (if present) into the panel.
4. Connect neutral wire (if present) to neutral bar in the panel.
5. Connect conductor wires to the circuit breaker.

## OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the lights on the side of the USES® unit. All should be lit and equally bright. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-phase and phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the lights were not lit or equally bright.
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TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
BLM-3Y	208/230	120	6.0
BLM-3D	208/230	N/A	9.2
BLM-3Y (480)	480	277	6.3
BLM-3D (480)	480	N/A	9.8

# USES® SHUNT EFFICIENCY SYSTEM

## INSTALLATION INSTRUCTIONS

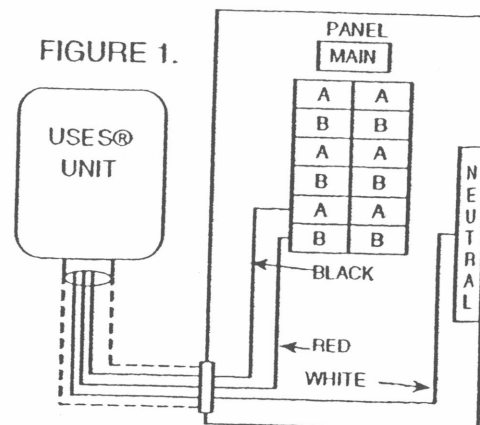
MODELS: RDES-1 CABO-240  
CMES-1

### PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 20 amp, 2 pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #10 THHN single conductor

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### INSTALLATION:

1. Install the circuit breaker in the electrical panel. \*
2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductors and the neutral wire into the panel.
4. Connect neutral wire to neutral bar in the panel.
5. Connect conductor wires to the circuit breaker.

### OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the lights on the side of the USES® unit. All should be lit and equally bright. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-phase and phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the lights were not lit or equally bright.
3. Confirm that the current on the conductors from the USES® unit to the circuit breaker as listed in Table 1 ( $\pm 20\%$ ) for the model being installed.
4. Periodically verify the indicator lights are lit and equally bright. Contact your USES dealer if they are not.

\* If breaker space is not available in an electrical panel or if the USES® unit is being installed local to a load, a circuit breaker disconnect may be used provided it meets NEC requirements. The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.

TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
RDES-1	240	120	3.7
CMES-1	240	120	10.0
CABO-240	240	120	3.7



# USES® SHUNT EFFICIENCY SYSTEM

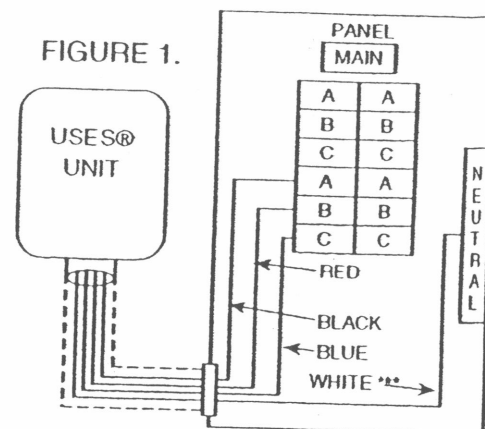
## INSTALLATION INSTRUCTIONS

MODELS: CMES-3Y (600)  
CMES-3D (600)

### PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 40 amp, 3 pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #6 THHN single conductor



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### INSTALLATION:

1. Install the circuit breaker in the electrical panel. \*
2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductors and the neutral wire (if present) into the panel.
4. Connect neutral wire (if present) to neutral bar in the panel.
5. Connect conductor wires to the circuit breaker.

### OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the lights on the side of the USES® unit. All should be lit and equally bright. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-phase and phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the lights were not lit or equally bright.
3. Confirm that the current on the conductors from the USES® unit to the circuit breaker as listed in Table 1 ( $\pm 20\%$ ) for the model being installed.
4. Periodically verify the indicator lights are lit and equally bright. Contact your USES dealer if they are not.

TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
CMES-3Y (600)	600	347	24.0
CMES-3D (600)	600	N/A	32.2

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# USES® SHUNT EFFICIENCY SYSTEM

# INSTALLATION INSTRUCTIONS

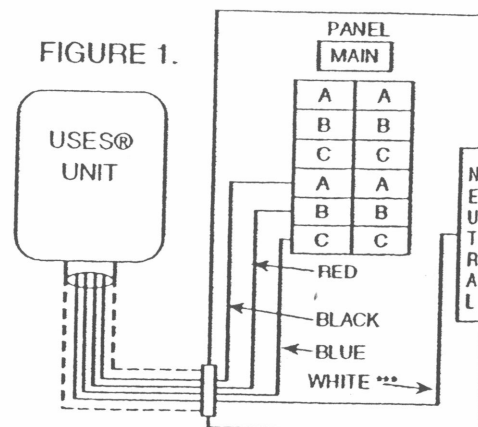
MODELS: CMES-3Y CMES-3Y (480)  
CMES-3D CMES-3D (480)

## PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 30 amp, 3 pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #8 THHN single conductor

FIGURE 1.



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## INSTALLATION:

1. Install the circuit breaker in the electrical panel. \*
2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductors and the neutral wire (if present) into the panel.
4. Connect neutral wire (if present) to neutral bar in the panel.
5. Connect conductor wires to the circuit breaker.

## OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the lights on the side of the USES® unit. All should be lit and equally bright. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-phase and phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the lights were not lit or equally bright.
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TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
CMES-3Y	208/230	120	11.0
CMES-3D	208/230	N/A	20.0
CMES-3Y (480)	480	277	17.4
CMES-3D (480)	480	N/A	24.7

# USES® SHUNT EFFICIENCY SYSTEM

## INSTALLATION INSTRUCTIONS

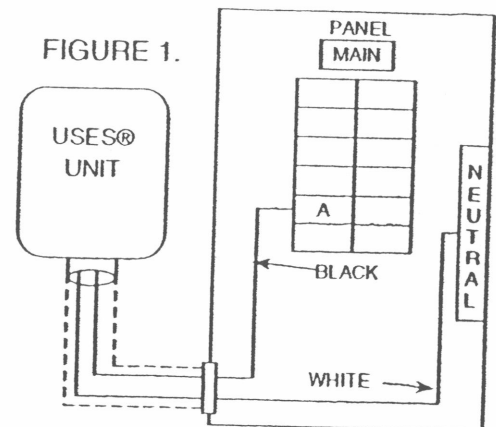
MODELS: BL-120 CABO-120  
BL-300

### PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 20 amp, single pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #10 THHN single conductor

FIGURE 1.



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### INSTALLATION:

1. Install the circuit breaker in the electrical panel. \*
2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductor and the neutral wire into the panel.
4. Connect neutral wire to neutral bar in the panel.
5. Connect conductor wire to the circuit breaker.

### OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the light on the side of the USES® unit. It should be lit. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the light was not lit.
3. Confirm that the current on the conductor from the USES® unit to the circuit breaker is as listed in Table 1 ( $\pm 20\%$ ) for the model being installed.
4. Periodically verify the indicator light is lit. Contact your USES dealer if it is not.

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TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
BL-120	N/A	120	1.0
BL-300	N/A	277	2.0
CABO-120	N/A	120	4.5

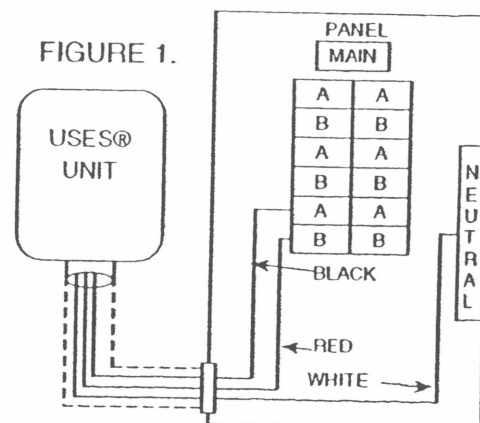
MODELS: RDES-1 (380) CABO-380  
CMES-1 (380)

## PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 20 amp, 2 pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #10 THHN single conductor

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TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
RDES-1 (380)	380	220	6.5
CMES-1 (380)	380	220	12.0
CABO-380	380	220	6.5

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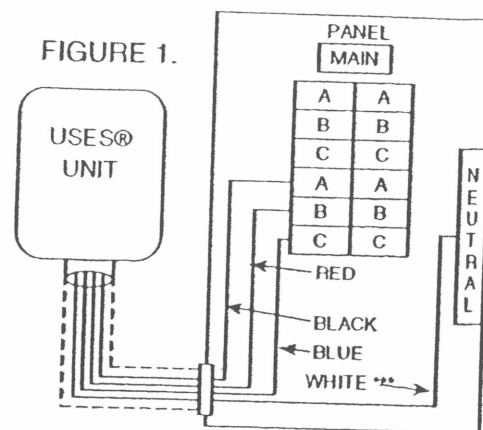
MODELS: CMES-3Y (380)  
CMES-3D (380)

### PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 30 amp, 3 pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #8 THHN single conductor

FIGURE 1.



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TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
CMES-3Y (380)	380	220	15.0
CMES-3D (380)	380	N/A	22.0



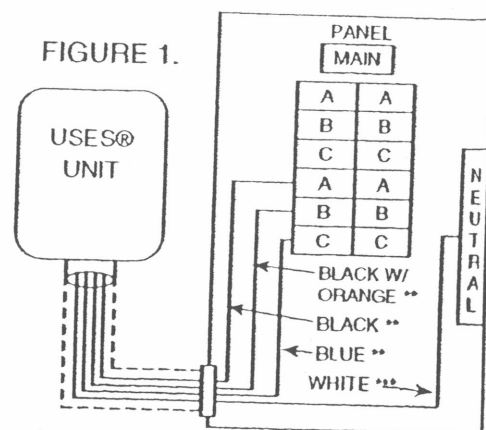
MODELS: CMES-3Y H

## PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

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4. PVC LB (size/quantity as required)
5. Wire: use #8 THHN single conductor

FIGURE 1.



\*\* Conductor colors: BLACK W/ORANGE stripes, BLACK and RED. BLACK W/ORANGE stripe conductor must be connected to the panel's high leg.

\*\*\* WHITE wire in "Y" models only.



CAUTION: DEENERGIZE ALL ELECTRICAL POWER TO THE PANEL AND EQUIPMENT BEFORE COMMENCING INSTALLATION.

CAUTION: The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.

CAUTION: Confirm all phase-to-phase and all phase-to-neutral voltages match those listed in Table 1 for the model being installed before commencing installation.

CAUTION: USES® unit must be installed by a licensed electrician. Installer is responsible to ensure all aspects of installation comply with the NEC and local electrical codes. All foreign country installations must comply with their electrical codes

CAUTION: USES® unit must be installed on the line side of a variable speed drives, magnetic motor controllers and frequency control drives. If put on the load side equipment damage may occur.

## INSTALLATION:

1. Install the circuit breaker in the electrical panel. \*
2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductors and the neutral wire into the panel.
4. Connect neutral wire to neutral bar in the panel.
5. Connect conductor wires to the circuit breaker.

## OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the lights on the side of the USES® unit. All should be lit and equally bright. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-phase and phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the lights were not lit or equally bright.
3. Confirm that the current on the conductors from the USES® unit to the circuit breaker as listed in Table 1 ( $\pm 20\%$ ) for the model being installed.
4. Periodically verify the indicator lights are lit and equally bright. Contact your USES dealer if they are not.

\* If breaker space is not available in an electrical panel or if the USES® unit is being installed local to a load, a circuit breaker disconnect may be used provided it meets NEC requirements. The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.

TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
CMES-3Y H			
L1-L2	208/230	L1-N 120	10.0
L2-L3	208/230	L2-N 208	11.0
L3-L1	208/230	L3-N 120	10.0

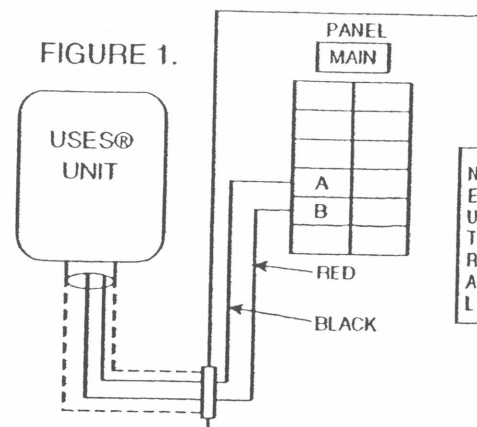
MODELS: BL-240  
BL-380

## PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 20 amp, 2 pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #10 THHN single conductor

FIGURE 1.



**CAUTION:** DEENERGIZE ALL ELECTRICAL POWER TO THE PANEL AND EQUIPMENT BEFORE COMMENCING INSTALLATION.

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**CAUTION:** USES® unit must be installed on the line side of a variable speed drives, magnetic motor controllers and frequency control drives. If put on the load side equipment damage may occur.

## INSTALLATION:

1. Install the circuit breaker in the electrical panel. \*
2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductors into the panel.
4. Connect conductor wires to the circuit breaker.

TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
BL-240	240	N/A	3.0
BL-380	380	N/A	4.0

## OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the light on the side of the USES® unit. It should be lit. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the light was not lit.
3. Confirm that the current on the conductor from the USES® unit to the circuit breaker is as listed in Table 1 ( $\pm 20\%$ ) for the model being installed.
4. Periodically verify the indicator light is lit. Contact your USES dealer if it is not.

\* If breaker space is not available in an electrical panel or if the USES® unit is being installed local to a load, a circuit breaker disconnect may be used provided it meets NEC requirements. The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.

# USES® SHUNT EFFICIENCY SYSTEM

## INSTALLATION INSTRUCTIONS

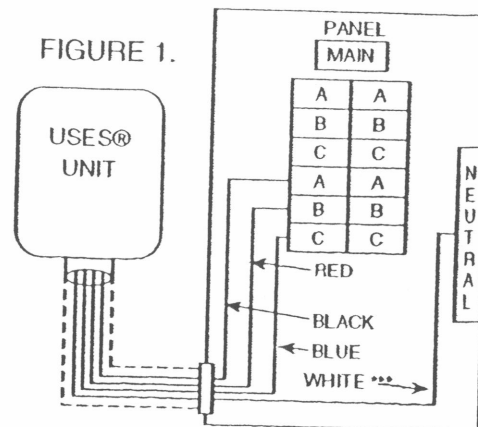
MODELS: CMES-3Y (240) CMES-3D (240)  
CMES-3Y (250) CMES-3D (250)

### PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 30 amp, 3 pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #8 THHN single conductor

FIGURE 1.



\*\*\* WHITE wire in "Y" models only.



**CAUTION:** DEENERGIZE ALL ELECTRICAL POWER TO THE PANEL AND EQUIPMENT BEFORE COMMENCING INSTALLATION.

**CAUTION:** The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.

**CAUTION:** Confirm all phase-to-phase and all phase-to-neutral voltages match those listed in Table 1 for the model being installed before commencing installation.

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**CAUTION:** USES® unit must be installed on the line side of a variable speed drives, magnetic motor controllers and frequency control drives. If put on the load side equipment damage may occur.

### INSTALLATION:

1. Install the circuit breaker in the electrical panel. \*
2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductors and the neutral wire (if present) into the panel.
4. Connect neutral wire (if present) to neutral bar in the panel.
5. Connect conductor wires to the circuit breaker.

### OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the lights on the side of the USES® unit. All should be lit and equally bright. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-phase and phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the lights were not lit or equally bright.
3. Confirm that the current on the conductors from the USES® unit to the circuit breaker as listed in Table 1 ( $\pm 20\%$ ) for the model being installed.
4. Periodically verify the indicator lights are lit and equally bright. Contact your USES dealer if they are not.

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TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
CMES-3Y (240)	240	120	11.0
CMES-3D (240)	240	N/A	20.0
CMES-3Y (250)	250	120	11.0
CMES-3D (250)	250	N/A	20.0

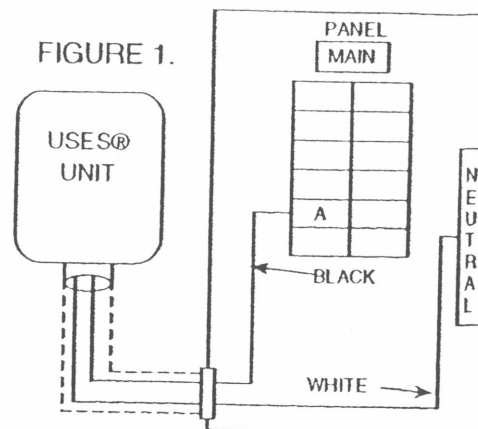
MODELS: RDES-1 220 CABO-220  
CMES-1 220

## PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 20 amp, single pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #10 THHN single conductor

FIGURE 1.



**CAUTION:** DEENERGIZE ALL ELECTRICAL POWER TO THE PANEL AND EQUIPMENT BEFORE COMMENCING INSTALLATION.

**CAUTION:** The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.

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## INSTALLATION:

1. Install the circuit breaker in the electrical panel. \*
2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductor and the neutral wire into the panel.
4. Connect neutral wire to neutral bar in the panel.
5. Connect conductor wire to the circuit breaker.

TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
RDES-1 220	N/A	220	10.0
CMES-1 220	N/A	220	16.0
CABO-220	N/A	220	5.0

## OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the light on the side of the USES® unit. It should be lit. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the light was not lit.
3. Confirm that the current on the conductor from the USES® unit to the circuit breaker is as listed in Table 1 ( $\pm 20\%$ ) for the model being installed.
4. Periodically verify the indicator light is lit. Contact your USES dealer if it is not.

\* If breaker space is not available in an electrical panel or if the USES® unit is being installed local to a load, a circuit breaker disconnect may be used provided it meets NEC requirements. The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.

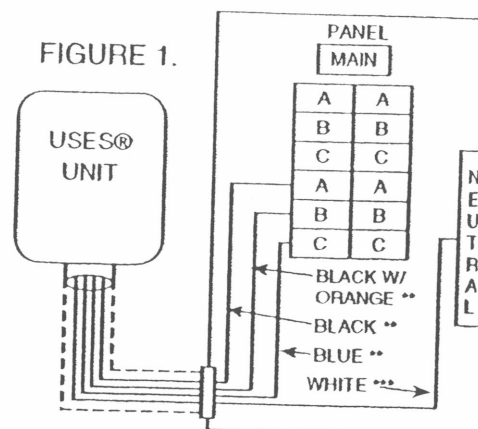
MODELS: CMES-3Y H (240)

## PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 30 amp, 3 pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #8 THHN single conductor

FIGURE 1.



\*\* Conductor colors: BLACK W/ORANGE stripes, BLACK and RED. BLACK W/ORANGE stripe conductor must be connected to the panel's high leg.

\*\*\* WHITE wire in "Y" models only.



**CAUTION:** DEENERGIZE ALL ELECTRICAL POWER TO THE PANEL AND EQUIPMENT BEFORE COMMENCING INSTALLATION.

**CAUTION:** The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.

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## INSTALLATION:

1. Install the circuit breaker in the electrical panel. \*
2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductors and the neutral wire into the panel.
4. Connect neutral wire to neutral bar in the panel.
5. Connect conductor wires to the circuit breaker.

## OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the lights on the side of the USES® unit. All should be lit and equally bright. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-phase and phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the lights were not lit or equally bright.
3. Confirm that the current on the conductors from the USES® unit to the circuit breaker as listed in Table 1 ( $\pm 20\%$ ) for the model being installed.
4. Periodically verify the indicator lights are lit and equally bright. Contact your USES dealer if they are not.

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TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
CMES-3Y H 240			
L1-L2	240	L1-N 120	10.0
L2-L3	240	L2-N 208	11.0
L3-L1	240	L3-N 120	10.0



# USES® SHUNT EFFICIENCY SYSTEM

## INSTALLATION INSTRUCTIONS

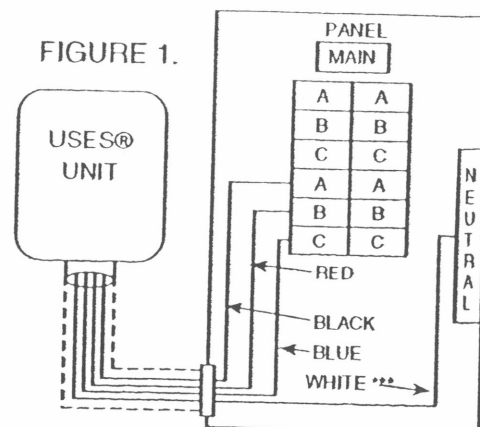
MODELS: CMES-3Y (416)  
CMES-3D (416)

### PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 30 amp, 3 pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #8 THHN single conductor

FIGURE 1.



\*\*\* WHITE wire in "Y" models only.



- CAUTION:** DEENERGIZE ALL ELECTRICAL POWER TO THE PANEL AND EQUIPMENT BEFORE COMMENCING INSTALLATION.
- CAUTION:** The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.
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- CAUTION:** USES® unit must be installed on the line side of a variable speed drives, magnetic motor controllers and frequency control drives. If put on the load side equipment damage may occur.

### INSTALLATION:

1. Install the circuit breaker in the electrical panel. \*
2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductors and the neutral wire (if present) into the panel.
4. Connect neutral wire (if present) to neutral bar in the panel.
5. Connect conductor wires to the circuit breaker.

### OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the lights on the side of the USES® unit. All should be lit and equally bright. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-phase and phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the lights were not lit or equally bright.
3. Confirm that the current on the conductors from the USES® unit to the circuit breaker as listed in Table 1 ( $\pm 20\%$ ) for the model being installed.
4. Periodically verify the indicator lights are lit and equally bright. Contact your USES dealer if they are not.

\* If breaker space is not available in an electrical panel or if the USES® unit is being installed local to a load, a circuit breaker disconnect may be used provided it meets NEC requirements. The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.

TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
CMES-3Y (416)	416	220	15.0
CMES-3D (416)	416	N/A	22.0

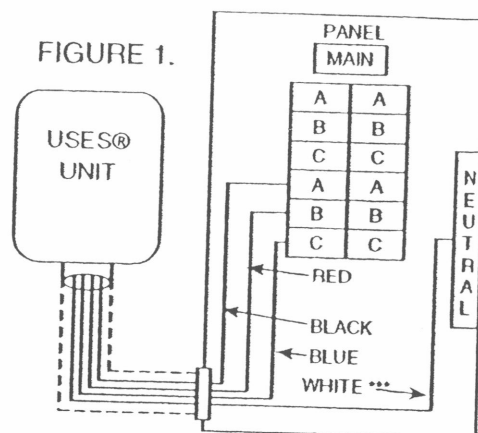
MODELS: CMES-3Y (460)  
CMES-3D (460)

## PARTS REQUIRED:

Parts to be supplied by the installer. Similar parts may be substituted. Additional parts may be required depending upon installation configuration.

1. Circuit breaker: 30 amp, 3 pole (SWD rated)
2. PVC pipe (size/quantity as required)
3. PVC T/A (size/quantity as required)
4. PVC LB (size/quantity as required)
5. Wire: use #8 THHN single conductor

FIGURE 1.



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- CAUTION:** USES® unit must be installed on the line side of a variable speed drives, magnetic motor controllers and frequency control drives. If put on the load side equipment damage may occur.

## INSTALLATION:

1. Install the circuit breaker in the electrical panel. \*
2. Mount the USES® unit. The total wiring length from unit to the circuit breaker must be 10' or less.
3. Run conductors and the neutral wire (if present) into the panel.
4. Connect neutral wire (if present) to neutral bar in the panel.
5. Connect conductor wires to the circuit breaker.

TABLE 1.

USES® MODEL	Ph.-Ph. VOLTAGE	Ph.-N VOLTAGE	USES® CURRENT
CMES-3Y (460)	460	240	15.0
CMES-3D (460)	460	N/A	22.0

## OPERATIONAL CHECKS:

1. When ready to energize the USES® unit, shut the circuit breaker
2. Observe the lights on the side of the USES® unit. All should be lit and equally bright. If not, deenergize the USES® unit, verify the wiring is correct and that proper phase-to-phase and phase-to-neutral voltages exist. Contact your USES dealer if the voltage is correct but the lights were not lit or equally bright.
3. Confirm that the current on the conductors from the USES® unit to the circuit breaker as listed in Table 1 ( $\pm 20\%$ ) for the model being installed.
4. Periodically verify the indicator lights are lit and equally bright. Contact your USES dealer if they are not.

\* If breaker space is not available in an electrical panel or if the USES® unit is being installed local to a load, a circuit breaker disconnect may be used provided it meets NEC requirements. The point at which the USES® unit is connected to the electrical system must be on the line side of any controller for any motor or load.