

ATX™ LDB, LDG and LDR Series Wellglass Luminaires

Flameproof. High Pressure High Pressure Sodium, Mercury, Metal Halide, Mixed, Incandescent, Induction

ATEX/IECEX:
Zone 1 and 2 – 21 and 22
⊕ II 2 GD
IP66/67 – IK08

Applications

- For use in hazardous locations such as plants where plastics, paints, thinners and petrochemicals are manufactured.
- Ideal for street lighting on refinery sites or oil depots and for tank lighting purposes.

Features

- Compensated power supply.
- Power factor ≥ 0.9
- Flat joint for IIB version, threaded joint for IIC version.
- E40 lamp holder with lock thread.
- High temperature internal wiring.
- Operates in any position subject to lamp type.
- Easy and efficient wiring due to separate Ex e terminal box with wiring onto two captive terminals capacity 6 mm^2 ($2 \times 0.009 \text{ in}^2$) and two internal earth terminals capacity 6 mm^2 (0.009 in^2).
- External earth terminal capacity 4 mm^2 (0.006 in^2).
- $2 \times 20 \text{ mm}$ clearance holes through-wire cable entries supplied with one Ex e unarmored cable gland — sealing diameter 6.5 to 14.5 mm (0.26 to 0.58 in) — and one blanking plug and two M20 locknuts.

Standard Materials

- Body and bezel: gray painted marine grade aluminum alloy
- Internal reflector: aluminum
- External reflector: white painted zinc plated steel

ATEX/IECEX Certifications and Compliances

- Certification Type: LTd (Model LT2d)
 - Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE: ⊕ II 2 G
 - Type of Protection: Ex de IIB (LDB series); Ex de IIC (LDG and LDR series)
 - Temperature Class: See *T Rating for Gas Table*
 - Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: ⊕ II 2 D
 - Type of Protection: Ex td A21
 - Surface Temperature: See *Surface Temperature for Dust Table*
- Ambient Temperature: -40°C to $+55^\circ\text{C}$ (-40°F to $+131^\circ\text{F}$)
- CE Declaration of Conformity: 50246
- ATEX Certificate: LCIE 02 ATEX 6165
- IECEx Certificate: IECEx LCI Ex 04.0019
- Index of Protection according EN/IEC 60529: IP66/67
- Impact Resistance (shock): IK08

EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912



LDB Version



LDB Version with Guard



THORNE &
DERRICK
INTERNATIONAL

Thorne & Derrick
+44 (0) 191 410 4292
www.heatingandprocess.com

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INCANDESCENT/AREA: ATEX/IECEX FLAMEPROOF

T Rating for Gas

Lamp Type and Wattage	Ambient Temperature			
	Lighting Downward		Lighting Upward	
	Ta = +40 °C (+104 °F)	Ta = +55 °C (+131 °F)	Ta = +40 °C (+104 °F)	Ta = +55 °C (+131 °F)
85 W Induction	T6	T6	T6	T5
100 W High Pressure Sodium	T6	T5	T5	T4
150 W High Pressure Sodium	T6	T5	T4	T4
250 W High Pressure Sodium	T4	T4	T3	T3
250 W Metal Halide ①	T4	T4	T4	T3
250 W Mercury ①	T4	T4	T3	T3
250 W Mixes	T4	T4	T3	T3
300 W Incandescent	T5	T4	T3	T3
500 W Incandescent	T3	T3	T3	T2
400 W High Pressure Sodium	T4	T3	Not Available	Not Available
400 W Metal Halide ①	T4	T3	Not Available	Not Available

Surface Temperature for Dust

Lamp Type and Wattage	Ambient Temperature			
	Lighting Downward		Lighting Upward	
	°C	°F	°C	°F
85 W Induction	+80	+176	+95	+203
100 W High Pressure Sodium	+95	+203	+130	+266
150 W High Pressure Sodium	+95	+203	+130	+266
250 W High Pressure Sodium	+130	+266	+195	+383
250 W Metal Halide ①	+130	+266	+195	+383
250 W Mercury ①	+130	+266	+195	+383
250 W Mixes	+130	+266	+195	+383
300 W Incandescent	+130	+266	+195	+383
500 W Incandescent	+195	+383	+290	+554
400 W High Pressure Sodium	+134	+273	Not Available	Not Available
400 W Metal Halide ①	+134	+273	Not Available	Not Available

① Mercury vapor and metal halide luminaires are not available for purchase within the United States. Please check with your countries governing legislation regarding allowable lamp types before ordering.

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Supplied with 1 x M20 Ex e cable gland — 6.5 to 14.5 mm (0.26 to 58 in) diameter — and 1 x M20 blanking plug. Lamps are not supplied, except for Induction version.

Lamp Wattages	Voltage (+/- 10%)	Lamp Type		Weight kg (lb)	Volume dm³ (in³)	Catalog Number
		Ellipsoidal	Tubular			
Flameproof Wellglass Luminaires for Hazardous Areas – Ex de IIB – LDB Series						
Electro Magnetic Induction ②						
85 W ①	230/240 Vac, 50/60 Hz	—	—	22.0 (48.50)	86.7 (5290.76)	LDBQ85AG2BJ
High Pressure Sodium						
100 W ①④	230/240 Vac, 50 Hz	X	X	22.0 (48.50)	86.7 (5290.76)	LDBL10AG2XJ
150 W ①④	230/240 Vac, 50 Hz	X	X	22.5 (49.60)	86.7 (5290.76)	LDBL15AG2XJ
250 W ①	230/240 Vac, 50 Hz	X	X	22.5 (49.60)	86.7 (5290.76)	LDBL25AG2XJ
Metal Halide						
250 W ①	230/240 Vac, 50 Hz	X	X	22.5 (49.60)	86.7 (5290.76)	LDBH25AG2XJ
Mercury Vapor						
250 W ①	230/240 Vac, 50 Hz	—	—	22.5 (49.60)	86.7 (5290.76)	LDBM25AG2XJ
Incandescent						
300 W to 500 W ③	—	—	—	19.0 (41.89)	86.7 (5290.76)	LDBI30AG2
Flameproof Wellglass Luminaires for Hazardous Areas – Ex de IIC – LDG series						
Electro Magnetic Induction ②						
85 W (1)	230/240 Vac, 50/60 Hz	—	—	22.0 (48.50)	86.7 (5290.76)	LDGQ85AG2BJ
High Pressure Sodium						
100 W ①	230/240 Vac, 50 Hz	X	X	22.0 (48.50)	86.7 (5290.76)	LDGL10AG2XJ
150 W ①	230/240 Vac, 50 Hz	X	X	22.5 (49.60)	86.7 (5290.76)	LDGL15AG2XJ
250 W ①	230/240 Vac, 50 Hz	X	X	22.5 (49.60)	86.7 (5290.76)	LDGL25AG2XJ
Metal Halide ⑤						
250 W ①	230/240 Vac, 50 Hz	X	X	22.5 (49.60)	86.7 (5290.76)	LDGH25AG2XJ
Mercury Vapor ⑤						
250 W ①	230/240 Vac, 50 Hz	—	—	22.5 (49.60)	86.7 (5290.76)	LDGM25AG2XJ
Incandescent						
300 W to 500 W ③	—	—	—	19.0 (41.89)	86.7 (5290.76)	LDGI30AG2
Flameproof Wellglass Luminaires for Hazardous Areas – Ex de IIC – LDR Series						
High Pressure Sodium						
400 W ①	220/230/240 Vac, 50 Hz	X	X	31.0 (68.34)	144 (8787.42)	LDRL40AG2XJ
Metal Halide ⑤						
400 W ①	220/230/240 Vac, 50 Hz	X	X	31.0 (68.34)	144 (8787.42)	LDRH40AG2XJ

① Ballast supplied.

② Service life 60,000 hours.

③ 250 W mixed lamps can be used.

④ Also available in LDM Series.

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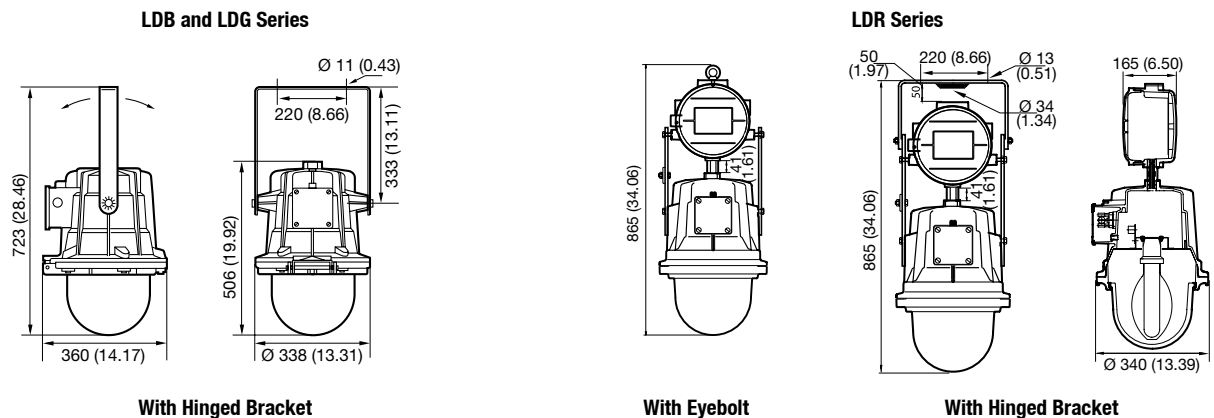
Appleton®

INCANDESCENT / AREA: ATEX/IECEX FLAMEPROOF

Accessories

	Description	Weight kg (lb)	Volume dm ³ (in ³)	Catalog Number
Protective Guard				
	Zinc plated steel protective guard	1.2 (2.65)	27 (1647.64)	LDPG27
External Reflector				
	White painted steel	3.4 (7.50)	108 (6590.56)	LDER27
	White polyester	2.5 (5.51)	108 (6590.56)	LDER2P
Hinged Bracket — Zinc plated steel hinged bracket for installation on flat surface				
	For LDB or LDG Series	3.4 (7.49)	8 (488.19)	LDGHBZ
	For LDR Series	3.4 (7.49)	8 (488.19)	LDRHBZ
Eyebolt — Zinc plated steel eyebolt for suspension				
	M10 — For LDB or LDG Series	0.1 (0.22)	0.2 (12.20)	LDRBM10Z
	M16 — For LDR Series	0.1 (0.22)	0.2 (12.20)	LDRBM16Z
Mounting Strap — Zinc plated steel mounting straps				
	For LDB or LDG Series	0.9 (1.98)	0.6 (36.61)	LDGSBZ
	For LDR Series	0.9 (1.98)	0.6 (36.61)	LDRSBZ

Dimensions in Millimeters (Inches)



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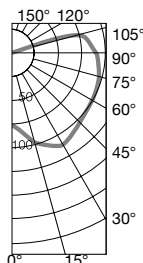
Photometric Data

Polar curves for a 1000 lm flux, according to NF C 71-120.
Luminaire symbol according to NF C 71-121.

85 W Induction
Efficiency 85.9%
NF C 71-121: 0.62 J + 0.24 T

CANDELA DISTRIBUTION

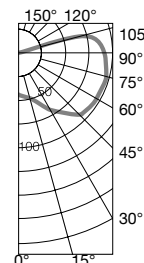
	90-270	0-180
0	75	75
5	80	80
10	89	89
15	98	98
20	105	105
25	114	114
30	117	117
35	116	116
40	112	112
45	107	107
50	102	102
55	99	99
60	97	97
65	94	94
70	92	92



150 W High Pressure Sodium
Efficiency 70.6%
NF C 71-121: 0.50 J + 0.20 T

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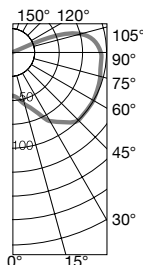
	90-270	0-180
0	33	33
5	36	36
10	42	42
15	48	48
20	55	55
25	62	62
30	70	70
35	78	78
40	84	84
45	87	87
50	89	89
55	88	88
60	88	88
65	87	87
70	87	87



250 W High Pressure Sodium
Efficiency 79.3%
NF C 71-121: 0.56 J + 0.23 T

CANDELA DISTRIBUTION

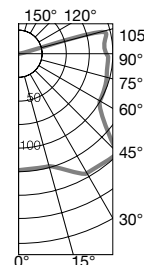
	90-270	0-180
0	40	40
5	43	43
10	49	49
15	57	57
20	64	64
25	72	72
30	80	80
35	89	89
40	95	95
45	97	97
50	98	98
55	97	97
60	96	96
65	95	95
70	94	94



500 W Incandescent
Efficiency 98%
NF C 71-121: 0.71 H + 0.28 T

CANDELA DISTRIBUTION

	90-270	0-180
0	147	147
5	128	128
10	133	133
15	149	149
20	159	159
25	159	159
30	173	173
35	166	166
40	157	157
45	136	136
50	120	120
55	104	104
60	99	99
65	91	91
70	92	92



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