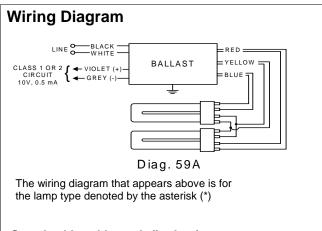


| IZT-2TTS40-SC@120V      |                    |  |  |  |  |  |
|-------------------------|--------------------|--|--|--|--|--|
| Brand Name MARK 7 0-10V |                    |  |  |  |  |  |
| Ballast Type            | Electronic Dimming |  |  |  |  |  |
| Starting Method         | Programmed Start   |  |  |  |  |  |
| Lamp Connection         | Series             |  |  |  |  |  |
| Input Voltage           | 120-277            |  |  |  |  |  |
| Input Frequency         | 50/60 HZ           |  |  |  |  |  |
| Status Active           |                    |  |  |  |  |  |

| Lamp Type       | Num.<br>of<br>Lamps | Rated<br>Lamp<br>Watts | Min. Start<br>Temp<br>(°F/C) | Input<br>Current<br>(Amps) | Input Power<br>(Watts)<br>(min/max) | Ballast Factor (min/max) | MAX<br>THD<br>% | Power<br>Factor | Lamp Current<br>Crest Factor | B.E.F. |
|-----------------|---------------------|------------------------|------------------------------|----------------------------|-------------------------------------|--------------------------|-----------------|-----------------|------------------------------|--------|
| FT36W/2G11      | 2                   | 36                     | 50/10                        | 0.64                       | 16/75                               | 0.03/1.00                | 10              | 0.99            | 1.7                          | 1.33   |
| * FT40W/2G11/RS | 2                   | 40                     | 50/10                        | 0.75                       | 16/90                               | 0.03/1.00                | 10              | 0.99            | 1.7                          | 1.11   |

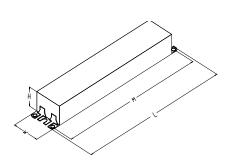


### Standard Lead Length (inches)

|        | in. | cm.  |
|--------|-----|------|
| Black  | 12  | 30.5 |
| White  | 12  | 30.5 |
| Blue   | 24  | 61   |
| Red    | 24  | 61   |
| Yellow | 24  | 61   |
| Gray   |     | 0    |
| Violet |     | 0    |

| cm. |
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# **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 03/20/12



## **Electrical Specifications**

| N |  |  |
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### 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 available in a plastic/metal can or all metal can construction to meet all plenum requirements.
- 1.3 Ballast shall be provided with poke-in wire trap connectors or integral leads color coded per ANSI C82.11.

### Section II - Performance Requirements

- 2.1 Ballast shall be Programmed Start.
- 2.2 VZT-4PSP32-G ballast shall provide Independent Lamp Operation (ILO) allowing remaining lamp(s) to maintain full light output when one or more lamps fail.

Brand Name MARK 7 0-10V

Ballast Type Electronic Dimming

Lamp Connection | Series

Status

Input Voltage
Input Frequency

Starting Method | Programmed Start

120-277

**Active** 

50/60 HZ

- 2.3 Ballast shall be provided with integral protection circuitry to withstand connection of low voltage control leads to mains power supply. In this event, ballast shall default to maximum light output.
- 2.4 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.5 Ballast shall operate from 50/60 Hz input source of 120V or 277V or 347V with sustained variations of +/- 10% (voltage and frequency). IntelliVolt models shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency).
- 2.6 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.
- 2.7 Ballast shall have a Power Factor greater than 0.98 at full light output and greater than 0.90 throughout the dimming range for primary lamp.
- 2.8 Ballast shall have a minimum ballast factor of 1.00 (120V and 277V 1-3 lamp models) or 0.88 (120V and 277V 4 lamp models and 347V 2-3 lamp models) or 1.18 (277V 4 lamp HL models) at maximum light output and 0.03 at minimum light output for primary lamp.
- 2.9 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less.
- 2.10 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage and 100% power.
- 2.11 Ballast shall have a Class A sound rating.
- 2.12 Ballast shall have a minimum starting temperature of 10C (50F) for primary lamp.
- 2.13 Ballast shall provide Lamp EOL Protection Circuit for all T5, T5/HO and CFL lamps.
- 2.14 Ballast shall control lamp light output from 100% 3% relative light output for series operation T8 and CFL lamps, 100% 10% relative light output for parallel operation T8 and 100% 1% relative light output for T5/HO lamps.
- 2.15 Ballast shall ignite the lamps at any light output setting without first going to another output setting.
- 2.16 Ballast shall tolerate sustained open circuit and short circuit output conditions.

### Section III - Regulatory Requirements

- 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 the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).
- 3.6 Ballast shall comply with NEMA 410 for in-rush current limits.

#### 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 Ballast shall be controlled by a Class 1 or Class 2 low voltage 0-10VDC controller.

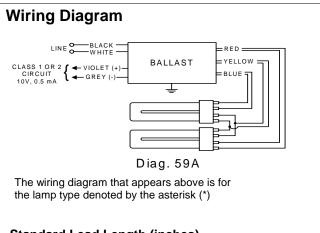
| 4.5 Ballast shall be Philips Advance part # | or approved equal. |
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| IZT-2TTS40-SC@277V      |                    |  |  |  |  |  |
|-------------------------|--------------------|--|--|--|--|--|
| Brand Name MARK 7 0-10V |                    |  |  |  |  |  |
| Ballast Type            | Electronic Dimming |  |  |  |  |  |
| Starting Method         | Programmed Start   |  |  |  |  |  |
| Lamp Connection         | Series             |  |  |  |  |  |
| Input Voltage           | 120-277            |  |  |  |  |  |
| Input Frequency         | 50/60 HZ           |  |  |  |  |  |
| Status                  | Active             |  |  |  |  |  |

| Lamp Type       | Num.<br>of<br>Lamps | Rated<br>Lamp<br>Watts | Min. Start<br>Temp<br>(°F/C) | Input<br>Current<br>(Amps) | Input Power<br>(Watts)<br>(min/max) | Ballast Factor (min/max) | MAX<br>THD<br>% | Power<br>Factor | Lamp Current<br>Crest Factor | B.E.F. |
|-----------------|---------------------|------------------------|------------------------------|----------------------------|-------------------------------------|--------------------------|-----------------|-----------------|------------------------------|--------|
| FT36W/2G11      | 2                   | 36                     | 50/10                        | 0.28                       | 16/76                               | 0.03/1.00                | 10              | 0.99            | 1.7                          | 1.32   |
| * FT40W/2G11/RS | 2                   | 40                     | 50/10                        | 0.32                       | 16/89                               | 0.03/1.00                | 10              | 0.99            | 1.7                          | 1.12   |

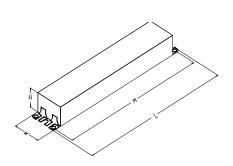


### Standard Lead Length (inches)

|        | in. | cm.  |
|--------|-----|------|
| Black  | 12  | 30.5 |
| White  | 12  | 30.5 |
| Blue   | 24  | 61   |
| Red    | 24  | 61   |
| Yellow | 24  | 61   |
| Gray   |     | 0    |
| Violet |     | 0    |

| in. | cm. |
|-----|-----|
|     | 0   |
|     | 0   |
|     | 0   |
|     | 0   |
|     | 0   |
|     | 0   |
|     | 0   |
|     | in. |





### **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      |





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## **Electrical Specifications**

| IZ1-211S40-SC@277V |                           |
|--------------------|---------------------------|
| Brand Name         | MARK 7 0-10V              |
| Ballast Type       | <b>Electronic Dimming</b> |
| Starting Method    | Programmed Start          |
| Lamp Connection    | Series                    |
| Input Voltage      | 120-277                   |
| Input Frequency    | 50/60 HZ                  |
| Status             | Active                    |

#### Notes:

### Section I - Physical Characteristics

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- 1.2 Ballast shall be available in a plastic/metal can or all metal can construction to meet all plenum requirements.
- 1.3 Ballast shall be provided with poke-in wire trap connectors or integral leads color coded per ANSI C82.11.

### Section II - Performance Requirements

- 2.1 Ballast shall be Programmed Start.
- 2.2 VZT-4PSP32-G ballast shall provide Independent Lamp Operation (ILO) allowing remaining lamp(s) to maintain full light output when one or more lamps fail.
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- 2.15 Ballast shall ignite the lamps at any light output setting without first going to another output setting.
- 2.16 Ballast shall tolerate sustained open circuit and short circuit output conditions.

### Section III - Regulatory Requirements

- 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 the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).
- 3.6 Ballast shall comply with NEMA 410 for in-rush current limits.

#### Section IV - Other

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