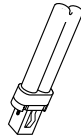


TWIN LAMPS 5 WATTS



- Open core & coil or encased & potted designs
- 1 & 2 lamp models available
- Ideal for surface mount fixtures, exit & retail display signs

MAGNETIC COMPACT FLUORESCENT BALLASTS FOR TWIN LAMPS 5 WATTS

QUICK REFERENCE

Nominal lamp watts and configuration

| Lamp Type | Mag or Elec | Qty of Lamps | Line Volt | Catalog Number | Input Watts | Line Current Amps | Starting Current Amps | Ballast Factor | Min Start Temp | Power Factor | THD | Lead Configuration | | | Starting Method | Dim | Wir Diag |
|---|-------------|--------------|-----------|----------------|-------------|-------------------|-----------------------|----------------|----------------|--------------|------|--------------------|-------------|-------------------|-----------------|-----|----------|
| | | | | | | | | | | | | Side Exit | Bottom Exit | Bottom Exit Studs | | | |
| Electrical Characteristics - 60 Hz | | | | | | | | | | | | | | | | | |
| 5 Watts CFT5W/G23 Twin, 2-Pin | ○ M | 1 | 120 | 4101F1P | 8 | 0.17 | 0.18 | 0.95 | 0° F | Normal | <10% | X | — | — | PH | A1 | 1 |
| | ○ M | 1 | 120 | 4101F2P | 8 | 0.17 | 0.18 | 0.95 | 0° F | Normal | <10% | X | — | — | PH | B1 | 1 |
| | ○ M | 1 | 120 | 4101P | 8 | 0.17 | 0.18 | 0.95 | 0° F | Normal | <10% | X | X | X | PH | C1 | 1 |
| | ○ M | 1 | 277 | 4205F1P | 11 | 0.08 | 0.19 | 1.00 | 0° F | Normal | <10% | X | — | — | PH | A2 | 1 |
| | ○ M | 1 | 277 | 4205F2P | 11 | 0.08 | 0.19 | 1.00 | 0° F | Normal | <10% | X | — | — | PH | B2 | 1 |
| | ○ M | 1 | 277 | 4205P | 11 | 0.08 | 0.19 | 1.00 | 0° F | Normal | <20% | X | X | X | PH | C2 | 1 |
| | ○ M | 1 | 120 | 4100P | 8 | 0.09 | 0.07 | 0.92 | 0° F | High | <20% | X | X | X | PH | C2 | 2 |
| | ○ M | 1 | 277 | 4204P | 11 | 0.05 | 0.06 | 1.00 | 0° F | High | <20% | X | X | X | PH | C3 | 2 |
| | ○ M | 2 | 120 | 4102P | 18 | 0.16 | 0.17 | 0.98 | 0° F | High | <20% | X | X | X | PH | C5 | 8 |

* Non-thermally protected models available.
 * PH = Preheat

- F1 indicates an open core & coil unit with no mounting feet.
- F2 indicates an open core & coil unit with mounting feet.
- ▲ Standard cases offer side lead configuration. Add "BE" suffix for Bottom Exit design or "BES" for Bottom Exit Studs design.
- Not approved for use in hazardous locations.

The encased ballasts listed on this page are available in white (001) or black (000) cans. All ballasts are UL listed, CSA approved and designated Class P (thermally protected).

WIRING DIAGRAMS

Install in accordance with National Electrical Code.

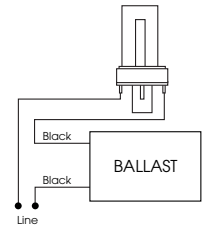


DIAGRAM 1

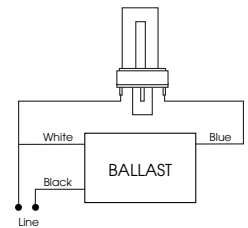


DIAGRAM 2

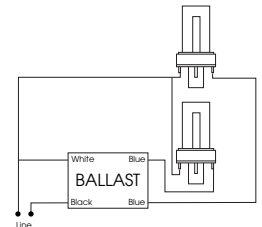
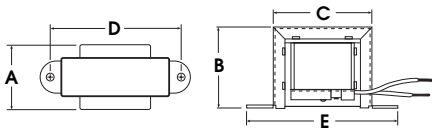


DIAGRAM 8
Parallel lamp operation

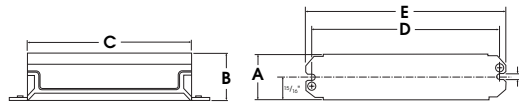
REFERENCE DRAWING FOR A1, A2, B1, B2



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| A1 | 0.84" | 1.41" | 1.72" | — | — |
| A2 | 1.94" | 1.64" | 1.97" | — | — |
| B1 | 0.84" | 1.41" | 1.72" | 2.00" | 2.38" |
| B2 | 1.94" | 1.64" | 1.97" | 2.38" | 2.81" |

Lead Lengths: 10"

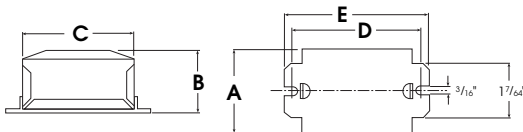
REFERENCE DRAWING FOR C3, C5



| Dwg. | A | B | C | D | E | F |
|------|-------|-------|-------|-------|-------|-------|
| C3 | 2.14" | 1.56" | 3.50" | 4.31" | 4.75" | 0.22" |
| C5 | 1.88" | 1.47" | 5.13" | 6.00" | 6.44" | 0.25" |

Lead Lengths: Side-12"
BE/BES-8"

REFERENCE DRAWING FOR C1, C2

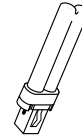


| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| C1 | 1.84" | 1.09" | 2.06" | 2.41" | 2.75" |
| C2 | 1.84" | 1.42" | 2.40" | 2.75" | 3.13" |

Lead Lengths: Side-12"
BE/BES-8"

MAGNETIC COMPACT FLUORESCENT BALLASTS FOR TWIN LAMPS 7 WATTS

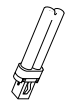
- Open core & coil or encased & potted designs
- 1 & 2 lamp models available
- Ideal for surface mount fixtures, exit & retail display signs



TWIN LAMPS 7 WATTS

QUICK REFERENCE

Nominal lamp watts and configuration

| Lamp Type | Electrical Characteristics - 60 Hz | | | | | | | | | | | Lead Configuration | | | Starting Method | Dim | Wir Diag |
|--|------------------------------------|--------------|-----------|----------------|-------------|-------------------|-----------------------|----------------|----------------|--------------|------|--------------------|-------------|-------------------|-----------------|-----|----------|
| | Mag or Elec | Qty of Lamps | Line Volt | Catalog Number | Input Watts | Line Current Amps | Starting Current Amps | Ballast Factor | Min Start Temp | Power Factor | THD | Side Exit | Bottom Exit | Bottom Exit Studs | | | |
| 7 Watts CFT7W/G23  Twin, 2-Pin | ○ M | 1 | 120 | 4105F1P | 10 | 0.18 | 0.20 | 0.95 | 0° F | Normal | <10% | X | — | — | PH | A1 | 1 |
| | ○ M | 1 | 120 | 4105F2P | 10 | 0.18 | 0.20 | 0.95 | 0° F | Normal | <10% | X | — | — | PH | B1 | 1 |
| | ○ M | 1 | 120 | 4105H2P | 10 | 0.18 | 0.20 | 0.90 | 0° F | Normal | <10% | X | — | — | PH | B6 | 1 |
| | ○ M | 1 | 120 | 4105P | 10 | 0.18 | 0.20 | 0.95 | 0° F | Normal | <10% | X | X | X | PH | C1 | 1 |
| | ○ M | 1 | 120 | CF79F2P | 9 | 0.15 | 0.20 | 0.85 | 25° F | Normal | <15% | X | — | — | PH | B8 | 1 |
| | ○ M | 1 | 120 | CF79H2P | 9 | 0.15 | 0.20 | 0.85 | 25° F | Normal | <15% | X | — | — | PH | B7 | 1 |
| | ○ M | 1 | 277 | 4205F1P | 12 | 0.08 | 0.19 | 0.95 | 0° F | Normal | <10% | X | — | — | PH | A2 | 1 |
| | ○ M | 1 | 277 | 4205F2P | 12 | 0.08 | 0.19 | 0.95 | 0° F | Normal | <10% | X | — | — | PH | B2 | 1 |
| | ○ M | 1 | 277 | 4205P | 12 | 0.08 | 0.19 | 0.95 | 0° F | Normal | <10% | X | X | X | PH | C2 | 1 |
| | ○ M | 1 | 120 | 4104P | 10 | 0.09 | 0.10 | 0.93 | 0° F | High | <20% | X | X | X | PH | C2 | 2 |
| | ○ M | 1 | 277 | 4204P | 12 | 0.05 | 0.06 | 0.95 | 0° F | High | <20% | X | X | X | PH | C3 | 2 |
| | ○ M | 2 | 120 | 4102P | 18 | 0.16 | 0.17 | 0.90 | 0° F | High | <20% | X | X | X | PH | C5 | 8 |
| | ○ M | 2 | 120 | 4106P | 19 | 0.17 | 0.20 | 0.94 | 25° F | High | <20% | X | X | X | PH | C5 | 8 |
| | ○ M | 2 | 277 | 4206P | 22 | 0.07 | 0.08 | 0.89 | 25° F | High | <20% | X | X | X | PH | C5 | 8 |

- ★ Non-thermally protected models available.
- ✱ PH = Preheat
- { F1 indicates an open core & coil unit with no mounting feet.
F2 indicates an open core & coil unit with mounting feet.
H2 indicates clamped & covered core & coil with mounting feet.
- ▲ Standard cases offer side lead configuration.
Add "BE" suffix for Bottom Exit design or "BES" for Bottom Exit Studs design.
- Not approved for use in hazardous locations.

The encased ballasts listed on this page are available in white (001) or black (000) cans. All ballasts are UL listed, CSA approved and designated Class P (thermally protected).

WIRING DIAGRAMS

Install in accordance with National Electrical Code.

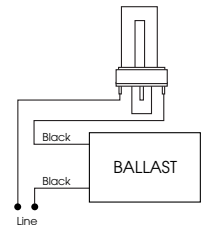


DIAGRAM 1

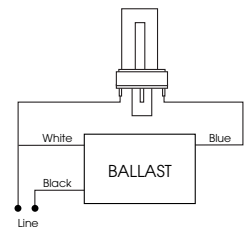


DIAGRAM 2

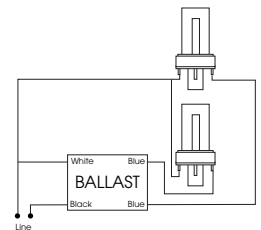
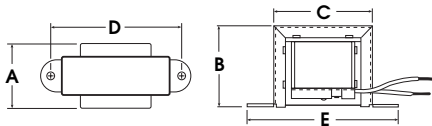


DIAGRAM 8
Parallel lamp operation

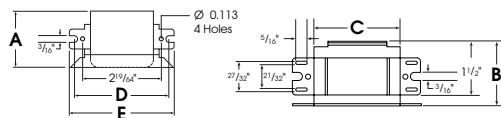
REFERENCE DRAWING FOR A1, A2, B1, B2, B8



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| A1 | 0.84" | 1.41" | 1.72" | — | — |
| A2 | 1.94" | 1.64" | 1.97" | — | — |
| B1 | 0.84" | 1.41" | 1.72" | 2.00" | 2.38" |
| B2 | 1.94" | 1.64" | 1.97" | 2.38" | 2.81" |
| B8 | 1.09" | 1.40" | 1.72" | 1.97" | 2.34" |

Lead Lengths: 10"-12"

REFERENCE DRAWING FOR B6



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| B6 | 1.42" | 1.75" | 2.09" | 2.73" | 3.06" |

Lead Lengths: 10"

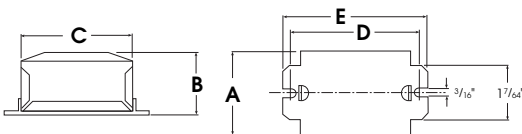
REFERENCE DRAWING FOR B7



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| B7 | 1.19" | 1.50" | 1.81" | 2.25" | 2.75" |

Lead Lengths: 12"

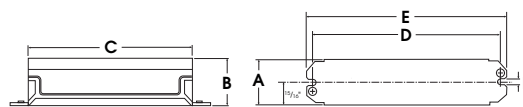
REFERENCE DRAWING FOR C1, C2



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| C1 | 1.84" | 1.09" | 2.06" | 2.41" | 2.75" |
| C2 | 1.84" | 1.42" | 2.40" | 2.75" | 3.13" |

Lead Lengths: Side-12"
BE/BES-8"

REFERENCE DRAWING FOR C3, C5

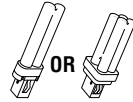


| Dwg. | A | B | C | D | E | F |
|------|-------|-------|-------|-------|-------|-------|
| C3 | 2.14" | 1.56" | 3.50" | 4.31" | 4.75" | 0.22" |
| C5 | 1.88" | 1.47" | 5.13" | 6.00" | 6.44" | 0.25" |

Lead Lengths: Side-12"
BE/BES-8"

TWIN & QUAD LAMPS

9 & 10 WATTS



- Open core & coil or encased & potted designs
- 1 & 2 lamp models available
- Ideal for surface mount fixtures, exit & retail display signs

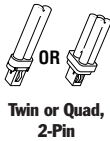
MAGNETIC COMPACT FLUORESCENT BALLASTS FOR TWIN & QUAD LAMPS

9/10 WATTS

QUICK REFERENCE

Nominal lamp watts and configuration

| Lamp Type | Mag or Elec | Qty of Lamps | Line Volt | Catalog Number | Input Watts | Line Current Amps | Starting Current Amps | Ballast Factor | Min Start Temp | Power Factor | THD | Lead Configuration | | | Starting Method | Dim | Wir Diag |
|---|-------------|--------------|-----------|----------------|-------------|-------------------|-----------------------|----------------|----------------|--------------|------|--------------------|-------------|-------------------|-----------------|-----|----------|
| | | | | | | | | | | | | Side Exit | Bottom Exit | Bottom Exit Studs | | | |
| Electrical Characteristics - 60 Hz | | | | | | | | | | | | | | | | | |
| 9 Watts | ○ M | 1 | 120 | 4105F1P | 10 | 0.18 | 0.20 | 0.90 | 25° F | Normal | <10% | X | — | — | PH | A1 | 1 |
| CF19W/G23 | ○ M | 1 | 120 | 4105F2P | 10 | 0.18 | 0.20 | 0.90 | 25° F | Normal | <10% | X | — | — | PH | B1 | 1 |
| OR | ○ M | 1 | 120 | 4105H2P | 10 | 0.18 | 0.20 | 0.90 | 25° F | Normal | <10% | X | — | — | PH | B6 | 1 |
| CFQ9W/G23 | ○ M | 1 | 120 | 4105P | 10 | 0.18 | 0.20 | 0.90 | 25° F | Normal | <10% | X | X | X | PH | C1 | 1 |
| ○ M | ○ M | 1 | 120 | CF79F2P | 9 | 0.12 | 0.20 | 0.75 | 25° F | Normal | <15% | X | — | — | PH | B8 | 1 |
| ○ M | ○ M | 1 | 120 | CF79H2P | 9 | 0.12 | 0.20 | 0.75 | 25° F | Normal | <15% | X | — | — | PH | B7 | 1 |
| ○ M | ○ M | 1 | 277 | 4205F1P | 14 | 0.11 | 0.18 | 0.95 | 0° F | Normal | <10% | X | — | — | PH | A2 | 1 |
| ○ M | ○ M | 1 | 277 | 4205F2P | 14 | 0.11 | 0.18 | 0.95 | 0° F | Normal | <10% | X | — | — | PH | B2 | 1 |
| ○ M | M | 1 | 277 | 4205P | 14 | 0.11 | 0.18 | 0.95 | 0° F | Normal | <10% | X | X | X | PH | C2 | 1 |
| ○ M | M | 1 | 120 | 4104P | 10 | 0.09 | 0.10 | 0.90 | 25° F | High | <20% | X | X | X | PH | C2 | 2 |
| ○ M | M | 1 | 277 | 4204P | 13 | 0.05 | 0.06 | 0.95 | 0° F | High | <20% | X | X | X | PH | C3 | 2 |
| ○ M | M | 2 | 120 | 4106P | 20 | 0.16 | 0.20 | 0.84 | 25° F | High | <20% | X | X | X | PH | C5 | 8 |
| ○ M | M | 2 | 277 | 4206P | 25 | 0.08 | 0.08 | 0.85 | 25° F | High | <20% | X | X | X | PH | C5 | 8 |
| 10 Watts | M | 1 | 120 | 4115P | 17 | 0.30 | 0.45 | 1.00 | 5° F | Normal | <10% | X | X | X | PH | C5 | 2 |
| CFQ10W/G24d | ○ M | 1 | 277 | 4217F1P | 16 | 0.12 | 0.21 | 1.00 | 5° F | Normal | <10% | X | — | — | PH | A2 | 1 |
| ○ M | ○ M | 1 | 277 | 4217F2P | 16 | 0.12 | 0.21 | 1.00 | 5° F | Normal | <10% | X | — | — | PH | B2 | 1 |
| ○ M | M | 1 | 277 | 4217P | 16 | 0.12 | 0.21 | 1.00 | 5° F | Normal | <20% | X | X | X | PH | C2 | 1 |
| ○ M | M | 1 | 120 | 4116P | 15 | 0.16 | 0.14 | 1.00 | 5° F | High | <20% | X | X | X | PH | C4 | 2 |
| ○ M | M | 1 | 277 | 4216P | 15 | 0.06 | 0.09 | 1.00 | 5° F | High | <20% | X | X | X | PH | C3 | 2 |



Twin or Quad, 2-Pin

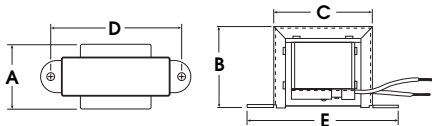


Quad, 2-Pin

- ★ Non-thermally protected models available.
- ◆ PH = Preheat
- F1 indicates an open core & coil unit with no mounting feet.
- F2 indicates an open core & coil unit with mounting feet.
- H2 indicates clamped & covered core & coil with mounting feet.
- ▲ Standard cases offer side lead configuration.
- ▲ Add "BE" suffix for Bottom Exit design or "BES" for Bottom Exit Studs design.
- Not approved for use in hazardous locations.

The encased ballasts listed on this page are available in white (001) or black (000) cans. All ballasts are UL listed, CSA approved and designated Class P (thermally protected).

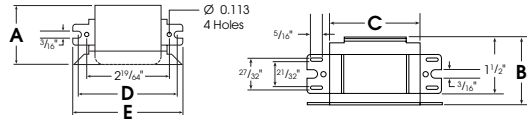
REFERENCE DRAWING FOR A1, A2, B1, B2, B8



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| A1 | 0.84" | 1.41" | 1.72" | — | — |
| A2 | 1.94" | 1.64" | 1.97" | — | — |
| B1 | 0.84" | 1.41" | 1.72" | 2.00" | 2.38" |
| B2 | 1.94" | 1.64" | 1.97" | 2.38" | 2.81" |
| B8 | 1.09" | 1.40" | 1.72" | 1.97" | 2.34" |

Lead Lengths: 10"-12"

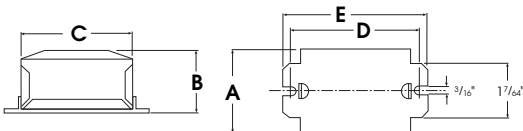
REFERENCE DRAWING FOR B6, B7



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| B6 | 1.42" | 1.75" | 2.09" | 2.73" | 3.06" |
| B7 | 1.19" | 1.50" | 1.81" | 2.25" | 2.75" |

Lead Lengths: 10" -B6
12" -B7

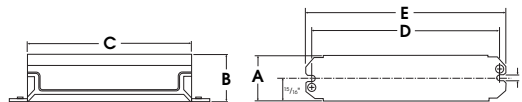
REFERENCE DRAWING FOR C1, C2



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| C1 | 1.84" | 1.09" | 2.06" | 2.41" | 2.75" |
| C2 | 1.84" | 1.42" | 2.40" | 2.75" | 3.13" |

Lead Lengths: Side-12"
BE/BES-8"

REFERENCE DRAWING FOR C3, C4, C5



| Dwg. | A | B | C | D | E | F |
|------|-------|-------|-------|-------|-------|-------|
| C3 | 2.14" | 1.56" | 3.50" | 4.31" | 4.75" | 0.22" |
| C4 | 2.34" | 1.53" | 5.45" | 6.00" | 6.59" | 0.31" |
| C5 | 1.88" | 1.47" | 5.13" | 6.00" | 6.44" | 0.25" |

Lead Lengths: Side-12"
BE/BES-8"

WIRING DIAGRAMS

Install in accordance with National Electrical Code.

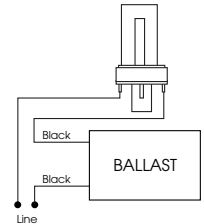


DIAGRAM 1

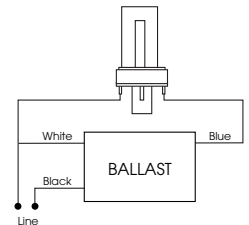


DIAGRAM 2

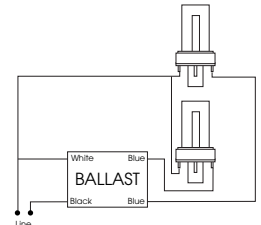
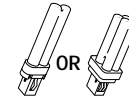


DIAGRAM 8
Parallel lamp operation

MAGNETIC COMPACT FLUORESCENT BALLASTS FOR TWIN AND QUAD LAMPS 13 WATTS – U.S. LAMPS

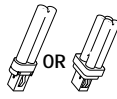
- Open core & coil or encased & potted designs
- Ideal for downlights & wall sconces



TWIN & QUAD LAMPS 13 WATTS

QUICK REFERENCE
Nominal lamp watts and configuration

| Lamp Type | Electrical Characteristics - 60 Hz | | | | | | | | | | | | | | | | | |
|-------------|------------------------------------|--------------|-----------|----------------|-------------|-------------------|-----------------------|----------------|----------------|--------------|--------|-----------|-------------|-------------------|-----------------|-----|----------|----|
| | Mag or Elec | Qty of Lamps | Line Volt | Catalog Number | Input Watts | Line Current Amps | Starting Current Amps | Ballast Factor | Min Start Temp | Power Factor | THD | Side Exit | Bottom Exit | Bottom Exit Studs | Starting Method | Dim | Wir Diag | |
| 13 Watts | ○ | M | 1 | 120 | 4111F1RP | 17 | 0.30 | 0.40 | 1.00 | 32° F | Normal | <10% | X | — | — | PH | A4 | 1 |
| CFT13W/GX23 | ○ | M | 1 | 120 | 4111F2RP | 17 | 0.30 | 0.40 | 1.00 | 32° F | Normal | <10% | X | — | — | PH | B4 | 1 |
| OR | ○ | M | 1 | 120 | 4111H2P | 17 | 0.30 | 0.40 | 1.00 | 32° F | Normal | <10% | X | — | — | PH | B6 | 1 |
| CFQ13W/GX23 | ○ | M | 1 | 120 | CF1320H2P | 16 | 0.24 | 0.30 | 0.85 | 32° F | Normal | <15% | X | — | — | PH | B10 | 1 |
| | ○ | M | 1 | 120 | 4111P | 17 | 0.29 | 0.40 | 1.00 | 32° F | Normal | <10% | X | X | X | PH | C2 | 1 |
| | ○ | M | 1 | 120 | 4113F1P | 14 | 0.24 | 0.36 | 0.80 | 32° F | Normal | <10% | X | — | — | PH | A5 | 1 |
| | ○ | M | 1 | 120 | 4113F2P | 14 | 0.24 | 0.36 | 0.80 | 32° F | Normal | <10% | X | — | — | PH | B5 | 1 |
| | ○ | M | 1 | 120 | 4113P | 14 | 0.24 | 0.36 | 0.80 | 32° F | Normal | <10% | X | X | X | PH | C3 | 1 |
| | ○ | M | 1 | 277 | 4211F1P | 22 | 0.16 | 0.35 | 1.00 | 32° F | Normal | <10% | X | — | — | PH | A3 | 1 |
| | ○ | M | 1 | 277 | 4211F2P | 22 | 0.16 | 0.35 | 1.00 | 32° F | Normal | <10% | X | — | — | PH | B3 | 1 |
| | ○ | M | 1 | 277 | 4211P | 22 | 0.32 | 0.35 | 1.00 | 32° F | Normal | <10% | X | X | X | PH | C3 | 1 |
| | ○ | M | 1 | 120 | 4110P | 17 | 0.15 | 0.19 | 0.95 | 32° F | High | <20% | X | X | X | PH | C3 | 2 |
| | ○ | M | 1 | 120 | 4112P | 14 | 0.13 | 0.14 | 0.80 | 32° F | High | <20% | X | X | X | PH | C2 | 2 |
| | ○ | M | 1 | 277 | 4210P | 21 | 0.10 | 0.11 | 1.00 | 32° F | High | <20% | X | X | X | PH | C3 | 2 |
| | ○ | M | 2 | 120 | 4114P | 31 | 0.26 | 0.33 | 0.95 | 32° F | High | <20% | X | X | X | PH | C5 | 8 |
| | ○ | M | 2 | 120 | CF213PBES | 28 | 0.26 | 0.25 | 0.85 | 32° F | High | <20% | — | — | X | PH | C3 | 10 |
| | ○ | M | 2 | 277 | 4214P | 26 | 0.09 | 0.09 | 0.85 | 32° F | High | <20% | X | X | X | PH | C4 | 9 |
| | ○ | M | 1 | 347 | 4310P | 21 | 0.07 | 0.10 | 0.88 | 25° F | High | <20% | X | X | X | PH | C4 | 2 |
| | ○ | M | 2 | 347 | 4314P | 34 | 0.10 | 0.09 | 0.85 | 25° F | High | <20% | X | X | X | PH | C4 | 9 |



Twin or Quad,
2-Pin
U.S. type lamp

*Non-thermally protected models available.

◆ PH = Preheat

F1 indicates an open core & coil unit with no mounting feet.

F2 indicates an open core & coil unit with mounting feet.

H2 indicates clamped & covered core & coil with mounting feet.

F1R - Coil enclosed with plastic covers/no mounting feet.

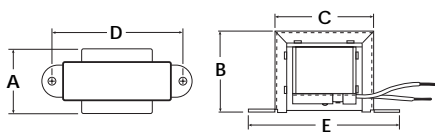
F2R - Coil enclosed with plastic covers/with mounting feet.

▲ Standard cases offer side lead configuration.

Add "BE" suffix for Bottom Exit design or "BES" for Bottom Exit Studs design.

○ Not approved for use in hazardous locations.

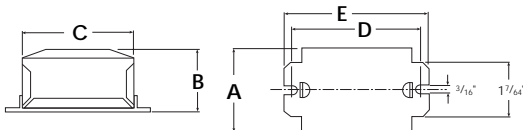
REFERENCE DRAWING FOR A3, A4, A5, B3, B4, B5, B9



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| A3 | 1.50" | 1.95" | 2.34" | — | — |
| A4 | 1.41" | 1.56" | 1.88" | — | — |
| A5 | 1.47" | 1.38" | 1.70" | — | — |
| B3 | 1.50" | 1.95" | 2.34" | 2.81" | 3.25" |
| B4 | 1.41" | 1.63" | 1.88" | 2.38" | 2.81" |
| B5 | 1.47" | 1.38" | 1.70" | 2.00" | 2.38" |

Lead Lengths: 12"

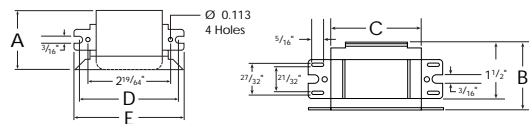
REFERENCE DRAWING FOR C2



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| C2 | 1.84" | 1.42" | 2.40" | 2.75" | 3.13" |

Lead Lengths: Side-12"
BE/BES-8"

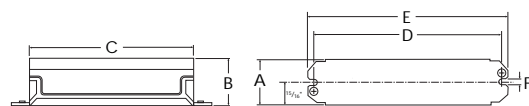
REFERENCE DRAWING FOR B6, B10



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| B6 | 1.42" | 1.75" | 2.09" | 2.73" | 3.06" |
| B10 | 1.31" | 1.50" | 1.81" | 2.75" | 3.06" |

Approximate Lead Lengths: 10"-B6
9" & 18"-B10

REFERENCE DRAWING FOR C3, C4, C5



| Dwg. | A | B | C | D | E | F |
|------|-------|-------|-------|-------|-------|-------|
| C3 | 2.14" | 1.56" | 3.50" | 4.31" | 4.75" | 0.22" |
| C4 | 2.34" | 1.53" | 5.45" | 6.00" | 6.59" | 0.31" |
| C5 | 1.88" | 1.47" | 5.13" | 6.00" | 6.44" | 0.25" |

Lead Lengths: Side-12"
BE/BES-8"

WIRING DIAGRAMS

Install in accordance with National Electrical Code.

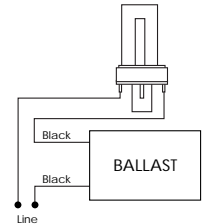


DIAGRAM 1

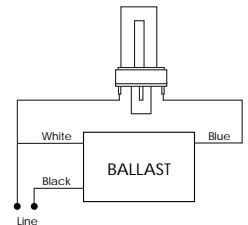


DIAGRAM 2

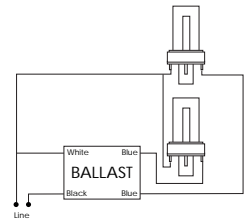


DIAGRAM 8
Parallel lamp operation

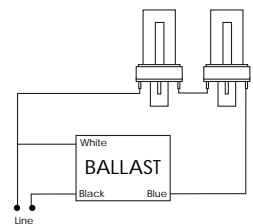


DIAGRAM 9
Series lamp operation

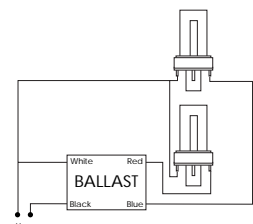


DIAGRAM 10
Parallel lamp operation

QUAD EUROPEAN LAMPS 13 WATTS



- Open core & coil or encased & potted designs
- Ideal for downlights & wall sconces

MAGNETIC COMPACT FLUORESCENT BALLASTS FOR QUAD LAMPS 13 WATTS – EUROPEAN LAMPS

QUICK REFERENCE

Nominal lamp watts and configuration

| Lamp Type | Mag or Elec | Qty of Lamps | Line Volt | Catalog Number | Input Watts | Line Current Amps | Starting Current Amps | Ballast Factor | Min Start Temp | Power Factor | THD | Lead Configuration | | | Starting Method | Dim | Wir Diag | |
|---|--------------------------------------|--------------|-----------|----------------|-------------|-------------------|-----------------------|----------------|----------------|--------------|------|--------------------|-------------|-------------------|-----------------|-----|----------|----|
| | | | | | | | | | | | | Side Exit | Bottom Exit | Bottom Exit Studs | | | | |
| Electrical Characteristics - 60 Hz | | | | | | | | | | | | | | | | | | |
| 13 Watts CFQ13W/G24d | M | 1 | 120 | 4115P▲ | 17 | 0.30 | 0.45 | 0.95 | 5° F | Normal | <10% | X | X | X | PH | C5 | 2 | |
| | ○ M | 1 | 277 | 4217F1P■ | 17 | 0.13 | 0.20 | 0.90 | 5° F | Normal | <10% | X | — | — | PH | A2 | 1 | |
| | ○ M | 1 | 277 | 4217F2P■ | 17 | 0.13 | 0.20 | 0.90 | 5° F | Normal | <10% | X | — | — | PH | B2 | 1 | |
| | ○ M | 1 | 277 | 4217P▲ | 17 | 0.13 | 0.20 | 0.90 | 5° F | Normal | <10% | X | X | X | PH | C2 | 1 | |
| | M | 1 | 120 | 4116P▲ | 18 | 0.18 | 0.14 | 1.00 | 5° F | High | <20% | X | X | X | PH | C4 | 2 | |
| | M | 1 | 277 | 4216P▲ | 16 | 0.09 | 0.09 | 0.85 | 5° F | High | <20% | X | X | X | PH | C3 | 2 | |
| | Quad, 2-Pin European type lamp | M | 2 | 120 | 4118P▲ | 40 | 0.35 | 0.23 | 0.98 | 5° F | High | <20% | X | X | X | PH | C6 | 10 |
| | | M | 2 | 277 | 4218P▲ | 33 | 0.13 | 0.15 | 0.90 | 5° F | High | <20% | X | X | X | PH | C4 | 8 |

WIRING DIAGRAMS

Install in accordance with National Electrical Code.

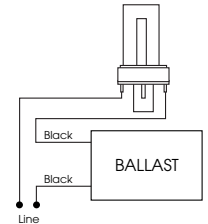


DIAGRAM 1

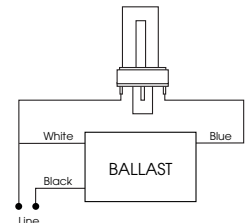


DIAGRAM 2

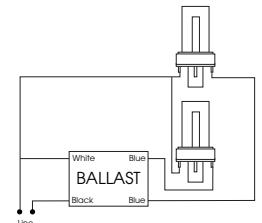


DIAGRAM 8

Parallel lamp operation

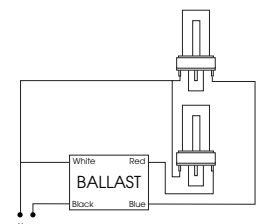


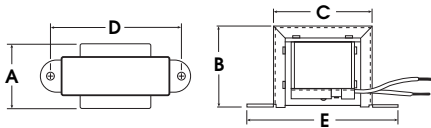
DIAGRAM 10

Parallel lamp operation

- ★ PH = Preheat
- F1 indicates an open core & coil unit with no mounting feet.
- F2 indicates an open core & coil unit with mounting feet.
- ▲ Standard cases offer side lead configuration.
- Add "BE" suffix for Bottom Exit design or "BES" for Bottom Exit Studs design.
- Not approved for use in hazardous locations.

The encased ballasts listed on this page are available in white (001) or black (000) cans. All ballasts are UL listed, CSA approved and designated Class P (thermally protected).

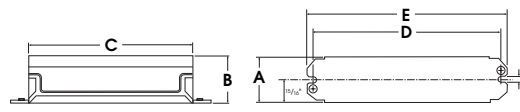
REFERENCE DRAWING FOR A2, B2



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| A2 | 1.94" | 1.64" | 1.97" | — | — |
| B2 | 1.94" | 1.64" | 1.97" | 2.38" | 2.81" |

Lead Lengths: 10"

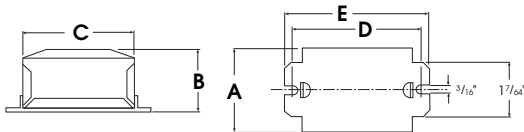
REFERENCE DRAWING FOR C3, C4, C5



| Dwg. | A | B | C | D | E | F |
|------|-------|-------|-------|-------|-------|-------|
| C3 | 2.14" | 1.56" | 3.50" | 4.31" | 4.75" | 0.22" |
| C4 | 2.34" | 1.53" | 5.45" | 6.00" | 6.59" | 0.31" |
| C5 | 1.88" | 1.47" | 5.13" | 6.00" | 6.44" | 0.25" |

Lead Lengths: Side-12"
BE/BES-8"

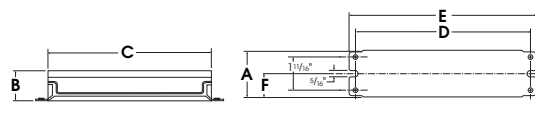
REFERENCE DRAWING FOR C2



| Dwg. | A | B | C | D | E |
|------|-------|-------|-------|-------|-------|
| C2 | 1.84" | 1.42" | 2.40" | 2.75" | 3.13" |

Lead Lengths: Side-12"
BE/BES-8"

REFERENCE DRAWING FOR C6

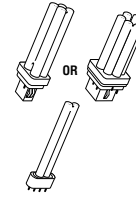


| Dwg. | A | B | C | D | E | F |
|------|-------|-------|-------|-------|-------|-------|
| C6 | 2.38" | 1.53" | 8.31" | 8.89" | 9.48" | 1.19" |

Lead Lengths: Side
• Black/White-11"
• Red/Blue-12"
BE/BES-8"

ELECTRONIC COMPACT FLUORESCENT BALLASTS FOR TWIN, QUAD AND MULTIPLE LAMPS 13 WATTS

- Ideal for downlights & wall sconces
- Electronic models feature universal input voltage from 120V to 277V. 347V models are also available.
- Electronic models feature programmed rapid start for excellent lamp performance & auto reset shutdown circuit

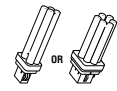


TWIN, QUAD & MULTIPLE LAMPS 13 WATTS

QUICK REFERENCE

Nominal lamp watts and configuration

| Lamp Type | Mag or Elec | Qty of Lamps | Line Volt | Catalog Number | Input Watts | Line Current Amps | Starting Current Amps | Ballast Factor | Min Start Temp | Power Factor | THD | Lead Configuration | | | Starting Method | Dim | Wir Diag |
|--|-------------|--------------|------------|----------------|-------------|-------------------|-----------------------|----------------|----------------|--------------|--------------|--------------------|-------------|-------------------|-----------------|-----|----------|
| | | | | | | | | | | | | Side Exit | Bottom Exit | Bottom Exit Studs | | | |
| Electrical Characteristics - 60 Hz | | | | | | | | | | | | | | | | | |
| 13 Watts CFQ13W/G24q OR CFM13W/GX24q | E | 1 | 120 277 | C213UNV♦ | 18 | 0.15 0.07 | — | 1.00 | 0° F | High | <10% | X | X | X | PRS | C10 | 18 |
| | E | 2 | 120 277 | C213UNV♦ | 32 | 0.27 0.12 | — | 0.98 | 0° F | High | <10% | X | X | X | PRS | C10 | 19 |
| | E | 1 2 | 347 | C213/347♦ | 18 33 | 0.06 0.10 | — | 1.00 0.98 | 0° F | High | <10% | X | X | X | PRS | C10 | 18 19 |
| Quad or Multiple, 4-Pin | | | | | | | | | | | | | | | | | |
| 13 Watts CFT13W/2GX7 | E | 1 | 120 277 | CT213UNV♦ | 15 | 0.12 0.06 | — | 0.98 | 0° F | High | <10% <12% | X | X | X | PRS | C10 | 20+ |
| | E | 2 | 120 277 | CT213UNV♦ | 26 | 0.22 0.10 | — | 0.98 | 0° F | High | <10% | X | X | X | PRS | C10 | 20 |



Quad or Multiple, 4-Pin



Twin T4, 4-Pin

- ♦ PRS = Programmed Rapid Start
- ◆ Add following suffix for complete catalog # "SE" for Side Exit connectors or "BE" suffix for Bottom Exit connectors or "BES" for Bottom Exit connectors with 2" O.C. screw studs.

The enclosed ballasts listed on this page are available in white (001) or black (000) cans. All ballasts are UL listed, CSA approved and designated Class P (thermally protected), Type HL.

WIRING DIAGRAMS

Install in accordance with National Electrical Code.

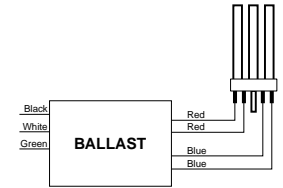


DIAGRAM 18

Ballast should be grounded

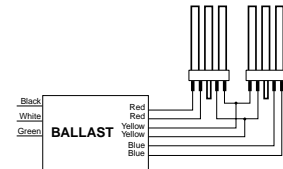


DIAGRAM 19

Series lamp operation
Ballast should be grounded

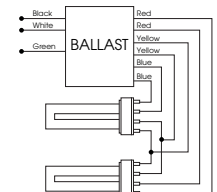
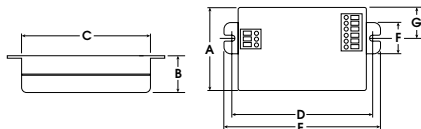


DIAGRAM 20

Series lamp operation

REFERENCE DRAWING FOR C10



| Dwg. | A | B | C | D | E | F | G |
|------|-------|-------|-------|-------|-------|-------|-------|
| C10 | 2.31" | 1.00" | 4.25" | 4.61" | 4.94" | 0.98" | 1.00" |

Leadless-Poke-in wire connection