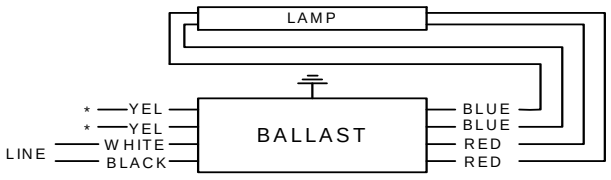
# ICN-2S110-SC@120V

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

## Electrical Specifications

| 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 | 0.43 | 49 | 1.15 | 10 | 0.95 | 1.7 | 2.35 |
| F48T12/HO | 2 | 60 | -20/-29 | 0.82 | 93 | 0.90 | 10 | 0.95 | 1.7 | 0.97 |
| F60T12/HO | 1 | 75 | -20/-29 | 0.52 | 59 | 1.10 | 10 | 0.95 | 1.7 | 1.86 |
| F60T12/HO | 2 | 75 | -20/-29 | 0.98 | 116 | 1.00 | 10 | 0.98 | 1.7 | 0.86 |
| F72T12/HO | 1 | 85 | -20/-29 | 0.63 | 72 | 1.10 | 10 | 0.95 | 1.7 | 1.53 |
| 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 | 1.64 | 191 | 0.90 | 10 | 0.98 | 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 | 1.30 | 158 | 0.85 | 10 | 0.98 | 1.6 | 0.54 |

## Wiring Diagram




*FOR SINGLE LAMP OPERATION, INSULATE YELLOW LEADS INDIVIDUALLY FOR 1000V

Diag. 39A

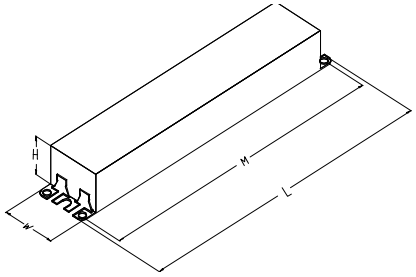
The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

### Standard Lead Length (inches)

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

| | in. | cm. |
|---|---|---|
| Yellow/Blue | | 0 |
| Blue/White | | 0 |
| Brown | | 0 |
| Orange | | 0 |
| Orange/Black | | 0 |
| Black/White | | 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 09/15/11

Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.


**ADVANCE TRANSFORMER CO.**

O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018

Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 847-768-7768

Corporate Offices: Phone: 800-322-2086

| 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** |

## Electrical Specifications

**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.

Revised 09/15/11



**ADVANCE TRANSFORMER CO.**
O'HARE INTERNATIONAL CENTER - 10275 WEST HIGGINS ROAD - ROSEMONT, ILLINOIS 60018
TELEPHONE: (847)390-5000 FAX: (847)768-7768

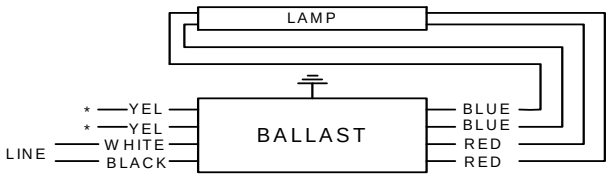
ADVANCE TRANSFORMER CO.

## Electrical Specifications

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

| 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 | 0.70 | 186 | 0.90 | 10 | 0.98 | 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 | 0.56 | 155 | 0.86 | 10 | 0.98 | 1.6 | 0.55 |

## Wiring Diagram

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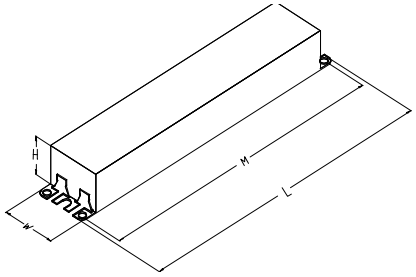
| Orange | | 0 |
| Orange/Black | | 0 |
| Black/White | | 0 |
| Red/White | | 0 |

## Enclosure

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| ICN-2S110-SC@277V | |
|---|---|
| Brand Name | **CENTIUM** |
| 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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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.

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