

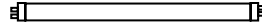


# SPECIFICATION SHEET: WHSG4-UNV-T8-IS

This Is An Original Product From Fulham Co., Inc.

**Description:** WORKHORSE Specifier Grade Series Electronic Ballast, Drop In Replacement For Magnetic Ballast, Parallel Lamp Operation, THD Less Than 10%

**This Ballast Will Operate Following Lamps:**

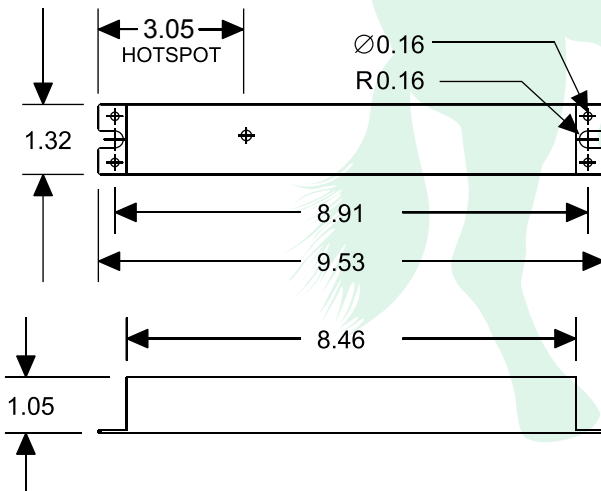


F17T8, F25T8, F32T8/25, F32T8/28, F32T8/30, FB28T8, FB31T8, FB32T8, F32T8, F40T8, F32T8

## ELECTRICAL DATA

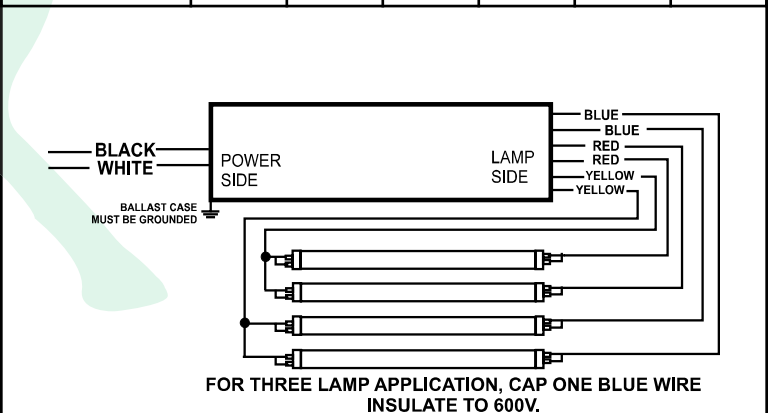
| INPUT VOLT              | 120V ± 10%, 50/60Hz               |          |          |        |        |        |        |        |
|-------------------------|-----------------------------------|----------|----------|--------|--------|--------|--------|--------|
| LAMP WATTS/TYPE         | F32T8/25                          | F32T8/28 | F32T8/30 | FB28T8 | FB31T8 | FB32T8 | F32T8  | F40T8  |
| LAMPS OPERATED          | 3 (THREE)                         |          |          |        |        |        |        |        |
| INPUT WATTS             | 74                                | 77       | 84       | 77     | 87     | 92     | 92     | 114    |
| LINE CURRENT            | 0.62                              | 0.65     | 0.71     | 0.65   | 0.73   | 0.77   | 0.77   | 0.95   |
| POWER FACTOR            | ≥ 0.98                            | ≥ 0.98   | ≥ 0.98   | ≥ 0.98 | ≥ 0.98 | ≥ 0.98 | ≥ 0.98 | ≥ 0.98 |
| BALLAST FACTOR          | 0.96                              | 0.96     | 0.96     | 0.96   | 0.96   | 0.96   | 0.96   | 0.96   |
| BALLAST EFFICACY FACTOR | 1.29                              | 1.24     | 1.14     | 1.24   | 1.10   | 1.04   | 1.04   | 0.84   |
| THD                     | ≤ 10%                             | ≤ 10%    | ≤ 10%    | ≤ 10%  | ≤ 10%  | ≤ 10%  | ≤ 10%  | ≤ 10%  |
| CURRENT CREST FACTOR    | ≤ 1.7                             |          |          |        |        |        |        |        |
| EMI/RFI COMPLIANCE      | FCC PART 18-A (NON-CONSUMER)      |          |          |        |        |        |        |        |
| SOUND RATING            | "A"                               |          |          |        |        |        |        |        |
| BALLAST TYPE            | INSTANT START                     |          |          |        |        |        |        |        |
| VOLTAGE TRANSIENTS      | ANSI C82.11-1993                  |          |          |        |        |        |        |        |
| INPUT/PROTECTION        | FUSE                              |          |          |        |        |        |        |        |
| OUTPUT/PROTECTION       | -                                 |          |          |        |        |        |        |        |
| MIN. STATING TEMP.      | -18°C (0°F)                       |          |          |        |        |        |        |        |
| MAX. CASE TEMP.         | 70°C (158°F)                      |          |          |        |        |        |        |        |
| TYPE "HL" APPROVAL      | APPROVED FOR HAZARDOUS LOCATION   |          |          |        |        |        |        |        |
| ENERGY STAR 4.0         | -                                 |          |          |        |        |        |        |        |
| APPROVALS/CLASS         | UL/cUL LISTED, CLASS P, 1 OUTDOOR |          |          |        |        |        |        |        |
| REMOTE MOUNTING         | 18 FT MAX.                        |          |          |        |        |        |        |        |

## MECHANICAL DATA



## WIRING DIAGRAMS

| WIRE          | BLACK | WHITE | RED   | BLUE  | YELLOW | BROWN |
|---------------|-------|-------|-------|-------|--------|-------|
| LENGTH-INCHES | 25±1" | 25±1" | 46±1" | 31±1" | -      | -     |



NOTE: This Ballast Must Be Grounded.



# SPECIFICATION SHEET: WHSG4-UNV-T8-IS

This Is An Original Product From Fulham Co., Inc.

**Description:** WORKHORSE Specifier Grade Series Electronic Ballast, Drop In Replacement For Magnetic Ballast, Parallel Lamp Operation, THD Less Than 10%

**This Ballast Will Operate Following Lamps:**

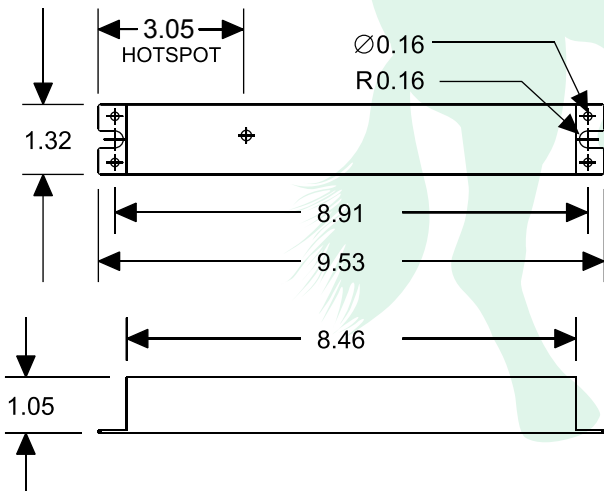


F17T8, F25T8, F32T8/25, F32T8/28, F32T8/30, FB28T8, FB31T8, FB32T8, F32T8, F40T8, F32T8

## ELECTRICAL DATA

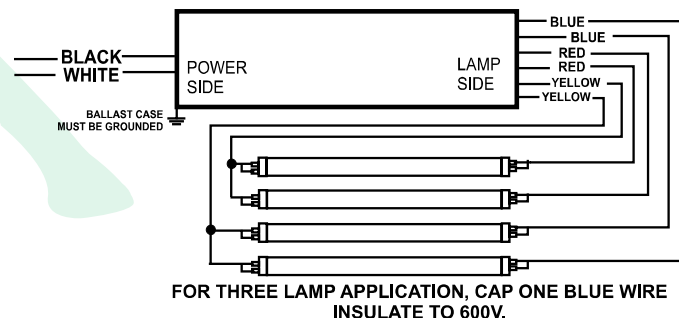
| INPUT VOLT              | 120V ± 10%, 50/60Hz               |        |          |          |          |         |         |        |         |
|-------------------------|-----------------------------------|--------|----------|----------|----------|---------|---------|--------|---------|
| LAMP WATTS/TYPE         | F17T8                             | F25T8  | F32T8/30 | F32T8/28 | F32T8/25 | FBO28T8 | FBO31T8 | F32T8  | FBO32T8 |
| LAMPS OPERATED          | 4 (FOUR)                          |        |          |          |          |         |         |        |         |
| INPUT WATTS             | 59                                | 87     | 88       | 94       | 101      | 94      | 107     | 112    | 112     |
| LINE CURRENT            | 0.49                              | 0.72   | 0.74     | 0.79     | 0.85     | 0.79    | 0.9     | 0.93   | 0.93    |
| POWER FACTOR            | ≥ 0.98                            | ≥ 0.98 | ≥ 0.98   | ≥ 0.98   | ≥ 0.98   | ≥ 0.98  | ≥ 0.98  | ≥ 0.98 | ≥ 0.98  |
| BALLAST FACTOR          | 0.93                              | 0.89   | 0.88     | 0.88     | 0.88     | 0.88    | 0.88    | 0.88   | 0.88    |
| BALLAST EFFICACY FACTOR | 1.57                              | 1.02   | 1.00     | 0.93     | 0.87     | 0.93    | 0.82    | 0.79   | 0.79    |
| THD                     | ≤ 10%                             | ≤ 10%  | ≤ 10%    | ≤ 10%    | ≤ 10%    | ≤ 10%   | ≤ 10%   | ≤ 10%  | ≤ 10%   |
| CURRENT CREST FACTOR    | ≤ 1.7                             |        |          |          |          |         |         |        |         |
| EMI/RFI COMPLIANCE      | FCC PART 18-A (NON-CONSUMER)      |        |          |          |          |         |         |        |         |
| SOUND RATING            | "A"                               |        |          |          |          |         |         |        |         |
| BALLAST TYPE            | INSTANT START                     |        |          |          |          |         |         |        |         |
| VOLTAGE TRANSIENTS      | ANSI C82.11-1993                  |        |          |          |          |         |         |        |         |
| INPUT/PROTECTION        | FUSE                              |        |          |          |          |         |         |        |         |
| OUTPUT/PROTECTION       | -                                 |        |          |          |          |         |         |        |         |
| MIN. STATING TEMP.      | -18°C (0°F)                       |        |          |          |          |         |         |        |         |
| MAX. CASE TEMP.         | 70°C (158°F)                      |        |          |          |          |         |         |        |         |
| TYPE "HL" APPROVAL      | APPROVED FOR HAZARDOUS LOCATION   |        |          |          |          |         |         |        |         |
| ENERGY STAR 4.0         | -                                 |        |          |          |          |         |         |        |         |
| APPROVALS/CLASS         | UL/cUL LISTED, CLASS P, 1 OUTDOOR |        |          |          |          |         |         |        |         |
| REMOTE MOUNTING         | 18 FT MAX.                        |        |          |          |          |         |         |        |         |

## MECHANICAL DATA



## WIRING DIAGRAMS

| WIRE          | BLACK | WHITE | RED   | BLUE  | YELLOW | BROWN |
|---------------|-------|-------|-------|-------|--------|-------|
| LENGTH-INCHES | 25±1" | 25±1" | 46±1" | 31±1" | -      | -     |



NOTE: This Ballast Must Be Grounded.

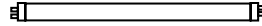


# SPECIFICATION SHEET: WHSG4-UNV-T8-IS

This Is An Original Product From Fulham Co., Inc.

**Description:** WORKHORSE Specifier Grade Series Electronic Ballast, Drop In Replacement For Magnetic Ballast, Parallel Lamp Operation, THD Less Than 10%

**This Ballast Will Operate Following Lamps:**

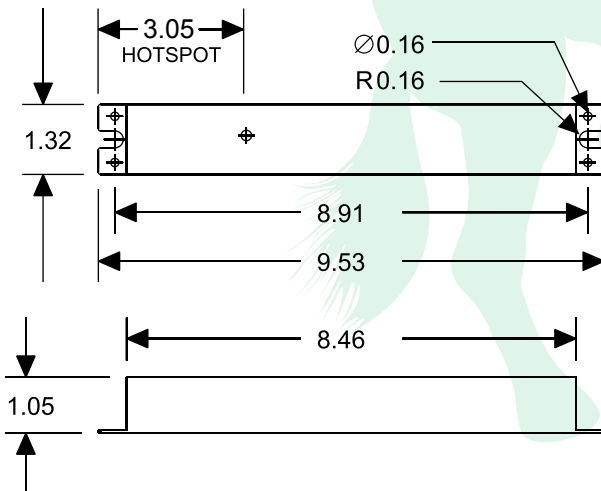


F17T8, F25T8, F32T8/25, F32T8/28, F32T8/30, FB28T8, FB31T8, FB32T8, F32T8, F40T8, F32T8

## ELECTRICAL DATA

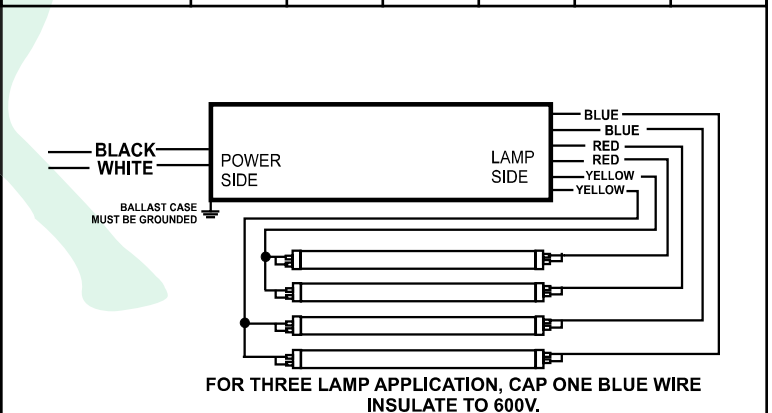
|                         |                                   |          |          |        |        |        |        |        |
|-------------------------|-----------------------------------|----------|----------|--------|--------|--------|--------|--------|
| INPUT VOLT              | 230V ± 10%, 50/60Hz               |          |          |        |        |        |        |        |
| LAMP WATTS/TYPE         | F32T8/25                          | F32T8/28 | F32T8/30 | FB28T8 | FB31T8 | FB32T8 | F32T8  | F40T8  |
| LAMPS OPERATED          | 3 (THREE)                         |          |          |        |        |        |        |        |
| INPUT WATTS             | 73                                | 77       | 84       | 77     | 87     | 89     | 89     | 109    |
| LINE CURRENT            | 0.32                              | 0.34     | 0.37     | 0.34   | 0.39   | 0.39   | 0.39   | 0.48   |
| POWER FACTOR            | ≥ 0.98                            | ≥ 0.98   | ≥ 0.98   | ≥ 0.98 | ≥ 0.98 | ≥ 0.98 | ≥ 0.98 | ≥ 0.98 |
| BALLAST FACTOR          | 0.96                              | 0.96     | 0.96     | 0.96   | 0.96   | 0.96   | 0.96   | 0.96   |
| BALLAST EFFICACY FACTOR | 1.31                              | 1.25     | 1.15     | 1.25   | 1.10   | 1.07   | 1.07   | 0.88   |
| THD                     | ≤ 10%                             | ≤ 10%    | ≤ 10%    | ≤ 10%  | ≤ 10%  | ≤ 10%  | ≤ 10%  | ≤ 10%  |
| CURRENT CREST FACTOR    | ≤ 1.7                             |          |          |        |        |        |        |        |
| EMI/RFI COMPLIANCE      | FCC PART 18-A (NON-CONSUMER)      |          |          |        |        |        |        |        |
| SOUND RATING            | "A"                               |          |          |        |        |        |        |        |
| BALLAST TYPE            | INSTANT START                     |          |          |        |        |        |        |        |
| VOLTAGE TRANSIENTS      | ANSI C82.11-1993                  |          |          |        |        |        |        |        |
| INPUT/PROTECTION        | FUSE                              |          |          |        |        |        |        |        |
| OUTPUT/PROTECTION       | -                                 |          |          |        |        |        |        |        |
| MIN. STATING TEMP.      | -18°C (0°F)                       |          |          |        |        |        |        |        |
| MAX. CASE TEMP.         | 70°C (158°F)                      |          |          |        |        |        |        |        |
| TYPE "HL" APPROVAL      | APPROVED FOR HAZARDOUS LOCATION   |          |          |        |        |        |        |        |
| ENERGY STAR 4.0         | -                                 |          |          |        |        |        |        |        |
| APPROVALS/CLASS         | UL/cUL LISTED, CLASS P, 1 OUTDOOR |          |          |        |        |        |        |        |
| REMOTE MOUNTING         | 18 FT MAX.                        |          |          |        |        |        |        |        |

## MECHANICAL DATA



## WIRING DIAGRAMS

| WIRE          | BLACK | WHITE | RED   | BLUE  | YELLOW | BROWN |
|---------------|-------|-------|-------|-------|--------|-------|
| LENGTH-INCHES | 25±1" | 25±1" | 46±1" | 31±1" | -      | -     |



NOTE: This Ballast Must Be Grounded.

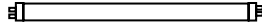


# SPECIFICATION SHEET: WHSG4-UNV-T8-IS

This Is An Original Product From Fulham Co., Inc.

**Description:** WORKHORSE Specifier Grade Series Electronic Ballast, Drop In Replacement For Magnetic Ballast, Parallel Lamp Operation, THD Less Than 10%

**This Ballast Will Operate Following Lamps:**

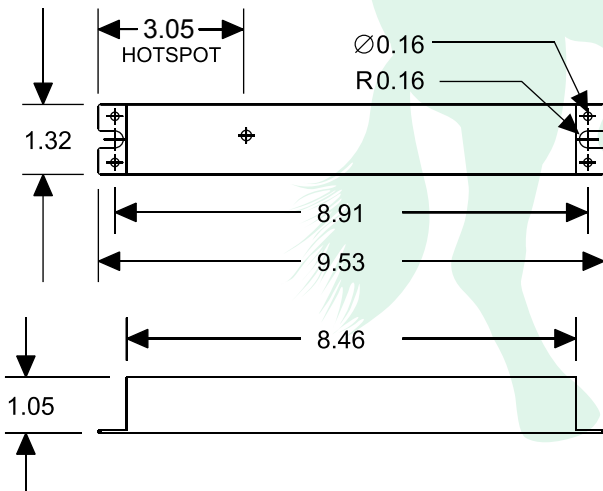


F17T8, F25T8, F32T8/25, F32T8/28, F32T8/30, FB28T8, FB31T8, FB32T8, F32T8, F40T8, F32T8

## ELECTRICAL DATA

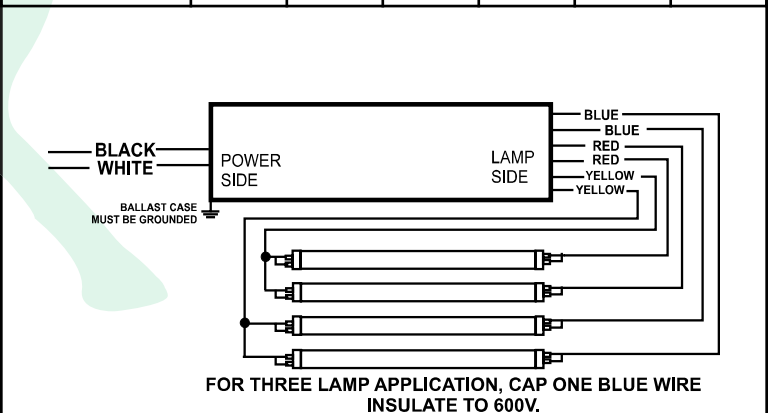
| INPUT VOLT              | 230V ± 10%, 50/60Hz               |        |          |          |          |         |         |        |         |
|-------------------------|-----------------------------------|--------|----------|----------|----------|---------|---------|--------|---------|
| LAMP WATTS/TYPE         | F17T8                             | F25T8  | F32T8/30 | F32T8/28 | F32T8/25 | FBO28T8 | FBO31T8 | F32T8  | FBO32T8 |
| LAMPS OPERATED          | 4 (FOUR)                          |        |          |          |          |         |         |        |         |
| INPUT WATTS             | 58                                | 85     | 88       | 94       | 100      | 92      | 106     | 108    | 108     |
| LINE CURRENT            | 0.26                              | 0.38   | 0.39     | 0.42     | 0.44     | 0.41    | 0.47    | 0.48   | 0.48    |
| POWER FACTOR            | ≥ 0.98                            | ≥ 0.98 | ≥ 0.98   | ≥ 0.98   | ≥ 0.98   | ≥ 0.98  | ≥ 0.98  | ≥ 0.98 | ≥ 0.98  |
| BALLAST FACTOR          | 0.93                              | 0.89   | 0.88     | 0.88     | 0.88     | 0.88    | 0.88    | 0.88   | 0.88    |
| BALLAST EFFICACY FACTOR | 1.59                              | 1.05   | 1.00     | 0.93     | 0.88     | 0.95    | 0.83    | 0.80   | 0.80    |
| THD                     | ≤ 10%                             | ≤ 10%  | ≤ 10%    | ≤ 10%    | ≤ 10%    | ≤ 10%   | ≤ 10%   | ≤ 10%  | ≤ 10%   |
| CURRENT CREST FACTOR    | ≤ 1.7                             |        |          |          |          |         |         |        |         |
| EMI/RFI COMPLIANCE      | FCC PART 18-A (NON-CONSUMER)      |        |          |          |          |         |         |        |         |
| SOUND RATING            | "A"                               |        |          |          |          |         |         |        |         |
| BALLAST TYPE            | INSTANT START                     |        |          |          |          |         |         |        |         |
| VOLTAGE TRANSIENTS      | ANSI C82.11-1993                  |        |          |          |          |         |         |        |         |
| INPUT/PROTECTION        | FUSE                              |        |          |          |          |         |         |        |         |
| OUTPUT/PROTECTION       | -                                 |        |          |          |          |         |         |        |         |
| MIN. STATING TEMP.      | -18°C (0°F)                       |        |          |          |          |         |         |        |         |
| MAX. CASE TEMP.         | 70°C (158°F)                      |        |          |          |          |         |         |        |         |
| TYPE "HL" APPROVAL      | APPROVED FOR HAZARDOUS LOCATION   |        |          |          |          |         |         |        |         |
| ENERGY STAR 4.0         | -                                 |        |          |          |          |         |         |        |         |
| APPROVALS/CLASS         | UL/cUL LISTED, CLASS P, 1 OUTDOOR |        |          |          |          |         |         |        |         |
| REMOTE MOUNTING         | 18 FT MAX.                        |        |          |          |          |         |         |        |         |

## MECHANICAL DATA



## WIRING DIAGRAMS

| WIRE          | BLACK | WHITE | RED   | BLUE  | YELLOW | BROWN |
|---------------|-------|-------|-------|-------|--------|-------|
| LENGTH-INCHES | 25±1" | 25±1" | 46±1" | 31±1" | -      | -     |



NOTE: This Ballast Must Be Grounded.

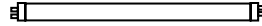


# SPECIFICATION SHEET: WHSG4-UNV-T8-IS

This Is An Original Product From Fulham Co., Inc.

**Description:** WORKHORSE Specifier Grade Series Electronic Ballast, Drop In Replacement For Magnetic Ballast, Parallel Lamp Operation, THD Less Than 10%

**This Ballast Will Operate Following Lamps:**

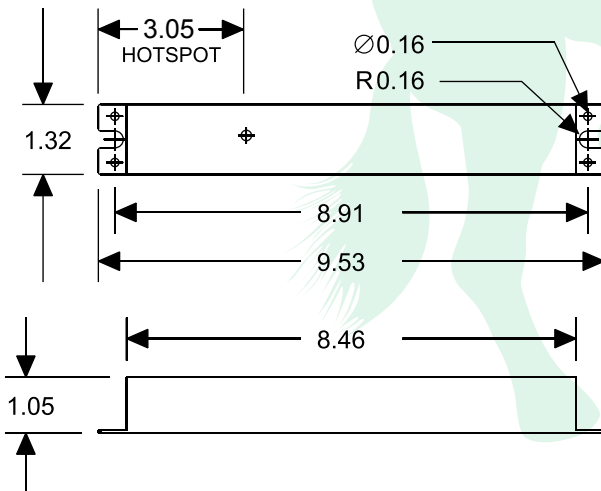


F17T8, F25T8, F32T8/25, F32T8/28, F32T8/30, FB28T8, FB31T8, FB32T8, F32T8, F40T8, F32T8

## ELECTRICAL DATA

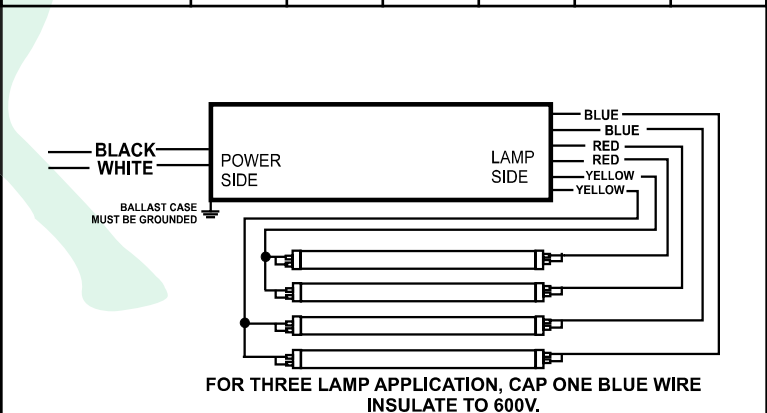
| INPUT VOLT              | 277V ± 10%, 50/60Hz               |          |          |        |        |        |        |        |
|-------------------------|-----------------------------------|----------|----------|--------|--------|--------|--------|--------|
| LAMP WATTS/TYPE         | F32T8/25                          | F32T8/28 | F32T8/30 | FB28T8 | FB31T8 | FB32T8 | F32T8  | F40T8  |
| LAMPS OPERATED          | 3 (THREE)                         |          |          |        |        |        |        |        |
| INPUT WATTS             | 73                                | 77       | 84       | 77     | 87     | 89     | 89     | 109    |
| LINE CURRENT            | 0.27                              | 0.29     | 0.31     | 0.29   | 0.32   | 0.34   | 0.34   | 0.41   |
| POWER FACTOR            | ≥ 0.98                            | ≥ 0.98   | ≥ 0.98   | ≥ 0.98 | ≥ 0.98 | ≥ 0.98 | ≥ 0.98 | ≥ 0.98 |
| BALLAST FACTOR          | 0.96                              | 0.96     | 0.96     | 0.96   | 0.96   | 0.96   | 0.96   | 0.96   |
| BALLAST EFFICACY FACTOR | 1.31                              | 1.25     | 1.15     | 1.25   | 1.10   | 1.07   | 1.07   | 0.88   |
| THD                     | ≤ 10%                             | ≤ 10%    | ≤ 10%    | ≤ 10%  | ≤ 10%  | ≤ 10%  | ≤ 10%  | ≤ 10%  |
| CURRENT CREST FACTOR    | ≤ 1.7                             |          |          |        |        |        |        |        |
| EMI/RFI COMPLIANCE      | FCC PART 18-A (NON-CONSUMER)      |          |          |        |        |        |        |        |
| SOUND RATING            | "A"                               |          |          |        |        |        |        |        |
| BALLAST TYPE            | INSTANT START                     |          |          |        |        |        |        |        |
| VOLTAGE TRANSIENTS      | ANSI C82.11-1993                  |          |          |        |        |        |        |        |
| INPUT/PROTECTION        | FUSE                              |          |          |        |        |        |        |        |
| OUTPUT/PROTECTION       | -                                 |          |          |        |        |        |        |        |
| MIN. STATING TEMP.      | -18°C (0°F)                       |          |          |        |        |        |        |        |
| MAX. CASE TEMP.         | 70°C (158°F)                      |          |          |        |        |        |        |        |
| TYPE "HL" APPROVAL      | APPROVED FOR HAZARDOUS LOCATION   |          |          |        |        |        |        |        |
| ENERGY STAR 4.0         | -                                 |          |          |        |        |        |        |        |
| APPROVALS/CLASS         | UL/cUL LISTED, CLASS P, 1 OUTDOOR |          |          |        |        |        |        |        |
| REMOTE MOUNTING         | 18 FT MAX.                        |          |          |        |        |        |        |        |

## MECHANICAL DATA



## WIRING DIAGRAMS

| WIRE          | BLACK | WHITE | RED   | BLUE  | YELLOW | BROWN |
|---------------|-------|-------|-------|-------|--------|-------|
| LENGTH-INCHES | 25±1" | 25±1" | 46±1" | 31±1" | -      | -     |



NOTE: This Ballast Must Be Grounded.

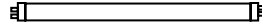


# SPECIFICATION SHEET: WHSG4-UNV-T8-IS

This Is An Original Product From Fulham Co., Inc.

**Description:** WORKHORSE Specifier Grade Series Electronic Ballast, Drop In Replacement For Magnetic Ballast, Parallel Lamp Operation, THD Less Than 10%

**This Ballast Will Operate Following Lamps:**

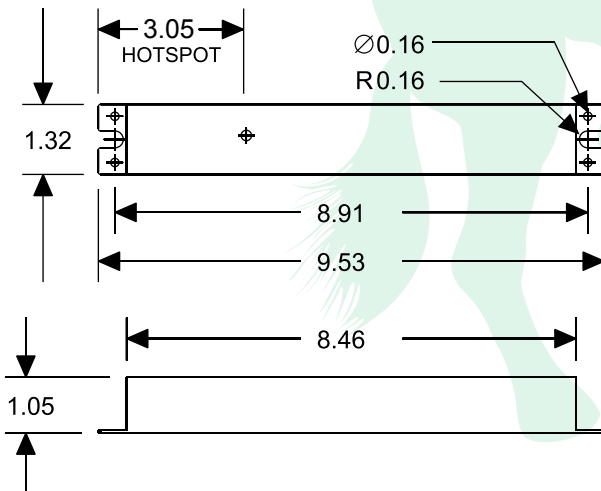


F17T8, F25T8, F32T8/25, F32T8/28, F32T8/30, FB28T8, FB31T8, FB32T8, F32T8, F40T8, F32T8

## ELECTRICAL DATA

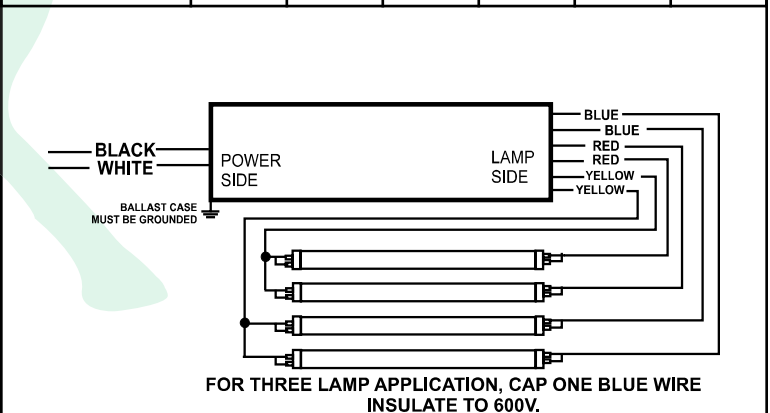
| INPUT VOLT              | 277V ± 10%, 50/60Hz               |        |          |          |          |         |         |        |         |
|-------------------------|-----------------------------------|--------|----------|----------|----------|---------|---------|--------|---------|
| LAMP WATTS/TYPE         | F17T8                             | F25T8  | F32T8/30 | F32T8/28 | F32T8/25 | FBO28T8 | FBO31T8 | F32T8  | FBO32T8 |
| LAMPS OPERATED          | 4 (FOUR)                          |        |          |          |          |         |         |        |         |
| INPUT WATTS             | 58                                | 85     | 88       | 94       | 100      | 92      | 106     | 108    | 108     |
| LINE CURRENT            | 0.22                              | 0.32   | 0.33     | 0.35     | 0.37     | 0.34    | 0.39    | 0.40   | 0.40    |
| POWER FACTOR            | ≥ 0.98                            | ≥ 0.98 | ≥ 0.98   | ≥ 0.98   | ≥ 0.98   | ≥ 0.98  | ≥ 0.98  | ≥ 0.98 | ≥ 0.98  |
| BALLAST FACTOR          | 0.93                              | 0.89   | 0.88     | 0.88     | 0.88     | 0.88    | 0.88    | 0.88   | 0.88    |
| BALLAST EFFICACY FACTOR | 1.59                              | 1.05   | 1.00     | 0.93     | 0.88     | 0.95    | 0.83    | 0.80   | 0.80    |
| THD                     | ≤ 10%                             | ≤ 10%  | ≤ 10%    | ≤ 10%    | ≤ 10%    | ≤ 10%   | ≤ 10%   | ≤ 10%  | ≤ 10%   |
| CURRENT CREST FACTOR    | ≤ 1.7                             |        |          |          |          |         |         |        |         |
| EMI/RFI COMPLIANCE      | FCC PART 18-A (NON-CONSUMER)      |        |          |          |          |         |         |        |         |
| SOUND RATING            | "A"                               |        |          |          |          |         |         |        |         |
| BALLAST TYPE            | INSTANT START                     |        |          |          |          |         |         |        |         |
| VOLTAGE TRANSIENTS      | ANSI C82.11-1993                  |        |          |          |          |         |         |        |         |
| INPUT/PROTECTION        | FUSE                              |        |          |          |          |         |         |        |         |
| OUTPUT/PROTECTION       | -                                 |        |          |          |          |         |         |        |         |
| MIN. STATING TEMP.      | -18°C (0°F)                       |        |          |          |          |         |         |        |         |
| MAX. CASE TEMP.         | 70°C (158°F)                      |        |          |          |          |         |         |        |         |
| TYPE "HL" APPROVAL      | APPROVED FOR HAZARDOUS LOCATION   |        |          |          |          |         |         |        |         |
| ENERGY STAR 4.0         | -                                 |        |          |          |          |         |         |        |         |
| APPROVALS/CLASS         | UL/cUL LISTED, CLASS P, 1 OUTDOOR |        |          |          |          |         |         |        |         |
| REMOTE MOUNTING         | 18 FT MAX.                        |        |          |          |          |         |         |        |         |

## MECHANICAL DATA



## WIRING DIAGRAMS

| WIRE          | BLACK | WHITE | RED   | BLUE  | YELLOW | BROWN |
|---------------|-------|-------|-------|-------|--------|-------|
| LENGTH-INCHES | 25±1" | 25±1" | 46±1" | 31±1" | -      | -     |



NOTE: This Ballast Must Be Grounded.