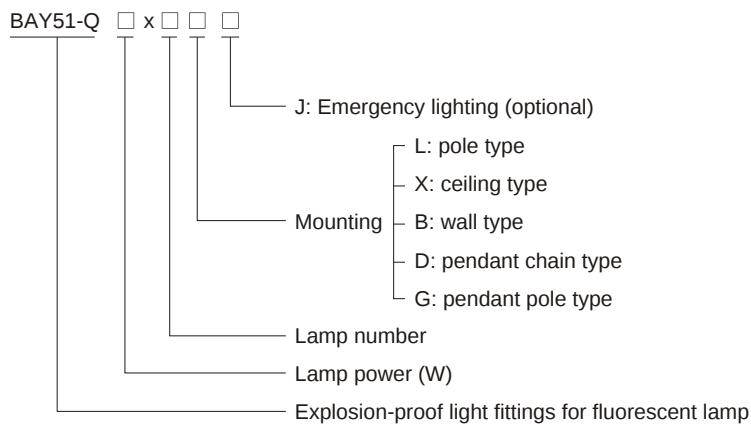




## Light Fittings for Fluorescent Lamp BAY51-Q Series Explosion-proof Light Fittings for Fluorescent Lamp

- ◆ Explosion protection to
  - CENELEC
  - IEC
  - NEC
- ◆ Can be used in
  - Zone 1 and Zone 2
  - Zone 21 and Zone 22
- ◆ Two enclosure types: 18W, 36W.
- ◆ Enclosure in glass fiber reinforced polyester, diffuser in polycarbonate, corrosion-proof.
- ◆ Ex e enclosure with explosion-proof components inside.
- ◆ Safety interlock between enclosure and diffuser switches off on opening.
- ◆ Electronic ballast, power factor  $\geq 0.95$ .
- ◆ Emergency unit with protections against over charge and over discharge.
- ◆ End of lamp life (EOL) rectification effect protection.

### Catalogue number logic



## Zones 1&2; 21&22

# Light Fittings for Fluorescent Lamp

## BAY51-Q Series Explosion-proof Light Fittings for Fluorescent Lamp

2

### Technical data

#### Explosion-proof light fittings for fluorescent lamp BAY51-Q □ x □ □

##### Explosion protection

Gas explosion protection

Ex II 2 G Ex deq IIC T4 Ex deq IIC T4 Gb

Dust explosion protection

Ex II 2 D Ex tD A21 IP66 T80°C Ex tD A21 IP66 T80°C

##### Certificates

LCIE 06 ATEX 6035X; IECEx CQM 07.0007; BR229577 (Brazil)

S-XPL/04547 (South Africa); FM (USA); GOST.R (Russia)

##### Conformity to standards

EN 60079-0:2006, EN 60079-1:2007, EN 60079-5:2007, EN 60079-7:2007

EN 61241-0:2006, EN 61241-1:2004

IEC 60079-0:2007, IEC 60079-1:2007, IEC 60079-5:2007, IEC 60079-7:2006

IEC 61241-0:2004, IEC 61241-1:2004

##### Material

Enclosure

GRP, stands 7J impact, corrosion-proof

Diffuser

Polycarbonate, 90% light transmission, stands 7J impact

Ballast

Explosion-proof electronic ballast, power factor  $\geq 0.95$ , with protection against short circuit, overload, lamp aging, lamp damage and dissymmetry power of lamp tube.

Certificate No.: LCIE 06 ATEX 0003U; IECEx CQM 07.0005U; BR229576-U (Brazil).

Exposed fastener

Stainless steel

##### Interlock

BZX-6 explosion-proof distance switch, switching off on opening.

Certificate No.: LCIE 06 ATEX 0002U, IECEx CQM 07.0006U

##### Lamp

Lamp brand

PHILIPS T8 (supplied with the light fittings)

Lamp power (W)

36W x 2 18W x 2

36W x 1 18W x 1

##### Rated voltage

96~254V AC 50/60Hz

##### Protection class

II (Protection against electric shock)

##### Degree of protection

IP66

##### Ambient temperature

-20°C ~ +55°C

##### Terminal

3 x 1.5~4mm<sup>2</sup> (L+N+PE)

##### Cable entries

4 x  $\Phi 26$ : 2 x M25 x 1.5 cable gland (DQM-I Ex e, plastic), 2 x M25 x 1.5 plug.

##### Available cable outer diameter

$\Phi 9 \sim \Phi 16$  (mm)

### Selection table

| Type/Ordering code | Lamp power(W) | Weight(kg) | Type/Ordering code | Lamp power(W) | Weight(kg) |
|--------------------|---------------|------------|--------------------|---------------|------------|
| BAY51-Q36 x 1L     | 36 x 1        | 11.40      | BAY51-Q36 x 2L     | 36 x 2        | 11.60      |
| BAY51-Q36 x 1X     | 36 x 1        | 11.30      | BAY51-Q36 x 2X     | 36 x 2        | 11.40      |
| BAY51-Q36 x 1B     | 36 x 1        | 12.30      | BAY51-Q36 x 2B     | 36 x 2        | 12.50      |
| BAY51-Q36 x 1D     | 36 x 1        | 12.60      | BAY51-Q36 x 2D     | 36 x 2        | 12.75      |
| BAY51-Q36 x 1G     | 36 x 1        | 12.20      | BAY51-Q36 x 2G     | 36 x 2        | 12.40      |
| BAY51-Q18 x 1L     | 18 x 1        | 6.80       | BAY51-Q18 x 2L     | 18 x 2        | 7.00       |
| BAY51-Q18 x 1X     | 18 x 1        | 6.70       | BAY51-Q18 x 2X     | 18 x 2        | 6.90       |
| BAY51-Q18 x 1B     | 18 x 1        | 7.80       | BAY51-Q18 x 2B     | 18 x 2        | 7.90       |
| BAY51-Q18 x 1D     | 18 x 1        | 8.10       | BAY51-Q18 x 2D     | 18 x 2        | 8.20       |
| BAY51-Q18 x 1G     | 18 x 1        | 7.70       | BAY51-Q18 x 2G     | 18 x 2        | 7.85       |

**Note:** Products above include all the mounting accessories listed in Mounting Accessories & Spare Parts Table (see P2/6~7).





## Technical data

**Explosion-proof emergency light fittings for fluorescent lamp**      **BAY51-Q** ☐ x ☐☐ **J**

|                                                                    |                                                                                                                                                                                                                                             |  |                                                                                               |         |         |         |         |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------|---------|---------|---------|---------|
| <b>Explosion protection</b>                                        | <div>Gas explosion protection</div> <div>Dust explosion protection</div>                                                                                                                                                                    |  | <div>Ex II 2 G Ex deq IIC T4</div> <div>Ex deq IIC T4 Gb</div> <div>Ex tD A21 IP66 T80℃</div> |         |         |         |         |
| <b>Certificates</b>                                                | LCIE 10 ATEX 3009; IECEx CQM 12.0002X; BVC 10.0203 (Brazil); FM (USA) GOST.R (Russia)                                                                                                                                                       |  |                                                                                               |         |         |         |         |
| <b>Conformity to standards</b>                                     | EN 60079-0: 2006, EN 60079-1: 2004, EN 60079-5: 2007, EN 60079-7: 2007<br>IEC 60079-0: 2007, IEC 60079-1: 2007, IEC 60079-5: 2007, IEC 60079-7: 2006<br>IEC 61241-0: 2004, IEC 61241-1: 2004                                                |  |                                                                                               |         |         |         |         |
| <b>Material</b>                                                    |                                                                                                                                                                                                                                             |  |                                                                                               |         |         |         |         |
| <div>Enclosure</div> <div>Diffuser</div> <div>Emergency unit</div> | <div>GRP, stands 7J impact, corrosion-proof</div> <div>Polycarbonate, 90% light transmission, stands 7J impact</div> <div>Special emergency controller and NI-MH battery pile, with protection against over charge and over discharge</div> |  |                                                                                               |         |         |         |         |
| <div>Emergency controller</div> <div>Exposed fastener</div>        | <div>BY-2 explosion-proof emergency controller.</div> <div>Certificate No.: LCIE 10 ATEX 3010U, IECEx CQM 11.0041U</div> <div>Stainless steel</div>                                                                                         |  |                                                                                               |         |         |         |         |
| <b>Lamp</b>                                                        |                                                                                                                                                                                                                                             |  |                                                                                               |         |         |         |         |
| <div>Lamp brand</div> <div>Lamp power(W)</div>                     | <div>PHILIPS T8 (supplied with the light fittings)</div> <table><tr><td>36W x 2</td><td>18W x 2</td></tr><tr><td>36W x 1</td><td>18W x 1</td></tr></table>                                                                                  |  |                                                                                               | 36W x 2 | 18W x 2 | 36W x 1 | 18W x 1 |
| 36W x 2                                                            | 18W x 2                                                                                                                                                                                                                                     |  |                                                                                               |         |         |         |         |
| 36W x 1                                                            | 18W x 1                                                                                                                                                                                                                                     |  |                                                                                               |         |         |         |         |
| <div>Emergency power(W)</div> <div>Emergency start time</div>      | <div>36W x 1, 18W x 1</div> <div>0.3s</div>                                                                                                                                                                                                 |  |                                                                                               |         |         |         |         |
| <div>Charge time</div> <div>Emergency lighting time</div>          | <div>24h</div> <div>120min (180min is optional)</div>                                                                                                                                                                                       |  |                                                                                               |         |         |         |         |
| <div>Rated voltage</div> <div>Protection class</div>               | <div>96~254V AC 50/60Hz</div> <div>II (Protection against electric shock)</div>                                                                                                                                                             |  |                                                                                               |         |         |         |         |
| <div>Degree of protection</div> <div>Ambient temperature</div>     | <div>IP66</div> <div>-20℃~+55℃</div>                                                                                                                                                                                                        |  |                                                                                               |         |         |         |         |
| <div>Terminal</div> <div>Cable entries</div>                       | <div>3 x 1.5~4mm<sup>2</sup> (L+N+PE)</div> <div>4 x Φ26: 2 x M25 x 1.5 cable gland (DQM-I Ex e, plastic), 2 x M25 x 1.5 plug.</div>                                                                                                        |  |                                                                                               |         |         |         |         |
| <div>Available cable outer diameter</div>                          | Φ9~Φ16 (mm)                                                                                                                                                                                                                                 |  |                                                                                               |         |         |         |         |

## Selection table

| Type/Ordering code | Lamp power(W) | Weight(kg) | Type/Ordering code | Lamp power(W) | Weight(kg) |
|--------------------|---------------|------------|--------------------|---------------|------------|
| BAY51-Q36 x 1LJ    | 36 x 1        | 13.00      | BAY51-Q36 x 2LJ    | 36 x 2        | 13.05      |
| BAY51-Q36 x 1XJ    | 36 x 1        | 12.95      | BAY51-Q36 x 2XJ    | 36 x 2        | 13.10      |
| BAY51-Q36 x 1BJ    | 36 x 1        | 14.00      | BAY51-Q36 x 2BJ    | 36 x 2        | 14.10      |
| BAY51-Q36 x 1DJ    | 36 x 1        | 14.30      | BAY51-Q36 x 2DJ    | 36 x 2        | 14.45      |
| BAY51-Q36 x 1GJ    | 36 x 1        | 13.90      | BAY51-Q36 x 2GJ    | 36 x 2        | 14.05      |
| BAY51-Q18 x 1LJ    | 18 x 1        | 8.65       | BAY51-Q18 x 2LJ    | 18 x 2        | 8.80       |
| BAY51-Q18 x 1XJ    | 18 x 1        | 8.50       | BAY51-Q18 x 2XJ    | 18 x 2        | 8.70       |
| BAY51-Q18 x 1BJ    | 18 x 1        | 9.60       | BAY51-Q18 x 2BJ    | 18 x 2        | 9.75       |
| BAY51-Q18 x 1DJ    | 18 x 1        | 9.90       | BAY51-Q18 x 2DJ    | 18 x 2        | 10.00      |
| BAY51-Q18 x 1GJ    | 18 x 1        | 9.50       | BAY51-Q18 x 2GJ    | 18 x 2        | 9.65       |

**Note:** Products above include all the mounting accessories listed in Mounting Accessories & Spare Parts Table (see P2/6~7).

# Light Fittings for Fluorescent Lamp

## BAY51-Q Series Explosion-proof Light Fittings for Fluorescent Lamp

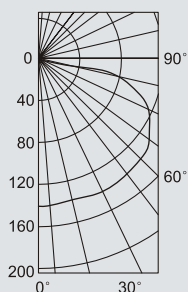
### Photometric data

#### 18W x 2 photometric data

Rated luminous flux:2100lm;

The data from PHILIPS lamp;

Luminous intensity distribution cd/1000lm



| Angle | CP  | Angle | CP  |
|-------|-----|-------|-----|
| 0     | 333 | 50    | 184 |
| 5     | 332 | 55    | 155 |
| 10    | 328 | 60    | 124 |
| 15    | 320 | 65    | 93  |
| 20    | 310 | 70    | 63  |
| 25    | 295 | 75    | 37  |
| 30    | 278 | 80    | 17  |
| 35    | 259 | 85    | 0   |
| 40    | 236 | 90    | 0   |
| 45    | 211 |       |     |

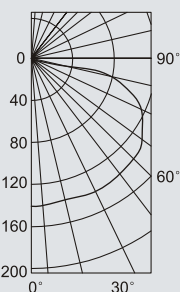
18W x 1 fluorescent lamp\*0.5

#### 36W x 2 photometric data

Rated luminous flux:5000lm;

The data from PHILIPS lamp;

Luminous intensity distribution cd/1000lm

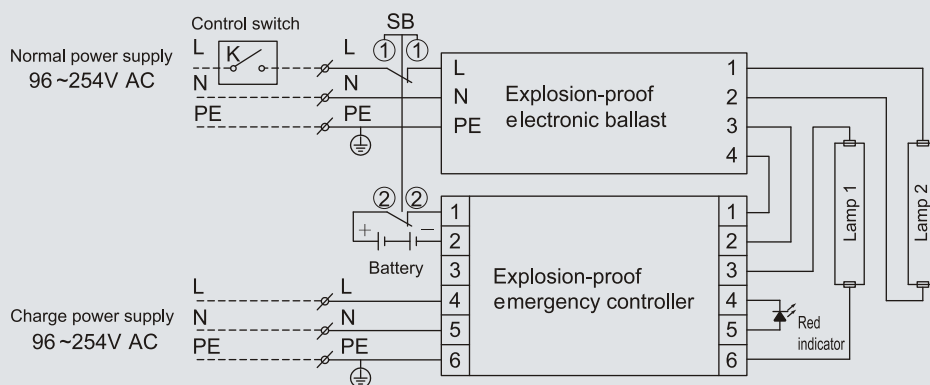


| Angle | CP  | Angle | CP  |
|-------|-----|-------|-----|
| 0     | 705 | 50    | 682 |
| 5     | 703 | 55    | 658 |
| 10    | 702 | 60    | 433 |
| 15    | 699 | 65    | 594 |
| 20    | 697 | 70    | 549 |
| 25    | 697 | 75    | 469 |
| 30    | 700 | 80    | 328 |
| 35    | 699 | 85    | 0   |
| 40    | 695 | 90    | 0   |
| 45    | 688 |       |     |

36W x 1 fluorescent lamp\*0.5

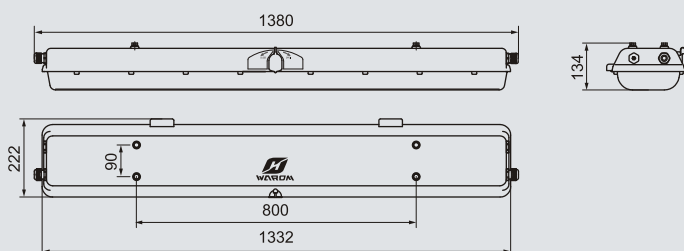
We can provide lighting design and data by professional lighting software DIALUX based upon simulated site situation on request.

### Schematic diagram (BAY51-Q□x□□J)

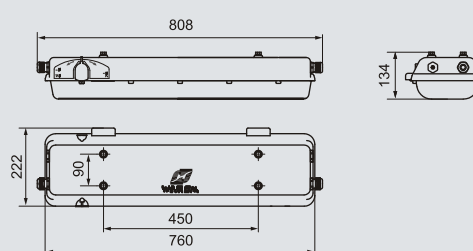


**Note:** Tube for lamp 2 shall be default for single tube fittings.

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



BAY51-Q36 x □ □ □



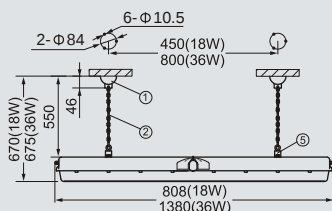
BAY51-Q18 x □ □ □



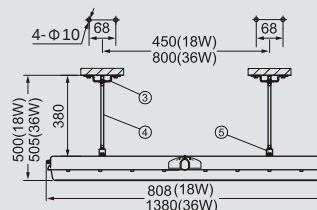
**Mounting type** (all dimensions in mm) - subject to alteration

Installation reference

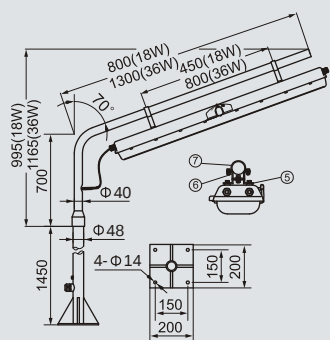
D: pendant chain type



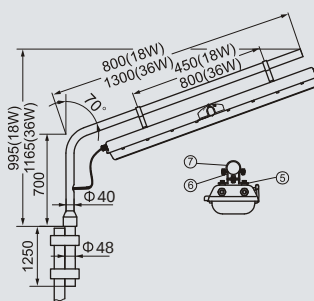
G: pendant pole type



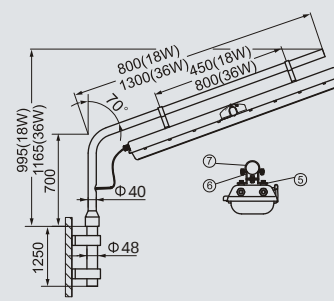
L: pole type (the pole is provided by user)



Suitable for ground pole type

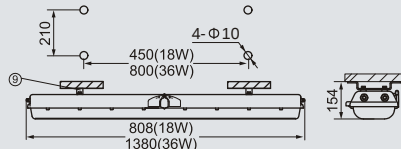


Suitable for fence pole type

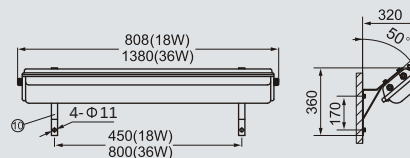


Suitable for wall pole type

X: ceiling type



B: wall type

**Mounting accessories and spare parts table**

Supplied according to the mounting type

| Mounting type         | Accessories        |     |                           | Ordering code | Weight (kg) |
|-----------------------|--------------------|-----|---------------------------|---------------|-------------|
|                       | Name               | Qty | Illustration              |               |             |
| D: pendant chain type | ①.Sucker           | 2   |                           | 5136017       | 0.15        |
|                       | ②.Chain            | 2   | Length: 450mm             | 5136016       | 0.08        |
|                       | ⑤.Mounting bracket | 2   | Same as pendant pole type | 5136030       | 0.07        |
| G: pendant pole type  | ③.Mounting bracket | 2   |                           | 51S01G1       | 0.04        |
|                       | ④.M8 Screw         | 2   | Length: 350mm             | 51S01G2       | 0.12        |
|                       | ⑤.Mounting bracket | 2   |                           | 5136030       | 0.05        |

**Note:** Accessories not in the table shall be supplied by user.

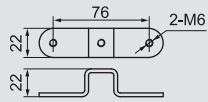
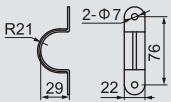
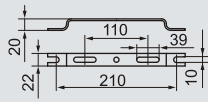
# Light Fittings for Fluorescent Lamp

## BAY51-Q Series Explosion-proof Light Fittings for Fluorescent Lamp

2

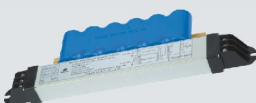
### Mounting accessories and spare parts table

Supplied according to the mounting type

| Mounting type   | Accessories          |     |                                                                                   | Ordering code | Weight (kg) |
|-----------------|----------------------|-----|-----------------------------------------------------------------------------------|---------------|-------------|
|                 | Name                 | Qty | Illustration                                                                      |               |             |
| L: pole type    | ⑥.Mounting bracket   | 2   |  | 5136012       | 0.04        |
|                 | ⑦.G1 1/4" Pipe clamp | 2   |  | 5136014       | 0.04        |
|                 | ⑤.Mounting bracket   | 2   | Same as pendant pole type                                                         | 5136030       | 0.07        |
| X: ceiling type | ⑨.Mounting bracket   | 2   |  | 5136015       | 0.20        |
| B: wall type    | ⑩.Wall bracket       | 2   | Welded sheet steel                                                                | 5136B02       | 0.62        |

**Note:** Accessories not in the table shall be supplied by user.

### Accessories

| Picture                                                                             | Name                                                    | Ordering code | Weight (kg) |
|-------------------------------------------------------------------------------------|---------------------------------------------------------|---------------|-------------|
|  | Explosion-proof distance switch                         | 5136003       | 0.04        |
|  | Spanner                                                 | 5136004       | 0.02        |
|  | Lamp holder (with wires)                                | 5136005       | 0.02        |
|  | 36W Explosion-proof electronic ballast                  | 5136011       | 1.30        |
|                                                                                     | 18W Explosion-proof electronic ballast                  | 5118004       | 1.30        |
|  | 36W Explosion-proof emergency controller (with battery) | 5136019       | 1.70        |
|                                                                                     | 18W Explosion-proof emergency controller (with battery) | 5118005       | 1.70        |

