13MM PILOT LIGHTS

series 13

c3controls' line of 13mm LED Pilot Lights utilize traffic-signal LED technology for superior visibility and brightness, even in direct sunlight. Each light comes with internal resistors to match various AC and DC voltages, and are available with self-lifting captive saddle clamps or integral wire leads for easy wiring. All light units come standard with Type 4/4X ingress protection.
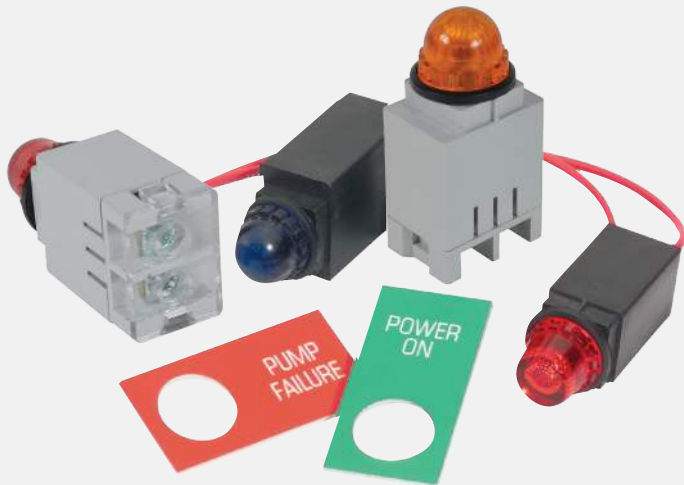
PROVEN

c(UL)us   CE

Conformity to Standards:
UL 508
CSA C22.2 No. 14

IEC 60947-1, 60947-5-1

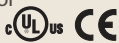Visit www.c3controls.com to download product certifications.

Certifications:
UL File #: E68568 (Guide NKCR, NKCR7)
CE Marked (per EU Low Voltage Directive 2006/E5/EC and RoHS Directive 2011/65/EU)

NOTE: The scope (range, description, price, specifications, dimensions, etc.) of the product featured in this section is subject to change without notice. Refer to www.c3controls.com for product updates.

13MM PILOT LIGHTS

All our products are fully certified, rated, and backed by our limited lifetime warranty to meet the needs of the machine builder, and our 13mm Pilot Lights are no exception. Check out the incredible features in the chart below!

DURABLE AND EFFICIENT LIGHTS FOR YOUR SMALLEST APPLICATIONS

✓ **Proven**	Our 13mm pilot lights are UL Listed, CE Marked, and are rated Type 4/4X as standard for watertight and corrosion resistance. Also rated for Type 1, 2, 3, 3R, 12 & 13 and IP20.
✓ **Compact Design**	Our 13mm LED pilot lights have the shortest depth behind the panel of any Type 1, 2, 3, 3R, 4, 4X, 12 & 13 and IP20 rated lights in the industry!
✓ **Heavy Duty**	Polyester construction provides superior durability, corrosion resistance, moisture rejection and electrical insulation.
✓ **Multiple Applications**	Light units come with internal resistors to match various AC and DC voltages.
✓ **Quick and Simple**	Front panel mounting for simple installation.
✓ **Simple Customization**	Various lens color options are available for appropriate operator interface and our light units come in neon or LED.
✓ **Low Energy Consumption**	c3controls 13mm LED Pilot Lights utilize traffic signal LED technology for superior visibility and brightness, even in direct sunlight. LED lamps last 100,000 hours—that's 11.4 years!
✓ **Quality Materials**	c3controls selects the highest quality raw materials to ensure our products outlast the competition, including Lexan™ plastic for our lenses—improving visibility and resistance to high impact for reliable performance, even in high ambient temperatures.
✓ **Convenience**	Each light unit is provided with a dress ring/panel gasket to accommodate a 1/2″ (13mm) mounting hole dimension and is designed to be mounted in panels up to 1/8″ (3mm) thick.
✓ **Limited Lifetime Warranty***	Every product is backed by our limited lifetime warranty—unmatched in the industry—bringing you quality components that perform in the most demanding applications.
✓ **Guaranteed Same-Day Shipping***	Product availability reduces inventory, and improves cash-flow—saving you money. With c3controls any order for standard catalog items received by 6:00pm ET is guaranteed to ship same-day.
✓ **Advantage Pricing**	Our approach to product development, manufacturing, and focus on servicing the OEM and Electrical Equipment Builder reduces cost. The result—the best value in the industry.

*See c3controls Terms & Conditions

> "c3controls engineers solid products that look good in a panel, and when you turn the panel on for the first time, it works every time. The clients are happy, we are happy, and that's why we've stuck with c3controls."

Al Doberstein, President • **Total Control Systems, Inc.**

13MM PILOT LIGHTS

Wire Lead Pilot Light

Screw Terminal Pilot Light

UNIQUE PRODUCT LINE FEATURES

COMPACT DESIGN

Behind the panel dimensions as small as 3/4" x 1-5/64" (19.1mm x 27.4mm).

WIDE RANGE OF VOLTAGES

Our 13mm pilot lights have a voltage range from 6V to 480V.

FLEXIBILITY

Our customers have the flexibility to order standard screw terminals or custom length factory installed wire leads.

ENHANCED SAFETY

A field installable IP20 terminal guard is available for enhanced safety and protection.

BI-POLAR DESIGN

Our 13mm LED Pilot Lights are designed for bi-polar installation for all AC and DC voltages, making installation even easier.

LEGEND PLATES
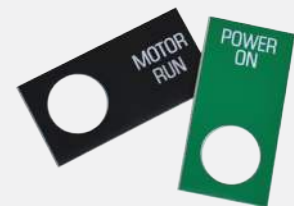
Standard or custom legend plates are available.

FIND IT FAST

13mm Pilot Lights

- Certifications
- Specifications
- Dimension Drawings
- Installation Instructions
- Easy to Buy

www.c3controls.com

IT'S EASY TO BUILD YOUR OWN PILOT LIGHT

Simply pick the code number from each of the sections below and combine them to build your part number.

Indicating Lights (Non-Relampable)

| I | II | III | IV | V | – 13 | VII | VIII | – | IX |

Example: To build one of our most popular Pilot Lights, the part number would be **I + II + III + IV + V + 13 + VII + VIII** or **13SBLG120WL-13GNR**
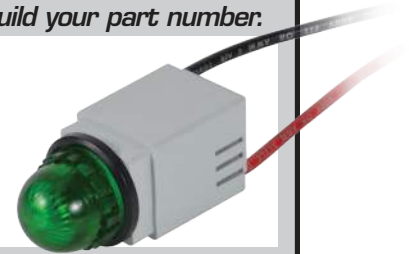
I. LIGHT UNIT BASE

CODE	DESCRIPTION	LIST
13SB	13mm Super Bright LED	$24.00
13N	13mm Neon	$16.00

II. LAMP TYPE/COLOR

CODE	DESCRIPTION
	LED*
LA	Amber
LB	Blue
LG	Green
LR	Red
LW	White
	*NOTE: Only to be used with an LED Light Unit Base.
	NEON†
G	Green
R	Red
	†NOTE: Only to be used with a Neon Light Unit Base.

III. VOLTAGE BASED ON LIGHT UNIT BASE

CODE	DESCRIPTION
	LED*
6	6V AC/DC
12	12V AC/DC
24	24V AC/DC
120	120V AC/DC
240	240V AC
	*NOTE: Only to be used with an LED Light Unit Base and LED Lamp.
	NEON†
120	120V AC/DC
240	240V AC/DC
480	480V AC/DC
	†NOTE: Only to be used with a Neon Light Unit Base and Neon Lamp.

IV. TERMINAL STYLE

CODE	DESCRIPTION
ST	Screw Terminal
WL	Wire Lead

V. WIRE LENGTH

CODE	DESCRIPTION	LIST/INCH
(Blank)	Both Leads 6" (152.4mm) [Standard]	—
*	Lead Length in inches [Non-Standard]	$ 0.10

*NOTE: Internal wire leads are available in non-standard custom lengths and various wire color options, including different lengths on the same light. To order, non-standard lead lengths designate length in inches for "Code". Example: Code 36 would represent a 3 ft. lead length.

For different length leads on the same indicating light consult factory.

Custom wire leads are not available for guaranteed same-day shipping.

DISCOUNT SCHEDULE E

VI. LENS

CODE	DESCRIPTION	LIST
13	13mm Indicating Light Lens	$ 2.00

VII. LENS COLOR

CODE	COLOR
AR	Amber
BE	Blue
CR	Clear
GN	Green
RD	Red
WE	White

NOTE: See chart below for recommended lamp/lens color combinations.

VIII. LENS TYPE

CODE	DESCRIPTION
R	Round
F	Flat

IX. OPTIONS

CODE	DESCRIPTION	LIST
(Blank)	None	—
IP20	IP20 Guard	$ 4.00

NOTE: Only to be used with an LED light unit base with screw terminals.

RECOMMENDED LAMP/LENS COLOR COMBINATIONS

LAMP	RECOMMENDED LENS COLORS
LED Amber	Amber or Clear
LED Blue	Blue or Clear
LED Green	Green or Clear
LED Red	Red or Clear
LED White	White or Clear
Neon Green	Green or Clear
Neon Red	Red, Amber or Clear

13MM INDICATING LIGHTS

Our 13mm low-cost Indicating Lights come complete with internal resistor(s) to match various AC and DC voltages. Each unit is provided with a dress ring/panel gasket to accommodate a 1/2" (13mm) mounting hole dimension and is designed to be mounted in panels up to 1/8" (3mm) thick. Conventional front panel mounting simplifies installation. Our 13mm indicating lights are UL Listed and are rated Type 4/4X as standard for watertight and corrosion resistance. In addition, light units are also listed for Type 1, 2, 3, 3R, 12 & 13 and IP20. All wire lead units are supplied with #22 AWG wire (0.5 - 4mm²) leads, 6" (152.4mm) long and stripped 1/2" (13mm). Custom lengths and various wire color options are available, please consult factory.

Product features include:

- Wider voltage operating range, up to 240V for LED construction.
- Industry leading shortest depth behind the panel.
- Polyester construction provides superior corrosion resistance, moisture rejection and electrical insulation.
- Our rugged Lexan™ lenses can resist high impact for reliable performance in most environments — even in high ambient temperatures.

UNIQUE PRODUCT FEATURES

SCREW TERMINAL

Self-lifting captive saddle terminal screws accommodate #22 through two #12 AWG wires (0.5 - 4mm²) per terminal to provide easy wiring in a broad range of applications. The terminals are arranged for straight through wiring so that bare wire may be "bussed" to multiple light installations providing significant labor savings. These units will also accept "ring" and "fork" connectors. Now available with optional IP20 protection

WIRE LEAD

Wire leads are supplied standard at 6" (152.4mm) length. They are also available in any specified length including different lengths on the same light (additional charge for non-standard length: $0.10 per inch after the standard first 6" (152.4mm), e.g., 12" (304.8mm) length wire lead = $0.60). This ability to quickly and economically "customize" to match specific wiring applications can provide major installation cost savings. For LEDs, the positive lead is red and the negative lead is black. For Neon, both wire leads are red. *While standard 6" wire leads are available for guaranteed same day shipping, our custom wire leads are not–please consult factory.*

SOME OF OUR POPULAR CONFIGURATIONS:

13MM INDICATING LIGHTS		
PART NUMBER	**DESCRIPTION**	**LIST**
13SBLR120ST-13RDR	120V Super Bright Red LED w/Screw Terminal and Red Round Lens	$26.00
13SBLG120WL-13GNF	120V Super Bright Green LED w/Wire Lead Terminal and Green Flat Lens	$26.00
13SBLA120ST-13ARR	120V Super Bright Amber LED w/Screw Terminal and Amber Round Lens	$26.00

MIX AND MATCH ANY COLOR AND INDICATING LIGHT LENS

Round Lens

Flat Lens

IT'S EASY TO BUILD YOUR OWN LEGEND PLATE

Simply pick the code number from each of the sections below and combine them to build your part number.

Legend Plates

```
[ I ]  [ II ]  – [ III ] – [ IV ]
```

All legend plates are a 2-ply laminated plastic, laser engraved for a permanent and quality appearance. Uppercase is standard unless specified.

I. LEGEND PLATE TYPE

CODE	DESCRIPTION	LIST
13MLLP	Standard 2"h x 2"w	$5.80
13MLLPH	Horizontal 1"h x 2"w	$5.80
13MLLPV	Vertical 2"h x 1"w	$5.80

Legend plates feature 4 lines of text with approximately 7 characters per line.

II. FACE AND LETTER COLOR

CODE	FACE COLOR	LETTER COLOR
AL	Aluminum	Black
(Blank)	Black	White
BE	Blue	White
GN	Green	White
RD	Red	White
WE	White	Black
YW	Yellow	Black

III. LEGEND DESIGNATION

CODE	DESCRIPTION
00	(BLANK)
01	AUTO
02	CLOSE
26	MOTOR RUN
12	OFF
13	ON
14	OPEN
27	OVERLOAD
15	POWER OFF
16	POWER ON
18	RESET
20	RUN
24	TEST
29	TRIP

IV. ADHESIVE BACK

CODE	DESCRIPTION
(Blank)	No Adhesive Back
A	Adhesive Back

Not finding what you need in a standard plate?

We offer Special and Custom Engraving up to 12" x 24" (304.8mm x 609.6mm). Consult factory or see page 402 for details.

While our standard legend plates are available for same day shipping, our special and custom legend plates are not.

DISCOUNT SCHEDULE E

CLAMP RING WRENCH

To simplify tightening and loosening of standard clamp rings. Also recommended for installing unassembled lenses. It will not scratch your lens or panel.

CODE	DESCRIPTION	LIST
13CRW	13mm Clamp Ring Wrench	$16.00

DRESS RING/PANEL GASKET

Our 5/8" panel gasket accommodates 5/8" - 21/32" (15.9mm - 16.7mm) mounting hole dimensions. NOTE: All 13mm c3controls products come standard with a 1/2" (13mm) gasket to accommodate 9/16" (12.7mm - 14.3mm) mounting hole dimensions.

CODE	DESCRIPTION	LIST
13PG5/8	5/8" (15.9mm) Panel Gasket	$ 2.00

IP20 TERMINAL GUARD

Our IP20 terminal guard protects against accidental contact with live parts and can be ordered separately as an accessory or factory installed providing the convenience of a single catalog number.

CODE	FOR USE WITH	LIST
13IP20	13mm Light Modules with Screw Terminals	$ 4.00

DISCOUNT SCHEDULE E

IT'S EASY TO BUILD YOUR OWN LEGEND PLATE

Simply pick the code number from each of the sections below and combine them to build your part number.

Special Legend Plates

☐ ☐ – **SP** – ☐
I II III IV

All legend plates are a 2-ply laminated plastic, laser engraved for a permanent and quality appearance. Uppercase is standard unless specified.

I. LEGEND PLATE TYPE

CODE	DESCRIPTION	LIST
13MLLP	Standard 2"h x 2"w	$ 5.80
13MLLPH	Horizontal 1"h x 2"w	$ 5.80
13MLLPV	Vertical 2"h x 1"w	$ 5.80

Legend plates feature 4 lines of text with approximately 7 characters per line.

II. FACE AND LETTER COLOR

CODE	FACE COLOR	LETTER COLOR
AL	Aluminum	Black
(Blank)	Black	White
BE	Blue	White
GN	Green	White
RD	Red	White
WE	White	Black
YW	Yellow	Black

III. LEGEND DESIGNATION

CODE	DESCRIPTION	LIST
SP	Special Legend	$14.00

NOTE: $6.00 each when ordering 3 or more of the same exact legend plate.

IV. ADHESIVE BACK

CODE	DESCRIPTION
(Blank)	No Adhesive Back
A	Adhesive Back

Upon receipt of your order, legend plates will be set-up as specified and a proof will be sent to you prior to production to ensure accuracy.

To order, submit your drawing to:

Mail: c3controls
Attn: Customer First
PO Box 496
Beaver, PA 15009

Fax: 724.775.5283

Email: legendplates@c3controls.com

To help simplify your order process, templates are available by calling our factory at 724.775.7926 or reference one of the drawings shown on page 405.

Special legend plates are not available for same day shipping.

DISCOUNT SCHEDULE E

(Sample custom plate)

CUSTOM LEGEND PLATES

- ***Add your Corporate Logo!*** Send us your corporate logo electronically to promote your company image in a clean professional legend plate.
- Available in 2-ply 12" x 24" (304.8mm x 609.6mm) sheets of laminated plastic for custom laser engraving.
- To order, specify part number 13MLLP-CP (no adhesive back) or 13MLLP-CP-A (adhesive back).
- Initial Set-Up Fee Per Legend Plate: $50/hour (minimum fee $50.00).
- $2.00/Square Inch (minimum $18.00).
- Design services available. Consult factory for details and hourly rate.
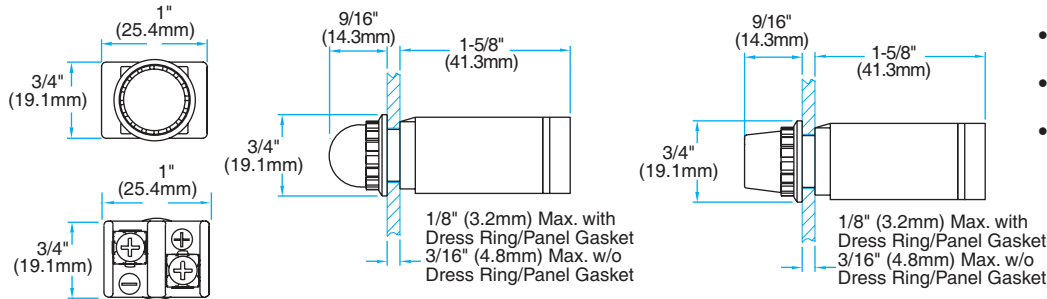- Custom legend plates are not available for same-day shipping.

To order, submit your drawing to:

Mail: c3controls
Attn: Customer First
PO Box 496
Beaver, PA 15009

Fax: 724.775.5283

Email: legendplates@c3controls.com

SPECIFICATIONS:

13MM INDICATING LIGHTS							
	UNITS						
ELECTRICAL RATINGS							
		Lamp Type	**Rated Volts**	**Lumens (MSCD)**	**Design Life (Hrs.)**	**Current Draw (mA)**	**Shock & Vibration**
		LED	6V†	Very Bright. Varies w/ Color 2000 mcd	100,000	20-50	Excellent
		LED	12V†		100,000	20-30	Excellent
		LED	24V†		100,000	25	Excellent
		LED	120V†		100,000	12	Excellent
		LED	240V†		100,000	25	Excellent
		Neon	120V	Typical (Glows)	25,000	2	Very Good
		Neon	240V	Typical (Glows)	25,000	2	Very Good
		Neon	480V	Typical (Glows)	25,000	2	Very Good
† LED voltage tolerance is +/- 10%							
DIELECTRIC STRENGTH (TERMINAL TO GROUND)		1960V for 1 Minute					
ENVIRONMENTAL RATINGS							
Operators		Rated and Certified for use in Type 1, 2, 3, 3R, 4/4X, 12 & 13 and IP20					
Operating Temperature	°F / °C	-40 to +131 / -40 to +55					
Storage Temperature	°F / °C	-40 to +185 / -40 to +85					
TERMINAL & WIRING CONSIDERATION (SCREW TERMINATION)							
AWG Conductor		22-12 CU (Copper Only)					
Solid Strand Conductor*	mm²	.5 ~ 4					
Fine Strand Conductor*	mm²	.5 ~ 4					
Recommended Torque	Lb-in.	7 (+3.0/-0.0)					
	Nm	.8					
*One or Two wires permitted per termination							
MATERIALS							
Operator Housings		Thermoplastic Polyester and Polyester Blends - (UV Stabilized for outdoor use)					
Structural Parts		Thermoplastic Polyester and Polyester Blends - (UV Stabilized for outdoor use)					
Terminal Supports		Thermoplastic Polyester and Polyester Blends - (UV Stabilized for outdoor use)					
Pilot Light Lens		High Impact Polycarbonate - (UV Stabilized for outdoor use)					
Seals		Thermoplastic - Elastomer Molded Seals					
Terminations		Brass (Not Plated Brass)					
Terminal Screws		Plated Steel - Self Lifting Clamps					
ROHS COMPLIANCE		For RoHS compliance documentation by product, refer to www.c3controls.com.					

NEON TERMINAL SCREW INDICATING LIGHT

1"
(25.4mm)

3/4"
(19.1mm)

1"
(25.4mm)

3/4"
(19.1mm)

9/16"
(14.3mm)

1-5/8"
(41.3mm)

3/4"
(19.1mm)

1/8" (3.2mm) Max. with
Dress Ring/Panel Gasket
3/16" (4.8mm) Max. w/o
Dress Ring/Panel Gasket

9/16"
(14.3mm)

1-5/8"
(41.3mm)

3/4"
(19.1mm)

1/8" (3.2mm) Max. with
Dress Ring/Panel Gasket
3/16" (4.8mm) Max. w/o
Dress Ring/Panel Gasket
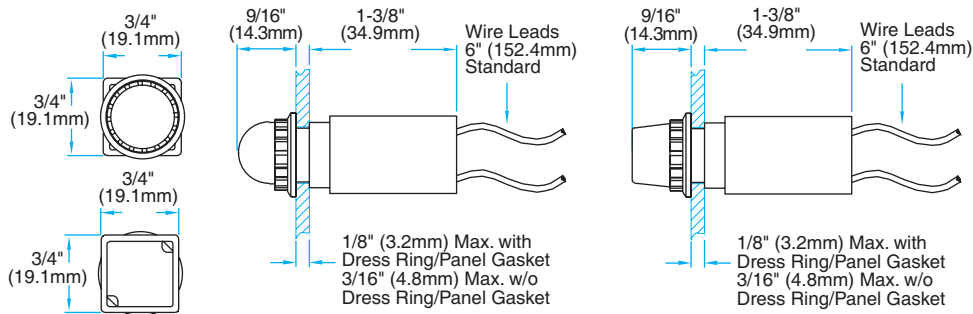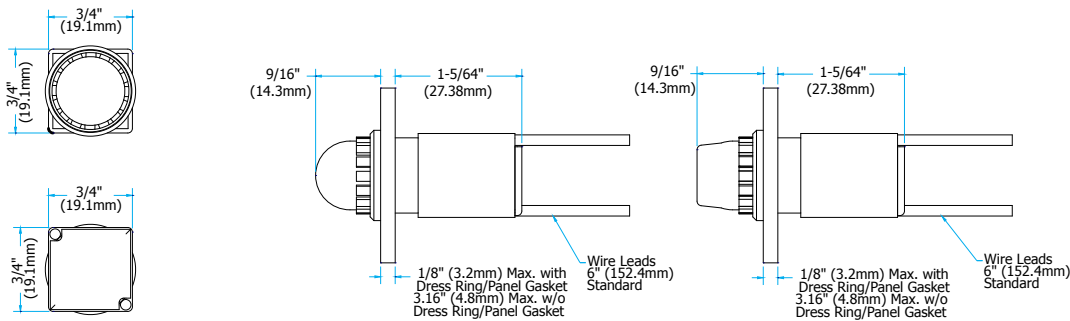
- Mounting hole in panel – 1/2" (13mm).
- Terminals accept #22 to two #12 AWG wires (0.5 - 4mm²).
- In order to meet Type 4/4X requirements, the gasket supplied must be used.

NEON WIRE LEAD INDICATING LIGHT

3/4"
(19.1mm)

3/4"
(19.1mm)

3/4"
(19.1mm)

3/4"
(19.1mm)

9/16"
(14.3mm)

1-3/8"
(34.9mm)

Wire Leads
6" (152.4mm)
Standard

1/8" (3.2mm) Max. with
Dress Ring/Panel Gasket
3/16" (4.8mm) Max. w/o
Dress Ring/Panel Gasket

9/16"
(14.3mm)

1-3/8"
(34.9mm)

Wire Leads
6" (152.4mm)
Standard

1/8" (3.2mm) Max. with
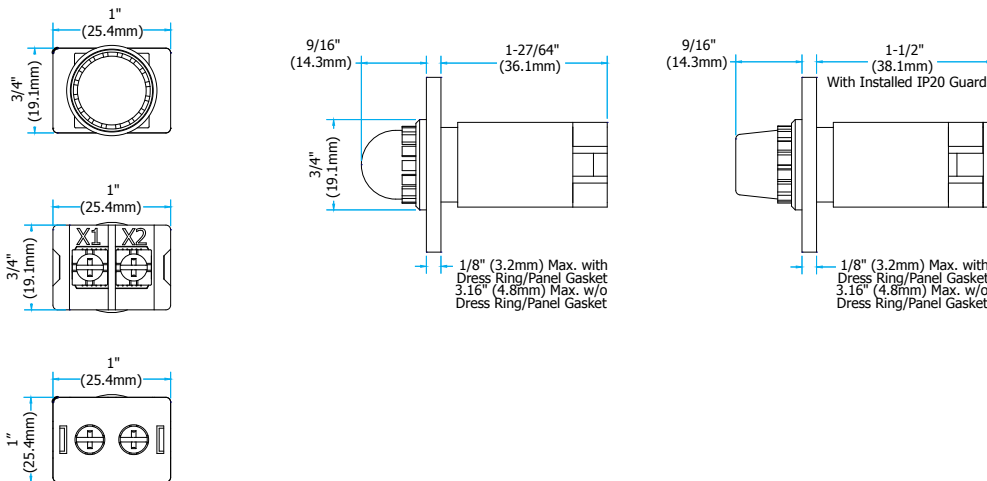Dress Ring/Panel Gasket
3/16" (4.8mm) Max. w/o
Dress Ring/Panel Gasket

- Mounting hole in panel – 1/2" (13mm).
- Terminals accept #22 to two #12 AWG wires (0.5 - 4mm²).
- In order to meet Type 4/4X requirements, the gasket supplied must be used.
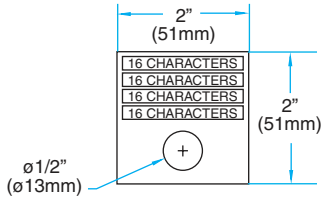
LED WIRE LEAD INDICATING LIGHT

3/4"
(19.1mm)

3/4"
(19.1mm)

3/4"
(19.1mm)

3/4"
(19.1mm)

9/16"
(14.3mm)

1-5/64"
(27.38mm)

1/8" (3.2mm) Max. with
Dress Ring/Panel Gasket
3.16" (4.8mm) Max. w/o
Dress Ring/Panel Gasket

Wire Leads
6" (152.4mm)
Standard

9/16"
(14.3mm)

1-5/64"
(27.38mm)

1/8" (3.2mm) Max. with
Dress Ring/Panel Gasket
3.16" (4.8mm) Max. w/o
Dress Ring/Panel Gasket

Wire Leads
6" (152.4mm)
Standard

LED TERMINAL SCREW INDICATING LIGHT

1"
(25.4mm)

3/4"
(19.1mm)

1"
(25.4mm)

X1 X2

3/4"
(19.1mm)

1"
(25.4mm)

1"
(25.4mm)

9/16"
(14.3mm)

1-27/64"
(36.1mm)

3/4"
(19.1mm)

1/8" (3.2mm) Max. with
Dress Ring/Panel Gasket
3.16" (4.8mm) Max. w/o
Dress Ring/Panel Gasket

9/16"
(14.3mm)

1-1/2"
(38.1mm)
With Installed IP20 Guard

1/8" (3.2mm) Max. with
Dress Ring/Panel Gasket
3.16" (4.8mm) Max. w/o
Dress Ring/Panel Gasket

LEGEND PLATES

**STANDARD 2" X 2"
(13MLLP)**

2"
(51mm)

| 16 CHARACTERS |
| 16 CHARACTERS |
| 16 CHARACTERS |
| 16 CHARACTERS |

2"
(51mm)

ø1/2"
(ø13mm)

**HORIZONTAL 1" X 2"
(13MLLPH)**

2"
(51mm)

1"
(25mm)

| 7 CHAR. |
| 7 CHAR. |
| 7 CHAR. |
| 7 CHAR. |

1/2"
(13mm)

1/2"
(13mm)

**VERTICAL 2" X 1"
(13MLLPV)**

1"
(25mm)

| 7 CHAR. |
| 7 CHAR. |
| 7 CHAR. |
| 7 CHAR. |

2"
(51mm)

1/2"
(13mm)

1/2"
(13mm)
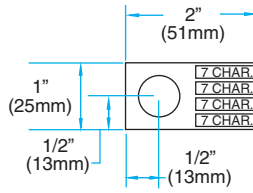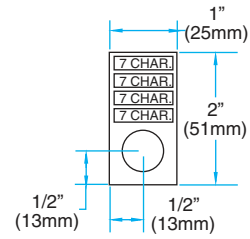
MOUNTING HOLE PATTERN

FOR WIRE LEAD INDICATING LIGHT

7/8"
(22.2mm)

7/8"
(22.2mm)

ø5/8"
(ø15.9mm) or ø1/2"
(ø13mm)

FOR SCREW INDICATING LIGHT

1-5/16"
(33.3mm)

1"
(25.4mm)

ø5/8"
(ø15.9mm) or ø1/2"
(ø13mm)
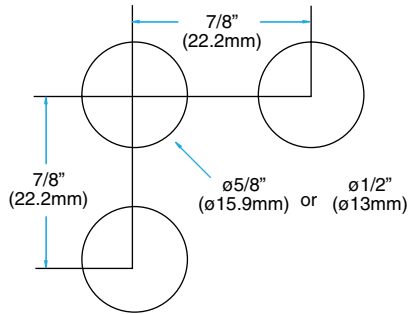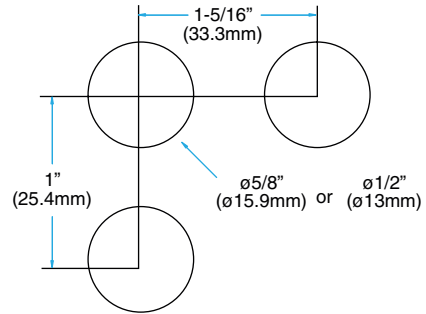
**VISIT WWW.C3CONTROLS.COM
TO DOWNLOAD CAD DRAWINGS**