

E2xB05 Xenon Strobe Beacon

The hazardous area E2xB05 Xenon strobe beacon is ATEX certified for Zone 2 applications and also UL approved for Class I Div 2 applications.

The E2xB05 is a 5 Joule Xenon strobe beacon with a 1Hz (60 fpm) flash rate.

The E2x range features enclosures manufactured from lightweight, high performance PPS which, with its corrosion proof properties, is suitable for the harshest of environments.

COMSEC PROTECTION SYSTEMS LTD.
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Part codes:

| Part Code: | Classification: |
|----------------------|---|
| ATEX version: | |
| E2xB05EG** | II 3G EEx nA nL IIC T2 (Tamb -20°C to +55°C) II 3G EEx nA nL IIC T3 (Tamb -20°C to +40°C) |
| UL version: | |
| E2xB05UL** | Class I, Div 2, Grps A,B,C,D T2D (215°C) at +55°C Class I, Div 2, Grps A,B,C,D T3 (200°C) at +40°C Class II, Div 2, Grps F & G T5 (100°C) at +55°C Class II, Div 2, Grps F & G T6 (85°C) at +40°C Class III, Div 1, T5 (100°C) at +55°C Class III, Div 1, T6 (85°C) at +40°C |

** = Voltage & lens colour reference:

Voltage options: 12DC, 24DC, 48DC, 115AC, 230AC

Lens colour options: -AM (Amber)
-BL (Blue)
-CL (Clear)
-GN (Green)
-RD (Red)
-YW (Yellow)

e.g: E2xB05EG115AC-AM

Replacement Xenon flash tube: FTASSYE2X

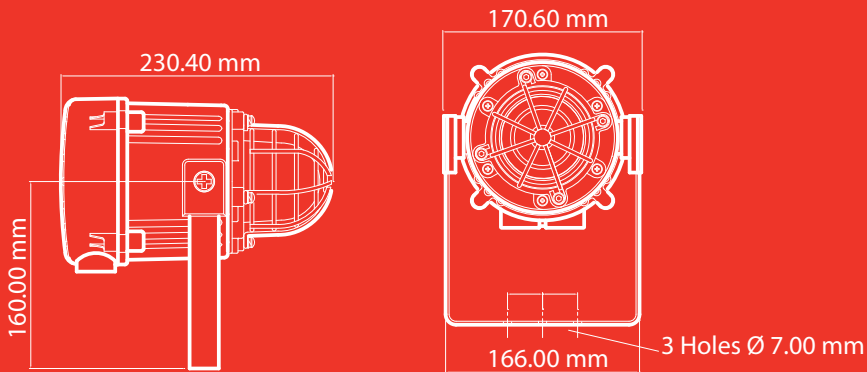
Features:

- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- Stainless Steel dome guard as standard
- Xenon tube mechanically secured against vibration/shock.
- User replaceable Xenon tube assembly.

Approvals:

- ATEX certificate: DEMKO 06 ATEX 0421554, EN 50021: 1999
- UL File ref: E245313



**Specification:**

| | |
|-------------------------|---|
| Energy: | 5 Joules (5Ws) |
| Flash rate: | 1Hz (60 fpm) |
| Peak Candela: | 31,950 cd |
| Effective Intensity cd: | 101 cd* |
| Lens colours: | Amber, Blue, Clear, Green, Red & Yellow |
| Voltages DC: | 12vdc; 24vdc; 48vdc |
| Voltages AC: | 115vac; 230vac |
| Ingress protection: | ATEX: IP66 & IP67 UL: Type 4, 4X & 13 |
| Housing material: | UL94V0 PPS & ABS |
| ATEX cable entries: | 2 x M20 ISO cable gland entries - with 1 blanking plug. |
| UL cable entries: | 1 x 1/2" NPT cable gland entry - with 0.5m flying leads. |
| Terminals (ATEX): | 0.5 to 4.0mm ² - In & Out |
| Weight : | 1.48kg |

Current consumption:

| Version: | Voltage range: | Current: |
|----------|----------------|----------|
| 12V dc | 10-14V dc | 520mA |
| 24V dc | 20-28V dc | 275mA |
| 48V dc | 42-58V dc | 145mA |
| 115V ac | 50/60Hz +/-10% | 80mA |
| 230V ac | 50/60Hz +/-10% | 30mA |

Effective Candela lens colour factor:

| Amber | Blue | Clear | Green | Red | Yellow |
|-------|------|-------|-------|------|--------|
| 0.51 | 0.12 | 1.00 | 0.49 | 0.15 | 0.86 |

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INSTRUCTION & SERVICE MANUAL

E2xB05UL BEACONS

For Use In Hazardous Locations

- 5 Joules
- Type 4 / 4X 13
- Operating Temperature Range
-20°C to 55°C



Unit Type No. E2xB05UL

Input Voltages: DC Units 12V or 24V or 48V
AC Units 120V or 230V 50/60Hz

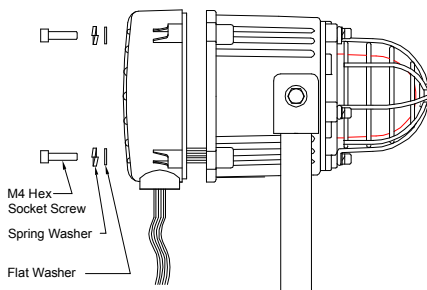
| Max. Operating Temperature / Code at +55°C Ambient | |
|--|------------------|
| Hazardous Location | Temperature Code |
| Class I, Division 2, Groups A, B, C, D | T2D (215°C) |
| Class II, Division 2, Groups F and G | T5 (100°C) |
| Class III, Divisions 1 and 2 | T5 (100°C) |

| Max. Operating Temperature / Code at +40°C Ambient | |
|--|------------------|
| Hazardous Location | Temperature Code |
| Class I, Division 2, Groups A, B, C, D | T3 (200°C) |
| Class II, Division 2, Groups F and G | T6 (85°C) |
| Class III, Divisions 1 and 2 | T6 (85°C) |

The equipment is suitable for use in the hazardous locations listed above or non-hazardous locations only.

PRE-INSTALLATION

WARNING - The E2xB05UL beacon is supplied with flying leads so it should not be necessary to open the unit before it is installed.

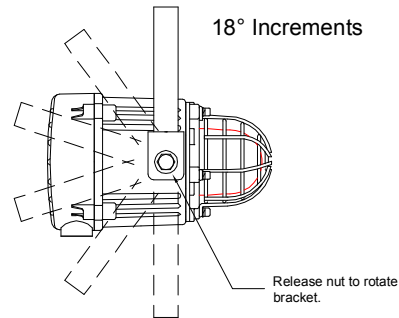


WARNING – NOT TO BE USED AS A VISUAL PUBLIC MODE NOTIFICATION APPLIANCE

WARNING – HIGH VOLTAGE SHOCK HAZARD. WAIT 5 MINUTES AFTER REMOVING POWER BEFORE OPENING THE ENCLOSURE

MOUNTING

The E2xB05UL beacon must be mounted using the rotating bracket as shown.



WARNING - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, II DIVISION 2.

WIRING INSTALLATION

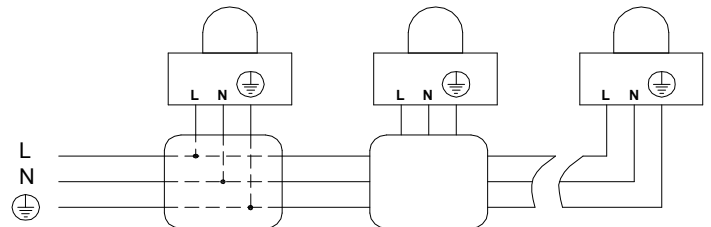
The E2xB05UL beacon has one ½ NPT cable entry, the blanking plug adjacent to the cable entry is permanently fixed and must not be removed. The beacon is pre-wired with flying leads which are colour coded and should be connected as shown in the diagram below.

The conduit running from the supply to the beacon must include an equipment grounding conductor that is at earth potential to facilitate ground connection of the device. A number of beacons can be connected in a chain to the same supply using field installed wiring compartments that are appropriate for the hazardous location, provided that the conductor at earth potential can be readily connected to the ground lead on each beacon in the chain.

WARNING - ALL ELECTRICAL WIRING MUST BE INSTALLED IN ACCORDANCE TO THE NATIONAL ELECTRICAL CODE

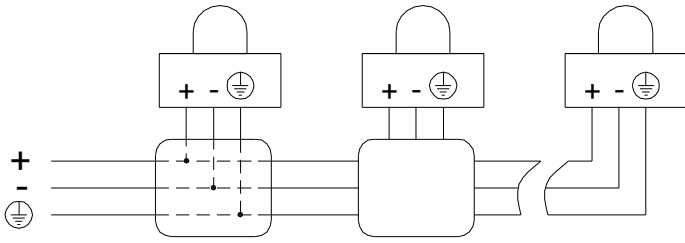
AC BEACONS

Black Live
White Neutral
Green/Yellow Ground



DC BEACONS

Red Positive
Black Negative
Green/Yellow Ground



POWER SUPPLY SELECTION

It is important that a suitable power supply is used to run the beacons. The power supply selected must have the necessary capacity to provide the input current to all of the beacons connected to the system.

| Unit Type | Input Voltage | Input Current | Max. I/P Volts |
|-----------|-----------------|---------------|----------------|
| E2xB05UL | 12V DC | 520mA | 15V |
| E2xB05UL | 24V DC | 275mA | 30V |
| E2xB05UL | 48V DC | 145mA | 58V |
| E2xB05UL | 230V 50/60Hz AC | 30mA | 253V |
| E2xB05UL | 120V 50/60Hz AC | 80mA | 132V |

END OF LINE MONITORING

On E2xB05UL DC units, dc reverse line monitoring can be used if required. All DC beacons have a blocking diode fitted in their supply input lines. An end of line monitoring resistor can be connected across the +ve and -ve terminals. If an end of line resistor is used it must have the following values:-

24V DC Beacons

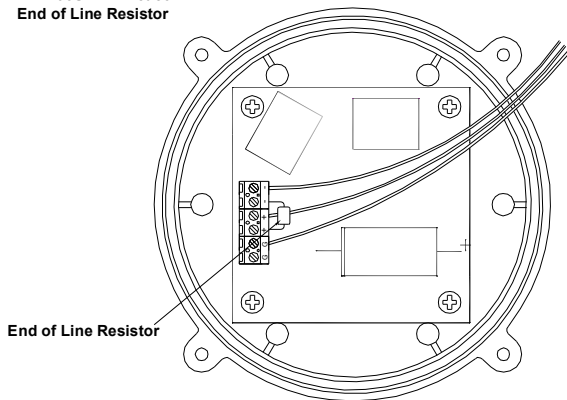
Minimum Resistance 3k9 ohms Minimum wattage 0.5W
 Minimum Resistance 1k ohms Minimum wattage 2.0W

48V DC Beacons

Minimum Resistance 15k ohms Minimum wattage 0.5W
 Minimum Resistance 3k9 ohms Minimum wattage 2.0W

The resistor must be connected directly across the +ve and -ve terminals as shown in the following drawing. Whilst keeping its leads as short as possible, a spacing of at least 1/16 inch (1.58mm) must be provided through air and over surfaces between uninsulated live parts.

E2xB05UL DC Beacon
End of Line Resistor



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E2xB05UL BEACONS

For Use In Hazardous Locations

- 5 Joules
- Type 4 / 4X 13
- Operating Temperature Range
-20°C to 55°C



Unit Type No. E2xB05UL

Input Voltages: DC Units 12V or 24V or 48V
AC Units 120V or 230V 50/60Hz

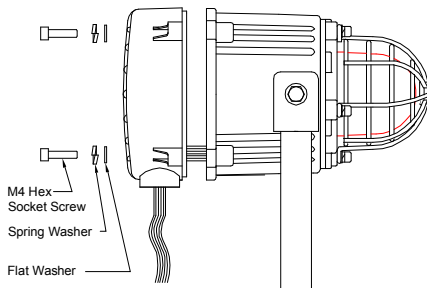
| Max. Operating Temperature / Code at +55°C Ambient | |
|--|------------------|
| Hazardous Location | Temperature Code |
| Class I, Division 2, Groups A, B, C, D | T2D (215°C) |
| Class II, Division 2, Groups F and G | T5 (100°C) |
| Class III, Divisions 1 and 2 | T5 (100°C) |

| Max. Operating Temperature / Code at +40°C Ambient | |
|--|------------------|
| Hazardous Location | Temperature Code |
| Class I, Division 2, Groups A, B, C, D | T3 (200°C) |
| Class II, Division 2, Groups F and G | T6 (85°C) |
| Class III, Divisions 1 and 2 | T6 (85°C) |

The equipment is suitable for use in the hazardous locations listed above or non-hazardous locations only.

PRE-INSTALLATION

WARNING - The E2xB05UL beacon is supplied with flying leads so it should not be necessary to open the unit before it is installed.

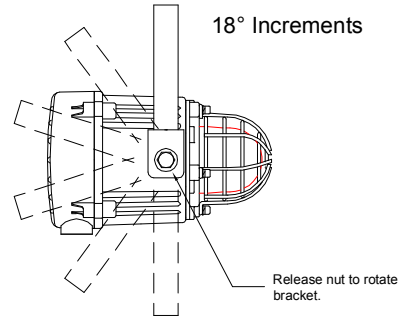


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MOUNTING

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WIRING INSTALLATION

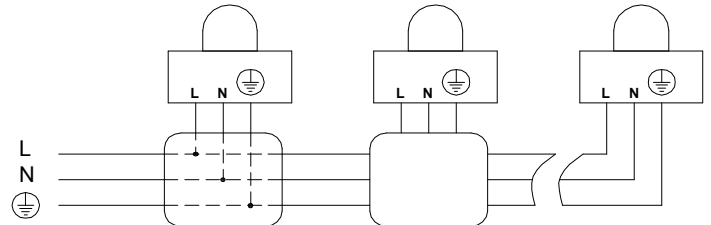
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The conduit running from the supply to the beacon must include an equipment grounding conductor that is at earth potential to facilitate ground connection of the device. A number of beacons can be connected in a chain to the same supply using field installed wiring compartments that are appropriate for the hazardous location, provided that the conductor at earth potential can be readily connected to the ground lead on each beacon in the chain.

WARNING - ALL ELECTRICAL WIRING MUST BE INSTALLED IN ACCORDANCE TO THE NATIONAL ELECTRICAL CODE

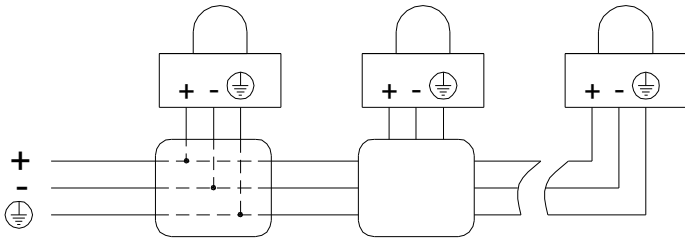
AC BEACONS

Black Live
White Neutral
Green/Yellow Ground



DC BEACONS

Red Positive
Black Negative
Green/Yellow Ground



POWER SUPPLY SELECTION

It is important that a suitable power supply is used to run the beacons. The power supply selected must have the necessary capacity to provide the input current to all of the beacons connected to the system.

| Unit Type | Input Voltage | Input Current | Max. I/P Volts |
|-----------|-----------------|---------------|----------------|
| E2xB05UL | 12V DC | 520mA | 15V |
| E2xB05UL | 24V DC | 275mA | 30V |
| E2xB05UL | 48V DC | 145mA | 58V |
| E2xB05UL | 230V 50/60Hz AC | 30mA | 253V |
| E2xB05UL | 120V 50/60Hz AC | 80mA | 132V |

END OF LINE MONITORING

On E2xB05UL DC units, dc reverse line monitoring can be used if required. All DC beacons have a blocking diode fitted in their supply input lines. An end of line monitoring resistor can be connected across the +ve and -ve terminals. If an end of line resistor is used it must have the following values:-

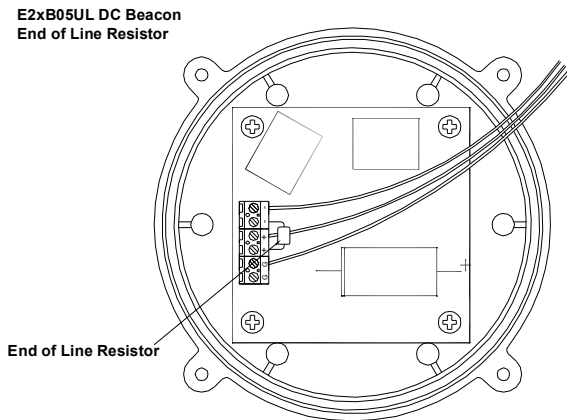
24V DC Beacons

Minimum Resistance 3k9 ohms Minimum wattage 0.5W
 Minimum Resistance 1k ohms Minimum wattage 2.0W

48V DC Beacons

Minimum Resistance 15k ohms Minimum wattage 0.5W
 Minimum Resistance 3k9 ohms Minimum wattage 2.0W

The resistor must be connected directly across the +ve and -ve terminals as shown in the following drawing. Whilst keeping its leads as short as possible, a spacing of at least 1/16 inch (1.58mm) must be provided through air and over surfaces between uninsulated live parts.



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
E2xB05EG BEACONS

For Use In Hazardous Areas

- 5 Joules
- IP Rating 66
- Operating Temperature Range -20°C to +55°C

Unit Type No. E2xB05EG

Input Voltages: DC Units 12V or 24V or 48V
AC Units 120V or 230V

 II 3G EEx nA nL IIC T2 (Tamb. -20°C to +55°C)
EEx nA nL IIC T3 (Tamb. -20°C to +40°C)

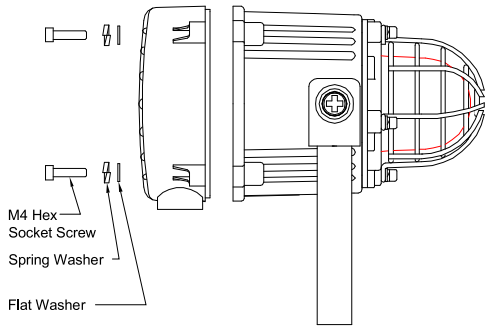
Certificate No. DEMKO 06 ATEX 0421554

Group/Category: II 3G

Zone: Zone 2

INSTALLATION

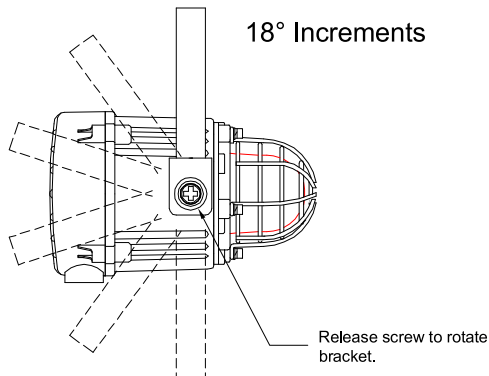
The E2xB05EG beacons must be installed in accordance with the relevant parts of the EN60079 standards or the equivalent IEC standards.



WARNING – DO NOT OPEN WHEN ENERGISED

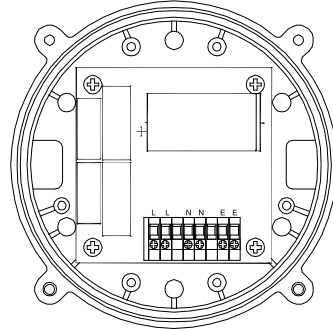
MOUNTING

The E2xB05EG beacon must be mounted using the rotating bracket as shown.

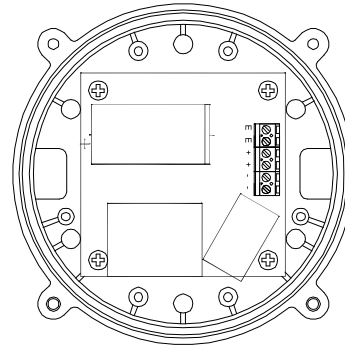


WARNING – TO AVOID A POSSIBLE ELECTROSTATIC CHARGE ONLY CLEAN THE UNIT WITH A DAMP CLOTH

E2xB05EG AC PCB Layout



E2xB05EG DC PCB Layout



WIRING CONNECTIONS

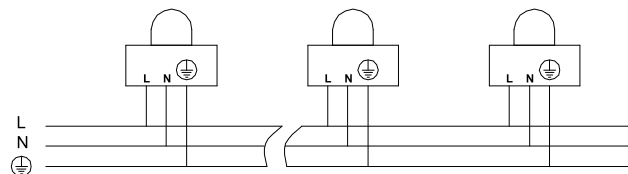
The E2xB05EG beacon has two M20 cable entries one of which is fitted with an M20 blanking plug. This should be removed if two cable entries are required. Cable entry devices shall be used which ensure a minimum ingress protection of IP54.

The cable connections are made to the terminal blocks on the pcb assembly in the enclosure.

WARNING - ALL ELECTRICAL WIRING MUST BE INSTALLED IN ACCORDANCE WITH THE RELEVANT STANDARDS AND ANY LOCAL CODES THAT MAY APPLY

AC BEACONS

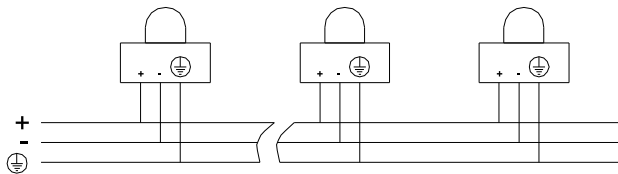
Live L
Neutral N
Earth E



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DC BEACONS

Positive +
Negative -
Earth E



POWER SUPPLY SELECTION

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| Unit Type | Input Voltage | Input Current | Max. I/P Volts |
|-----------|---------------|---------------|----------------|
| E2xB05EG | 12V DC | 520mA | 15V |
| E2xB05EG | 24V DC | 275mA | 30V |
| E2xB05EG | 48V DC | 145mA | 58V |
| E2xB05EG | 230V AC | 30mA | 253V |
| E2xB05EG | 120V AC | 80mA | 132V |

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