BAD Series Flameproof Lighting

BAD series flameproof lighting is our latest updated, entitled with exclusive property right and related patents. It conforms to IEC, EN standard and 94/9/EC instruction.

BAD series lighting has passed type test by PTB and has gained PTB certificate of conformity.

For use in hazardous area Zone 1, Zone 2.

IIA and IIB explosive gas atmospheres.

Typical application includes chemical and petrochemical processing facilities, off-shore and dockside installations, military industry and warehouse.

100 type

250 type

400 type

◇ Catalog number logic

BAD- □ □ □

- Mounting style
  - G: pendant
  - B1: bracket 30°
  - B2: bracket 90°
  - X: ceiling
- Lamp wattage (W)
- Lamp
  - N: high-pressure sodium vapor lamp
  - L: metal halide lamp
  - G: high-pressure mercury vapor lamp
- Series constant

◇ Compliances

94/9/EC instruction
IEC 60079-0, IEC 60079-1
EN 50014、EN 50018
GB 3836.1-2000、GB 3836.2-2000

◇ Certificates of conformity No:

PTB 03 ATEX 1077

◇ Features

1. Housings made of die-cast aluminum alloy with semi-auto hydraulic facilities one-off formation under high temperature and high-pressure for strength and resistance to corrosion. Most compact in size and smooth in surface.
2. Roboblast and epoxy resin finish by semi-auto high-voltage electrostatic spray applied for housings, corrosion-free and exposure free.
3. Water proof housings joint, resistance to water and dust.
4. Hinge is designed in conjunction between lamp and housing, hinged bolt applied for fixture, providing quick and easy accessibility to internal components and maintenance.
5. Toughened glass applied for transparent globe for 4J impact and over 98% light transmittance.
6. Glass globe guard supplied with galvanized, epoxy resin finish for resistance to corrosion.
7. All external hardware-stainless steel for resistance to corrosion.
8. For use with sodium, metal halide and mercury vapor lamps of 400W and below, including three models 100 type, 250 type and 400 type.
9. Globe and doom reflector selected for lighting requirements.
10. Complete selection of mounting style.
11. Both steel pipe wiring and cable wiring are available.

◇ Technical data

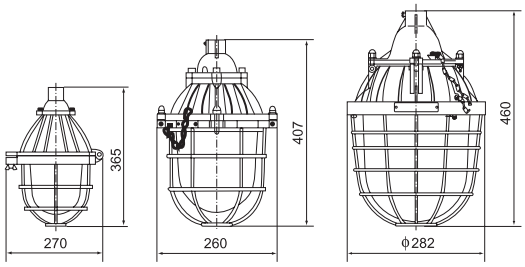
Description	Power	Hub size	Cable O. Dϕ(mm)	Lamp holder	Marking	Protec-tion	Corrosion protection	Weight (kg)
BAD- □ 100	AC220V 50HZ	G3/4"	10~14	E27	Ex II 2G EExd II BT4	IP55	WF 1	4.7
BAD- □ 250				E40				5.5
BAD- □ 400				E40	Ex II 2G EExd II BT3			7.1

◇ Lamp wattage available

Description	High-pressure sodium vapor lamp	Metal halide lamp	High-pressure mercury vapor lamp	lamp holder	Lamp brand
BAD- □ 100	70W、100W	70W、100W	80W、125W	E27	PHILIPS
BAD- □ 250	150W、250W	175W、250W	175W、250W	E40	
BAD- □ 400	400W	400W	400W	E40	

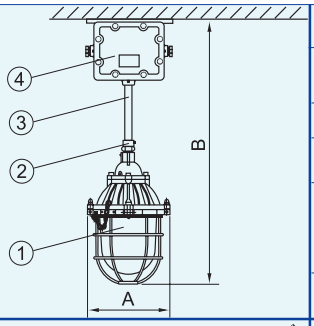
◇ Dimension versions

Description \ Size	Pendant A×B (mm)	Bracket 30° A (mm)	Bracket 90° A×B (mm)	Ceiling A×B (mm)
BAD-□100	270×870	830	540×580	270×620
BAD-□250	260×920	730	580×600	260×640
BAD-□400	282×980	/	/	282×570



100 type 250 type 400 type

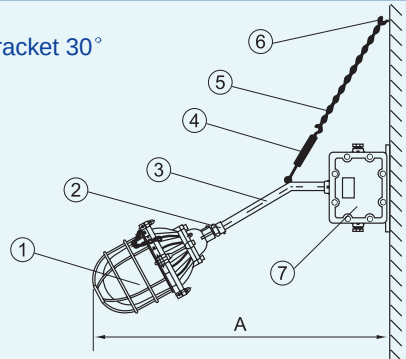
Pendant



Srl. No.	Description	Qty	Specification
①	Explosion-proof lighting	1	BAD-□□G (Lamp is not included when ex-work).
②	Shaft coupling	1	Included with lightings when ex-work.
③	Pipe G3/4″	1	
④	Explosion-proof ballast	1	Not included-must be ordered separately. BAZ51 explosion-proof ballast is recommended in our catalogue, please check it for details.

Remarks: All mounting fasteners are equipped by user.

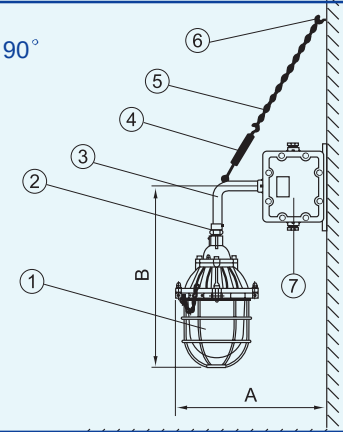
Bracket 30°



Srl. No.	Description	Qty	Specification
①	Explosion-proof lighting	1	BAD-□□B1 (Lamp is not included when ex-work).
②	Shaft coupling	1	Included with lightings when ex-work.
③	Elbow G3/4″	1	
④	CC sling	1	
⑤	Chain	1	
⑥	Expansion bolt	1	
⑦	Explosion-proof ballast	1	Not included-must be ordered separately. BAZ51 explosion-proof ballast is recommended in our catalogue, please check it for details.

Remarks: All mounting fasteners are equipped by user.

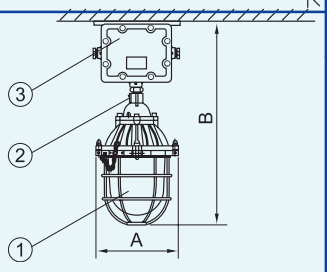
Bracket 90°



Srl. No.	Description	Qty	Specification
①	Explosion-proof lighting	1	BAD-□□B2 (Lamp is not included when ex-work).
②	Shaft coupling	1	Included with lightings when ex-work.
③	Elbow G3/4″	1	
④	CC sling	1	
⑤	Chain	1	
⑥	Expansion bolt	1	
⑦	Explosion-proof ballast	1	Not included-must be ordered separately. BAZ51 explosion-proof ballast is recommended in our catalogue, please check it for details.

Remarks: All mounting fasteners are equipped by user.

Ceiling



Srl. No.	Description	Qty	Specification
①	Explosion-proof lighting	1	BAD-□□X (Lamp is not included when ex-work).
②	Flexible coupling	1	Included with lightings when ex-work.
③	Explosion-proof ballast	1	Not included-must be ordered separately. BAZ51 explosion-proof ballast is recommended in our catalogue, please check it for details.

Remarks: All mounting fasteners are equipped by user.

◇ Photometric data

Luminous intensity data for 100W high-pressure sodium vapor lamp

70W High-pressure sodium vapor lamp: rated luminous flux 6000lm
100W High-pressure sodium vapor lamp: rated luminous flux 8500lm
70W Metal halide lamp: rated luminous flux 5600lm
100W Metal halide lamp: rated luminous flux 8000lm
80W High-pressure mercury vapor lamp: rated luminous flux 2940lm
125W High-pressure mercury vapor lamp: rated luminous flux 4990lm

The rated luminous flux from PHILIPS lamp

Luminous intensity distribution

For a 70W High-pressure sodium vapor lamp multiply by 0.70
For a 70W Metal halide lamp multiply by 0.66
For a 80W High-pressure mercury vapor lamp multiply by 0.35
For a 100W Mercury halide lamp multiply by 0.94
For a 125W High-pressure mercury vapor lamp multiply by 0.59
Lighting efficiency: 63.4%

Luminous intensity data

Angle	CP	Angle	CP	Angle	CP
0	340	60	790	120	102
5	365	65	875	125	42
10	399	70	833	130	0
15	416	75	816	135	0
20	425	80	824	140	0
25	433	85	828	145	0
30	444	90	833	150	0
35	467	95	892	155	0
40	485	100	918	160	0
45	510	105	927	165	0
50	603	110	722	170	0
55	705	115	493	175	0
				180	0

Luminous intensity data for 100W high-pressure sodium vapor lamp with reflector

70W High-pressure sodium vapor lamp: rated luminous flux 6000lm
100W High-pressure sodium vapor lamp: rated luminous flux 8500lm
70W Metal halide lamp: rated luminous flux 5600lm
100W Metal halide lamp: rated luminous flux 8000lm
80W High-pressure mercury vapor lamp: rated luminous flux 2940lm
125W High-pressure mercury vapor lamp: rated luminous flux 4990lm

The rated luminous flux from PHILIPS lamp

Luminous intensity distribution

For a 70W High-pressure sodium vapor lamp multiply by 0.70
For a 70W Metal halide lamp multiply by 0.66
For a 80W High-pressure mercury vapor lamp multiply by 0.35
For a 100W Metal halide lamp multiply by 0.94
For a 125W High-pressure mercury vapor lamp multiply by 0.59
Lighting efficiency: 52.7%

Luminous intensity data

Angle	CP	Angle	CP	Angle	CP
0	773	60	1326	120	0
5	765	65	1283	125	0
10	756	70	1266	130	0
15	782	75	1249	135	0
20	883	80	1275	140	0
25	935	85	1190	145	0
30	1003	90	918	150	0
35	1105	95	612	155	0
40	1207	100	340	160	0
45	1283	105	9	165	0
50	1360	110	0	170	0
55	1343	115	0	175	0
				180	0

Luminous intensity data for 175W Metal halide lamp with reflector

150W High-pressure sodium vapor lamp: rated luminous flux 16000lm
250W High-pressure sodium vapor lamp: rated luminous flux 28000lm
175W Metal halide lamp: rated luminous flux 14000lm
250W Metal halide lamp: rated luminous flux 20500lm
175W High-pressure mercury vapor lamp: rated luminous flux 7350lm
250W High-pressure mercury vapor lamp : rated luminous flux 11025lm

The rated luminous flux from PHILIPS lamp

Luminous intensity distribution

For a 150W High-pressure sodium vapor lamp multiply by 1.14
For a 250W High-pressure sodium vapor lamp multiply by 2
For a 250W Metal halide lamp multiply by 1.46
For a 175W High-pressure mercury vapor lamp multiply by 0.53
For a 250W High-pressure mercury vapor lamp multiply by 0.79
Lighting efficiency: 65.3%

Luminous intensity data

Angle	CP	Angle	CP	Angle	CP
0	924	60	1316	120	42
5	868	65	1344	125	28
10	812	70	1358	130	14
15	770	75	1351	135	0
20	756	80	1330	140	0
25	784	85	1372	145	0
30	798	90	1428	150	0
35	840	95	1414	155	0
40	882	100	1400	160	0
45	938	105	1218	165	0
50	1092	110	980	170	0
55	1176	115	560	175	0
				180	0

All lighting designs and lighting data come from DIALUX software of Germany upon stimulated situation and working condition.

LIGHTING

◇ Photometric data

Luminous intensity data for 175W Metal halide lamp with reflector

150W High-pressure sodium vapor lamp: rated luminous flux 16000lm
250W High-pressure sodium vapor lamp: rated luminous flux 28000lm
175W Metal halide lamp: rated luminous flux 14000lm
250W Metal halide lamp: rated luminous flux 20500lm
175W High-pressure mercury vapor lamp: rated luminous flux 7350lm
250W High-pressure mercury vapor lamp: rated luminous flux 11025lm
The rated luminous flux from PHILIPS lamp

Luminous intensity distribution

For a 150W High-pressure sodium vapor lamp multiply by 1.14
For a 250W High-pressure sodium vapor lamp multiply by 2
For a 250W Metal halide lamp multiply by 1.46
For a 175W High-pressure mercury vapor lamp multiply by 0.53
For a 250W High-pressure mercury vapor lamp multiply by 0.79
Lighting efficiency 51.3%

Luminous intensity data

Angle	CP	Angle	CP	Angle	CP
0	1792	60	1918	120	49
5	1806	65	1820	125	32
10	1820	70	1652	130	14
15	1862	75	1386	135	0
20	1974	80	980	140	0
25	2058	85	700	145	0
30	2114	90	560	150	0
35	2128	95	420	155	0
40	2100	100	308	160	0
45	2072	105	210	165	0
50	2030	110	140	170	0
55	2002	115	70	175	0
				180	0

Luminous intensity data for 400W Metal halide lamp

400W High-pressure sodium vapor lamp: rated luminous flux 48000lm
400W High-pressure sodium vapor lamp: rated luminous flux 35000lm
400W High-pressure mercury vapor lamp: rated luminous flux 21000lm
The rated luminous flux from PHILIPS lamp

Luminous intensity distribution

For a 400W High-pressure sodium vapor lamp multiply by 1.37
For a 400W High-pressure mercury vapor lamp multiply by 0.6

Lighting efficiency 61.8%

Luminous intensity data

Angle	CP	Angle	CP	Angle	CP
0	1960	60	3220	120	1735
5	1890	65	3325	125	1400
10	1855	70	3360	130	1085
15	1820	75	3378	135	105
20	1715	80	3395	140	35
25	1750	85	3482	145	0
30	1995	90	3605	150	0
35	2065	95	3675	155	0
40	2205	100	3745	160	0
45	2310	105	3570	165	0
50	2625	110	2660	170	0
55	2870	115	2100	175	0
				180	0

Luminous intensity data for 400W Metal halide lamp with reflector

400W High-pressure sodium vapor lamp: rated luminous flux 48000lm
400W High-pressure sodium vapor lamp: rated luminous flux 35000lm
400W High-pressure mercury vapor lamp: rated luminous flux 21000lm
The rated luminous flux from PHILIPS lamp

Luminous intensity distribution

For a 400W High-pressure sodium vapor lamp multiply by 1.37
For a 400W High-pressure mercury vapor lamp multiply by 0.6

Lighting efficiency 53.2%

Luminous intensity data

Angle	CP	Angle	CP	Angle	CP
0	4550	60	5145	120	175
5	4515	65	5005	125	133
10	4830	70	4725	130	105
15	5040	75	3990	135	70
20	5005	80	2800	140	35
25	4900	85	1750	145	17
30	4882	90	1120	150	0
35	5075	95	700	155	0
40	5355	100	525	160	0
45	5600	105	420	165	0
50	5565	110	350	170	0
55	5355	115	210	175	0
				180	0

All lighting designs and lighting data come from DIALUX software of Germany upon stimulated situation and working condition.

◇ Power connection and lamp installation

1. Screw the mounting box open, through the mounting box opening, cable is connected to lamp holder. Earthing bolt supplied with mounting box inside and outside. The lighting works after reliable grounding.
2. Lamp of proper power selected according to the description on nameplate. Lamp of other power is not available! Loosen hinged bolt, open transparent globe, screw the lamp into the holder, and tighten for good contact, close the globe and screw the hinged bolt tight.

◇ Accessories

Picture	Description	Ordering code	Picture	Description	Ordering code
	100 type mounting box	51001		Flexible coupling	51016
	250 type mounting box	51002			
	400 type mounting box	51003			
	100 type doom reflector	51004		Shaft coupling	61021
	250 type doom reflector	51005			
	400 type doom reflector	51006			
	100 type steel guard	51007		Expansion bolt	51017
	250 type steel guard	51008			
	400 type steel guard	51009			
	100 type glass globe	51010		Chain	51018
	250 type glass globe	51011			
	400 type glass globe	51012			
	E27 lamp holder	51013		CC sling	51019
	250 type E40 lamp holder	51014			
	400 type E40 lamp holder	51015			

◇ Ordering information

1. Select the product according to catalog number logic such as proper lamp, lamp wattage and mounting style.
2. Please note if any special requirements for the power.
3. Mounting fittings and accessories should be ordered separately upon accessory model, referred in“Accessories”.
4. Lamp is not included when ex-work. Please adopt suitable lamp, technical requirements provided for reference. PHILIPS is recommended.
5. Ordering example:
   Enquiry: 250W sodium lamp, ceiling mounting, with globe and doom reflector, AC220V/50Hz.
   Ordering code: BAD-N250X+51005
6. We reserve the power of final interpretation and to make alterations to the technical data, weights, dimensions, designs and products available without notice.