

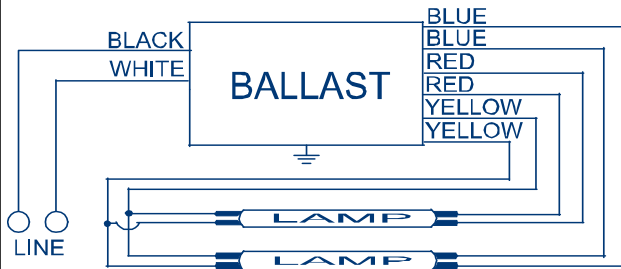


## Electrical Specifications

| ICN-2S110-SC@120V |                    |
|-------------------|--------------------|
| Brand Name        | <b>CENTIUM</b>     |
| Ballast Type      | <b>Electronic</b>  |
| Starting Method   | <b>Rapid Start</b> |
| Lamp Connection   | <b>Series</b>      |
| Input Voltage     | <b>120-277</b>     |
| Input Frequency   | <b>50/60 HZ</b>    |
| Status            | <b>Active</b>      |

| Lamp Type    | Num. of Lamps | Rated Lamp Watts | Min. Start Temp (°F/°C) | Input Current (Amps) | Input Power (ANSI Watts) | Ballast Factor | MAX THD % | Power Factor | MAX Lamp Current Crest Factor | B.E.F. |
|--------------|---------------|------------------|-------------------------|----------------------|--------------------------|----------------|-----------|--------------|-------------------------------|--------|
| F48T12/HO    | 2             | 60               | -20/-29                 | 0.82                 | 93                       | 0.90           | 10        | 0.95         | 1.7                           | 0.97   |
| F60T12/HO    | 2             | 75               | -20/-29                 | 0.98                 | 116                      | 1.00           | 10        | 0.98         | 1.7                           | 0.86   |
| F72T12/HO    | 2             | 85               | -20/-29                 | 1.19                 | 140                      | 0.90           | 10        | 0.98         | 1.7                           | 0.64   |
| F96T12/HO    | 1             | 110              | -20/-29                 | 0.88                 | 100                      | 0.91           | 10        | 0.95         | 1.6                           | 0.91   |
| * F96T12/HO  | 2             | 110              | -20/-29                 | 1.57                 | 189                      | 0.89           | 10        | 1.00         | 1.6                           | 0.47   |
| F96T12/HO/ES | 1             | 95               | 60/16                   | 0.68                 | 78                       | 0.91           | 10        | 0.95         | 1.6                           | 1.17   |
| F96T12/HO/ES | 2             | 95               | 60/16                   | 1.27                 | 152                      | 0.85           | 10        | 1.00         | 1.6                           | 0.56   |

### Wiring Diagram

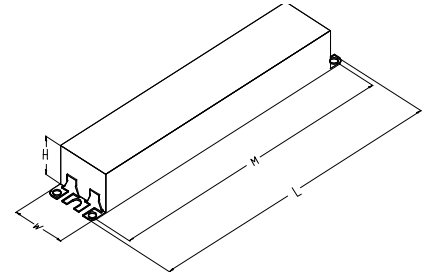


The wiring diagram that appears above is for the lamp type denoted by the asterisk (\*)

### Standard Lead Length (inches)

|        | in. | cm.   |              | in. | cm. |
|--------|-----|-------|--------------|-----|-----|
| Black  | 25  | 63.5  | Yellow/Blue  |     | 0   |
| White  | 25  | 63.5  | Blue/White   |     | 0   |
| Blue   | 46  | 116.8 | Brown        |     | 0   |
| Red    | 46  | 116.8 | Orange       |     | 0   |
| Yellow | 79  | 200.7 | Orange/Black |     | 0   |
| Gray   |     | 0     | Black/White  |     | 0   |
| Violet |     | 0     | Red/White    |     | 0   |

### Enclosure



### Enclosure Dimensions

| OverAll (L) | Width (W) | Height (H) | Mounting (M) |
|-------------|-----------|------------|--------------|
| 9.50 "      | 1.7 "     | 1.18 "     | 8.90 "       |
| 9 1/2       | 1 7/10    | 1 9/50     | 8 9/10       |
| 24.1 cm     | 4.3 cm    | 3 cm       | 22.6 cm      |



Revised 04/17/13

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## ADVANCE TRANSFORMER CO.

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Corporate Offices: Phone: 800-322-2086



## Electrical Specifications

| ICN-2S110-SC@120V |             |
|-------------------|-------------|
| Brand Name        | CENTIUM     |
| Ballast Type      | Electronic  |
| Starting Method   | Rapid Start |
| Lamp Connection   | Series      |
| Input Voltage     | 120-277     |
| Input Frequency   | 50/60 HZ    |
| Status            | Active      |

### Notes:

#### Section I - Physical Characteristics

- 1.1 Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.
- 1.2 Ballast shall be provided with integral leads color-coded per ANSI C82.11.

#### Section II - Performance

- 2.1 Ballast shall be \_\_\_\_\_ (Instant, Rapid or Programmed) Start.
- 2.2 Ballast shall provide Independent Lamp Operation (ILO) for Instant Start ballasts allowing remaining lamp(s) to maintain full light output when one or more lamps fail.
- 2.3 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power (except T8/HO ballast).
- 2.4 Ballast shall operate from 50/60 Hz input source of \_\_\_\_\_ (120V through 277V or 347V through 480V) with sustained variations of +/- 10% (voltage and frequency).
- 2.5 Ballast shall be high frequency electronic type and operate lamps at a frequency above 42 kHz to avoid interference with infrared devices and eliminate visible flicker.
- 2.6 Ballast shall have a Power Factor greater than 0.98 for primary lamp.
- 2.7 Ballast shall have a minimum ballast factor for primary lamp application as follows: 0.75 for Low Watt, 0.85 for Normal Light Output and 1.20 for High Light.
- 2.8 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less.
- 2.9 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage with primary lamp.
- 2.10 Ballast shall have a Class A sound rating for all 4-foot lamps and smaller.
- 2.11 Ballast shall have a minimum starting temperature of \_\_\_\_\_ [-18C (0F) for standard T8 and Long Twin Tube lamps, 10C (50F) for standard T12 lamps, 0C (32F) for Slimline T8 lamps, -29C (-20F) for HO lamps.] for primary lamp application. Ballast shall have a minimum starting temperature of 16C (60F) for energy-saving lamps.
- 2.12 Ballast shall tolerate sustained open circuit and short circuit output conditions.
- 2.13 Ballast for T8 lamps shall provide lamp striation-reduction circuitry.
- 2.14 Ballast for FT5 lamps shall provide lamp EOL protection circuitry.

#### Section III - Regulatory

- 3.1 Ballast shall not contain any Polychlorinated Biphenyl (PCB).
- 3.2 Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type 1 Outdoor; and Canadian Standards Association (CSA) certified where applicable.
- 3.3 Ballast shall comply with ANSI C62.41 Category A for Transient protection.
- 3.4 Ballast shall comply with ANSI C82.11 where applicable.
- 3.5 Ballast shall comply with applicable requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, for Non-Consumer equipment.
- 3.6 Ballast shall comply with NEMA 410 for in-rush current limits.
- 3.7 Ballast for T8 lamps shall meet NEMA Premium/CEE High Performance T8 Lighting System Specifications.
- 3.8 Ballast shall meet RoHS Compliance Standards

#### Section IV - Other

- 4.1 Ballast shall be manufactured in a factory certified to ISO 9001 Quality System Standards.
- 4.2 Ballast shall carry a five-year warranty from date of manufacture against defects in material or workmanship, including replacement, for operation at a maximum case temperature of 70C.
- 4.3 Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.
- 4.4 Energy saving T8 lamps (25W, 28W or 30W) may experience lamp striations if operated on ballasts not rated for their use.



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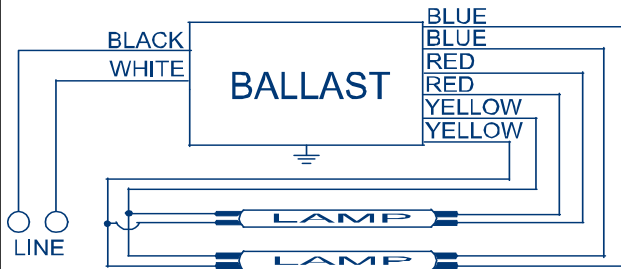


## Electrical Specifications

| ICN-2S110-SC@277V |                    |
|-------------------|--------------------|
| Brand Name        | <b>CENTIUM</b>     |
| Ballast Type      | <b>Electronic</b>  |
| Starting Method   | <b>Rapid Start</b> |
| Lamp Connection   | <b>Series</b>      |
| Input Voltage     | <b>120-277</b>     |
| Input Frequency   | <b>50/60 HZ</b>    |
| Status            | <b>Active</b>      |

| Lamp Type    | Num. of Lamps | Rated Lamp Watts | Min. Start Temp (°F/°C) | Input Current (Amps) | Input Power (ANSI Watts) | Ballast Factor | MAX THD % | Power Factor | MAX Lamp Current Crest Factor | B.E.F. |
|--------------|---------------|------------------|-------------------------|----------------------|--------------------------|----------------|-----------|--------------|-------------------------------|--------|
| F48T12/HO    | 1             | 60               | -20/-29                 | 0.19                 | 49                       | 1.15           | 10        | 0.95         | 1.7                           | 2.35   |
| F48T12/HO    | 2             | 60               | -20/-29                 | 0.35                 | 92                       | 0.90           | 10        | 0.95         | 1.7                           | 0.98   |
| F60T12/HO    | 1             | 75               | -20/-29                 | 0.22                 | 59                       | 1.10           | 10        | 0.95         | 1.7                           | 1.86   |
| F60T12/HO    | 2             | 75               | -20/-29                 | 0.42                 | 114                      | 1.00           | 10        | 0.98         | 1.7                           | 0.88   |
| F72T12/HO    | 1             | 85               | -20/-29                 | 0.27                 | 72                       | 1.10           | 10        | 0.95         | 1.7                           | 1.53   |
| F72T12/HO    | 2             | 85               | -20/-29                 | 0.51                 | 138                      | 0.90           | 10        | 0.98         | 1.7                           | 0.65   |
| F96T12/HO    | 1             | 110              | -20/-29                 | 0.35                 | 92                       | 0.91           | 10        | 0.95         | 1.6                           | 0.99   |
| * F96T12/HO  | 2             | 110              | -20/-29                 | 0.67                 | 184                      | 0.89           | 10        | 0.99         | 1.6                           | 0.48   |
| F96T12/HO/ES | 1             | 95               | 60/16                   | 0.29                 | 77                       | 0.91           | 10        | 0.95         | 1.6                           | 1.18   |
| F96T12/HO/ES | 2             | 95               | 60/16                   | 0.55                 | 149                      | 0.85           | 10        | 0.99         | 1.6                           | 0.57   |

### Wiring Diagram

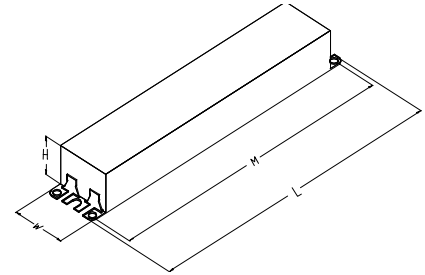


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| Ballast Type      | Electronic  |
| Starting Method   | Rapid Start |
| Lamp Connection   | Series      |
| Input Voltage     | 120-277     |
| Input Frequency   | 50/60 HZ    |
| Status            | Active      |

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