



## Piloto ND16

### 1. General

Grado de protección: IP40, IP20 (Zumbador);

IP65 bajo demanda (a consultar)

Estándar: IEC/EN60947-5-1

### 2. Condiciones de funcionamiento

2.1 La temperatura ambiente deberá hallarse entre  $-5^{\circ}\text{C}$ ~ $+40^{\circ}\text{C}$  y la temperatura media a lo largo de 24 horas no deberá superar los  $+35^{\circ}\text{C}$ .

2.2 Altitud:  $\leq 2000\text{m}$ .

2.3 Condiciones atmosféricas:

La humedad relativa no deberá superar el 50% cuando la temperatura alcance la máxima de  $+40^{\circ}\text{C}$ . No obstante, se permitirá una humedad relativa mucho más elevada en condiciones de baja temperatura, por ejemplo, cuando la temperatura alcance los  $+20^{\circ}\text{C}$ , la humedad relativa podrá ser de hasta el 90%. Deberán tomarse las medidas necesarias para la condensación que podría aparecer como resultado de los cambios de temperatura.

2.4 Grado de contaminación: 3

2.5 Categoría de sobretensión: III

2.6 El par de apriete será de  $0.8\sim 1.2\text{N}\cdot\text{m}$  para los terminales de cable, y de  $1.5\sim 1.8\text{N}\cdot\text{m}$  para la tuerca de fijación. La sección de la conexión del cable es de  $0.5\sim 2.5\text{mm}^2$ , y deberá emplearse un conductor de 8mm de largo.



ND16-22A

E-046



ND16-22AS

E-046



ND16-22B

E-047



ND16-22BS

E-047



ND16-22C

E-047~E-048



ND16-22CS

E-047~E-048



ND16-22D

E-048



ND16-22DS

E-048



ND16-22F, ND16-22FS  
ND16-22L, ND16-22LC

E-050



ND16-22BK

E-049

### 3. Datos técnicos

Parámetros básicos

| Tensión nominal de funcionamiento Ue (V) |       | Corriente nominal de funcionamiento (mA) | Vida útil (h) | Luminosidad(cd/m2)   | Color básico |
|------------------------------------------|-------|------------------------------------------|---------------|----------------------|--------------|
| CA                                       | CA/CC |                                          |               |                      |              |
| 400                                      | 6     | I <sub>es</sub> ≤20                      | ≥30 000       | ≥40<br>≥20(ZUMBADOR) | ●            |
| 230                                      | 12    |                                          |               |                      | ●            |
| 110                                      | 24    |                                          |               |                      | ●            |
| -                                        | 36    |                                          |               |                      | ●            |
| -                                        | 48    |                                          |               |                      | ●            |
| -                                        | 110   |                                          |               |                      | ○            |
| -                                        | 230   |                                          |               |                      | ○            |
| -                                        | 400   |                                          |               |                      | ●            |

Nota: Para una fuente de alimentación CA, el intervalo límite de tensión es de  $0.85U_e\sim 1.1U_e$  entre terminales; C:IP65; K2: anti-interferencias

4. Indicador de la serie ND16

★ Piloto de cabeza plana (tipo resistencia)

| (R)                                                                               | (A)                                                                                                                       | (B)                         | Color                                                                                                          |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------|
|  | LED 6 Vca/Vcc,<br>12 Vca/Vcc,<br>24 Vca/Vcc,<br>36 Vca/Vcc,<br>48 Vca/Vcc,<br>110 Vca/Vcc,<br>230 Vca/Vcc,<br>400 Vca/Vcc | ND16-22AS/2<br>ND16-22A/2K2 | <div><div>○ (B)</div><div>● (V)</div><div>● (R)</div><div>● (Am)</div><div>● (Az)</div><div>● (Na)</div></div> |

★ Piloto de cabeza plana compacto (tipo resistencia)

| ND16-22AS/2                                                                       | Bombilla-Tensión                                                          | Modelo      | Color                                                                                                          |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------|
|  | LED 6 Vca/Vcc,<br>12 Vca/Vcc,<br>24 Vca/Vcc,<br>36 Vca/Vcc,<br>48 Vca/Vcc | ND16-22AS/2 | <div><div>○ (B)</div><div>● (V)</div><div>● (R)</div><div>● (Am)</div><div>● (Az)</div><div>● (Na)</div></div> |

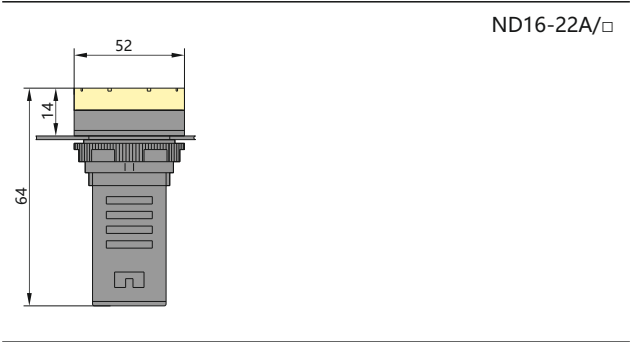
★ Piloto de cabeza plana (tipo condensador)

| ND16-22A/4                                                                         | Bombilla-Tensión              | Modelo                     | Color                                                                                                          |
|------------------------------------------------------------------------------------|-------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------|
|  | LED 110Vca,<br>230Vca, 400Vca | ND16-22A/4<br>ND16-22A/4K2 | <div><div>○ (B)</div><div>● (V)</div><div>● (R)</div><div>● (Am)</div><div>● (Az)</div><div>● (Na)</div></div> |

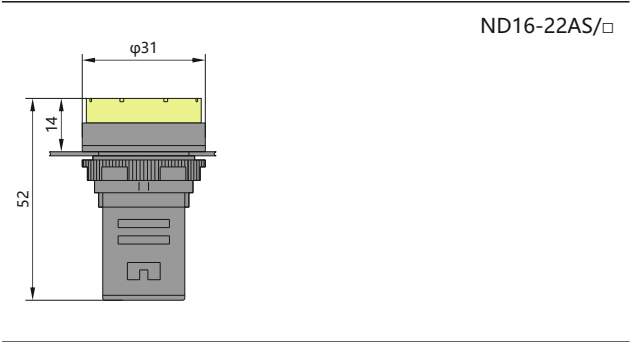
★ Piloto de cabeza plana compacto (tipo condensador)

| ND16-22AS/4                                                                        | Bombilla-Tensión              | Modelo | Color                                                                                                          |
|------------------------------------------------------------------------------------|-------------------------------|--------|----------------------------------------------------------------------------------------------------------------|
|  | LED 110Vca,<br>230Vca, 400Vca | (A)    | <div><div>○ (B)</div><div>● (V)</div><div>● (R)</div><div>● (Am)</div><div>● (Az)</div><div>● (Na)</div></div> |

Dimensiones (mm)



Dimensiones (mm)



★ Piloto de cabeza saliente plana (tipo resistencia)

| ND16-22B/2                                                                        | Bombilla-Tensión                                                                                                     | Modelo                                    | Color  |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------|
|  | LED<br>6Vca/Vcc,<br>12Vca/Vcc,<br>24Vca/Vcc,<br>36Vca/Vcc,<br>48Vca/Vcc,<br>110Vca/Vcc,<br>230Vca/Vcc,<br>400Vca/Vcc | ND16-22B/2<br>ND16-22B/2K2<br>ND16-22B/2C | ○ (B)  |
|                                                                                   |                                                                                                                      |                                           | ● (V)  |
|                                                                                   |                                                                                                                      |                                           | ● (R)  |
|                                                                                   |                                                                                                                      |                                           | ● (Am) |
|                                                                                   |                                                                                                                      |                                           | ● (Az) |
|                                                                                   |                                                                                                                      |                                           | ● (Na) |

★ Piloto de cabeza saliente plana compacto (tipo resistencia)

| ND16-22BS/2                                                                       | Bombilla-Tensión                                                        | Modelo                      | Color  |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------|--------|
|  | LED<br>6Vca/Vcc,<br>12Vca/Vcc,<br>24Vca/Vcc,<br>36Vca/Vcc,<br>48Vca/Vcc | ND16-22BS/2<br>ND16-22BS/2C | ○ (B)  |
|                                                                                   |                                                                         |                             | ● (V)  |
|                                                                                   |                                                                         |                             | ● (R)  |
|                                                                                   |                                                                         |                             | ● (Am) |
|                                                                                   |                                                                         |                             | ● (Az) |
|                                                                                   |                                                                         |                             | ● (Na) |

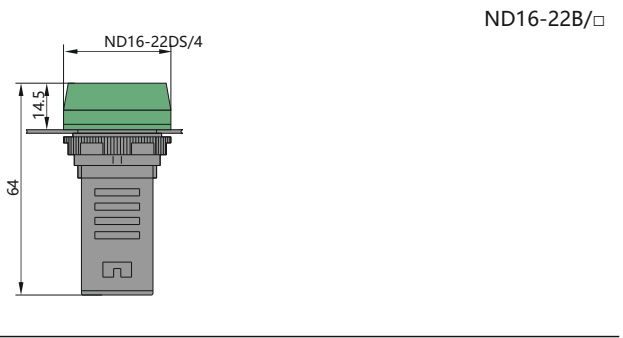
★ Piloto de cabeza saliente plana (tipo condensador)

| ND16-22B/4                                                                        | Bombilla-Tensión                    | Modelo                                    | Color  |
|-----------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------|--------|
|  | LED<br>110Vca,<br>230Vca,<br>400Vca | ND16-22B/4<br>ND16-22B/4K2<br>ND16-22B/4C | ○ (B)  |
|                                                                                   |                                     |                                           | ● (V)  |
|                                                                                   |                                     |                                           | ● (R)  |
|                                                                                   |                                     |                                           | ● (Am) |
|                                                                                   |                                     |                                           | ● (Az) |
|                                                                                   |                                     |                                           | ● (Na) |

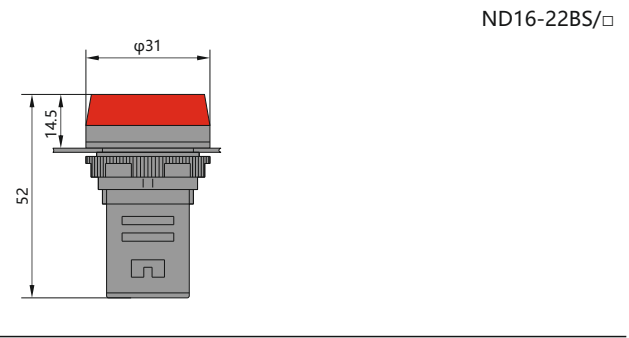
★ Piloto de cabeza saliente plana compacto (tipo condensador)

| ND16-22BS/4                                                                       | Bombilla-Tensión                    | Modelo                      | Color  |
|-----------------------------------------------------------------------------------|-------------------------------------|-----------------------------|--------|
|  | LED<br>110Vca,<br>230Vca,<br>400Vca | ND16-22BS/4<br>ND16-22BS/4C | ○ (B)  |
|                                                                                   |                                     |                             | ● (V)  |
|                                                                                   |                                     |                             | ● (R)  |
|                                                                                   |                                     |                             | ● (Am) |
|                                                                                   |                                     |                             | ● (Az) |
|                                                                                   |                                     |                             | ● (Na) |

Dimensiones (mm)



Pilotos



★ Piloto cabeza abombada (tipo resistencia)

| ND16-22C/2                                                                          | Bombilla-Tensión                                                                                                     | Modelo                     | Color  |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------|--------|
|  | LED<br>6Vca/Vcc,<br>12Vca/Vcc,<br>24Vca/Vcc,<br>36Vca/Vcc,<br>48Vca/Vcc,<br>110Vca/Vcc,<br>230Vca/Vcc,<br>400Vca/Vcc | ND16-22C/2<br>ND16-22C/2K2 | ○ (B)  |
|                                                                                     |                                                                                                                      |                            | ● (V)  |
|                                                                                     |                                                                                                                      |                            | ● (R)  |
|                                                                                     |                                                                                                                      |                            | ● (A)  |
|                                                                                     |                                                                                                                      |                            | ● (N)  |
|                                                                                     |                                                                                                                      |                            | ● (Na) |

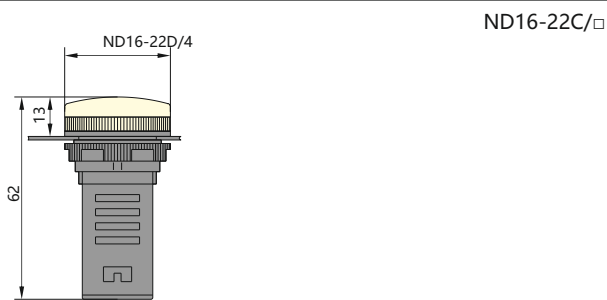
★ Piloto cabeza abombada compacto (tipo capacitancia)

| ND16-22CS/2                                                                         | Bombilla-Tensión                                                        | Modelo      | Color  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------|--------|
|  | LED<br>6Vca/Vcc,<br>12Vca/Vcc,<br>24Vca/Vcc,<br>36Vca/Vcc,<br>48Vca/Vcc | ND16-22CS/2 | ○ (B)  |
|                                                                                     |                                                                         |             | ● (V)  |
|                                                                                     |                                                                         |             | ● (R)  |
|                                                                                     |                                                                         |             | ● (A)  |
|                                                                                     |                                                                         |             | ● (N)  |
|                                                                                     |                                                                         |             | ● (Na) |

## ★ Piloto cabeza abombada (tipo capacitancia)

| ND16-22C/4                                                                        | Bombilla-Tensión                    | Modelo                     | Color                                                 |
|-----------------------------------------------------------------------------------|-------------------------------------|----------------------------|-------------------------------------------------------|
|  | LED<br>110Vca,<br>230Vca,<br>400Vca | ND16-22C/4<br>ND16-22C/4K2 | ○ (B)<br>● (V)<br>● (R)<br>● (Am)<br>● (Az)<br>● (Na) |

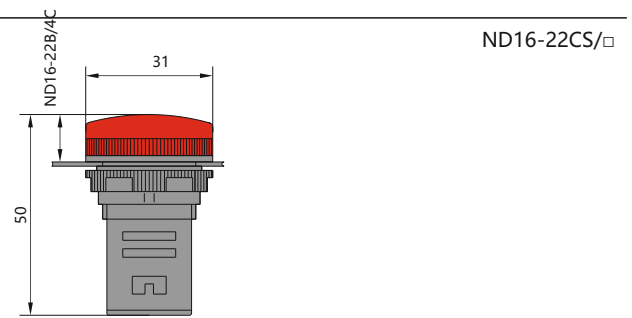
Dimensiones (mm)



## Piloto cabeza abombada compacto (tipo capacitancia)

| ND16-22CS/4                                                                       | Bombilla-Tensión                 | Modelo      | Color                                                 |
|-----------------------------------------------------------------------------------|----------------------------------|-------------|-------------------------------------------------------|
|  | LED<br>110Vca,<br>230Vca, 400Vca | ND16-22CS/4 | ○ (B)<br>● (V)<br>● (R)<br>● (Am)<br>● (Az)<br>● (Na) |

(A)



## ★ Piloto cabeza plana (tipo resistencia)

| ND16-22D/2                                                                          | Bombilla-Tensión                                                                                                      | Modelo                                    | Color                                                 |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------|
|  | LED:<br>6Vca/Vcc,<br>12Vca/Vcc,<br>24Vca/Vcc,<br>36Vca/Vcc,<br>48Vca/Vcc,<br>110Vca/Vcc,<br>230Vca/Vcc,<br>400Vca/Vcc | ND16-22D/2<br>ND16-22D/2K2<br>ND16-22D/2C | ○ (B)<br>● (V)<br>● (R)<br>● (Am)<br>● (Az)<br>● (Na) |

## ★ Piloto cabeza plana compacto (Tipo resistencia)

| ND16-22DS/2                                                                         | Bombilla-Tensión                                                         | Modelo                      | Color                                                 |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------|
|  | LED:<br>6Vca/Vcc,<br>12Vca/Vcc,<br>24Vca/Vcc,<br>36Vca/Vcc,<br>48Vca/Vcc | ND16-22DS/2<br>ND16-22DS/2C | ○ (B)<br>● (V)<br>● (R)<br>● (Am)<br>● (Az)<br>● (Na) |

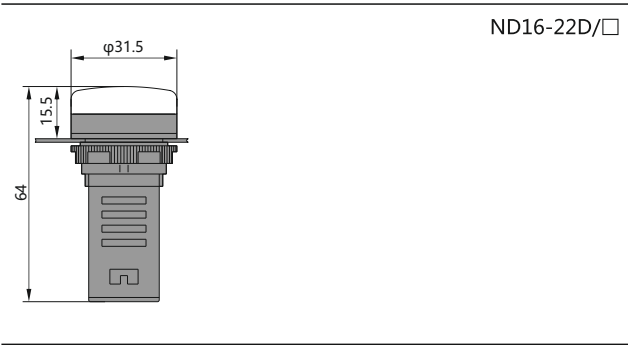
## ★ Piloto cabeza saliente abombada (tipo capacitancia)

| ND16-22D/4                                                                          | Bombilla-Tensión                    | Modelo                                    | Color                                               |
|-------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------|-----------------------------------------------------|
|  | LED<br>110Vca,<br>230Vca,<br>400Vca | ND16-22D/4<br>ND16-22D/4K2<br>ND16-22D/4C | ○ (B)<br>● (V)<br>● (R)<br>● (Y)<br>● (N)<br>● (Na) |

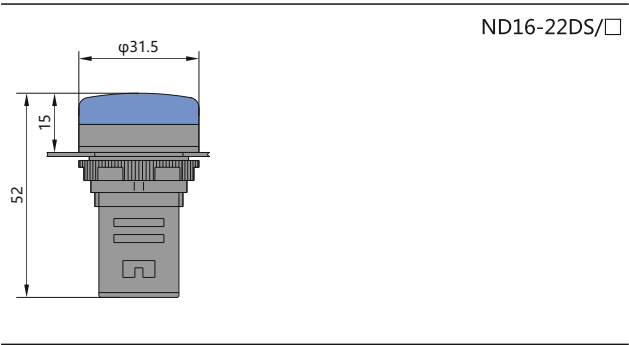
## ★ Piloto cabeza saliente abombada compacto (tipo capacitancia)

| ND16-22DS/4                                                                         | Bombilla-Tensión                    | Modelo                      | Color                                               |
|-------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|-----------------------------------------------------|
|  | LED<br>110Vca,<br>230Vca,<br>400Vca | ND16-22DS/4<br>ND16-22DS/4C | ○ (B)<br>● (V)<br>● (R)<br>● (A)<br>● (N)<br>● (Na) |

Dimensiones (mm)



Dimensiones (mm)



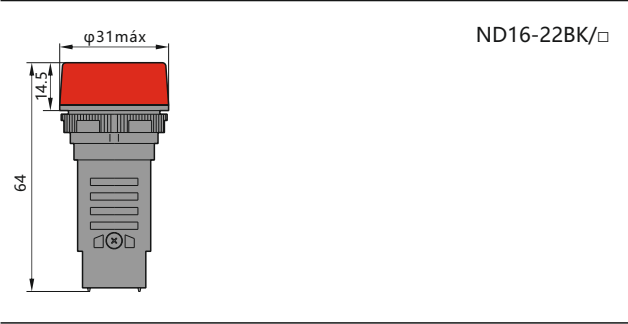
★ Tipo de conexión rápida (Tipo resistencia)

| ND16-22BK/2                                                                       | Bombilla-Tensión                                                                                                      | Modelo      | Color  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------|--------|
|  | LED:<br>6Vca/Vcc,<br>12Vca/Vcc,<br>24Vca/Vcc,<br>36Vca/Vcc,<br>48Vca/Vcc,<br>110Vca/Vcc,<br>230Vca/Vcc,<br>400Vca/Vcc | ND16-22BK/2 | ○ (B)  |
|                                                                                   |                                                                                                                       |             | ● (V)  |
|                                                                                   |                                                                                                                       |             | ● (R)  |
|                                                                                   |                                                                                                                       |             | ● (Am) |
|                                                                                   |                                                                                                                       |             | ● (Az) |
|                                                                                   |                                                                                                                       |             | ● (Na) |

★ Tipo de conexión rápida (Tipo capacitancia)

| ND16-22BK/4                                                                       | Bombilla-Tensión                     | Modelo      | Color  |
|-----------------------------------------------------------------------------------|--------------------------------------|-------------|--------|
|  | LED:<br>110Vca,<br>230Vca,<br>400Vca | ND16-22BK/4 | ○ (B)  |
|                                                                                   |                                      |             | ● (V)  |
|                                                                                   |                                      |             | ● (R)  |
|                                                                                   |                                      |             | ● (Am) |
|                                                                                   |                                      |             | ● (Az) |
|                                                                                   |                                      |             | ● (Na) |

Dimensiones (mm)



★ Sonido intermitente

| Zumbador ND16                                                                     | Modelo   | Color                                                                             | Tensión                             |
|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|-------------------------------------|
|  | ND16-22F |  | 24Vca/Vcc<br>36Vca/Vcc<br>48Vca/Vcc |
|                                                                                   |          |  | 110Vca/Vcc,<br>230Vca,<br>400Vca    |

★ Sonido intermitente y rasante

| Zumbador ND16                                                                     | Modelo    | Color                                                                               | Tensión |
|-----------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------|---------|
|  | ND16-22FS |  | P-050   |

★ Sonido continuo

| Zumbador ND16                                                                     | Modelo   | Color                                                                             | Tensión                             |
|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|-------------------------------------|
|  | ND16-22L |  | 24Vca/Vcc<br>36Vca/Vcc<br>48Vca/Vcc |
|                                                                                   |          |  | 110Vca/Vcc,<br>230Vca,<br>400Vca    |

★ Sonido continuo y luminoso

| Zumbador ND16                                                                     | Modelo    | Color                                                                               | Tensión                                                                 |
|-----------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
|  | ND16-22LC |  | 24Vca/Vcc<br>36Vca/Vcc<br>48Vca/Vcc<br>110Vca/Vcc,<br>230Vca,<br>400Vca |

Dimensiones (mm)

