



English Section

InView Marquee Message Display

(Catalog Numbers 2706-P92C and 2706-P94C)

Introduction

These instructions show how to mount the message displays and what the dip switch settings are. These signs are intended for indoor use only.

Wiring and Safety Guidelines

Install the InView display conforming to NFPA 70E, Electrical Safety Requirements for Employee Workplaces. In addition to the NFPA general guidelines, refer to the following:

Careful cable routing helps minimize electrical noise. Route incoming power to the module by a separate path from the communication cables.

TIP

Do not run communications wiring and power wiring in the same conduit!

WARNING



SHOCK HAZARD

- Maintain separation of circuits. Route the incoming power directly to the power connection terminal block.
- Do not run the power wiring over the logic board or optional Legacy Communication board.

Where communication and wire paths must cross, make their intersection perpendicular.

Grounding helps limit the effects of noise due to electromagnetic interference (EMI). To avoid problems caused by EMI, properly ground all equipment and use shielded cables.

IMPORTANT

Power wiring must be in accordance with Class I, Division 2 wiring methods (Article 501-4(b) of the National Electrical Code, NFPA70) and in accordance with the local authority having jurisdiction.

Hazardous Location Considerations

This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D or non-hazardous location only. The following WARNING statement applies to use in hazardous locations.

Allen-Bradley Parts

WARNING



EXPLOSION HAZARD

- Substitution of components may impair suitability for Class I, Division 2.
- Do not replace components or disconnect equipment unless power has been switched off or the area is known to be non-hazardous.
- Do not connect or disconnect components unless power has been switched off or the area is known to be non-hazardous.
- All wiring must comply with N.E.C. article 501-4(b), 502-4(b), or 503-3(b), as appropriate for Class I equipment.

WARNING



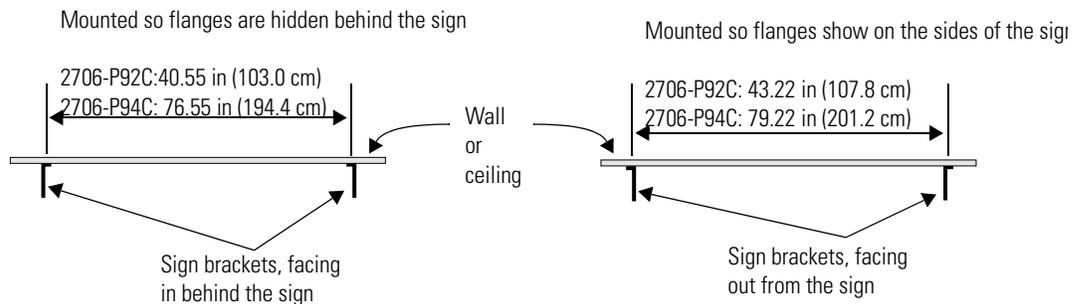
This product contains a lithium battery (catalog number 2711P-RY2032). There is a danger of explosion if it is incorrectly replaced. Replace only with the indicated type. Do not replace the battery unless the area is known to be nonhazardous.

Do not dispose of the battery in a fire or incinerator. Dispose of used batteries in accordance with local disposal regulations.

**Mounting Instructions
2706-P92C and 2706-P94C**

1. Attach the two sign brackets to a wall, ceiling, or other surface.

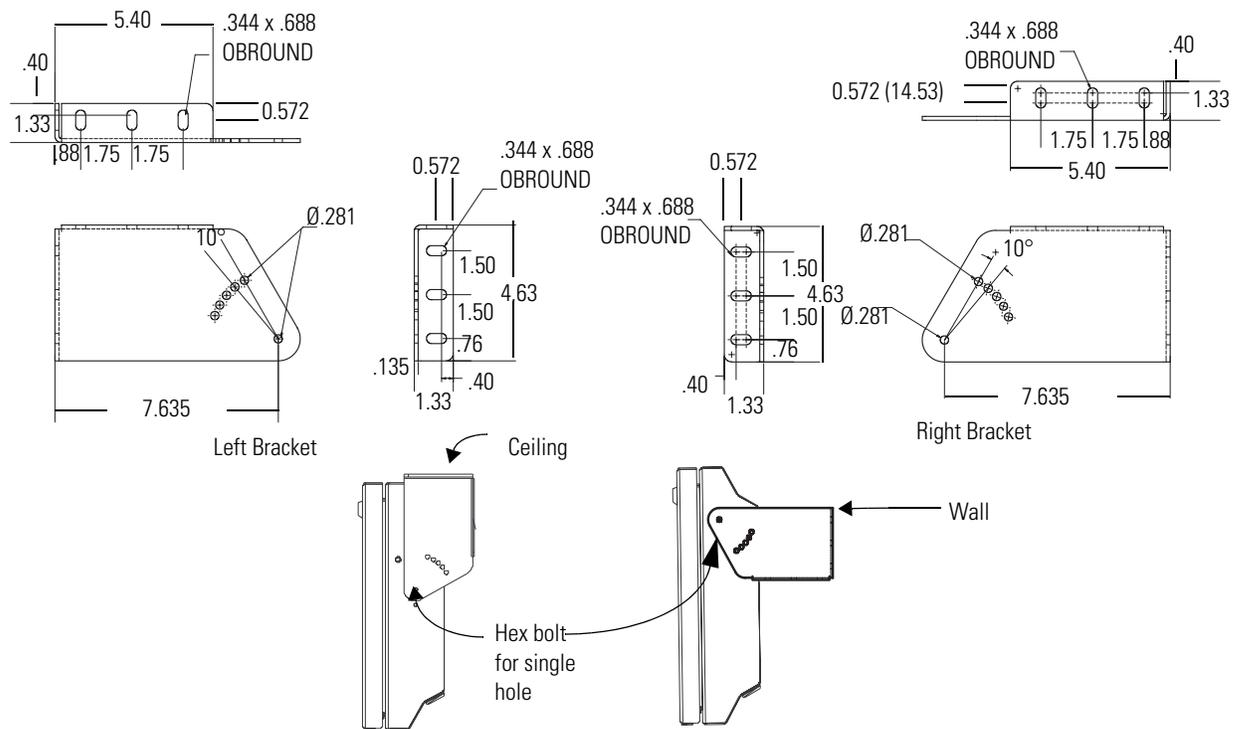
Be sure to place the brackets so the bracket flanges face appropriately as shown below. Mount the brackets the following distance apart (measured from the center of the mounting holes in each bracket):



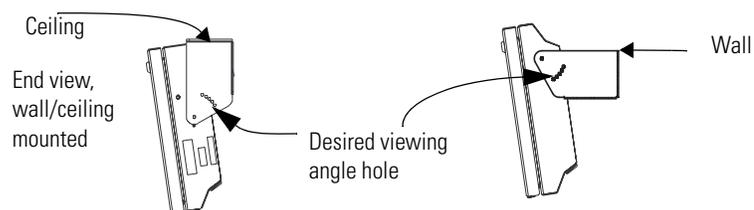
IMPORTANT

Do NOT install the sign directly to drywall or plasterboard. The sign must be fastened to a surface capable of supporting at least four times the weight of the sign.

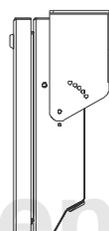
2. Mount the sign on the sign brackets using the hex bolts supplied. Insert the bolts into the far single holes first, until the desired viewing angle is determined.



3. Tilt the sign to select a viewing angle. To hold the sign in place, inset the remaining bolts into the desired viewing angle hole on each bracket.

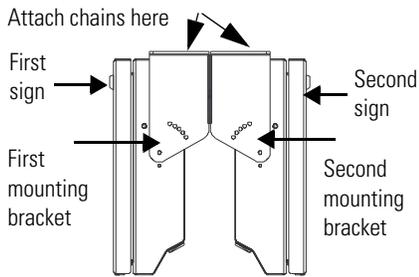


TIP Keep a minimum 1.0-inch (2.54 cm) clearance on all sides of the sign for adequate ventilation.



Back-to-Back Mounting

1. Attach the brackets to the sign in the ceiling mount position. Use the hex bolts supplied.



2. Match the signs together back-to-back. Connect them together using a total of six 5/16" bolts and nuts (not supplied).
3. Use chains (not supplied) to hang the signs from the ceiling. Attach the chains to the top mounting holes of the bracket.

TIP

Use chains capable of supporting 4 times the total weight of the signs.

Electrical Connections 2706-P92C and 2706-P94C

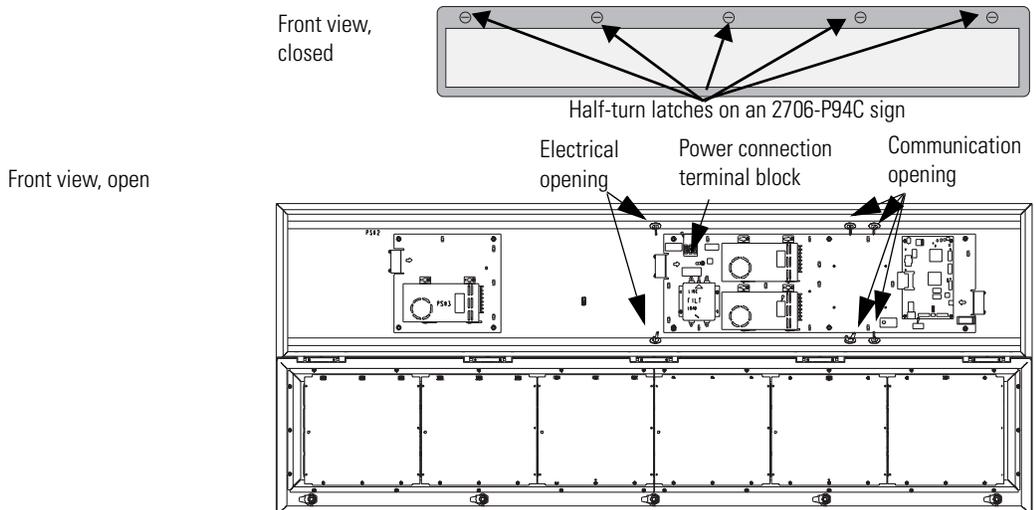
WARNING



HAZARDOUS VOLTAGE

- Contact with high voltage may cause death or serious injury. Always disconnect power to sign prior to servicing.
- Maintain Separation of circuits. Route the incoming power directly to the power connection terminal block.
- Do not run the power wiring over the logic board or optional Legacy Communication board.

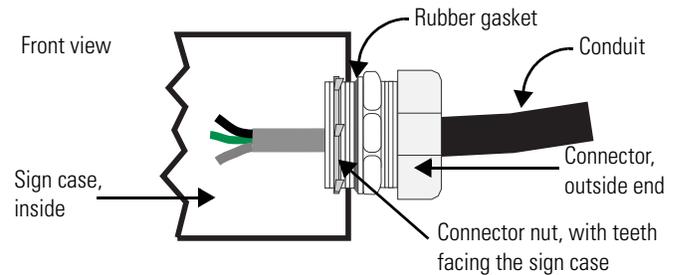
1. Open the front of the sign case by turning the half-turn latches to the left with a large screwdriver. (On the 2706-P92C, there are 3 half-turn latches; on the 2706-P94C there are 5.) Carefully let the front of the case drop forward.



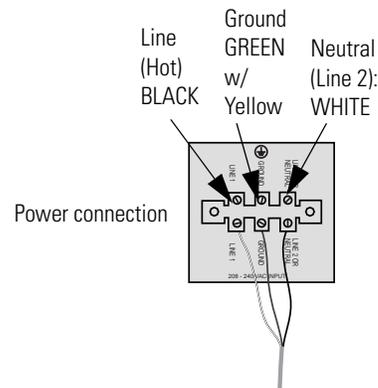
2. Feed electrical cable through 1/2" water-tight conduit, the outside end of the connector (supplied), the electrical opening in the sign case, and then through the inside end of the connector. Screw the inside and outside ends of the connector together until water-tight

TIP

Use either of the two holes nearest the power connection terminal block.



- Strip the electrical wires back 1/4". Insert the wires into the appropriate terminal connection and tighten the screw to 7 in-lbs (0.79 Nm). The terminal block is UL rated for wire ranges of 14 to 8 AWG.



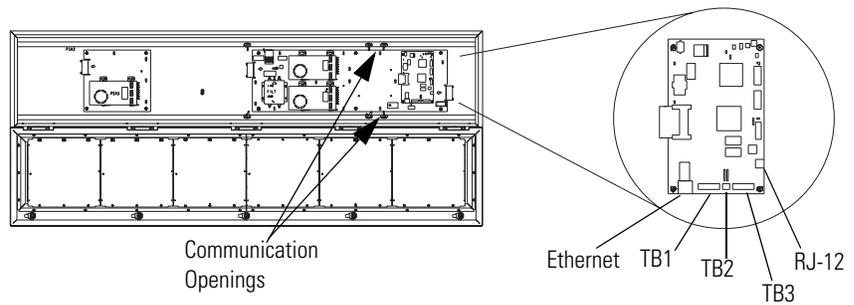
- Remove the necessary hole plugs before connecting the communications cables.
- Connect the incoming communication wires per the tables below.

ATTENTION

Use shielded Ethernet cable. Shielded Ethernet cable is required to maintain noise immunity.

The 2706-PCable1 is used for downloading messages only and must be removed after downloading is complete.

TB2 is used for supplying power to the optional InView Legacy Communication board kit.

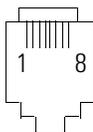


TB1 - RS-485	
1. GND	4. CH A
2. SHLD	5. CH B
3. COMM	6. TERM

TB2 - Aux +5V	
1. +5V	2. GND

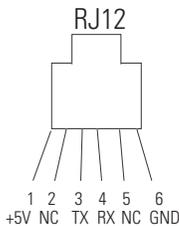
TB3 - RS-232	
1. TXD	4. CTS
2. RXD	5. GND
3. RTS	6. EGND

Ethernet (RJ-45)⁽¹⁾	
1. TD+	5. NC
2. TD-	6. RD-
3. RD+	7. NC
4. NC	8. NC



(1) Use shielded Ethernet cable to maintain noise immunity.

Download Port (RJ-12)⁽¹⁾	
1. Aux +5V	4. RX
2. NC	5. NC
3. TX	6. GND

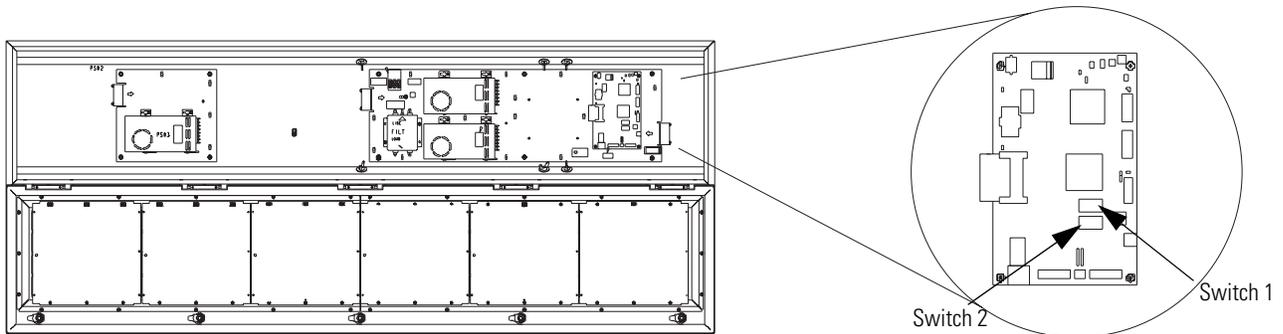


(1) The 2706-PCable1 is used for downloading messages only and must be removed after downloading is complete.

- Carefully close the front of the sign case and turn the half-turn latches to the right with a large screwdriver.

Dip Switch Information

There are two dip switches located on the controller board, Switch 1 and Switch 2.



Switch 1

Switch 1 is used to configure the display - RS485 echo enable, baud rate settings, and display size.

- Position 1 enables or disables the echo function.

Enabling the RS485 echo function allows any packets that come in on COM 0 (download, RJ-12 port), COM 1 (RS-232, TB3 port), and the Ethernet TCP/IP port to be sent out the RS485 port. This allows Ethernet TCP/IP and other communication protocols to be converted to RS485 by a single P92 or P94 and then sent out to multiple RS485 networked displays.

TIP

Only enable the echo function on one P9x display.

- Positions 3 and 4 set the baud rate. (Refer to page 8 for default positions.)

If both switches are off, the baud rate can be set via the InView Messaging Software. The dip switches take priority over the software setting. If the baud rate is set to 19200 using the software (positions 3 and 4 set to off) and then set to 9600 using Switch 1 (position 3 on and 4 off), the baud rate would then be 9600. Also, once positions 3 and 4 are used to set the baud rate and then they are switched off, the baud rate setting will remain until it is changed by software or a different dip switch setting.

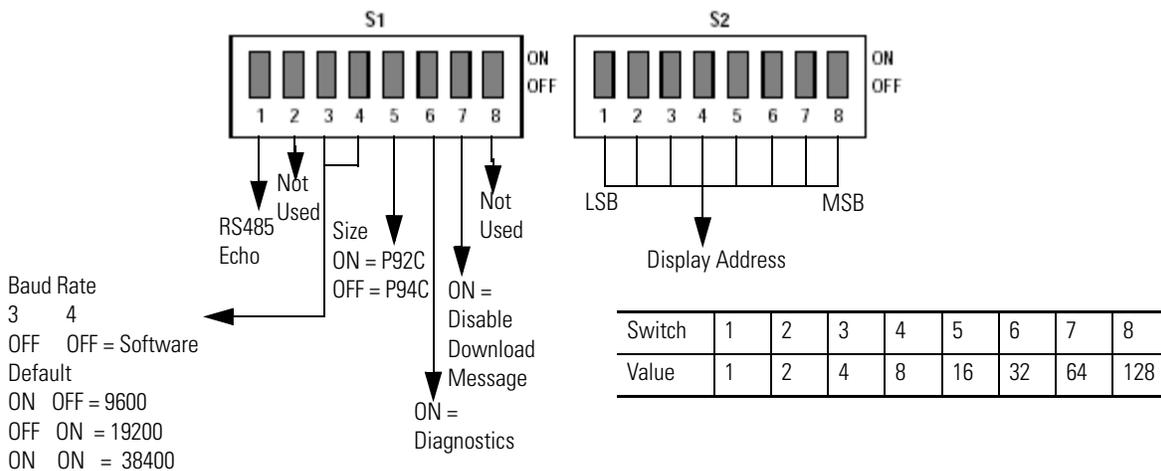
- Position 5 is used to set the display size. This is set by the factory.
- Position 6 is used to turn on diagnostics.
- Position 7 disables download message.

Switch 2

Switch 2 is used to set the serial address of the display. Position 1 is the LSB of the address and position 8 is the MSB of the address.

- If position 1 is on and all other positions are off, the display address will be 1.
- If position 8 is on and all other positions are off, the display address will be 128.
- If all positions are set to off, the serial address can be set using the InView Messaging Software.

The dip switch setting takes priority over the software setting. If the serial address is set to 2 using the software (all the dip switches set to off) and then Switch 2 is used to set the serial address to 3 (position 1 and 2 set to on and the remaining positions set to off), the serial address will then be 3. Also, once Switch 2 is used to set the serial address and then all switch positions are set to off, the serial address setting remains until it is changed by software or the dip switch is set.



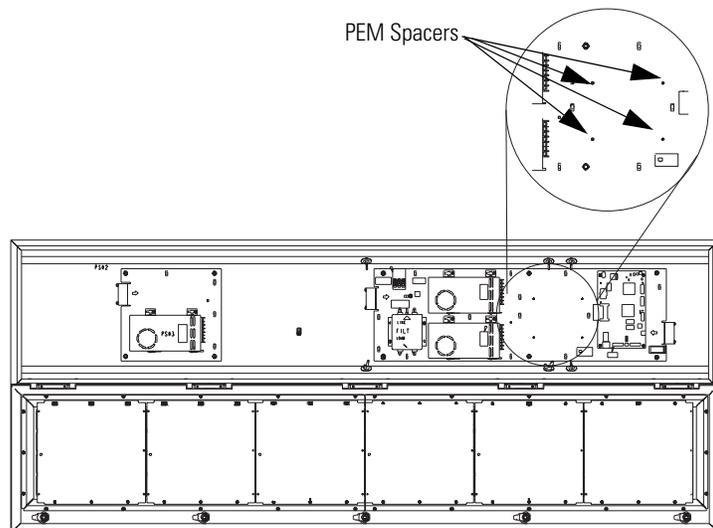
Additional Information

For additional information on communication port wiring and display configuration, refer to the InView Marquee Message Display User Manual, publication 2706-UM016.

This product contains a Lithium battery. See publication 2711P-IN009 for information regarding battery replacement and disposal.

Legacy Communications Board Kit

There is an optional Legacy Communications Board Kit available for the P9 series displays. There are a total of six board kits: Remote I/O, DH+, DH-485, ControlNet, DeviceNet, and EtherNet/IP. The Legacy Communications Board Kit converts the six protocols to RS-232. The board kit mounts on the four PEM spacers that are attached to the internal mounting plate. See publication 2706-IN015 for more information on how to install the board kit.



Compact Flash Card

This product uses a Type I Compact Flash Card for message file storage. Refer to publication 2706-IN017 for information on replacement and installation of the Compact Flash Card.

2706-P9x Temperature Protection

InView P92C and P94C signs have automatic temperature controls that help to protect the sign from damage when the internal temperature of the sign is too hot to continue normal operation.

- If the internal temperature of the sign reaches a pre-determined “dimming point”, the LED output from the sign is forced into a 50 percent reduced power mode, effectively dimming the brightness of LED output by about 50 percent.
- If the internal temperature of the sign continues to increase, another sensing circuit will execute an automatic shut down to protect the sign from damage. The LED output from the sign is turned off. Two LED pixels will flash in the lower right corner, indicating an auto-shutdown has occurred.

- The dimming and shutdown points are listed in the table below. Once the temperature drops below the auto-shutdown threshold, the LED output is turned on at the dimming level. Once the temperature drops below the dimming threshold, auto-dimming is disabled and the LED brightness is back to 100 percent.

Model	Dimming Point	Auto-Shutdown On
2706-P92C	55°C (131°F)	75°C (167°F)
2706-P94C	55°C (131°F)	75°C (167°F)

TIP

Take into account the effects of ambient temperature when evaluating mounting locations for the sign. You should always maintain recommended clearance distances around the sign and avoid poorly ventilated mounting locations that could be subject to radiation, convection, conduction or other thermal transfer effects.

Specifications

	2706-P92C	2706-P94C
Display		
Display Type	LED matrix: Tri-Color (C)	
Display Window Size (W x H)	36 x 9.6 in (91.4 x 24.4 cm) ⁽¹⁾	72 x 9.6 in (182.9 x 24.4 cm) ⁽²⁾
Display Array	120 x 32 pixels	240 x 32 pixels
Center to Center Pixel Spacing (Pitch)	0.3 in (0.76 cm)	
Number of Lines	1 to 5	
Lines of Text/Character Height/ Minimum Characters per Line	1 line/9.6 in/13 ⁽¹⁾ 2 line/4.5 in/13 ⁽¹⁾ 3 line/3.0 in/13 ⁽¹⁾ 4 line/2.1 in/20 ⁽¹⁾ 5 line/1.5 in/24 ⁽¹⁾	1 line/9.6 in/26 ⁽²⁾ 2 line/4.5 in/26 ⁽²⁾ 3 line/3.0 in/26 ⁽²⁾ 4 line/2.1 in/40 ⁽²⁾ 5 line/1.5 in/48 ⁽²⁾
Character Set	Standard and Extended ASCII	
Approximate Viewing Distance	450 ft (137m)	
Electrical and Environmental		
Input Voltage	100 to 240V ac; 50/60 Hz	
Operating Temperature	+0°C to +50°C (+32°F to +122°F)	
Humidity	5 to 95% noncondensing	
Ratings	Designed to meet UL types 12, 13 and 4 (indoor use only)	

	2706-P92C	2706-P94C
Certifications	cULus, CE and C-Tick	
Enclosure Approximate Weight	70 lbs (32 kg) or	120 lbs (54.4 kg)
Enclosure Dimensions (W x D x H)	41.14 x 5.25 x 15.9 in ⁽¹⁾ (105 x 13 x 40 cm)	77.2 x 5.25 x 15.9 in ⁽²⁾ (196 x 13 x 40 cm)

(1) Display is available in short format (3 feet).

(2) Display is available in long format (6 feet).

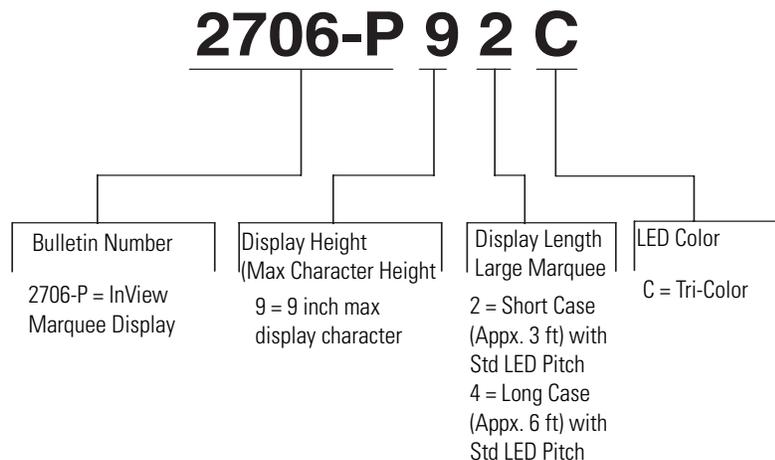
Input Current Requirements for 2706-P92C and 2706-P94C

Line Voltage (VAC)	Frequency (Hz)	100% Display Load	50% Display Load	25% Display Load
100 - P92C	50/60	3.6	2.1	1.3
100 - P94C	50/60	7.1	3.9	2.3
120 - P92C	50/60	2.9	1.7	1.0
120 - P94C	50/60	5.8	3.2	1.9
240 - P92C	50/60	1.4	0.9	0.6
240 - P94C	50/60	2.8	1.6	1.0

Display Load

100%	Condition - All display pixels are lit in amber
	Usage - Highly unlikely, use this value for sizing input power circuit
50%	Condition - 50% of the display lit in amber (screen full of 32 pixel amber 'B's)
	Usage - Unlikely, not a typical display condition, may be seen with use of bitmaps
25%	Condition - Mixture of red, green and amber characters and spaces
	Usage - Typical display load for most message types

Catalog Number Explanation



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Publication 2706-IN016B-EN-P - April 2004

Supersedes Publication 2706-IN016A-EN-P - September 2003

PN 41061-330-01(2)

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