

# Technical & Order Information - Indicators

The majority of Arcoelectric indicator lights can be supplied with alternative light sources:

## Neon, Fluorescent, Filament lamp or LED.

### NEON and FLUORESCENT LAMPS

#### Colors

Available with Red, Amber, Green or Clear lenses.

#### Maximum striking voltages

Standard brightness types 65Vac 90Vdc.

High brightness types 85Vac 135Vdc.

High brightness types are usually fitted.

#### Life

Typically 25,000 hours (Green fluorescent lamps 20,000 hours). (Measured to a point when the light output of the lamp is half its original level.)

The end of life for a neon lamp is not usually a sudden failure.

#### False signals due to long wiring

It is possible for neon or fluorescent tubes to glow when they should be off. The false signal is caused by the capacitance effect of fairly long wiring to the indicator being adjacent to other live cables. This effect can be prevented in most cases by fitting a 100k resistor across the supply wires close to the indicator assembly.

### MATERIALS

Moulded bodies and bases

Metal bodies and bezels

Lenses

Terminals (most types)

Terminals (exceptions)

Threaded metal nuts

Other fixings

Nylon 6.6

Chrome plated brass (except #)

Polycarbonate

Brass (electro-tin plated)

Brass (flash silver\* or nickel\*\* plated)

Brass (nickel plated on 0275/7)

Call factory for details

\* R9, 0061, 0062, 0430, 0480, 1090, 1091, 6030, 7030, 8630, 8580

\*\* # 3130, 3160, 3161, 3221 have nickel plated terminals with steel screws and plated polyamide bezel trims

### SYMBOLS



Terminals

C 6.3, H 4.8, K 2.8



Wire leads

200mm long Standard



Solid wires

LED only



Panel hole size



Panel thickness



Temperature rating

### FILAMENT LAMPS

#### Colors

Available with Red, Amber, Green, Clear or Blue lenses.

#### LEDs - DC

#### Colors

Red, Yellow, Green, Blue and White.

#### Voltage

Basic voltage 2.0/2.2V. Some items are available with integral resistors for 12V use.

For details of resistors required for higher voltages, please call the factory.

#### Current

Maximum continuous forward current 20mA.

#### Life

>100,000hrs

#### LEDs - AC

#### Colors

Red, Yellow, Green, Blue and White.

#### Voltage

Rated up to 230V ac, suitable for use at 110V and 230V ac.

#### Current

<3mA

#### Life

>100,000hrs

### TEMPERATURE RATING

| Authority | with Terminals | with Wire leads |          |
|-----------|----------------|-----------------|----------|
|           |                | PVC             | SILICONE |
| European  | T125°C         | T105°C          | T125°C   |
| UL        | T65/75°C       | T65/75°C        |          |



## ORDER FORMAT

**NL 589 WL 2G**

SERIES CODES   MODEL CODES   TERMINAL CODES   LAMP / VOLTAGE / COLOR CODES

| SERIES CODES                                 | MODEL CODES      | TERMINAL CODES          | LAMP TYPE VOLTAGE & COLOR          |                |                |                            |
|----------------------------------------------|------------------|-------------------------|------------------------------------|----------------|----------------|----------------------------|
|                                              |                  |                         | CODES for FL & LH                  | CODES for LE   | CODES for NL   |                            |
| <b>FL</b><br>Incandescent Lamps              | <b>67</b>        | <b>WL</b><br>Wire Leads | <b>Incandescent Lamps AC or DC</b> | <b>LEDs DC</b> | <b>LEDs AC</b> | <b>Neon Lamps AC or DC</b> |
|                                              | <b>81</b>        |                         |                                    |                |                |                            |
|                                              | <b>145</b>       |                         |                                    |                |                |                            |
|                                              | <b>177</b>       |                         |                                    |                |                |                            |
|                                              | <b>180</b> AA/BB |                         |                                    |                |                |                            |
|                                              | <b>195</b> 00/BB |                         |                                    |                |                |                            |
|                                              | <b>196</b>       |                         |                                    |                |                |                            |
|                                              | <b>233</b>       |                         |                                    |                |                |                            |
|                                              | <b>234</b>       |                         |                                    |                |                |                            |
|                                              | <b>245</b>       |                         |                                    |                |                |                            |
| <b>LE</b><br>LEDs                            | <b>273</b> /LL   | <b>C</b><br>6.3 Tab     | <b>LEDs DC</b>                     | <b>LEDs AC</b> | <b>LEDs AC</b> | <b>Neon Lamps AC or DC</b> |
|                                              | <b>275</b> /C    |                         |                                    |                |                |                            |
|                                              | <b>276</b>       |                         |                                    |                |                |                            |
|                                              | <b>277</b>       |                         |                                    |                |                |                            |
|                                              | <b>278</b>       |                         |                                    |                |                |                            |
|                                              | <b>568</b> A/B   |                         |                                    |                |                |                            |
|                                              | <b>569</b>       |                         |                                    |                |                |                            |
|                                              | <b>579</b>       |                         |                                    |                |                |                            |
|                                              | <b>581</b>       |                         |                                    |                |                |                            |
|                                              | <b>582</b>       |                         |                                    |                |                |                            |
| <b>NL</b><br>Neon Lamps                      | <b>586</b>       | <b>H</b><br>4.8 Tab     | <b>LEDs DC</b>                     | <b>LEDs AC</b> | <b>LEDs AC</b> | <b>Neon Lamps AC or DC</b> |
|                                              | <b>589</b>       |                         |                                    |                |                |                            |
|                                              | <b>1041</b>      |                         |                                    |                |                |                            |
|                                              | <b>1045</b>      |                         |                                    |                |                |                            |
|                                              | <b>2950</b>      |                         |                                    |                |                |                            |
|                                              | <b>2951</b>      |                         |                                    |                |                |                            |
|                                              | <b>2760</b>      |                         |                                    |                |                |                            |
|                                              | <b>2820</b>      |                         |                                    |                |                |                            |
|                                              | <b>2821</b>      |                         |                                    |                |                |                            |
|                                              | <b>2870</b>      |                         |                                    |                |                |                            |
| <b>LH</b><br>Lamp Holders<br>6, 12, 24V only | <b>3130</b>      | <b>T</b><br>Solder      | <b>LEDs DC</b>                     | <b>LEDs AC</b> | <b>LEDs AC</b> | <b>Neon Lamps AC or DC</b> |
|                                              | <b>3160</b>      |                         |                                    |                |                |                            |
|                                              | <b>3161</b>      |                         |                                    |                |                |                            |
|                                              | <b>3221</b>      |                         |                                    |                |                |                            |
|                                              | <b>61</b>        |                         |                                    |                |                |                            |
|                                              | <b>62</b>        |                         |                                    |                |                |                            |
|                                              | <b>63</b>        |                         |                                    |                |                |                            |
|                                              | <b>67</b>        |                         |                                    |                |                |                            |
|                                              | <b>382</b>       |                         |                                    |                |                |                            |
|                                              | <b>392</b>       |                         |                                    |                |                |                            |
|                                              | <b>692</b>       |                         |                                    |                |                |                            |
|                                              |                  |                         |                                    |                |                |                            |

For LH, if lamp not required, state "COLOR" only

# Indicator Lights (Neon, LED and Filament Lamp)



Approvals shown for neon versions only



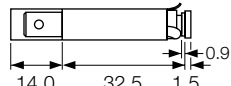
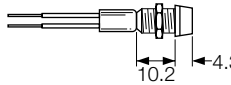
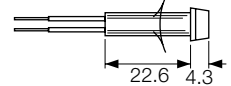
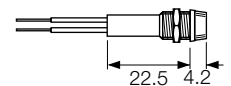
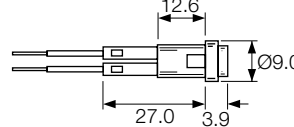
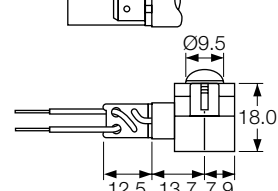
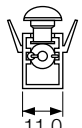
RoHS compliant

- ▶ Neon, LED, mains LED or filament lamp
- ▶ Bezel sizes from 6.7 to 16.3mm dia
- ▶ Red, amber, green and clear lenses
- ▶ Red, yellow, green, blue and white LEDs
- ▶ Wide choice of styles

ORDER FORMAT example

**NL 145 C 2R**

SERIES CODE    MODEL CODE    TERMINAL CODE    VOLTAGE & COLOR  
see p66

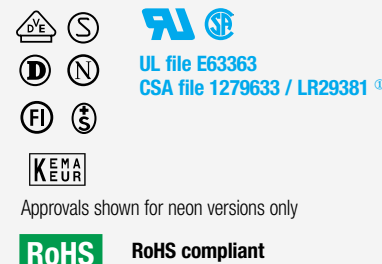
| ► SERIES    | ► MODEL                                                                                                                                                                                                                        | ► TERM                                                                                           | ► VOLTAGE, COLOR, TECHNICAL INFORMATION see p66                                             |                                                                                       |                                                                                       |                                                                                       |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| FL Filament | <b>145</b><br><br>③ ① ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿                           | <b>C</b> 6.3    |  5.8       |                                                                                       |                                                                                       |                                                                                       |
| NL Neon     |                                                                                                                                                                                                                                |                                                                                                  |  3.0max    |                                                                                       |                                                                                       |                                                                                       |
| LE LED (DC) |                                                                                                                                                                                                                                |                                                                                                  |  page 66   |    |    |                                                                                       |
| LE LED (AC) |                                                                                                                                                                                                                                |                                                                                                  |                                                                                             | 14.0 32.5 1.5 0.9                                                                     | Ø6.7                                                                                  |                                                                                       |
| FL Filament | <b>1041</b> Chrome bezel<br><br>① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿           | <b>L</b>        |  6.3       |                                                                                       |                                                                                       |                                                                                       |
| NL Neon     |                                                                                                                                                                                                                                | <b>W</b>        |  6.3max    |                                                                                       |                                                                                       |                                                                                       |
| LE LED (DC) |                                                                                                                                                                                                                                |                                                                                                  |  page 66   |    |    |                                                                                       |
|             |                                                                                                                                                                                                                                |                                                                                                  |                                                                                             | 10.2 4.3                                                                              | Ø7.6                                                                                  |                                                                                       |
| FL Filament | <b>1045</b> Chrome bezel available<br><br>③ ① ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿ | <b>L</b>      |  6.3     |                                                                                       |                                                                                       |                                                                                       |
| NL Neon     |                                                                                                                                                                                                                                | <b>W</b>      |  10.0max |                                                                                       |                                                                                       |                                                                                       |
| LE LED (DC) |                                                                                                                                                                                                                                |                                                                                                  |  page 66 |  |  |                                                                                       |
| LE LED (AC) |                                                                                                                                                                                                                                |                                                                                                  |                                                                                             | 22.6 4.3                                                                              | Ø7.6                                                                                  |                                                                                       |
| FL Filament | <b>245</b> Chrome bezel available<br><br>③ ① ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿  | <b>L</b>      |  7.1     |                                                                                       |                                                                                       |                                                                                       |
| NL Neon     |                                                                                                                                                                                                                                | <b>W</b>      |  6.3max  |                                                                                       |                                                                                       |                                                                                       |
| LE LED (AC) |                                                                                                                                                                                                                                |                                                                                                  |  page 66 |  |  |                                                                                       |
| LE LED (AC) |                                                                                                                                                                                                                                |                                                                                                  |                                                                                             | 22.5 4.2                                                                              | Ø7.6                                                                                  |                                                                                       |
| FL Filament | <b>2950</b> Chrome bezel available<br><br>③ ① ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿ | <b>L</b>      |  8.0     |                                                                                       |                                                                                       |                                                                                       |
| NL Neon     |                                                                                                                                                                                                                                |                                                                                                  |  0.8-1.6 |                                                                                       |                                                                                       |                                                                                       |
| LE LED (AC) |                                                                                                                                                                                                                                |                                                                                                  |  page 66 |  |  |                                                                                       |
| LE LED (AC) |                                                                                                                                                                                                                                |                                                                                                  |                                                                                             | 12.6 27.0 3.9 Ø9.0                                                                    | Ø7.5                                                                                  |                                                                                       |
| FL Filament | <b>195 BB</b><br><br>③ ① ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿                      | <b>L</b>      |  8.0     |                                                                                       |                                                                                       |                                                                                       |
| NL Neon     |                                                                                                                                                                                                                                | <b>C</b> 6.3  |  0.8-3.0 |                                                                                       |                                                                                       |                                                                                       |
|             |                                                                                                                                                                                                                                |                                                                                                  |  page 66 |  |  |  |
|             |                                                                                                                                                                                                                                |                                                                                                  |                                                                                             | 12.5 13.7 7.9 Ø9.5 18.0 11.0                                                          | Ø9.5                                                                                  |                                                                                       |

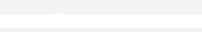
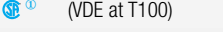
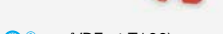
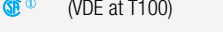
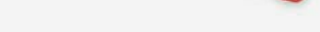
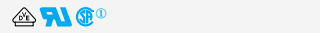
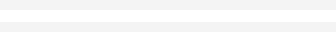
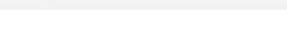
# Indicator Lights (Neon, LED and Filament Lamp)

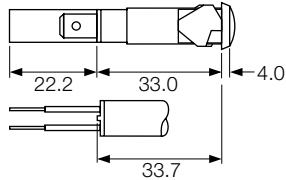
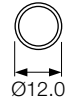
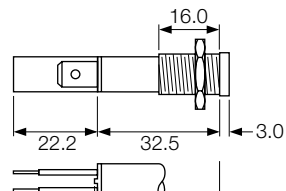
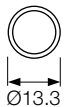
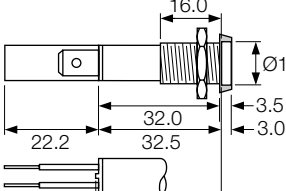
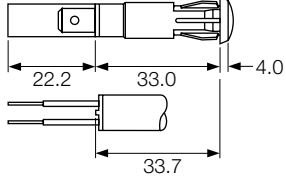
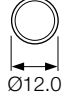
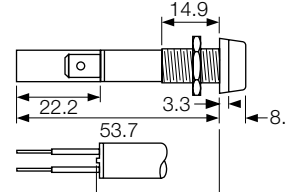
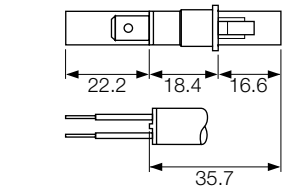
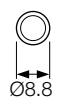
ORDER FORMAT example

**NL 2951 L 2R**  
 SERIES CODE MODEL CODE TERMINAL CODE VOLTAGE & COLOR see p66

- ▶ Neon, LED, mains LED or filament lamp
- ▶ Bezel sizes from 6.7 to 16.3mm dia
- ▶ Red, amber, green and clear lenses
- ▶ Red, yellow, green, blue and white LEDs
- ▶ Wide choice of styles



| SERIES      | MODEL                                                                               | TERM  | VOLTAGE, COLOR, TECHNICAL INFORMATION see p66 |
|-------------|-------------------------------------------------------------------------------------|-------|-----------------------------------------------|
| FL Filament | <b>2951</b> Chrome bezel available                                                  | L     | 8.0                                           |
| NL Neon     |    |       | 0.8-1.6                                       |
| LE LED (DC) |    |       | page 66                                       |
| LE LED (AC) |    |       |                                               |
| FL Filament | <b>0568A(*)</b> Deep lens profile                                                   | L     | 8.0                                           |
| NL Neon     |    | K 2.8 | 0.8-3.5                                       |
| LE LED (DC) |    | H 4.8 | page 66                                       |
|             |   |       |                                               |
| FL Filament | <b>568B(*)</b> Shallow lens profile                                                 | L     | 8.0                                           |
| NL Neon     |  | K 2.8 | 0.8-3.5                                       |
| LE LED (DC) |  | H 4.8 | page 66                                       |
|             |  |       |                                               |
| FL Filament | <b>569</b>                                                                          | L     | 9.0                                           |
| NL Neon     |  |       | 0.8-2.5                                       |
| LE LED (DC) |  |       | Call factory                                  |
| LE LED (AC) |  |       |                                               |
| FL Filament | <b>273</b>                                                                          | L     | 9.0                                           |
| NL Neon     |  | K 2.8 | 2.0 max                                       |
| LE LED (DC) |  | H 4.8 | page 66                                       |
| LE LED (AC) |  | C 6.3 |                                               |
| FL Filament | <b>278</b>                                                                          | L     | 9.0                                           |
| NL Neon     |  | K 2.8 | 2.0 max                                       |
| LE LED (DC) |  | H 4.8 | page 66                                       |
| LE LED (AC) |  | C 6.3 |                                               |

| SERIES      | MODEL                                                                                                           | TERM                                                                                             | VOLTAGE, COLOR, TECHNICAL INFORMATION see p66                                                |                                                                                                                                  |                                                                                                |
|-------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| FL Filament | <b>276</b><br>                 | <b>L</b>        |  9.5        |                                               | <br>Ø12.0   |
| NL Neon     |                                                                                                                 | <b>K 2.8</b>    |  0.8-2.8    |                                                                                                                                  |                                                                                                |
| LE LED (DC) |                                                                                                                 | <b>H 4.8</b>    |  page 66    |                                                                                                                                  |                                                                                                |
| LE LED (AC) |                                                                                                                 | <b>C 6.3</b>    |                                                                                              |                                                                                                                                  |                                                                                                |
| FL Filament | <b>275</b><br>                 | <b>L</b>        |  10.0       |                                              | <br>Ø13.3   |
| NL Neon     |                                                                                                                 | <b>K 2.8</b>    |  12.0 max   |                                                                                                                                  |                                                                                                |
| LE LED (DC) |                                                                                                                 | <b>H 4.8</b>    |  page 66    |                                                                                                                                  |                                                                                                |
| LE LED (AC) |                                                                                                                 | <b>C 6.3</b>   |                                                                                              |                                                                                                                                  |                                                                                                |
| FL Filament | <b>275C</b> Chrome bezel<br> | <b>L</b>      |  10.0     |                                             | <br>Ø15.6 |
| NL Neon     |                                                                                                                 | <b>K 2.8</b>  |  11.5 max |                                                                                                                                  |                                                                                                |
| LE LED (DC) |                                                                                                                 | <b>H 4.8</b>  |  page 66  |                                                                                                                                  |                                                                                                |
| LE LED (DC) |                                                                                                                 | <b>C 6.3</b>  |                                                                                              |                                                                                                                                  |                                                                                                |
| FL Filament | <b>2760</b><br>              | <b>L</b>      |  10.0     |                                             | <br>Ø12.0 |
| NL Neon     |                                                                                                                 | <b>K 2.8</b>  |  2.8 max  |                                                                                                                                  |                                                                                                |
| LE LED (DC) |                                                                                                                 | <b>H 4.8</b>  |  page 66  |                                                                                                                                  |                                                                                                |
| LE LED (AC) |                                                                                                                 | <b>C 6.3</b>  |                                                                                              |                                                                                                                                  |                                                                                                |
| FL Filament | <b>277</b> Chrome bezel<br>  | <b>L</b>      |  10.0     |                                             | <br>Ø14.6 |
| NL Neon     |                                                                                                                 | <b>K 2.8</b>  |  12.0 max |                                                                                                                                  |                                                                                                |
| LE LED (DC) |                                                                                                                 | <b>H 4.8</b>  |  page 66  |                                                                                                                                  |                                                                                                |
| LE LED (AC) |                                                                                                                 | <b>C 6.3</b>  |                                                                                              |                                                                                                                                  |                                                                                                |
| FL Filament | <b>273LL</b><br>             | <b>L</b>      |  10.0     | <br>For sub-panel mounting, behind a facia. | <br>Ø8.8  |
| NL Neon     |                                                                                                                 | <b>K 2.8</b>  |  0.6-2.0  |                                                                                                                                  |                                                                                                |
| LE LED (DC) |                                                                                                                 | <b>H 4.8</b>  |  page 66  |                                                                                                                                  |                                                                                                |
| LE LED (AC) |                                                                                                                 | <b>C 6.3</b>  |                                                                                              |                                                                                                                                  |                                                                                                |

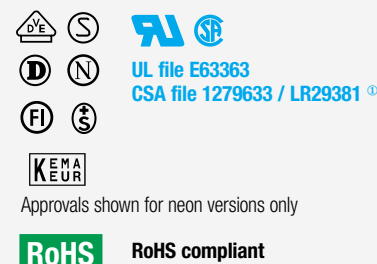
# Indicator Lights (Neon, LED and Incandescent Lamp)

ORDER FORMAT example

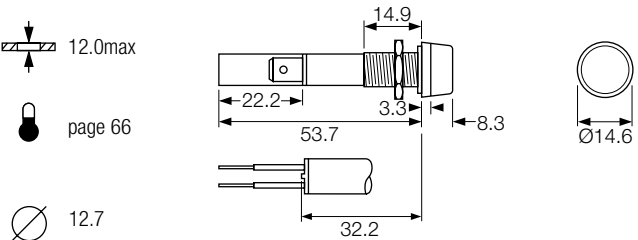
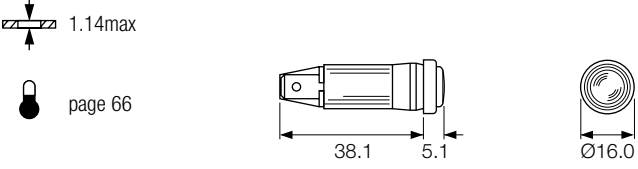
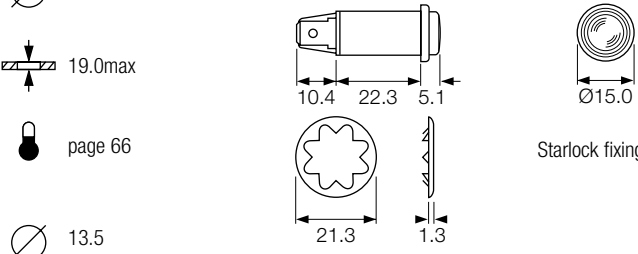
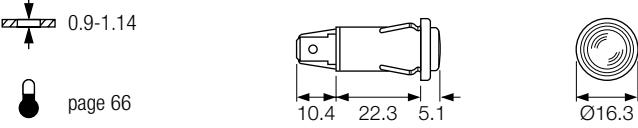
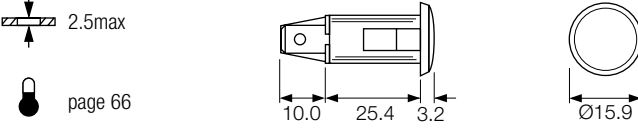
**NL 2820 C 2R**

SERIES CODE    MODEL CODE    TERMINAL CODE    VOLTAGE & COLOR  
see p66

- ▶ Neon, LED, mains LED or filament lamp
- ▶ Bezel sizes from 6.7 to 16.3mm dia
- ▶ Red, amber, green and clear lenses
- ▶ Red, yellow, green, blue and white LEDs
- ▶ Wide choice of styles



| SERIES             | MODEL                  | TERM         | VOLTAGE, COLOR, TECHNICAL INFORMATION see p66 |                 |               |         |
|--------------------|------------------------|--------------|-----------------------------------------------|-----------------|---------------|---------|
| <b>FL</b> Filament | <b>2820</b>            | <b>L</b>     |                                               | 12.0            |               |         |
| <b>NL</b> Neon     |                        | <b>K 2.8</b> |                                               | 0.75-2.0        |               |         |
| <b>LE</b> LED (DC) |                        | <b>H 4.8</b> |                                               | page 66         |               |         |
| <b>LE</b> LED (AC) |                        | <b>C 6.3</b> |                                               |                 | 10.0 22.8 5.0 | Ø13.6   |
| <b>FL</b> Filament | <b>2821</b>            | <b>L</b>     |                                               | 12.0 or 12.7    |               |         |
| <b>NL</b> Neon     |                        | <b>K 2.8</b> |                                               | Ø12.0 = 0.8-2.5 |               |         |
| <b>LE</b> LED (DC) |                        | <b>H 4.8</b> |                                               | Ø12.7 = 1.1-2.5 |               |         |
| <b>LE</b> LED (AC) |                        | <b>C 6.3</b> |                                               | page 66         | 10.0 22.8 1.6 | Ø14.5   |
| <b>FL</b> Filament | <b>586</b>             | <b>L</b>     |                                               | 12.5            |               |         |
| <b>NL</b> Neon     |                        | <b>K 2.8</b> |                                               | 0.8-1.5         |               |         |
| <b>LE</b> LED (DC) |                        | <b>H 4.8</b> |                                               | page 66         |               |         |
| <b>LE</b> LED (AC) |                        | <b>C 6.3</b> |                                               |                 | 10.0 25.1 1.8 | 15.5 Sq |
| <b>FL</b> Filament | <b>2870</b>            | <b>L</b>     |                                               | 12.7            |               |         |
| <b>NL</b> Neon     |                        | <b>K 2.8</b> |                                               | 0.75-2.0        |               |         |
| <b>LE</b> LED (DC) |                        | <b>H 4.8</b> |                                               | page 66         |               |         |
| <b>LE</b> LED (AC) |                        | <b>C 6.3</b> |                                               |                 | 9.9 22.8 5.0  | Ø13.6   |
| <b>FL</b> Filament | <b>589</b>             | <b>L</b>     |                                               | 12.7            |               |         |
| <b>NL</b> Neon     |                        | <b>K 2.8</b> |                                               | 0.8-1.5         |               |         |
| <b>LE</b> LED (DC) |                        | <b>H 4.8</b> |                                               | page 66         |               |         |
|                    |                        | <b>C 6.3</b> |                                               |                 | 10.5 21.6 3.2 | Ø15.9   |
| <b>FL</b> Filament | <b>81</b> Chrome bezel | <b>L</b>     |                                               | 12.7            |               |         |
| <b>NL</b> Neon     |                        |              |                                               | 9.5             |               |         |
| <b>LE</b> LED (DC) |                        |              |                                               | page 66         | 18.0 11.4     | Ø16.0   |
| <b>LE</b> LED (AC) |                        |              |                                               |                 |               | Ø18.3   |

| SERIES      | MODEL                                                                                                                                                                                                      | TERM  | VOLTAGE, COLOR, TECHNICAL INFORMATION see p66                                       |                                                                                              |                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| FL Filament | <b>177</b><br><br>Chrome bezel<br>       | L     |    |  12.7       |    |
| NL Neon     |                                                                                                                                                                                                            | K 2.8 |    |  12.0max    |                                                                                      |
| LE LED (DC) |                                                                                                                                                                                                            | H 4.8 |    |  page 66    |                                                                                      |
| LE LED (AC) |                                                                                                                                                                                                            | C 6.3 |    |                                                                                              |                                                                                      |
| FL Filament | <b>67</b><br><br>Chrome bezel<br>       | L     |    |  12.7       |   |
| NL Neon     |                                                                                                                                                                                                            | K 2.8 |    |  1.14max    |                                                                                      |
| LE LED (DC) |                                                                                                                                                                                                            | H 4.8 |    |  page 66    |                                                                                      |
| LE LED (AC) |                                                                                                                                                                                                            | C 6.3 |   |                                                                                              |                                                                                      |
| FL Filament | <b>180AA</b><br><br>                 | L     |  |  12.7     |  |
| NL Neon     |                                                                                                                                                                                                            | K 2.8 |  |  19.0max  |                                                                                      |
| LE LED (DC) |                                                                                                                                                                                                            | H 4.8 |  |  page 66  |                                                                                      |
|             |                                                                                                                                                                                                            | C 6.3 |  |                                                                                              |                                                                                      |
| FL Filament | <b>180BB</b><br><br>Chrome bezel<br> | L     |  |  13.5     |  |
| NL Neon     |                                                                                                                                                                                                            | K 2.8 |  |  0.9-1.14 |                                                                                      |
| LE LED (DC) |                                                                                                                                                                                                            | H 4.8 |  |  page 66  |                                                                                      |
|             |                                                                                                                                                                                                            | C 6.3 |  |                                                                                              |                                                                                      |
| FL Filament | <b>579</b><br><br>                   | L     |  |  14.0     |  |
| LE LED      |                                                                                                                                                                                                            | K 2.8 |  |  2.5max   |                                                                                      |
| LE LED (DC) |                                                                                                                                                                                                            | H 4.8 |  |  page 66  |                                                                                      |
| LE LED (AC) |                                                                                                                                                                                                            | C 6.3 |  |                                                                                              |                                                                                      |

# Indicator Lights (Neon, LED and Incandescent Lamp)

▶ **ORDER FORMAT** **example**

**NL 581AY H 2R**

SERIES CODE    MODEL CODE    TERMINAL CODE    VOLTAGE & COLOR  
see p66

- ▶ Neon, LED, mains LED or filament lamp
- ▶ Bezel sizes from 6.7 to 16.3mm dia
- ▶ Red, amber, green and clear lenses
- ▶ Red, yellow, green, blue and white LEDs
- ▶ Wide choice of styles

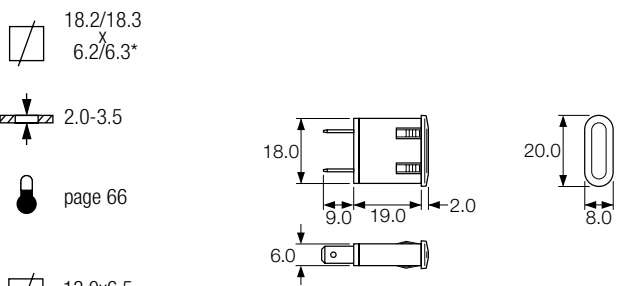
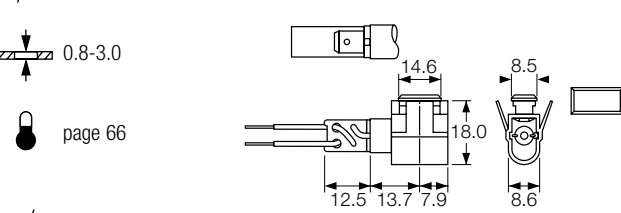
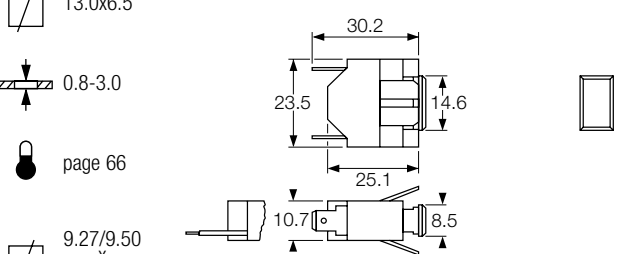
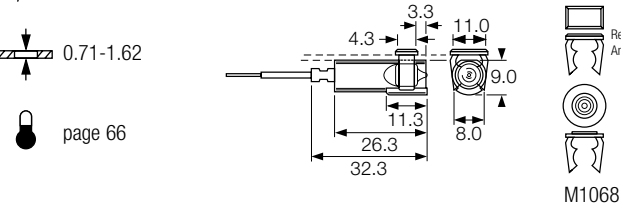
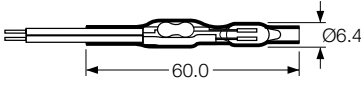


UL file E63363  
CSA file 1317844 / 1279633 ®

Approvals shown for neon versions only



RoHS compliant

| SERIES      | MODEL        | TERM  | VOLTAGE, COLOR, TECHNICAL INFORMATION see p66                                                                                                                                                                                                                                   |
|-------------|--------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FL Filament | <b>581AY</b> | H 4.8 |                                                                                                              |
| NL Neon     |              |       |                                                                                                                                                                                                                                                                                 |
|             |              |       |                                                                                                                                                                                                                                                                                 |
|             |              |       |                                                                                                                                                                                                                                                                                 |
| FL Filament | <b>195</b>   | L     |                                                                                                             |
| NL Neon     |              |       |                                                                                                                                                                                                                                                                                 |
|             |              |       |                                                                                                                                                                                                                                                                                 |
|             |              |       |                                                                                                                                                                                                                                                                                 |
| FL Filament | <b>196</b>   | L     |                                                                                                          |
| NL Neon     |              |       |                                                                                                                                                                                                                                                                                 |
|             |              |       |                                                                                                                                                                                                                                                                                 |
|             |              |       |                                                                                                                                                                                                                                                                                 |
| NL Neon     | <b>234</b>   | L     |   <p>L77 Red &amp; Amber<br/>Red only<br/>M1068</p>                                                      |
|             |              |       |                                                                                                                                                                                                                                                                                 |
|             |              |       |                                                                                                                                                                                                                                                                                 |
|             |              |       |                                                                                                                                                                                                                                                                                 |
| NL Neon     | <b>233</b>   | L     |   <p>Neon tube, resistor and flexible lead assembly, protected by "shrunk on" transparent sleeving.</p> |
|             |              |       |                                                                                                                                                                                                                                                                                 |
|             |              |       |                                                                                                                                                                                                                                                                                 |
|             |              |       |                                                                                                                                                                                                                                                                                 |

# Indicator Lights

(To match 8500, 8600, R13, 1500, 1550, 5500, 6000, 8300 and 7000 switches)

## Colors and voltages:

### Neon

Red, Amber Green, Clear  
100/130V (marked 110V), 200/250V (marked 230V)

### LED

Red, Yellow, Green  
2.0/2.2V. Resistors for other voltages available

### Filament lamp

Red, Amber, Green, Clear and Blue  
6V, 12/14V, 24/28V

- Indicator lights
- Neon or filament lamp
- Bezel sizes from 6.7 to 16.3mm dia
- Red, amber green and clear neons
- Red, amber and green filament lamps
- Styles to match rocker and push



Approvals shown for neon versions only



RoHS compliant

| TERM | MODEL |
|------|-------|
|------|-------|

**H 4.8**

**H8580 AB**

**H 4.8**

**T**

**X**

**H8630 FB**

**H 4.8**

**R9 92B**

Approvals details - contact the factory

**C 6.3**

**H 4.8**

**K 2.8**

**T** **U**

**C0430 A(\*)** **C6030 AL**

6030 - L body & C terminals only

**C 6.3**

**H 4.8**

**K 2.8**

**T** **U**

**C0480 A(\*)**

**C 6.3**

**H 4.8**

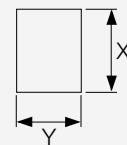
**C7030 AH**

## DIMENSIONS (mm)

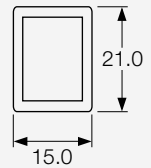
Full product details on pages 10-11

| Body Code | Panel thickness | Cut-out   |           |
|-----------|-----------------|-----------|-----------|
|           |                 | X         | Y         |
| <b>B</b>  | 0.75-1.25       | 19.1/19.2 | 12.9/13.0 |
|           | 1.25-2.0        | 19.3/19.4 | 12.9/13.0 |
|           | 2.0-3.0         | 19.7/19.8 | 12.9/13.0 |

### Cut-out



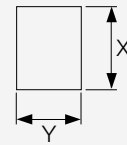
### Flange



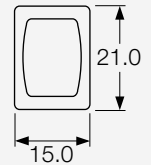
Full product details on pages 12-13

| Body Code | Panel thickness | Cut-out   |           |
|-----------|-----------------|-----------|-----------|
|           |                 | X         | Y         |
| <b>B</b>  | 0.75-1.25       | 19.1/19.2 | 12.9/13.0 |
|           | 1.25-2.0        | 19.3/19.4 | 12.9/13.0 |
|           | 2.0-3.0         | 19.7/19.8 | 12.9/13.0 |

### Cut-out



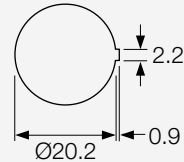
### Flange



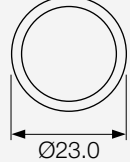
Full product details on pages 29

Snap fixing in panels thickness up to 3.0

### Cut-out



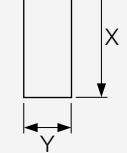
### Flange



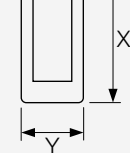
Full product details on pages 16-17 & 20-21

| Body *Code | Cut-out   |           | Flange |      |
|------------|-----------|-----------|--------|------|
|            | Y         | X         | Y      | X    |
| <b>A</b>   | 12.2/12.3 | 27.2/27.3 | 14.0   | 30.2 |
| <b>B</b>   | 11.0/11.1 | 30.0/30.1 | 14.0   | 33.4 |
| <b>L</b>   | 11.0/11.1 | 30.0/30.1 | 14.0   | 31.9 |
| <b>R</b>   | 14.0/14.1 | 28.5/28.6 | 17.0   | 31.5 |
| <b>T</b>   | 11.5/11.6 | 28.2/28.3 | 14.0   | 30.2 |

### Cut-out



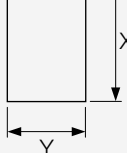
### Flange



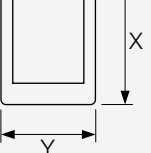
Full product details on pages 26-27

| Body *Code | Cut-out   |           | Flange |      |
|------------|-----------|-----------|--------|------|
|            | Y         | X         | Y      | X    |
| <b>A</b>   | 22.3/22.4 | 27.2/27.3 | 25.0   | 30.2 |
| <b>B</b>   | 22.1/22.2 | 30.0/30.1 | 25.0   | 33.4 |
| <b>L</b>   | 22.1/22.2 | 30.0/30.1 | 25.0   | 32.0 |
| <b>R</b>   | 23.0/25.4 | 28.4/28.5 | 28.9   | 33.2 |
| <b>T</b>   | 22.3/22.4 | 28.2/28.3 | 25.0   | 30.2 |

### Cut-out



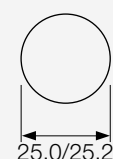
### Flange



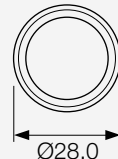
Full product details on pages 40-41

| Body Code | Cut-out    | Flange |
|-----------|------------|--------|
| <b>H</b>  | Ø25.0/25.2 | Ø28.0  |

### Cut-out



### Flange



# Neon & LED Indicator Lights Sealed to IP52 and IP54

▶ **ORDER FORMAT** example

**NL 3130 S 2R**

SERIES CODE    MODEL CODE    TERMINAL CODE    VOLTAGE & COLOR see p 66

- ▶ IP52 and IP54 sealing
- ▶ Three bezel sizes: 18.0, 20.5 and 30.0 dia.
- ▶ Neon or LED indicator
- ▶ Black and satin chrome bezel or without bezel
- ▶ Recessed screw terminals



Approval shown for neon versions only



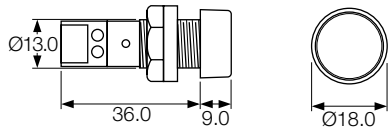
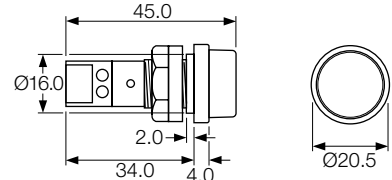
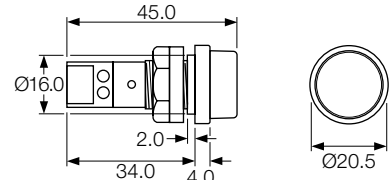
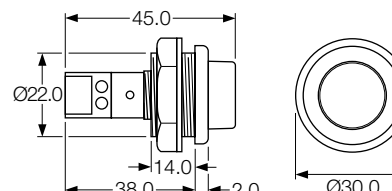
**RoHS compliant**

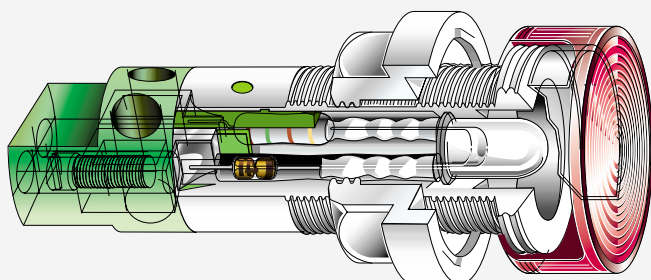
Neon versions feature integral current limiting & ghost lighting resistors.

LED versions have rectifier diodes & resistors for direct connection to 28Vac/dc.

IP52 is standard.

A panel sealing washer is available for IP54

| ▶ SERIES       | ▶ MODEL                                                                             | ▶ TERM                                                                                                | ▶ VOLTAGE & COLOR see p66        | ▶ SEALING OPTION<br>State IP52 or IP54                                                |
|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------|
| <b>LE</b> LED  | <b>3130</b> No bezel                                                                | <b>S</b>                                                                                              | 13.2                             |                                                                                       |
| <b>NL</b> Neon |    | <br>Recessed Screw   | 8.0max<br>120°C neon<br>50°C LED |    |
| <b>LE</b> LED  | <b>3160</b> Black bezel                                                             | <b>S</b>                                                                                              | 16.2                             |                                                                                       |
| <b>NL</b> Neon |    | <br>Recessed Screw   | 5.0max<br>120°C neon<br>50°C LED |   |
| <b>LE</b> LED  | <b>3161</b> Satin chrome style bezel                                                | <b>S</b>                                                                                              | 16.2                             |                                                                                       |
| <b>NL</b> Neon |  | <br>Recessed Screw | 5.0max<br>55°C neon<br>50°C LED  |  |
| <b>LE</b> LED  | <b>3221</b> Large black bezel                                                       | <b>S</b>                                                                                              | 22.3                             |                                                                                       |
| <b>NL</b> Neon |  | <br>Recessed Screw | 4.5max<br>120°C neon<br>50°C LED |  |



Select the version most suitable for your application from the 4 types shown.  
Or call the factory for availability to your special requirements.