

Si-36

36 Watt pure sine wave emergency lighting inverter with "Power Share Technology"



Specifiers reference:

Project: _____
 Type: _____
 Model #: _____
 Comments: _____

Product Summary

Approvals UL Listed to UL924
Input Voltage (Universal Input) 120 - 277 Vac, 50 or 60Hz
Input Current 0.335 A (max)
Output 120 - 277 Vac, 50 or 60 Hz
 Auto setting output voltage equal to input voltage

Output Power and Temperature

Max. 36W- Ta 10-55°C (50 to 131°F)
 Max. 27W- Ta 0-55°C (32 to 131°F)
 FEMA 2 Hour run time Max. 27W- Ta 0-55°C (50 to 131°F)
 FEMA 2 Hour run time Max. 20W- Ta 0-55°C (32 to 131°F)

Operating Time 90 Minutes minimum
Auto Test Monthly and Annual
Transfer Time 1 second to Power Share
Power Share Technology ... allows for ~20% (field programmable to 30%) of normal luminaire power in emergency
Recharge Time 24 Hours
Remote Mounting Distance 1,000 ft (max. w/ 18ga wire)
Battery Lithium
Dimensions 13.54" L x 3.23" W x 1.18" D
Weight 3.0 lbs.
Warranty 5 years full. See website for warranty details



See Si-36 Power Share Chart for additional information.

All Specifications subject to change without prior notification.

Description

The Assurance Emergency Lighting Si-36 is a compact, versatile Auto-Test Sine Wave output inverter designed for designated emergency lighting fixtures and includes PST- Power Share Technology. In the event of a power failure, the inverter will automatically supply up to 36 watts of emergency power to LED or fluorescent luminaires for a minimum of 90 minutes. It can operate with a single or multiple switched, dimmed, non-switched and emergency only luminaires. It can operate as a stand alone 36 watt mini inverter or used with 0-10Vdc controlled dimmable luminaires (up to 180W or 120W**) and apply 2 Vdc (or 3 Vdc**) to the emergency luminaire dimming driver in the emergency operation to achieve 20% (or 30%**)of the luminaire power for emergency fixture(s). It can be used with single and multiple channel LED drivers and Type A, B or C TLED lamps. The emergency output will be up to 36 W at temperatures of (10-55C), 27 W for (0-55C), 27W for 2 hours (10-55C) and 20W for 2 hours for (0-55C).

Specifications

The Assurance Emergency Lighting Si-36 is a compact Auto Test pure sine wave output inverter designed for designated emergency lighting fixtures and includes PST- Power Share Technology. For 0-10Vdc dimming applications, the Power Share Technology allows for normal dimming to pass to the normal/emergency luminaire in normal operation and applies 2 Vdc (3Vdc**) to the emergency luminaire dimming driver leads in emergency operation. This allows the selected emergency luminaires to operate at approximately 20% (30%**) of luminaire total power. (maximum normal operation power up to 180W and programmable to 3 Vdc up to 120W). Compatible with linear 0-10Vdc dimming drivers. Not compatible with logarithmic 0-10 vdc dimming drivers with PST operation. In the event of a power failure, the inverter will automatically supply up to 36 watts of emergency power to LED or fluorescent luminaires for a minimum of 90 minutes. It can operate with a single or multiple switched, dimmed, non-switched and emergency only luminaires. It can operate as a standalone 36 watt mini inverter. It can be used with single and multiple channel LED drivers and Type A, B or C TLED lamps. The emergency output will be up to 36 W at temperatures of (10-55°C), 27 W for (0-55°C), 27W for 2 hours (10-55°C) and 20W for 2 hours for (0-55°C). The Si-36 Auto test function will perform a 90-minute annual test and a monthly 30-second test to ensure proper operation. The Si-36 shall be UL924 Listed for factory or field installation. It shall meet or exceed the requirements of UL924, NFPA101 Life Safety Code, NFPA 70 National Electrical Code, OSHA, California Energy Commission- Title 20 and State and Local codes. Warranty: Five years full. See Website for warranty details.

** See installation instructions for field programming to 3 vdc and for luminaire(s) up to 120W.

Assurance Emergency Lighting, a division of Assurance Engineering LLC

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Si-36 Power Share Selection Chart



| 20% setting 180W Max. Load | | | | | | | | | | |
|------------------------------------|-----------|-----------|-----------|-----------|-----------|---------------|------------|-----------|------------|-----------|
| Luminaire wattage | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 |
| Emergency Dim to 20% (W) | 7 | 7.2 | 7.4 | 7.6 | 7.8 | 8 | 8.2 | 8.4 | 8.6 | 8.8 |
| # of Emergency Luminaires | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Actual wattage from Si-36 used | 35 | 36 | 29.6 | 30.4 | 31.2 | 32 | 32.8 | 33.6 | 34.4 | 35.2 |
| Lumens per EM fixture ** | 833 | 857 | 881 | 904 | 928 | 952 | 976 | 1000 | 1023 | 1047 |
| Total System Lumens provided | 4165 | 4284 | 3522 | 3618 | 3713 | 3808 | 3903 | 3998 | 4094 | 4189 |
| Total fixture wattage (Max. 180 W) | 175 | 180 | 148 | 152 | 156 | 160 | 164 | 168 | 172 | 176 |
| Luminaire wattage | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 |
| Emergency Dim to 20% (W) | 9 | 9.2 | 9.4 | 9.6 | 9.8 | 10 | 10.2 | 10.4 | 10.6 | 10.8 |
| # of Emergency Luminaires | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Actual wattage from Si-36 used | 36 | 27.6 | 28.2 | 28.8 | 29.4 | 30 | 30.6 | 31.2 | 31.8 | 32.4 |
| Lumens per EM fixture ** | 1071 | 1095 | 1119 | 1142 | 1166 | 1190 | 1214 | 1238 | 1261 | 1285 |
| Total System Lumens provided | 4284 | 3284 | 3356 | 3427 | 3499 | 3570 | 3641 | 3713 | 3784 | 3856 |
| Total fixture wattage (Max. 180 W) | 180 | 138 | 141 | 144 | 147 | 150 | 153 | 156 | 159 | 162 |
| Luminaire wattage | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 |
| Emergency Dim to 20% (W) | 11 | 11.2 | 11.4 | 11.6 | 11.8 | 12 | 12.2 | 12.4 | 12.6 | 12.8 |
| # of Emergency Luminaires | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 |
| Actual wattage from Si-36 used | 33 | 33.6 | 34.2 | 34.8 | 35.4 | 36 | 24.4 | 24.8 | 25.2 | 25.6 |
| Lumens per EM fixture ** | 1309 | 1333 | 1357 | 1380 | 1404 | 1428 | 1452 | 1476 | 1499 | 1523 |
| Total System Lumens provided | 3927 | 3998 | 4070 | 4141 | 4213 | 4284 | 2904 | 2951 | 2999 | 3046 |
| Total fixture wattage (Max. 180 W) | 165 | 168 | 171 | 174 | 177 | 180 | 122 | 124 | 126 | 128 |
| Luminaire wattage | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| Emergency Dim to 20% (W) | 13 | 13.2 | 13.4 | 13.6 | 13.8 | 14 | 14.2 | 14.4 | 14.6 | 14.8 |
| # of Emergency Luminaires | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Actual wattage from Si-36 used | 26 | 26.4 | 26.8 | 27.2 | 27.6 | 28 | 28.4 | 28.8 | 29.2 | 29.6 |
| Lumens per EM fixture ** | 1547 | 1571 | 1595 | 1618 | 1642 | 1666 | 1690 | 1714 | 1737 | 1761 |
| Total System Lumens provided | 3094 | 3142 | 3189 | 3237 | 3284 | 3332 | 3380 | 3427 | 3475 | 3522 |
| Total fixture wattage (Max. 180 W) | 130 | 132 | 134 | 136 | 138 | 140 | 142 | 144 | 146 | 148 |
| Luminaire wattage | 75 | 80 | 85 | 88 | 90 | 91-180 | 150 | 175 | 180 | |
| Emergency Dim to 20% (W) | 15 | 16 | 17 | 17.6 | 18 | 18 - 36 | 30 | 35 | 36 | |
| # of Emergency Luminaires | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | |
| Actual wattage from Si-36 used | 30 | 32 | 34 | 35.2 | 36 | cal. | 30 | | | |
| Lumens per EM fixture ** | 1785 | 1904 | 2023 | 2094 | 2142 | 2140-4280 | 4200 | | | |
| Total System Lumens provided | 3570 | 3808 | 4046 | 4189 | 4284 | 2140-4280 | | | | |
| Total fixture wattage (Max. 180 W) | 150 | 160 | 170 | 176 | 180 | 91-120 | 150 | | | |

** 140 lumens/watt & 85% system eff.

The Si-36 may need to be re-programmed to enable 3.0 Vdc in emergency from the Violet/Blk and Pink/Blk leads. See instructions.

All calculations based on 10-55C

- 1- Define the wattage of the normal/emergency luminaire.
- 2- Determine from the chart how many emergency luminaires can be used with the Si-36 for 90 minutes
- 3- Use a lighting calculation program to determine spacing of emergency luminaires to meet life safety and local code requirements for egress.
- 4- Ensure that the total normal/(emergency) luminaire(s) or connected loads do not exceed 180 W.
- 5- LED Luminaires must incorporate linear 0-10Vdc dimming drivers and be wired with the Si-36 when using the PST functions. Not compatible with logarithmic dimming drivers.
- 6- **All Selection Chart Calculations are based on 85% driver efficiency and 140Lm/W efficacy.

Si-36 Power Share Selection Chart

120W @ 3 Vdc Re-program setting for PST

| Luminaire Wattage | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|
| Emergency Dim to 30%(W) | 4.2 | 4.5 | 4.8 | 5.1 | 5.4 | 5.7 | 6 | 6.3 | 6.6 | 6.9 |
| # of Emergency Luminaires | 8 | 8 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 5 |
| Lumens per EM Fixture ** | 500 | 536 | 571 | 607 | 643 | 678 | 714 | 750 | 785 | 821 |
| Total System Lumens Provided | 3998 | 4284 | 3998 | 4248 | 3856 | 4070 | 4284 | 3749 | 3927 | 4106 |
| Total Fixture Wattage (Max. 120W) | 112 | 120 | 112 | 119 | 108 | 114 | 120 | 105 | 110 | 115 |

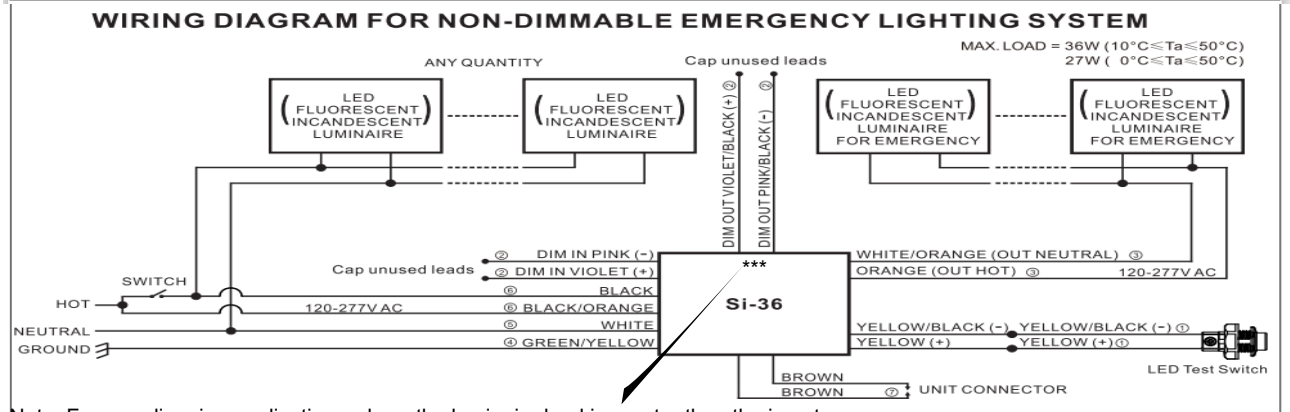
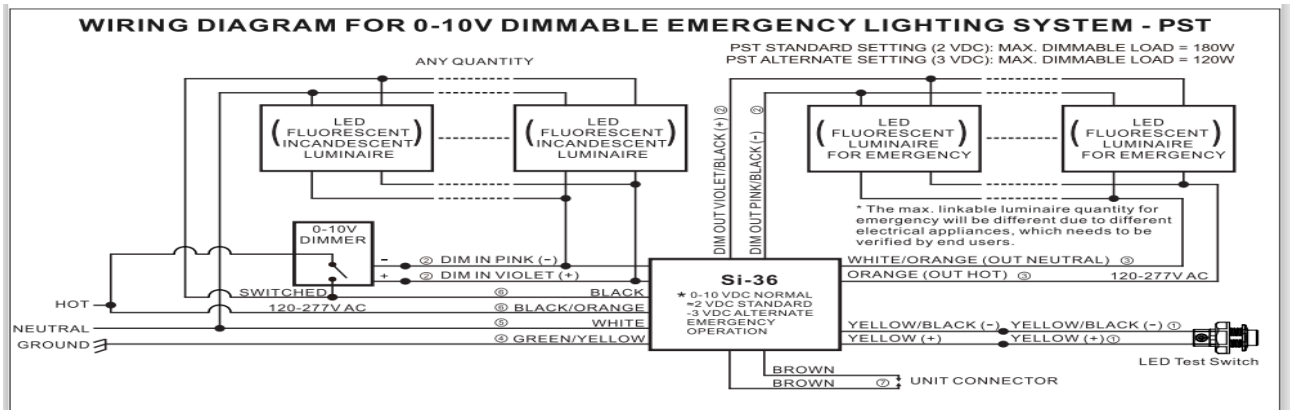
| Luminaire Wattage | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|
| Emergency Dim to 30%(W) | 7.2 | 7.5 | 7.8 | 8.1 | 8.4 | 8.7 | 9 | 9.3 | 9.6 | 9.9 |
| # of Emergency Luminaires | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 |
| Lumens per EM Fixture ** | 857 | 893 | 928 | 964 | 1000 | 1035 | 1071 | 1107 | 1142 | 1178 |
| Total System Lumens Provided | 4284 | 3570 | 3713 | 3856 | 3998 | 4141 | 4284 | 3320 | 3427 | 3534 |
| Total Fixture Wattage (Max. 120W) | 120 | 100 | 104 | 108 | 112 | 116 | 120 | 93 | 96 | 99 |

| Luminaire Wattage | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|
| Emergency Dim to 30%(W) | 10.2 | 10.5 | 10.8 | 11.1 | 11.4 | 11.7 | 12 | 12.3 | 12.6 | 12.9 |
| # of Emergency Luminaires | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 |
| Lumens per EM Fixture ** | 1214 | 1250 | 1285 | 1321 | 1357 | 1392 | 1428 | 1464 | 1499 | 1535 |
| Total System Lumens Provided | 3641 | 3749 | 3856 | 3963 | 4070 | 4177 | 4284 | 2927 | 2999 | 3070 |
| Total Fixture Wattage (Max. 120W) | 102 | 105 | 108 | 111 | 114 | 117 | 120 | 82 | 84 | 86 |

| Luminaire Wattage | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|
| Emergency Dim to 30%(W) | 13.2 | 13.5 | 13.8 | 14.1 | 14.4 | 14.7 | 15 | 15.3 | 15.6 | 15.9 |
| # of Emergency Luminaires | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Lumens per EM Fixture ** | 1571 | 1607 | 1642 | 1678 | 1714 | 1749 | 1785 | 1821 | 1856 | 1892 |
| Total System Lumens Provided | 3142 | 3213 | 3284 | 3356 | 3427 | 3499 | 3570 | 3641 | 3713 | 3784 |
| Total Fixture Wattage (Max. 120W) | 88 | 90 | 92 | 94 | 96 | 98 | 100 | 102 | 104 | 106 |

| Luminaire Wattage | 54 | 55 | 56 | 58 | 60 | 61-120 | | | | |
|-----------------------------------|------|------|------|------|------|-----------|--|--|--|------------|
| Emergency Dim to 30%(W) | 16.2 | 16.5 | 16.8 | 17.4 | 18 | 18.3-36 | | | | up to 36 |
| # of Emergency Luminaires | 2 | 2 | 2 | 2 | 1 | | | | | 1 |
| Lumens per EM Fixture ** | 1928 | 1964 | 1999 | 2071 | 2142 | 2140-4280 | | | | up to 4282 |
| Total System Lumens Provided | 3856 | 3927 | 3998 | 4141 | 4284 | 2140-4280 | | | | up to 4282 |
| Total Fixture Wattage (Max. 120W) | 108 | 110 | 112 | 116 | 120 | 61-120 | | | | up to 36 |

- 1 - Define the wattage of the normal/emergency luminaire.
- 2 - Determine from chart how many emergency luminaires can be used with the Si-36.
- 3 - Use lighting calculation program to determine spacing of emergency luminaires to meet life safety and local requirements for egress.
- 4 - Ensure that the total normal/emergency lighting luminaire(s) wattage does not exceed 120W.
- 5 - LED Luminaires must incorporate 0-10 Vdc dimming driver and be wired with the Si-36 when using the PST function.
- 6 - **All Selection Chart calculations based on 85% driver efficiency and 140 Lm/W efficacy.



Note: For non-dimming applications where the luminaire load is greater than the inverter power, the EM 0-10Vdc (vio/blk and pink/blk) leads MUST be connected to the luminaire's driver. ***