Explosion protected
linear light fixture

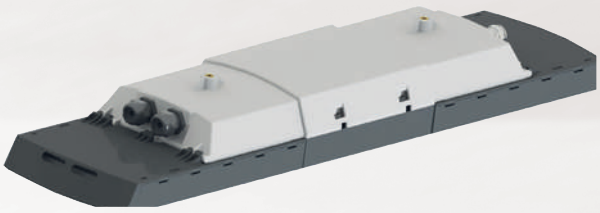
CROUSE-HINDS
SERIES

# CEAG ExLin

## LED linear fixtures for hazardous areas







EATON
Powering Business Worldwide



# Introducing CEAG ExLin

## A linear LED engineered for use in Zone 1 and 21 hazardous areas.

CEAG ExLin delivers longer life, improved efficiency and superior performance with a competitive payback vs. fluorescent fixtures.



The following CEAG ExLin models will replace 2x18W, 2x36W and 2x58W fluorescent fixtures

| Model | Typical lumens with clear glass cover | Wattage | Lumens per watt | Equivalent fluorescent luminaire | Typical energy savings / lifetime |
|---|---|---|---|---|---|
| **ExLin 3L-1** | 2,750 | 22W | 125 | 2 x 18 W | > 40% |
| **ExLin 5L-1** | 5,300 | 44W | 120 | 2 x 36 W | > 40% |
| **ExLin 5L-2** | 5,480 | 44W | 125 | 2 x 36 W | > 40% |
| **ExLin 7L-2** | 8,120 | 67W | 121 | 2 x 58 W | > 40% |

**Applications:**

- Designed to provide general illumination where moisture, dust, corrosion, and extreme temperature exist
- Areas requiring frequent on-and-off of lights
- Oil and gas refineries, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, outdoor wall and stanchion mounted general area lighting, and where flammable vapors and gases are present.

# Why CEAG ExLin LED?

**Safe, reliable, efficient.** CEAG ExLin fixtures combine state-of-the-art LED technology with optimised thermal management and a time-tested enclosure to extend service life in extreme environments.



### Superior performance and efficiency

- Replaces 2x18W, 2x36W and 2x58W fluorescent fixtures
- Rated life of 100,000 hours at 25°C based on L90C5 provides long term, low-maintenance operation
- Up to 120 LM/W provides up to 40% energy efficiency compared to traditional fluorescent fixtures
- Operating temperature from -40°C to +55°C

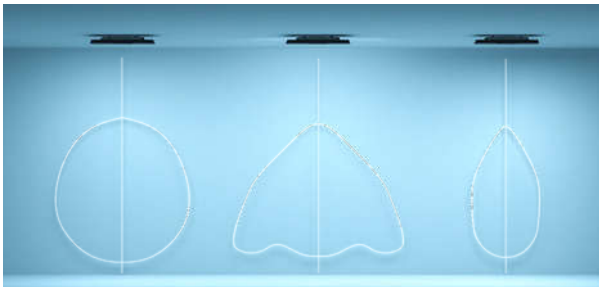
### State-of-the-art LED technology coupled with a long history of hazardous area lighting design expertise

- LED light strings operate independently. Should one string fail, all other strings will continue to work, avoiding complete loss of illumination
- Enclosure material is time-tested and field-proven for durability in harsh and hazardous applications globally
- Optimised thermal management for extending service life in extreme environments

### Optimised light distribution with optics and lens options

- Standard, narrow and wide beam optics optimise light distribution, providing light where the customer needs it with the potential to reduce the number of fixtures required
- Clear or diffused (frosted) LED module cover available in glass provides application flexibility. Also with stray light protection.
- The laminated glass version with external plastic foil prevents any glass splitters from falling, allowing safe use in critical application such as Food & Beverage, Chemical and Pharmaceutical industries





**Standard** **Wide** **Narrow**

### Low profile and lightweight design with drop in mounting compatibility to CEAG eLLK fluorescent

- Decreases footprint in confined applications and reduces installation effort
- Same fixing point as eLLK 2x18W fixtures and a mounting kit available allowing for easy replacement of 2x36W and 2x58W without changing cables or adding drilled holes



# CEAG ExLin technical specifications:

## Certifications and compliances:

**IECEx / ATEX Standards:**

EC-Type Examination Certificate

- BVS 18 ATEX E 037 X

IECEx-Certification of conformity

- IECEx BVS 18.0028X

Marking accd. to 2014/34/EU

- Ex II 2G Ex eb ib op is q IIC T4/T5 Gb
- Ex II 2D Ex tb op is IIIC T 80/110°C Db

Marking accd. to IECEx

- Ex eb ib op is q IIC T4/T5 Gb
- Ex tb op is IIIC T 80/110°C Db

Permissible ambient temperature, depending on configuration

- -40°C up to +55°C*

Degree of protection accd. to EN 60529

- IP66/67

IK-class according to IEC/EN 62262

- IK10

* up to +50°C for 3L-1 and 5L-2 with through wiring and plastic cable glands. Up to +45°C for 5L-1 and 7L-2 with through wiring and plastic cable glands



3L-1 and 5L-1 models

5L-2 and 7L-2 models

## LED system:

- Light colour / CRI: 5000K / 70 and 80 (4000K on request)
- Optics: Standard, narrow beam, wide beam.

## Fixture life (IEC 62722):

LED

- L90 ~100,000 h at ta = +25 °C
- L85 ~75,000 h at ta = +55 °C

Control gear

- C5 ~100,000 h at ta = +25 °C
- C10 ~75,000 h at ta = +55 °C

## Standard materials:

- Fixture enclosure - Glassfibre reinforced polyester
- LED module cover - toughened glass or plastic-laminated glass, clear or opaque

## Dimensions and weights:

ExLin 3L-1 and 5L-1

- 770 x 201 x 115 mm
- 6.7 kg

ExLin 5L2 and 7L-2

- 931 x 201 x 115 mm
- 8.0 kg

## Electrical ratings:

| Model | ExLin 3L-1 | ExLin 5L-1 / 5L-2 | ExLin 7L-2 |
|---|---|---|---|
| **Voltage** | 110 up to 277 V AC/DC | 110 up to 277 V AC/DC | 110 up to 277 V AC/DC |
| **Power consumption** | 22W | 44W | 67W |
| **Lumens (clear glass cover) †** | 2750 | 5300/5480 | 8120 |
| **Lumens (frosted glass cover) †** | 2370 | 4580/4680 | 6920 |
| **Frequency** | 0/50 - 60 Hz | 0/50 - 60 Hz | 0/50 - 60 Hz |
| **Inrush current** | 6A for 1ms | 6A for 1ms | 10A for 1ms |
| **Power factor cos φ @ 230 V** | ≥ 0.92 | ≥ 0.95 | ≥ 0.95 |
| **Circuit** | EVG | EVG | EVG |
| **Protection class** | I | I | I |
| **Immunity to surge voltages according to EN6100-4-5** | 4 kV, L-N and L-PE | 4 kV, L-N and L-PE | 4 kV, L-N and L-PE |
| **THD @230V** | 8% | 5% | 5% |

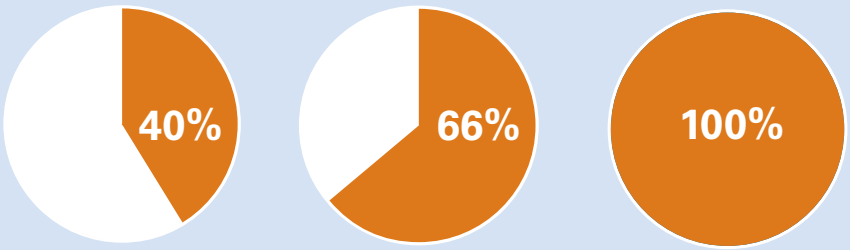
† Lumen values apply to 5000K light colour, 70 CRI fixtures with standard optic. Lumen output may vary slightly for different models.

## LED vs. fluorescent savings at a glance

Why are so many facilities making the switch from fluorescent to LED?

The numbers say it all.

### CEAG ExLin vs. x 36W Fluorescent




40% REDUCTION IN ENERGY COSTS

66% LOWER TOTAL COST OF OWNERSHIP

100% LAMP MAINTENANCE REDUCTION

**Assumptions:** Calculations based on overall life of the LED system. Energy cost of €.09 per kilowatt; 24 hour per day operation; labor rate of €75 each for 2 workers; average time for fixture maintenance of 2 hours.

# Catalog Numbering System:

**Part number example**

**ExLin 5L-1 G C S 7 50 T1 1/6 M25K**

*CEAG ExLin linear, 5300 lumens, glass lens, clear lens, standard light beam, >70 CRI, 5000K, Type 2410-4 terminals, single-ended wiring, M25 plastic cable gland*

**ExLin 5L-1 G C S 7 50 T1 1/6 M25K R**

**Version / LED modules**

| | |
|---|---|
| 3L-1 | 2750 lm single sided |
| 5L-1 | 5300 lm single sided |
| 5L-2 | 5480 lm double sided* |
| 7L-2 | 8120 lm double sided |

**Protective cover material**

| | |
|---|---|
| G | Glass |
| F | Laminated glass |

**Protective cover type**

| | |
|---|---|
| C | Clear |
| F | Opaque (Frosted) |

**Light distribution**

| | |
|---|---|
| S | Standard |
| N | Narrow beam |
| W | Wide beam |

**CRI**

| | |
|---|---|
| 7 | >70 |
| 8 | >80 |

**CCT**

| | |
|---|---|
| 40 | 4000K |
| 50 | 5000K |
| XX | On request |

**Terminals**

| | |
|---|---|
| T1 | Type 2410-4 max 6mm² |
| XX | On request |

**Through wiring**

| | |
|---|---|
| 1/6 | Single-ended |
| 2/6 | Twin-ended |

**Cable gland / thread**

| | |
|---|---|
| M25K | M25 plastic glands |
| M20M | M20 metallic threads |
| M25M | M25 metallic threads |

**Stray light**

| | |
|---|---|
| R | Stray light protection grid** |

*On request.
**Only for GCS and FCS version.
Additional terminal, CCT and CRI options available. Please consult factory or authorized Eaton's Crouse-Hinds Division sales representative.

# Ordering information:

| Model | Cover type | Light distribution | Through wiring single-ended | Through wiring twin-ended | Cable gland/thread | Order No CRI70 | Order No CRI80 |
|---|---|---|---|---|---|---|---|
| **ExLin 3L-1** | | | | | | | |
| ExLin 3L-1 G C S 750 T1 1/6 M25K | Glass, Clear | Standard | X | | M25 Plastic cable gland | **1 2300 120 101** | **1 2300 320 101** |
| ExLin 3L-1 G C S 750 T1 2/6 M25K | Glass, Clear | Standard | | X | M25 Plastic cable gland | **1 2300 120 103** | **1 2300 320 103** |
| ExLin 3L-1 G C S 750 T1 1/6 M20M | Glass, Clear | Standard | X | | M20 Metal thread | **1 2300 120 109** | **1 2300 320 109** |
| ExLin 3L-1 G C S 750 T1 2/6 M20M | Glass, Clear | Standard | | X | M20 Metal thread | **1 2300 120 111** | **1 2300 320 111** |
| ExLin 3L-1 G F S 750 T1 1/6 M25K | Glass, Frosted | Standard | X | | M25 Plastic cable gland | **1 2300 125 101** | **1 2300 325 101** |
| ExLin 3L-1 G F S 750 T1 2/6 M25K | Glass, Frosted | Standard | | X | M25 Plastic cable gland | **1 2300 125 103** | **1 2300 325 103** |
| ExLin 3L-1 G F S 750 T1 1/6 M20M | Glass, Frosted | Standard | X | | M20 Metal thread | **1 2300 125 109** | **1 2300 325 109** |
| ExLin 3L-1 G F S 750 T1 2/6 M20M | Glass, Frosted | Standard | | X | M20 Metal thread | **1 2300 125 111** | **1 2300 325 111** |
| **ExLin 5L-1** | | | | | | | |
| ExLin 5L-1 G C S 750 T1 1/6 M25K | Glass, Clear | Standard | X | | M25 Plastic cable gland | **1 2300 140 101** | **1 2300 340 101** |
| ExLin 5L-1 G C S 750 T1 2/6 M25K | Glass, Clear | Standard | | X | M25 Plastic cable gland | **1 2300 140 103** | **1 2300 340 103** |
| ExLin 5L-1 G C S 750 T1 1/6 M20M | Glass, Clear | Standard | X | | M20 Metal thread | **1 2300 140 109** | **1 2300 340 109** |
| ExLin 5L-1 G C S 750 T1 2/6 M20M | Glass, Clear | Standard | | X | M20 Metal thread | **1 2300 140 111** | **1 2300 340 111** |
| ExLin 5L-1 G F S 750 T1 1/6 M25K | Glass, Frosted | Standard | X | | M25 Plastic cable gland | **1 2300 145 101** | **1 2300 345 101** |
| ExLin 5L-1 G F S 750 T1 2/6 M25K | Glass, Frosted | Standard | | X | M25 Plastic cable gland | **1 2300 145 103** | **1 2300 345 103** |
| ExLin 5L-1 G F S 750 T1 1/6 M20M | Glass, Frosted | Standard | X | | M20 Metal thread | **1 2300 145 109** | **1 2300 345 109** |
| ExLin 5L-1 G F S 750 T1 2/6 M20M | Glass, Frosted | Standard | | X | M20 Metal thread | **1 2300 145 111** | **1 2300 345 111** |
| **ExLin 7L-2** | | | | | | | |
| ExLin 7L-2 G C S 750 T1 1/6 M25K | Glass, Clear | Standard | X | | M25 Plastic cable gland | **1 2300 170 101** | **1 2300 370 101** |
| ExLin 7L-2 G C S 750 T1 2/6 M25K | Glass, Clear | Standard | | X | M25 Plastic cable gland | **1 2300 170 103** | **1 2300 370 103** |
| ExLin 7L-2 G C S 750 T1 1/6 M20M | Glass, Clear | Standard | X | | M20 Metal thread | **1 2300 170 109** | **1 2300 370 109** |
| ExLin 7L-2 G C S 750 T1 2/6 M20M | Glass, Clear | Standard | | X | M20 Metal thread | **1 2300 170 111** | **1 2300 370 111** |
| ExLin 7L-2 G F S 750 T1 1/6 M25K | Glass, Frosted | Standard | X | | M25 Plastic cable gland | **1 2300 175 101** | **1 2300 375 101** |
| ExLin 7L-2 G F S 750 T1 2/6 M25K | Glass, Frosted | Standard | | X | M25 Plastic cable gland | **1 2300 175 103** | **1 2300 375 103** |
| ExLin 7L-2 G F S 750 T1 1/6 M20M | Glass, Frosted | Standard | X | | M20 Metal thread | **1 2300 175 109** | **1 2300 375 109** |
| ExLin 7L-2 G F S 750 T1 2/6 M20M | Glass, Frosted | Standard | | X | M20 Metal thread | **1 2300 175 111** | **1 2300 375 111** |

# Mounting Accessories (Order Separately)

## Pipe Clamps

| Ordering Code | Description |
|---|---|
| 2 2480 462 000 * | 2 pcs. R12 (1 1/4"), Ø 38 - 42 mm with screws and polyamide washer, hot-dip galvanized |
| 2 2480 472 000 * | 2 pcs. R22 (1 1/2"), Ø 47 - 51 mm with screws and polyamide washer, hot-dip galvanized |
| 2 2480 482 000 * | 2 pcs. R32 (2''), Ø 56 - 60 mm with screws and polyamide washer, hot-dip galvanized |
| NOR 000 005 009 211 | 1 pcs. A8 (1 1/2") D 47 - 51 mm for AB 12.. with screws and polyamide washer, hot-dip galvanized |
| NOR 000 005 009 229 | 1 pcs. A9 (2") D 56 - 60 mm for AB 12.. with screws and polyamide washer, hot-dip galvanized |
| 2 2480 550 010 | 2 pcs. Two-part, for pipe mounting LB 48 - FT with screws and polyamide washer, hot-dip galvanized |

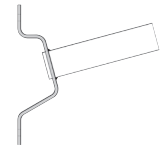




## Fixing Accessories

| Ordering Code | Description |
|---|---|
| 2 2480 550 013 | 2 pcs. luminaire mounting bracket with 30° angle, wall mounting LH 30 - FT, hot-dip galvanized |
| 2 2480 550 014 | 2 pcs. luminaire mounting bracket with 45° angle, wall mounting LH 45 - FT, hot-dip galvanized |
| 2 2480 000 122 | 2 pcs. wall mounting bracket with 30° angle, with screws and polyamide washer, hot-dip galvanized |
| NOR 000 005 009 196 | 1 pcs. wall bracket 45° with screws and polyamide washer, hot-dip galvanized |
| 2 2483 027 000 | 1 pcs. wall bracket W 27, 15°, for pole-mounting fitting Ø 42 mm, hot-dip galvanized |
| 2 2480 092 000 | 2 pcs. ceiling mounting bracket D 92 with screws and polyamide washer, stainless steel |
| NOR 000 005 009 162 | 1 pcs. ceiling mounting bracket A5 with screws and polyamide washer, hot-dip galvanized |
| 2 2480 550 011 | 2 pcs. C-bracket for luminaire mounting LAB-C50 - ER, stainless steel |
| 2 2480 054 000 | 2 pcs. hexagon screw M8 x 20 for luminaire mounting, with polyamide washer |
| 2 2480 002 000 * | 2 pcs. eye bolt M8 for luminaire mounting, hot-dip galvanized |
| NOR 000 005 009 261 | 1 pcs. eye bolt M8 - A1 for luminaire mounting, hot-dip galvanized |
| 22480600001 | Pole mounting adapter - 42-49mm diameter |
| 22480600002 | Pole mounting adapter - 52-62mm diameter |











* Also available in stainless steel. Consult factory for ordering code.

# Metallic Cable Glands (Order Separately)

## ADE-1F2

| Catalog # | Metric Thread Size | Cable Types | Cable sealing range - Min | Cable seaing range - Max |
|---|---|---|---|---|
| ADE1M200NPN | M20 | Non-armoured, Marine shipboard, Type P, Tray cable (armoured) | 2.8 | 5.5 |
| ADE1M201NPN | M20 | | 4.5 | 8.5 |
| ADE1M202NPN | M20 | | 7.0 | 12.0 |
| ADE1M203NPN | M20 | | 10.0 | 16.0 |



## ADE-4F

| | | | Cable sealing range inner sheath | | Cable sealing range outer sheath | | Armor | |
|---|---|---|---|---|---|---|---|---|
| Catalog # | Metric Thread Size | Cable Types | Min. | Max. | Min. | Max. | Min. | Max. |
| ADE4M200NPN | M20 | SWA, SWB, STA, Braided marine shipboard, Type P; Lead sheathed cable (with addition of earthing washer) | 2.8 | 5.5 | 4.5 | 8.5 | 0.2 | 0.9 |
| ADE4M201NPN | M20 | | 4.5 | 8.0 | 7.0 | 12.0 | 0.2 | 0.9 |
| ADE4M202NPN | M20 | | 7.0 | 12.0 | 10.0 | 16.0 | 0.2 | 1.3 |
| ADE4M203NPN | M20 | | 10.0 | 15.5 | 13.5 | 21.0 | 0.2 | 1.3 |



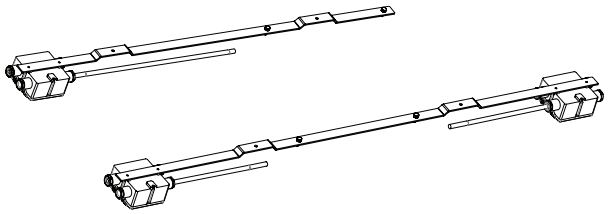
ADE-1F2 and ADE-4F catalog numbers are for nickel-plated brass; For other material options, refer to our cable glands section within www.crouse-hinds.de/en/

# Adapter Kits for eLLK Retrofits (Order Separately)

CEAG ExLin LED fixtures are designed with the same fixing point as Crouse-Hinds series CEAG eLLK 2x18W fixtures, making retrofits simple and cost-effective.

Adapter kits allow for easy replacement of 2x36W and 2x58W eLLK fixtures without changing already-installed cables or mounting brackets. Adapter kits include a metal bar, junction box and connection cables between the juntion box and ExLin fixture.

| Ordering Code | Description |
|---|---|
| 2 2300 500 001 | 2 pcs. ExLin adapter kit for retrofitting to eLLK 2x36W fixture - includes metal bar, junction box, plastic glands and connection cable between box and fixture* |
| 2 2300 500 002 | 1 pcs. ExLin adapter kit for retrofitting to eLLK 2x58W fixture - includes metal bar, two junction boxes, plastic glands and connection cable between boxes and fixture* |



*Metal bar available also as stand alone, for easy replacement without additional drilling. Consult Customer Service for availability.

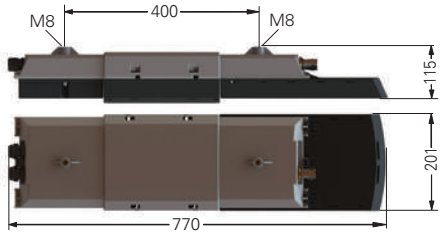
**See for yourself how easy it is to upgrade your eLLK lighting installation to our state-of-the-art ExLin LED solution!**




Visit eaton.com/ellk-to-exlin to watch the fast and simple retrofit process using our adapter kit

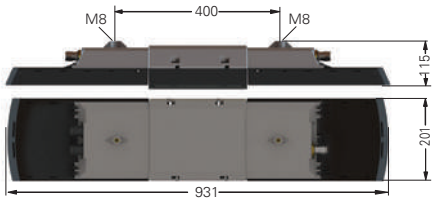
# Dimensions and Weights:

### CEAG ExLin 3L-1 and 5L-1:




**Weight:** 6.7 kg

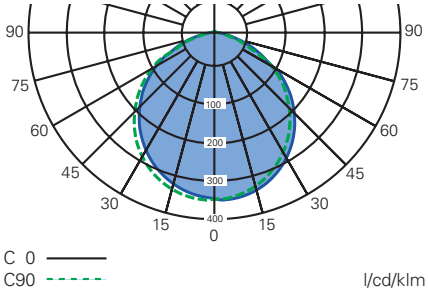
### CEAG ExLin 5L and 7L-2:



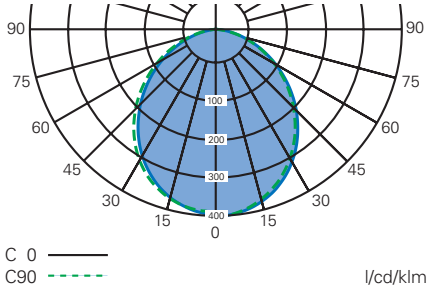

**Weight:** 8.0 kg

# Polar Curves:

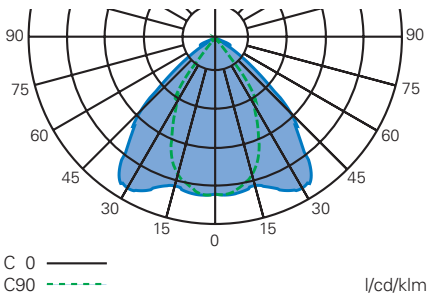
### CEAG ExLin standard beam with clear cover



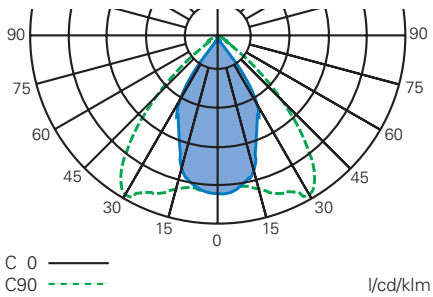

### CEAG ExLin standard beam with frosted cover




### CEAG ExLin wide beam




### CEAG ExLin narrow beam



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