

# 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	

## NL 589 WL 2G

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

### ORDER FORMAT

SERIES CODES	MODEL CODES	TERMINAL CODES	CODES for FL & LH	LAMP TYPE VOLTAGE & COLOR CODES for LE	CODES for NL	
<b>FL</b> Incandescent Lamps	67 81 145 177 180 AA/BB 195 OO/BB 196 233 234 245 273 /LL 275 /C 276 277 278 568 A/B	<b>WL</b> Wire Leads	<b>Incandescent Lamps AC or DC</b> 7A is 12V Amber 7B is 12V Blue 7C is 12V Clear 7G is 12V Green 7R is 12V Red	<b>LEDs DC</b> 3900 is 1.7V Red 3901 is 2.2V Amber 3902 is 2.1V Green  39006 is 6V Red 39016 is 6V Amber 39026 is 6V Green  39007 is 12V Red 39017 is 12V Amber 39027 is 12V Green  39008 is 24V Red 39018 is 24V Amber 39028 is 24V Green	<b>LEDs AC</b> 5A is 125-250V Amber 5B is 125-250V Blue 5C is 125-250V Clear 5G is 125-250V Green 5R is 125-250V Red	<b>Neon Lamps AC or DC</b> 2A is 105-130V Amber 2C is 105-130V Clear 2G is 105-130V Green 2R is 105-130V Red  3A is 250V Amber 3C is 250V Clear 3G is 250V Green 3R is 250V Red
<b>LE</b> LEDs	569 579 581 582 586 589 1041 1045 2950 2951 2760 2820 2821 2870 3130 3160 3161 3221	<b>C</b> 6.3 Tab	<b>8A is 24V Amber</b> 8B is 24V Blue 8C is 24V Clear 8G is 24V Green 8R is 24V Red			
<b>NL</b> Neon Lamps		<b>H</b> 4.8 Tab				
<b>LH</b> Lamp Holders 6, 12, 24V only	61 62 63 67 382 392 692	<b>T</b> Solder				

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

# Indicator Lights (Neon, LED and Filament Lamp)



UL file E63363  
CSA file 1279633 / LR29381<sup>®</sup>



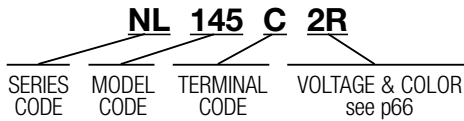
Approvals shown for neon versions only



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

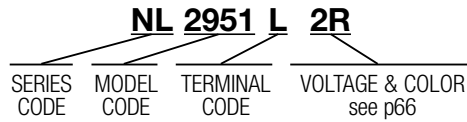
**ORDER FORMAT example**







SERIES	MODEL	TERM	VOLTAGE, COLOR, TECHNICAL INFORMATION see p66
FL Filament	<b>145</b> 	<b>C</b> 6.3	
NL Neon			
LE LED (DC)			
LE LED (AC)			
FL Filament	<b>1041</b> Chrome bezel 	<b>L</b>	
NL Neon		<b>W</b>	
LE LED (DC)			
LE LED (AC)			
FL Filament	<b>1045</b> Chrome bezel available 	<b>L</b>	
NL Neon		<b>W</b>	
LE LED (DC)			
LE LED (AC)			
FL Filament	<b>245</b> Chrome bezel available 	<b>L</b>	
NL Neon		<b>W</b>	
LE LED (AC)			
LE LED (AC)			
FL Filament	<b>2950</b> Chrome bezel available 	<b>L</b>	
NL Neon			
LE LED (AC)			
LE LED (AC)			
FL Filament	<b>195 BB</b> 	<b>L</b>	
NL Neon		<b>C</b> 6.3	
LE LED (AC)			
LE LED (AC)			

# Indicator Lights (Neon, LED and Filament Lamp)



▶ **ORDER FORMAT** **example**




- ▶ 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
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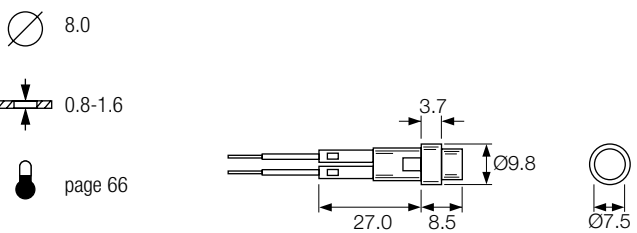


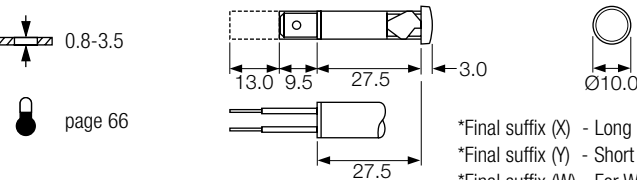


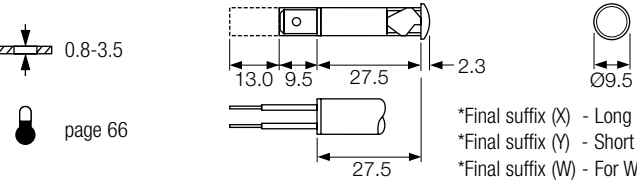


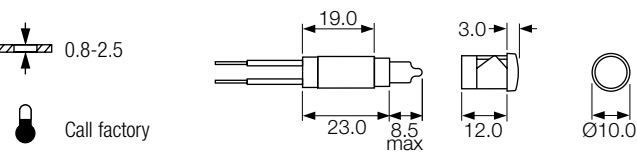





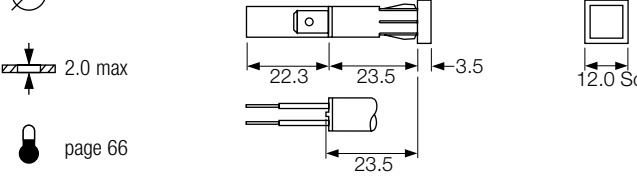


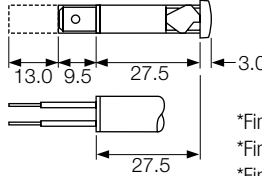









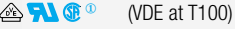
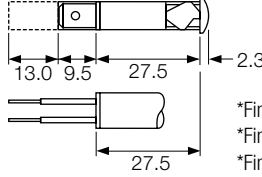








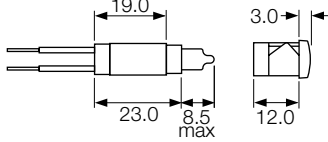











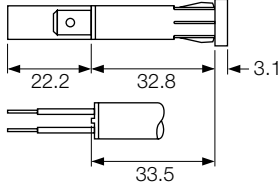











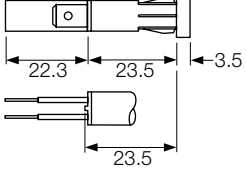

UL file E63363  
CSA file 1279633 / LR29381 ®



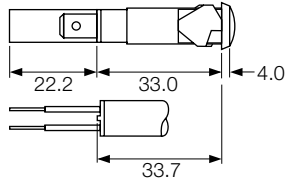






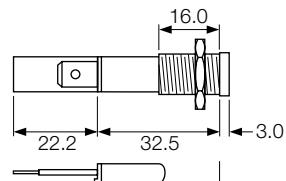






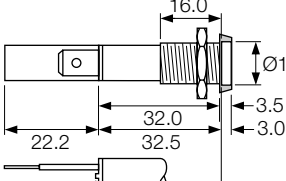






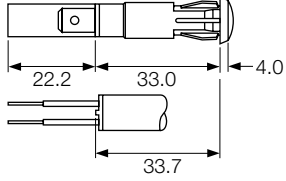






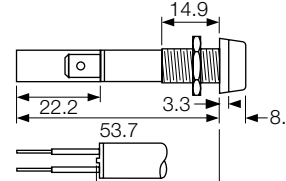






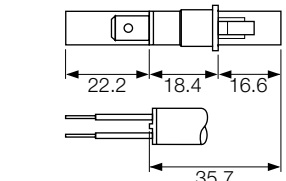









Approvals shown for neon versions only


**RoHS compliant**

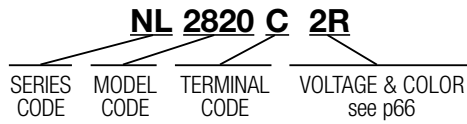
SERIES	MODEL	TERM	VOLTAGE, COLOR, TECHNICAL INFORMATION see p66
<b>FL</b> Filament	<b>2951</b> Chrome bezel available	<b>L</b> 	 8.0
<b>NL</b> Neon			 0.8-1.6
<b>LE</b> LED (DC)			 page 66
<b>LE</b> LED (AC)			
			 
<b>FL</b> Filament	<b>0568A(*)</b> Deep lens profile	<b>L</b> 	 8.0
<b>NL</b> Neon		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

SERIES	MODEL	TERM	VOLTAGE, COLOR, TECHNICAL INFORMATION see p66		
FL Filament	<b>276</b> 	L 	$\varnothing$ 9.5		
NL Neon		K 2.8 	0.8-2.8		
LE LED (DC)		H 4.8 			
LE LED (AC)		C 6.3 	page 66		
FL Filament	<b>275</b> 	L 	$\varnothing$ 10.0		
NL Neon		K 2.8 	12.0 max		
LE LED (DC)		H 4.8 			
LE LED (AC)		C 6.3 	page 66		
FL Filament	<b>275C</b> Chrome bezel 	L 	$\varnothing$ 10.0		
NL Neon		K 2.8 	11.5 max		
LE LED (DC)		H 4.8 			
LE LED (DC)		C 6.3 	page 66		
FL Filament	<b>2760</b> 	L 	$\varnothing$ 10.0		
NL Neon		K 2.8 	2.8 max		
LE LED (DC)		H 4.8 			
LE LED (AC)		C 6.3 	page 66		
FL Filament	<b>277</b> Chrome bezel 	L 	$\varnothing$ 10.0		
NL Neon		K 2.8 	12.0 max		
LE LED (DC)		H 4.8 			
LE LED (AC)		C 6.3 	page 66		
FL Filament	<b>273LL</b> 	L 	$\varnothing$ 10.0		
NL Neon		K 2.8 	0.6-2.0		
LE LED (DC)		H 4.8 			
LE LED (AC)		C 6.3 	page 66		

For sub-panel mounting, behind a facia.

# Indicator Lights (Neon, LED and Incandescent Lamp)

ORDER FORMAT example





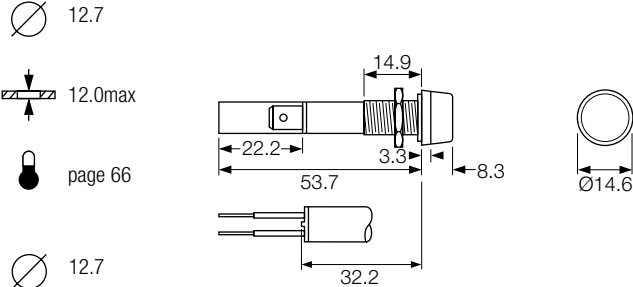





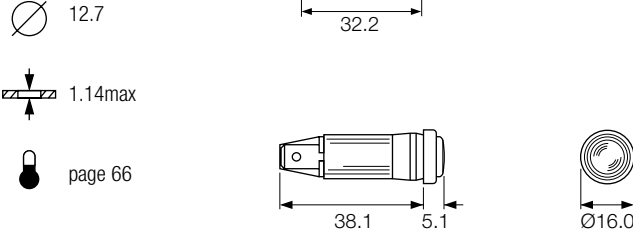





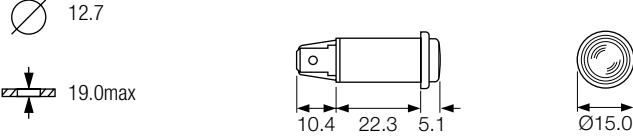





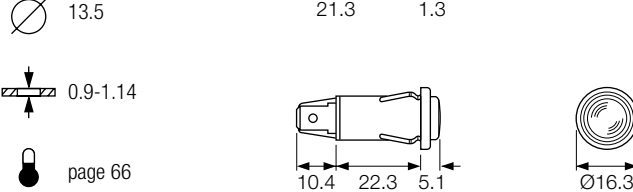





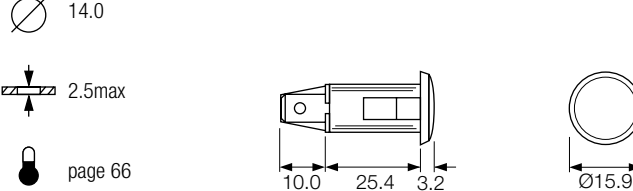



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UL file E63363
   
CSA file 1279633 / LR29381

Approvals shown for neon versions only

RoHS compliant

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

SERIES	MODEL	TERM	VOLTAGE, COLOR, TECHNICAL INFORMATION see p66
FL Filament	<b>177</b> Chrome bezel 	L 	
NL Neon		K 2.8 	
LE LED (DC)		H 4.8 	
LE LED (AC)		C 6.3 	
FL Filament	<b>67</b> Chrome bezel 	L 	
NL Neon		K 2.8 	
LE LED (DC)		H 4.8 	
LE LED (AC)		C 6.3 	
FL Filament	<b>180AA</b> 	L 	
NL Neon		K 2.8 	
LE LED (DC)		H 4.8 	
		C 6.3 	
FL Filament	<b>180BB</b> Chrome bezel 	L 	
NL Neon		K 2.8 	
LE LED (DC)		H 4.8 	
		C 6.3 	
FL Filament	<b>579</b> 	L 	
LE LED		K 2.8 	
LE LED (DC)		H 4.8 	
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





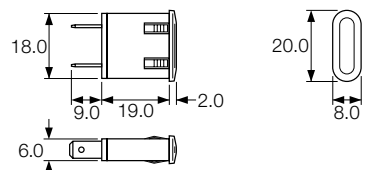

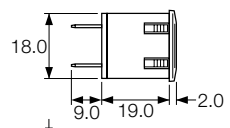
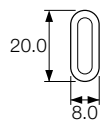







- ▶ Neon, LED, mains LED or filament lamp
- ▶ Bezel sizes from 6.7 to 16.3mm dia
- ▶ Red, amber, green and clear lenses
- ▶ Red, yellow, green, blue and white LEDs
- ▶ Wide choice of styles

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  C 6.3 		
NL Neon				
NL Neon	<b>234</b>  	L 		
NL Neon				
NL Neon	<b>233</b> 	L 		
NL Neon				
				<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:

<b>Neon</b>	Red, Amber Green, Clear 100/130V (marked 110V), 200/250V (marked 230V)
<b>LED</b>	Red, Yellow, Green 2.0/2.2V. Resistors for other voltages available
<b>Filament lamp</b>	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



UL file E63363  
CSA file LR29381



Approvals shown for neon versions only



RoHS compliant

TERM	MODEL
------	-------

H 4.8		<b>H8580 AB</b>	
			
			
			
			
			
			
			
			

H 4.8		<b>H8630 FB</b>	
T			
X			
			
			
			
			
			
			

H 4.8		<b>R9 92B</b>	
			
			
			
			
			
			
			
			

Approvals details - contact the factory

C 6.3		<b>C0430 A(*)</b>	<b>C6030 AL</b>		
H 4.8					
K 2.8					
T					
					
					
					
					
					

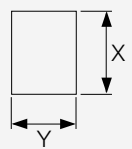
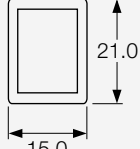
6030 - L body & C terminals only

C 6.3		<b>C0480 A(*)</b>	
H 4.8			
K 2.8			
T			
			
			
			
			
			

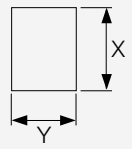
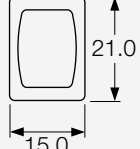
C 6.3		<b>C7030 AH</b>	
H 4.8			
			
			
			

## DIMENSIONS (mm)

Full product details on pages 10-11

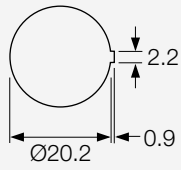
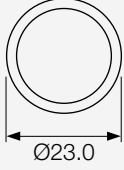
Body Code	Panel thickness	Cut-out		Cut-out	Flange
		X	Y		
B	0.75-1.25	19.1/19.2	12.9/13.0		
	1.25-2.0	19.3/19.4	12.9/13.0		
	2.0-3.0	19.7/19.8	12.9/13.0		

Full product details on pages 12-13

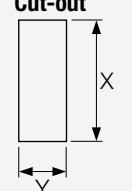
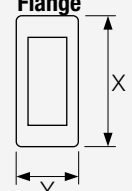
Body Code	Panel thickness	Cut-out		Cut-out	Flange
		X	Y		
B	0.75-1.25	19.1/19.2	12.9/13.0		
	1.25-2.0	19.3/19.4	12.9/13.0		
	2.0-3.0	19.7/19.8	12.9/13.0		

Full product details on pages 29

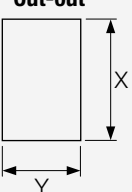
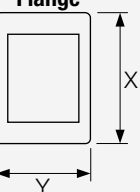
Snap fixing in panels thickness up to 3.0

Cut-out	Flange
	

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

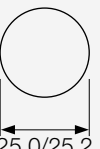
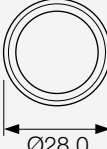
Body *Code	Cut-out		Flange		Cut-out	Flange
	Y	X	Y	X		
A	12.2/12.3	27.2/27.3	14.0	30.2		
B	11.0/11.1	30.0/30.1	14.0	33.4		
L	11.0/11.1	30.0/30.1	14.0	31.9		
R	14.0/14.1	28.5/28.6	17.0	31.5		
T	11.5/11.6	28.2/28.3	14.0	30.2		

Full product details on pages 26-27

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

Full product details on pages 40-41

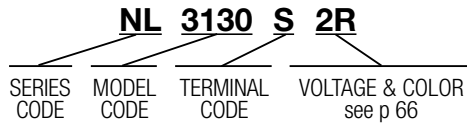
Body Code	Cut-out	Flange
H	Ø25.0/25.2	Ø28.0



# Neon & LED Indicator Lights Sealed to IP52 and IP54

▶ **ORDER FORMAT example**



- ▶ 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





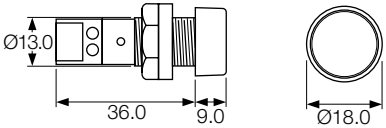



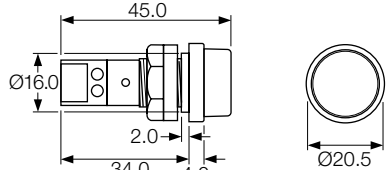



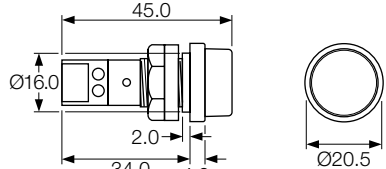



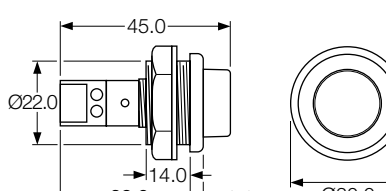

**RoHS compliant**

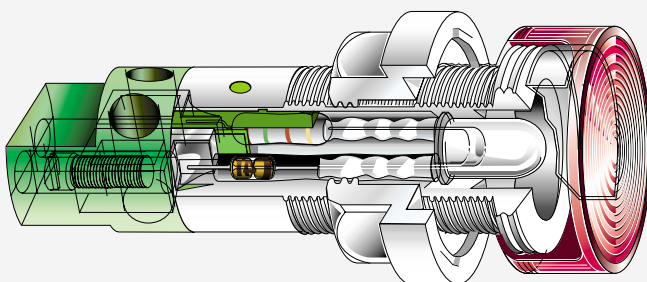
Neon versions feature integral current limiting & ghost lighting resistors.

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 State IP52 or IP54
LE LED	<b>3130</b> No bezel 	<b>S</b>  Recessed Screw	13.2 8.0max 120°C neon 50°C LED	
NL Neon				
LE LED	<b>3160</b> Black bezel 	<b>S</b>  Recessed Screw	16.2 5.0max 120°C neon 50°C LED	
NL Neon				
LE LED	<b>3161</b> Satin chrome style bezel 	<b>S</b>  Recessed Screw	16.2 5.0max 55°C neon 50°C LED	
NL Neon				
LE LED	<b>3221</b> Large black bezel 	<b>S</b>  Recessed Screw	22.3 4.5max 120°C neon 50°C LED	
NL Neon				



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



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**Электронная почта:** [sales@st-electron.ru](mailto:sales@st-electron.ru)

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Промышленная ул, дом № 19, литера Н,  
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