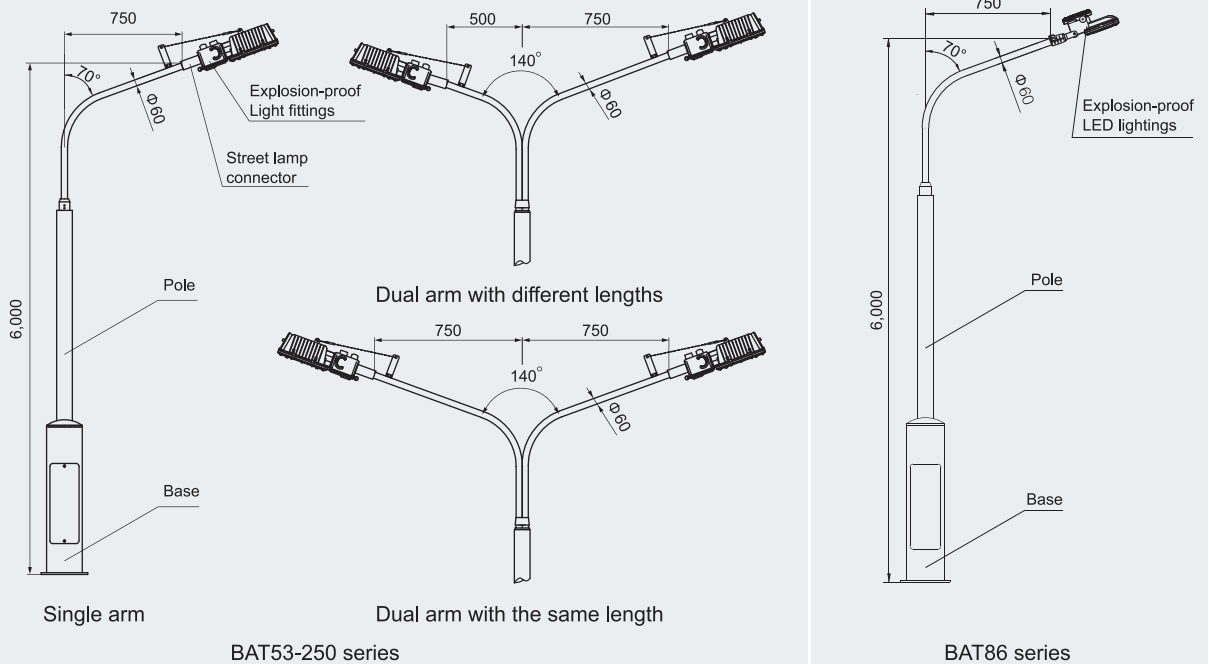**BAT53-250, BAT53-400, BAT85-400 Series**
HRD91-250, HRD91-400 Series
BDD91-150, BDD91-250, BDD91-400 Series
BAT86 Series, BnT81 Series, HRT81 Series
Explosion-proof Street Lamps

◆ Explosion protection to
-CENELEC
-IEC
-NEC
◆ Can be used in
Zone 1 and Zone 2
Zone 21 and Zone 22
◆ Please refer to mounting schematic diagram to select right
lamp and mounting types on request of job site.
◆ Please refer to this catalogue for detailed technical data and
ordering information of each light fitting.
Note: If BAT53-250 type street lamp is required, please specify
when ordering.
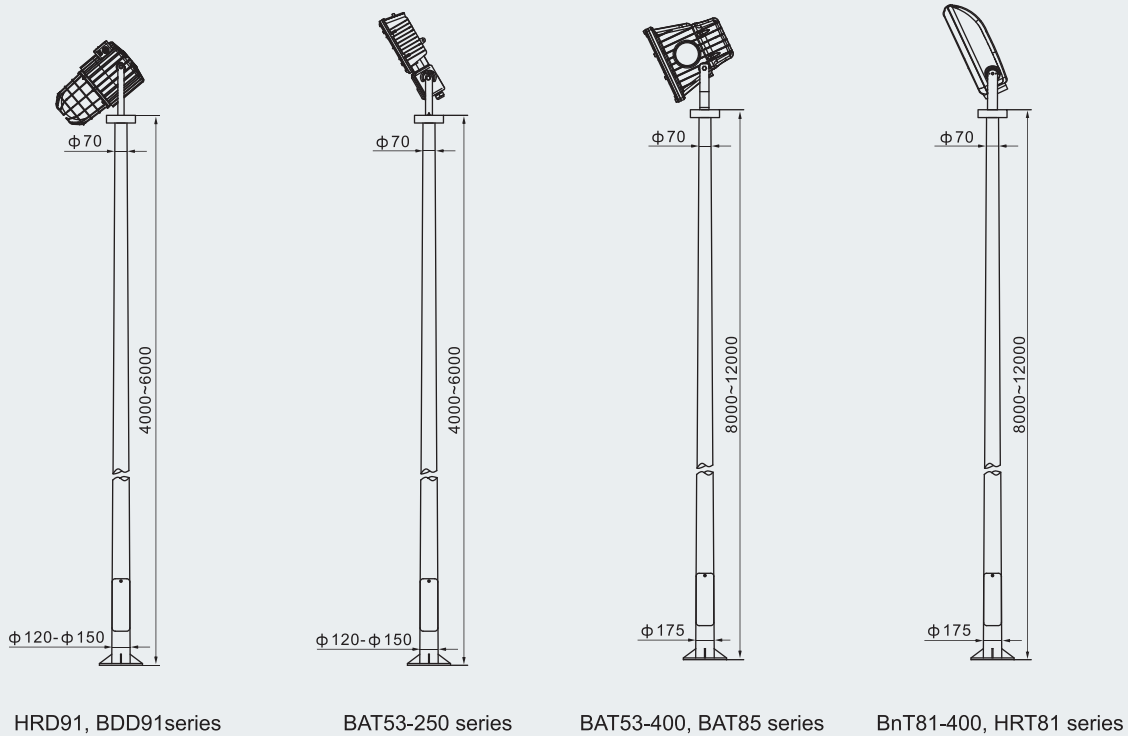◆ The street lamp is supplied without pole; please specify
when ordering.

Mounting schematic diagram of bent arm type street lamp

750

70°

Ø 60

Explosion-proof
Light fittings

Street lamp
connector

6,000

Pole

Base

Single arm

500   750

140°

Ø 60

Dual arm with different lengths

750   750

140°

Ø 60

Dual arm with the same length

BAT53-250 series

750

70°

Ø 60

Explosion-proof
LED lightings

6,000

Pole

Base

BAT86 series

Zones 1&2; 21&22

Mounting schematic diagram of platform type street lamp

φ70	φ70	φ70	φ70
4000~6000	4000~6000	8000~12000	8000~12000
φ120-φ150	φ120-φ150	φ175	φ175
HRD91, BDD91series	BAT53-250 series	BAT53-400, BAT85 series	BnT81-400, HRT81 series

Reference diagram of street lamp mounting base
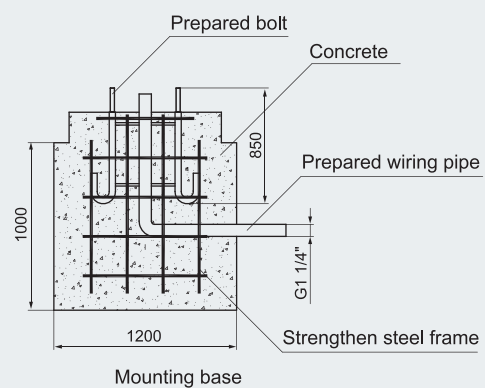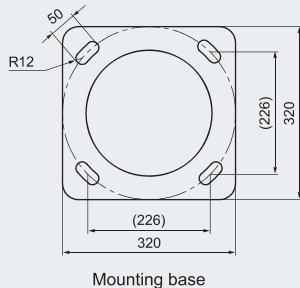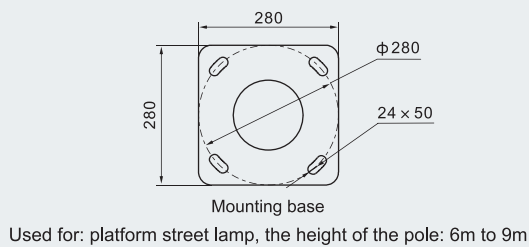
280

280

φ280

24 × 50

Mounting base

Used for: platform street lamp, the height of the pole: 6m to 9m

50

R12

(226)

320

(226)

320

Mounting base

Used for:
1. Bent arm type street lamp.
2. Platform type street lamp, the height of the pole: 10m to 12m.

Prepared bolt

Concrete

850

1000

Prepared wiring pipe

G1 1/4"

1200

Strengthen steel frame

Mounting base

WAROM

◆ Explosion protection to
  -CENELEC
  -IEC
  -NEC
◆ Can be used in
  Zone 1 and Zone 2
  Zone 21 and Zone 22
◆ Applicable to lamp (max. 400W) of HIE, HSE and HME.
◆ Enclosure in copper-free aluminium, powder coated surface, yellow (RAL1021).
◆ Electromagnetic ballast, rapid starting, stable performance.

■ Catalogue number logic

BAZ51 - □ □

Lamp power (W)

Lamp
  HSE: High pressure sodium lamp
  HME: High pressure mercury lamp
  HIE: Metal halide lamp

Explosion-proof ballasts
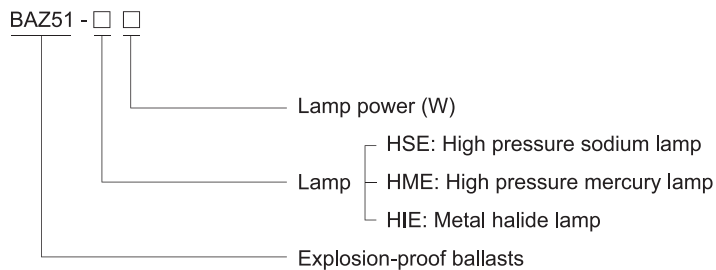
■ Selection table

Type/Ordering code	Available lamp Power(W)	Weight (kg)	Enclosure	Type/Ordering code	Available lamp Power(W)	Weight (kg)	Enclosure
BAZ51-HIE 70	HIE 70	5.65	I	BAZ51-HSE 150	HSE 150	6.60	I
BAZ51-HIE 100	HIE 100	6.25	I	BAZ51-HSE 250	HSE 250	6.95	II
BAZ51-HIE 150	HIE 150	6.55	I	BAZ51-HSE 400	HSE 400	8.65	II
BAZ51-HIE 175	HIE 175	6.60	I	BAZ51-HME 80	HME 80	5.60	I
BAZ51-HIE 250	HIE 250	6.60	I	BAZ51-HME 125	HME 125	6.25	I
BAZ51-HIE 400	HIE 400	8.70	II	BAZ51-HME 175	HME 175	6.60	I
BAZ51-HSE 70	HSE 70	5.65	I	BAZ51-HME 250	HME 250	6.50	I
BAZ51-HSE 100	HSE 100	6.25	I	BAZ51-HME 400	HME 400	8.65	II
Note: The power factor is more than 0.90 while equipped with compensation capacitor.							

Zones 1&2; 21&22

Technical data

Explosion-proof ballasts BAZ51-□□

|	
Explosion protection	
Gas explosion protection	Ⓔₓ II 2 G Ex d IIB T6 Gb
Dust explosion protection	Ⓔₓ II 2 D Ex tb IIIC T80℃ Db IP66
Certificates	LCIE 06 ATEX 6019; IECEx LCI 08. 0002
Conformity to standards	EN 60079-0, EN 60079-1, EN 60079-31
	IEC 60079-0, IEC 60079-1, IEC 60079-31
Material	
Enclosure	Copper-free aluminium, powder coated surface, yellow (RAL1021)
Exposed fastener	Stainless steel
Available lamp	High pressure sodium lamp (HSE): 70W, 100W, 150W, 250W, 400W
	High pressure mercury lamp (HME): 80W, 125W, 175W, 250W, 400W
	Metal halide lamp (HIE): 70W, 100W, 150W, 175W, 250W, 400W
	Note: HPI European standard ballast is available in general
Rated voltage	220~240V AC 50Hz (60Hz is optional)
	Note: other voltage on request.
Earthing protection	M5 (internal & external earth bolts)
Degree of protection	IP66
Ambient temperature	-60℃~+60℃
Terminal	3 x 1.5~2.5mm^2 (L+N+PE)
Cable entries	3 x M25 x 1.5 plugs for independent type
	2 x M25 x 1.5 plugs for block type
	With seal gasket and plain washer at bottom entries
Cable gland (optional)	DQM-II (Ex d) or DQM-III (Ex d) is recommended. Please see P7/20~27.

## Dimension drawings (all dimensions in mm) - subject to alteration
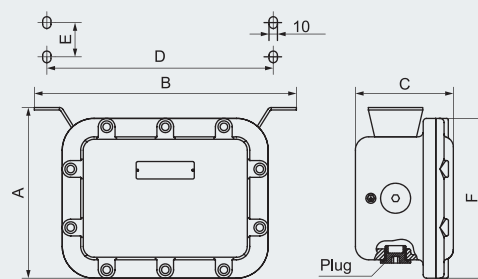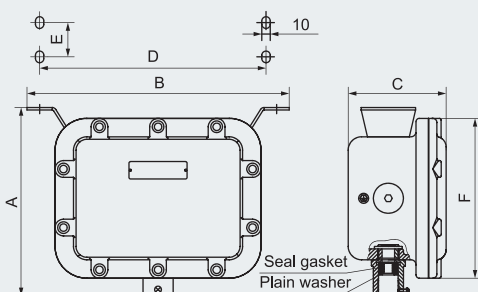
Enclosure	Size(mm)					
	A	B	C	D	E	F
I	215	288	117	258	41	191
II	230	313	137	283	41	206

Outline 1 (For block mounting, for example: used for series HRD51)

Enclosure	Size(mm)					
	A	B	C	D	E	F
I	204	288	117	258	41	191
II	229	313	137	283	41	206

Outline 2 (For independent mounting, for example: used for series HRT51-400)

Schematic diagram of light fittings and ballasts
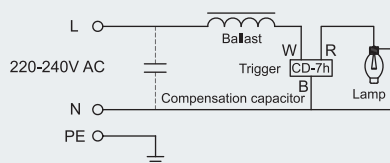
Schematic diagram 1 (For HSE or HIE)
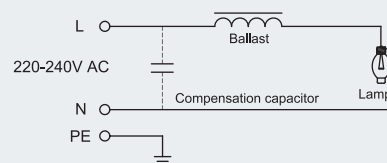
Schematic diagram 2 (For HME)

HRD305 Portable Searchlight
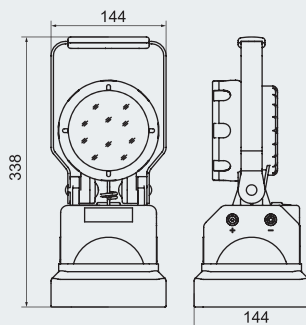## HRD309E Searchlight
HRD502A Strong Working Light
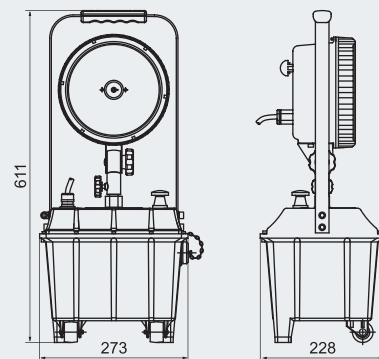## HRD318 Explosion-proof LED Hand Lamps
BSX-60 Series Explosion-proof Incandescent Hand Lamps

◆ Explosion protection to
   -CENELEC
   -IEC
   -NEC
◆ Can be used in
   Zone 1 and Zone 2
   Zone 21 and Zone 22
   Class I, Zone 1 and Zone 2
   Class I, Division 1, Groups A, B, C, D
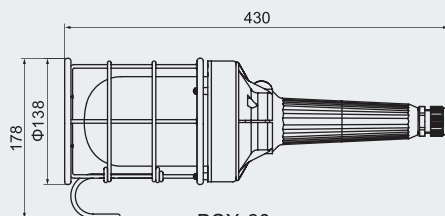   Class I, Division 2, Groups A, B, C, D

Dimension drawings (all dimensions in mm) - subject to alteration
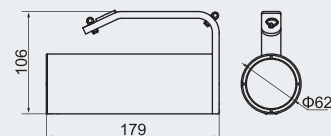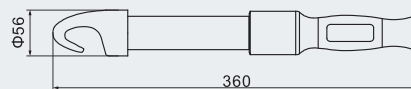

HRD309E

HRD502A

BSX-60

HRD305

HRD318

Zones 1&2; 21&22

◆ Explosion protection to
  -CENELEC
  -IEC
  -NEC
◆ Can be used in
  Zone 1 and Zone 2
  Zone 21 and Zone 22
  Class I, Zone 1 and Zone 2
  Class I, Division 1, Groups A, B, C, D
◆ Safe and reliable: the product with reliable explosion-proof performance, can safely and reliably work in various combustible areas, the battery is equipped with PTC thermistor and temperature fuse; double-protected circuit, safety performance enhanced.
◆ Efficient and energy-saving: memory-free battery, with long service life, low auto-discharge rate, economic and environmental friendly, solid efficient LED lamp, low energy consumption and long service life.
◆ Waterproof and damage-proof: the enclosure is made of imported alloy with high strength, excellent strong impact resistant performance, unique sealing type, with very good water-proof performance.
◆ Anti-strong interference: scientific module driving circuit, strong performance of anti-shock and anti-electromagnetic interference.
◆ Heat resistant: LED radiator and battery are effectively isolated, which improves the stability of the light.
◆ Intelligent control: pulse dimming technology, strong light and working light can be changed at random, with battery detection indicator, which can detect the working condition at any time, intelligent charger is with protection circuit.
◆ Portable and flexible: small volume, light weigh, several types of handling like portable and on shoulder, meet different working requirement.

Technical data

Portable Searchlight   HRD305

Explosion protection	
Gas explosion protection	⟨Ex⟩ II 2 G Ex d ia IIC T6 Gb
Dust explosion protection	⟨Ex⟩ II 2 D Ex tb IIIC T80℃ Db IP68
Certificates	LCIE 13 ATEX 3089X; IECEx CQM 13.0026X; KZ.7500525.22.01.00380 (CU-TR)
Conformity to standards	EN 60079-0, EN 60079-1, EN 60079-11, EN 60079-31
	IEC 60079-0, IEC 60079-1, IEC 60079-11, IEC 60079-31
Rated voltage	14.8V
Rated capacity	2Ah
Lamp(LED)	
Rated power	9W / 3W
Current of strong light	900mA
Continuous working time	
Strong light	≥8h
Working light	≥16h
Charging time	≥8h
Charging voltage	100~240V AC, 50/60Hz
Service life of battery	about 1000 times cycling
Degree of protection	IP68
Weight	790g

Zones 1&2; 21&22

◆ Explosion protection to
  -CENELEC
  -IEC
  -NEC
◆ Can be used in
  Zone 2
  Zone 21 and Zone 22
  Class I, Zone 2
  Class I, Division 2, Groups A, B, C, D
◆ Safe and reliable: the product with good explosion-proof performance and antistatic effect, can safely and reliably work in various combustible areas.
◆ Efficient and energy-saving: LED solid lamp, low energy consumption, high luminous efficacy, long service life, maintenance free and no subsequent usage cost, memory-free battery is recyclable, pollution-free.
◆ Waterproof and damage-proof: the light adopts whole-sealing craft, applicable in damp and severe atmosphere, special alloy enclosure makes sure the light can resist strong shock and impact.
◆ Intelligent control: the light is with two kinds of working modes: strong light and working light, switch is controlled by intelligent chip,the strong light and weak light can be changed at random, single-chip control; with battery display and special protection circuit, with protection function of anti-over charging, over discharging and short circuit, reliably protect the battery and prolong the service life.
◆ Convenient and durable: unique lamp cap; lighting angle can be adjusted within the scope of -45°~ 55°, no lighting dead angle (lighting range of strong light: 800m, effective distance: 300m, suitable for long-distance searching and lighting in large area of close range), light weight, portable type, horizontal type, hang type, magnetic absorption, etc, convenient to use; the switch is with anti-incorrect operation function.

Technical data

Searchlight   HRD309E

Explosion protection	
Gas explosion protection	⟨Ex⟩ II 3 G Ex nA nR IIC T4 Gc
Dust explosion protection	⟨Ex⟩ II 2 D Ex tb IIIC T80℃ Db IP66
Certificates	EPT 16 ATEX 2503X; IECEx CQM 16.0008X
Conformity to standards	EN 60079-0, EN 60079-15, EN 60079-31
	IEC 60079-0, IEC 60079-15, IEC 60079-31
Rated voltage	12V
Rated capacity	4Ah
Lamp(LED)	
Rated power	9W / 3W
Average service life	100000h
Continuous working time	
Strong light	≥8h
Working light	≥18h
Charging time	≥8h
Charging voltage	100~240V AC, 50/60Hz
Service life of battery	about 1000 times cycling
Degree of protection	IP66
Weight	1.9kg

Zones 2; 21&22

◆ Explosion protection to
   -CENELEC
   -IEC
   -NEC
◆ Can be used in
   Zone 1 and Zone 2
   Class I, Zone 1 and Zone 2
   Class I, Division 2, Groups A, B, C, D
◆ Safe and reliable: the product with good explosion-proof perfor-
   mance, can safely and reliably work in various combustible
   areas.
◆ Efficient and energy-saving: special gas discharging lamp; high
   luminous efficiency, luminous flux is 5 times of that of halogen
   lamp with the same power, illumination is 3 times of 100W halogen
   bulb, service life is 5-10 times of that of normal halogen lamp,
   with the same brightness, the power consumption is 15% of that
   of normal halogen lamp, good anti-shock effect, small heating
   value, safer and more reliable.
◆ Waterproof and damage-proof: the light adopts whole-sealing
   craft, can work normally when in water, special alloy enclosure makes sure the light can resist strong shock and impact.
◆ Economic and environmental friendly: the memory-free battery can be charged at any time, after charging fully and laid aside for
   a year, the reserve of electricity is not less than 80% when it is full, for two years, it is not less than 50%, low-voltage discharging
   protection circuit is set; reliably protect the battery and prolong the service life.
◆ Convenient and durable: unique lamp cap, lighting angle can be adjusted at random, there are wheels at the bottom, easy to move and work.
◆ Other performances: normally, floodlight is provided; spotlight is on request.

Technical data	
Strong working light HRD502A	
Explosion protection	⟨Ex⟩ II 2 G Ex d e IIC T4 Gb
Certificates	LCIE 12 ATEX 3081X; IECEx CQM 12.0040X
Conformity to standards	EN 60079-0, EN 60079-1, EN 60079-7
	IEC 60079-0, IEC 60079-1, IEC 60079-7
Rated voltage	24V
Rated capacity	20Ah
Lamp	Xenon lamp
Working voltage	24V
Rated power	35W
Luminous flux	3200lm
Average service life	3000h
Continuous working time	⩾10h
Charging time	⩾12h
Charging voltage	100~240V AC, 50/60Hz
Service life of battery	about 1000 times cycling
Degree of protection	IP65
Weight	15kg

Zones 1&2

◆ Explosion protection to
  -CENELEC
  -IEC
  -NEC
◆ Can be used in
  Zone 1 and Zone 2
  Zone 21 and Zone 22
  Class I, Zone 1 and Zone 2
  Class I, Division 2, Groups A, B, C, D
◆ LED lamp: 8W
◆ Handle in copper-free aluminium, sheath is of high-quality NBR, waterproof and strong impact resistance.
◆ Transparent cover: PC with diffusant, 90%light transmission, soft light and without glaring.
◆ Two kinds of working modes, switch is controlled by intelligent chip, the strong light and weak light can be changed at random.
◆ Small volume, light weight, delicate structure, portable type and hang type etc. Convenient to carry, meet different working requirements.

Technical data

Explosion-proof LED hand lamps   HRD318

Explosion protection	
Gas explosion protection	⟨Ex⟩ II 2 G Ex d IIC T6 Gb
Dust explosion protection	⟨Ex⟩ II 2 D Ex tb IIIC T80℃ Db IP66
Certificates	ATEX and IECEx (applied for)
Conformity to standards	EN 60079-0, EN 60079-1, EN 60079-31
	IEC 60079-0, IEC 60079-1, IEC 60079-31
Material	
Enclosure	Copper-free aluminium, powder coated surface
Handle	Copper-free aluminium, powder coated surface
Sheath	NBR (Nitrile butadiene rubber)
Exposed fastener	Stainless steel
Lamp	
Available lamp	LED lamp : 8W
Working voltage	AC 36V 50/60Hz
Degree of protection	IP66
Ambient temperature	-40℃~+55℃
Terminal	3 x 1.5~2.5mm^2 (L+N+PE)
Weight	2.35kg

Zones 1&2; 21&22

Hand Lamps
BSX-60 Series Explosion-proof Incandescent Hand Lamps

◆ Explosion protection to
   -CENELEC
   -IEC
   -NEC
◆ Can be used in
   Zone 1 and Zone 2
   Class I, Zone 1 and Zone 2
   Class I, Division 2, Groups A, B, C, D
◆ Incandescent lamps: Max. 60W
◆ Cable on request
◆ Handle in plastic, with control pushbutton
◆ Powder coated wire guard, white
◆ Toughened glass cover resistant to temperature changes
◆ Movable transformer on request (see P3/52~53)

Technical data

Explosion-proof incandescent hand lamps   BSX-60

Explosion protection	⟨Ex⟩ II 2 G Ex d e IIC T4
Certificates	LCIE 07 ATEX 6028; IECEx CQM 08.0015
Conformity to standards	EN 60079-0, EN 60079-1, EN 60079-7
	IEC 60079-0, IEC 60079-1, IEC 60079-7
Material	
Enclosure	Copper-free aluminium, powder coated surfacce, yellow (RAL1021)
Handle	Plastic, black
Wire guard	Powder coated carbon steel, white
Exposed fastener	Stainless steel
Lamp	
Lamp holder	E27
Available lamp	Incandescent lamp: 25W, 40W, 60W; LED: 7W, 10W, 12W
Rated voltage	Max. 230V
Protection class	II (Protection against electric shock)
Degree of protection	IP65
Ambient temperature	-20℃~+55℃
Terminal	3 x 1.5~2.5mm² (L+N+PE)
Cable entries	1 x M25 x 1.5 cable gland (DQM-I Ex e, plastic)
Available cable outer diameter	Φ9~Φ16 (mm)
Weight	2.35kg

Zones 1&2

2

Local, Caution Spotlight Fittings
BAJ52-20 Series Explosion-proof Emergency Light Fittings

◆ Explosion protection to
  -CENELEC
  -IEC
  -NEC
◆ Can be used in
  Zone 1 and Zone 2
  Class I, Zone 1 and Zone 2
  Class I, Division 1, Groups C, D
◆ Enclosure in copper-free aluminium, powder coated surface,
  yellow (RAL1021).
◆ Lighting angle can be adjusted.
◆ Low-power halogen tungsten lamps, with reflector to in-
  crease lighting intensity.
◆ Emergency device with Ni-MH batteries, charging automatically;
  when power supply is cut off, the emergency device starts
  to work; with overcharge and overdischarge protection.
◆ Toughened glass cover resistant to temperature changes.

Zones 1&2

Local, Caution Spotlight Fittings
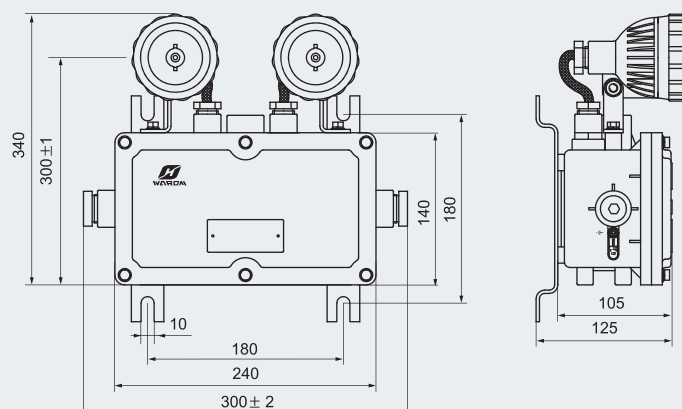## BAJ52-20 Series Explosion-proof Emergency Light Fittings

Technical data

Explosion-proof emergency light fittings   BAJ52-20

Explosion protection	⟨Ex⟩ II 2 G Ex d IIB T4
Certificates	LCIE 07 ATEX 6086; IECEx CQM 08. 0001
Conformity to standards	EN 60079-0, EN 60079-1
	IEC 60079-0, IEC 60079-1
Material	
Enclosure	Copper-free aluminium, powder coated surfacce, yellow (RAL1021)
Exposed fastener	Stainless steel
Rated voltage	220~240V AC 50/60Hz
Lamp	
Available lamp	Halogen tungsten lamp (LED on request)
Lamp power (W)	2 x 10W (LED lamp power: 2 x 1W)
Emergency time	90min
Rated luminous flux	Halogen tungsten lamp: 2 x 100lm (LED lamp: 2 x 90lm)
Battery	
Description	Ni-MH battery
Rated capacity	6Ah
Rated voltage	6V
Charging current	300mA
Discharging current	1000mA
Charging time	24h
Degree of protection	IP65
Ambient temperature	-20℃~+55℃
Terminal	3 x 1.5~2.5mm² (L+N+PE)
Cable entries	2 x M25 x 1.5 plugs
Cable gland (optional)	DQM-II (Ex d) or DQM-III (Ex d) is recommended. Please see P7/20~27.
Weight	5.05kg

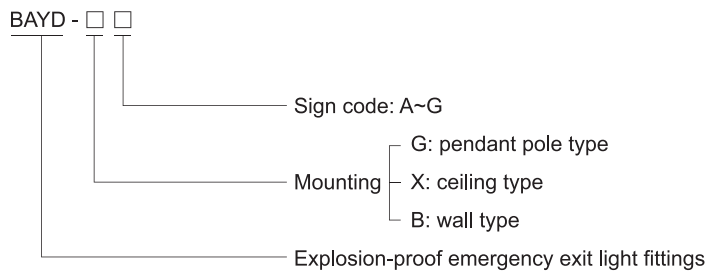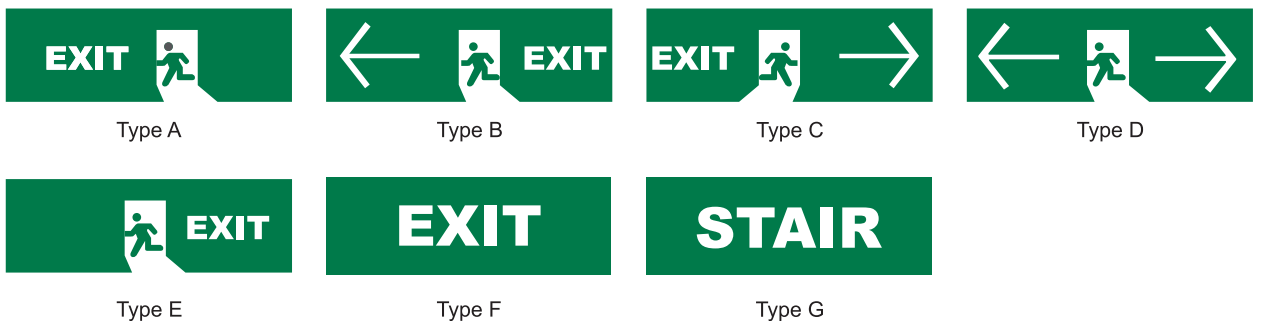## Dimension drawings (all dimensions in mm) - subject to alteration

◆ Explosion protection to
  -CENELEC
  -IEC
  -NEC
◆ Can be used in
  Zone 1 and Zone 2
◆ Lighting both in normal condition and emergency condition;
  When power supply is cut off, the emergency device starts to
  work; with overcharge, overdischarge protection and short
  circuit protection.
◆ With test pushbutton, convenient to check the emergency
  function. Press the test pushbutton, the light will switch into
  emergency condition.
◆ Ultra-bright LED lamp, low power consumption and long
  service life up to 50,000 hours; energy saving and environ-
  mental protection.
◆ Enclosure in copper-free aluminium, powder coated surface,
  yellow (RAL 1021).
◆ Toughened glass sheet resistant to temperature changes.

■ **Catalogue number logic**

BAYD - □ □

Sign code: A~G

Mounting
  ┌ G: pendant pole type
  ├ X: ceiling type
  └ B: wall type

Explosion-proof emergency exit light fittings

■ **Sign code type A-G**

| Type A | Type B | Type C | Type D |
| Type E | Type F | Type G | |

Zones 1&2