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K100 Pro Daylight Visible Beacon (DC)

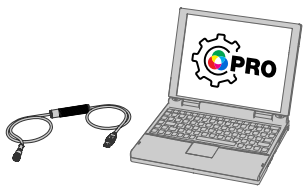
Features

High Daylight Visibility, Programmable Multicolor Indicator with Optional Audible Alarm for Indoor or Outdoor Use



- Highly visible indicator provides bright, even light in direct sunlight
- Three colors in one device
- Programmable using Banner's Pro Editor software and Pro Converter Cable
- 36 mm threaded polycarbonate base
- Rugged IP66 and IP69K per ISO 20653, UL Type 4X housing
- PNP or NPN operation depending on wiring
- Variety of connector options
- Rugged UV-stabilized polycarbonate base and window
- 12 V DC to 48 V DC operating voltage

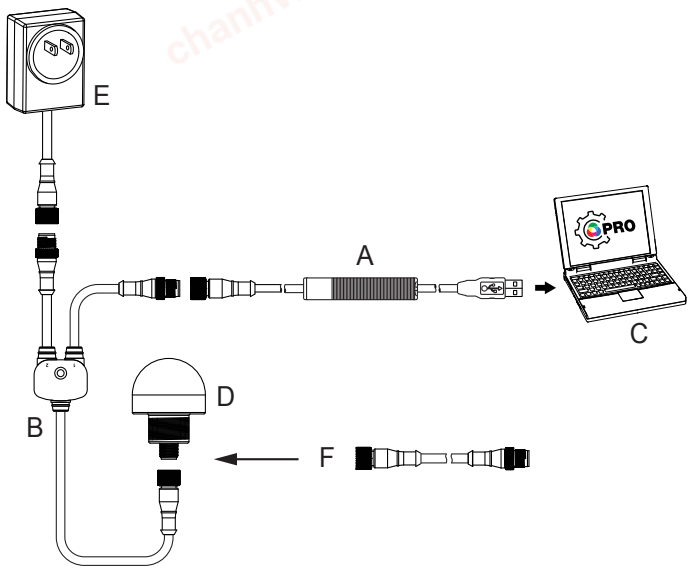
Pro Editor



Use Banner's Pro Editor software and Pro Converter Cable to create custom configurations by selecting different colors, flash patterns, and animations.
For more information visit www.bannerengineering.com/proeditor.

Full Preview Connection (Required)

The full preview connection must be used for the K100 Pro Beacon.



A = Pro Converter Cable (MQDC-506-USB)
B = Splitter (CSB-M1251FM1251M)
C = PC running Pro Editor software
D = Any Banner Pro Series-enabled device (K50 shown)
E = Power Supply (PSW-24-1, PSW-24-2, or PSD-24-4)
F = 8-Pin to 5-Pin Double-Ended Cordset (MQDC-801-5M-PRO), required for 8-Pin models

Models

Standard models shown. Contact factory for other options.

Three Color Models. Other available color options: Blue and White

Family	Style	Type	Color 1	Color 2	Color 3	Audible	Connector[1]
K100	P	BL	G	Y	R	A	Q

Continued on page 2

[1] Models with a quick-disconnect connector require a mating cordset.

Original Instructions
02-Sep-25

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225026
p/n: 225026 Rev. F

K100 Pro Daylight Visible Beacon (DC)

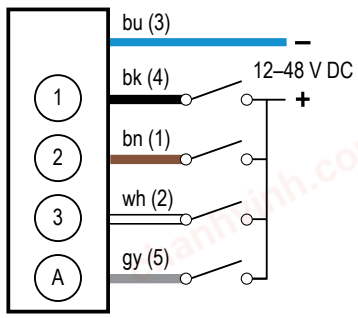
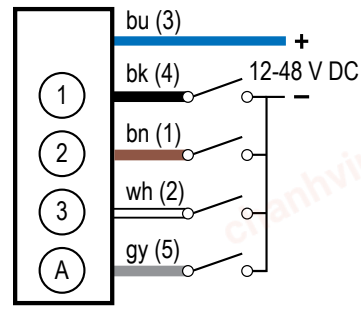
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Family	Style	Type	Color 1	Color 2	Color 3	Audible	Connector
	P = Pro	BL = Beacon	G = Green	Y = Yellow	R = Red	Blank = None A = Audible	Blank = 2 m (6.5 ft) integral PVC-jacketed cable Q = Integral 5-pin M12 male quick-disconnect connector QP = 150 mm (6 in) PVC-jacketed cable with a 5-pin M12 male quick-disconnect connector

One Color Models. Other available color option: Red

Family	Style	Type	Color	Audible	Connector
K100	**P**	**BL**	**Y**	**A**	**Q**
	P = Pro	BL = Beacon	Y = Yellow	Blank = None A = Audible	Blank = 2 m (6.5 ft) integral PVC-jacketed cable Q = Integral 5-pin M12 male quick-disconnect connector QP = 150 mm (6 in) PVC-jacketed cable with a 5-pin M12 male quick-disconnect connector

Wiring

PNP Input	NPN Input	Key
		1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray

An "X" denotes an active input.

For example: When Input 1 and Input 3 are both active, the indicator will be Color 1 Flashing at 1 Hz.

Default Configuration: Three Color Models

Wiring				Operating Mode/Function	
Black (Input 1)	Brown (Input 2)	White (Input 3)	Gray (Input 4)	Non-Audible	Audible
X				Color 1 Steady	Color 1 Steady
	X			Color 2 Steady	Color 2 Steady
		X		Color 3 Steady	Color 3 Steady
X		X		Color 1 Flashing at 1 Hz	Color 1 Flashing at 1 Hz
X	X			Color 2 Flashing at 1 Hz	Color 2 Flashing at 1 Hz
	X	X		Color 3 Flashing at 1 Hz	Color 3 Flashing at 1 Hz
X	X	X		Color 3, 3-pulse Strobe	Color 3, 3-pulse Strobe
			X	Off	Audible Steady, Frequency 2.5 KHz, Volume High
X			X	Color 1 Steady	Color 1 Steady, Audible Steady, Frequency 2.5 KHz, Volume High
	X		X	Color 2 Steady	Color 2 Steady, Audible Steady, Frequency 2.5 KHz, Volume High
		X	X	Color 3 Steady	Color 3 Steady, Audible Steady, Frequency 2.5 KHz, Volume High
X		X	X	Color 1 Flashing at 1 Hz	Color 1 Flashing at 1 Hz, Audible Steady, Frequency 2.5 KHz, Volume High
X	X		X	Color 2 Flashing at 1 Hz	Color 2 Flashing at 1 Hz, Audible Steady, Frequency 2.5 KHz, Volume High
	X	X	X	Color 3 Flashing at 1 Hz	Color 3 Flashing at 1 Hz, Audible Steady, Frequency 2.5 KHz, Volume High

Continued on page 3

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Continued from page 2

Wiring				Operating Mode/Function	
Black (Input 1)	Brown (Input 2)	White (Input 3)	Gray (Input 4)	Non-Audible	Audible
X	X	X	X	Color 3, 3-pulse Strobe	Color 3, 3-pulse Strobe, Audible Steady, Frequency 2.5 KHz, Volume High

Default Configuration: One Color Models

Wiring				Operating Mode/Function	
Black (Input 1)	Brown (Input 2)	White (Input 3)	Gray (Input 4)	Non-Audible	Audible
X				Color 1 Flashing at 1 Hz	Color 1 Flashing at 1 Hz
	X			Color 1 Steady	Color 1 Steady
		X		Color 1 Rotate	Color 1 Rotate
X		X		Color 1 Flashing at 5 Hz	Color 1 Flashing at 5 Hz
X	X			Color 1 Flashing at 0.5 Hz	Color 1 Flashing at 0.5 Hz
	X	X		Color 1 Strobe	Color 1 Strobe
X	X	X		Color 1, 3-pulse Strobe	Color 1, 3-pulse Strobe
			X	Off	Audible Steady, Frequency 2.5 KHz, Volume High
X			X	Color 1 Flashing at 1 Hz	Color 1 Flashing at 1 Hz, Audible Steady, Frequency 2.5 KHz, Volume High
	X		X	Color 1 Steady	Color 1 Steady, Audible Steady, Frequency 2.5 KHz, Volume High
		X	X	Color 1 Rotate	Color 1 Rotate, Audible Steady, Frequency 2.5 KHz, Volume High
X		X	X	Color 1 Flashing at 5 Hz	Color 1 Flashing at 5 Hz, Audible Steady, Frequency 2.5 KHz, Volume High
X	X		X	Color 1 Flashing at 0.5 Hz	Color 1 Flashing at 0.5 Hz, Audible Steady, Frequency 2.5 KHz, Volume High
	X	X	X	Color 1 Strobe	Color 1 Strobe, Audible Steady, Frequency 2.5 KHz, Volume High
X	X	X	X	Color 1, 3-pulse Strobe	Color 1, 3-pulse Strobe, Audible Steady, Frequency 2.5 KHz, Volume High

Specifications

Supply Voltage and Current

12 V DC to 48 V DC

Product approved with usage of Class 1 or Class 3 Power Supply to achieve Class 2 Power Supply status

Use only with a suitable Class 2 power supply (North America)

Maximum Current (mA)				
Supply Voltage (V DC)	Steady On, Flash, or Strobe Function[2]		Rotate Function	
	Light Only	Light & Audible	Light Only	Light & Audible
12	760	820	365	435
18	495	530	235	275
24	395	425	185	220
30	340	365	165	195
36	305	330	150	180
42	280	305	145	170
48	260	285	140	165

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Leakage Current Immunity

400 µA

[2] Flash or Strobe Mode: Peak current, operating at 50% duty cycle or less.

Indicator Response Time

On response: 325 ms (max)

Off response: 20 ms (max)

Connections

Integral 5-pin M12 male quick-disconnect connector, 150 mm (6 in) PVC-jacketed cable with an M12 quick disconnect, or 2 m (6.5 ft) integral PVC-jacketed cable, depending on model

Models with a quick disconnect require a mating cordset

Mounting

M36 by 2.0 threaded base, maximum torque 5.0 N·m (44 inch-lbf)

Interior 3/4-14 NPT Thread

Mounting nut included

Adjacent Unit Mounting Separation Distance

Minimum: 0 in (mounted with unit flanges touching)

Audible Characteristics

Sound Intensity at 2.5 KHz, at 1 m (typical):

Low volume setting: 93 dB
Medium volume setting: 96 dB
High volume setting: 101 dB

Construction

Base, Dome, and Nut: Polycarbonate

Operating Conditions

–40 °C to +60 °C (–40 °F to +140 °F)

90% at +50 °C maximum relative humidity (non-condensing)

Storage Temperature: –40 °C to +70 °C (–40 °F to +158 °F)

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Vibration and Mechanical Shock

Meets IEC 60068-2-6 requirements (Vibration: 10 Hz to 55 Hz, 1.0 mm amplitude, 5 minutes sweep, 30 minutes dwell)

Meets IEC 60068-2-27 requirements (Shock: 30G 11 ms duration, half sine wave)

Impact: IK10 (60068-2-75)

Environmental Rating

IP66, IP69K per ISO 20653, UL Type 4X

LED Lifetime

Lumen maintenance L_{70}

When operating within specifications, output decreases less than 30% after 42,000 hours

Pro Editor Configuration

Connection to Pro Editor software enables control of:

- Animation: On, Flash, Rotate, Two Color Flash, Two Color Cycle, Intensity Sweep
- Color: Green, Yellow, Red, Blue, White
- Wiring: See "Wiring" on page 2
- Intensity: Low, Medium, High
- Speed: Slow, Standard, Fast
  - Slow Flash: 0.5 Hz
  - Standard Flash: 1.0 Hz
  - Fast Flash: 5.0 Hz
  - Slow Rotate: 80 rpm
  - Standard Rotate: 120 rpm
  - Fast Rotate: 160 rpm
- Audible Tones: Pulse, Wobble, Strobe, Whoop, Staccato, Siren, Continuous 1, Continuous 2, Jingle, Melody 1, Melody 2, Melody 3

Pro Converter Cable required to interface between PC and indicator, see accessories

Default Indicator Characteristics

At 12 V DC

Color	Dominant Wavelength (nm) or Color Temperature (CCT)	Color Coordinates[3]		Lumen Output (Typical at 25 °C)
		x	y	
Green	528 nm	0.1603	0.6973	360
Yellow	589 nm	0.5557	0.4276	525
Red	625 nm	0.6999	0.2982	155
Blue	475 nm	0.1167	0.1121	165
White	5500K ± 250	0.3320	0.3433	600

Lumen Output decreases by 15% at 48 V DC

Internal temperature compensation circuitry: Reduces the Lumen Output to decrease the unit internal operating temperature. The amount of reduction is dependent on the ambient operating temperature, supply voltage, color, and/or audible functions being utilized.

[3] Refer to CIE 1931 chromaticity diagram or color chart, to show equivalent color with indicated color coordinates.

Required Overcurrent Protection

WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

Overcurrent protection is required to be provided by end product application per the supplied table.

Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.

Supply wiring leads < 24 AWG shall not be spliced.

For additional product support, go to www.bannerengineering.com.

Supply Wiring (AWG)	Required Overcurrent Protection (A)	Supply Wiring (AWG)	Required Overcurrent Protection (A)
20	5.0	26	1.0
22	3.0	28	0.8
24	2.0	30	0.5

Certifications

Banner Engineering BV
Park Lane, Culliganlaan 2F bus 3
1831 Diegem, BELGIUM

Turck Banner LTD Blenheim House
Blenheim Court
Wickford, Essex SS11 8YT
GREAT BRITAIN

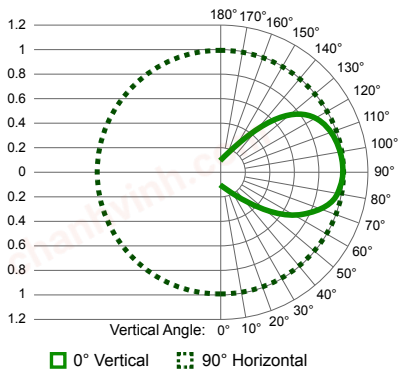
Photometric Data

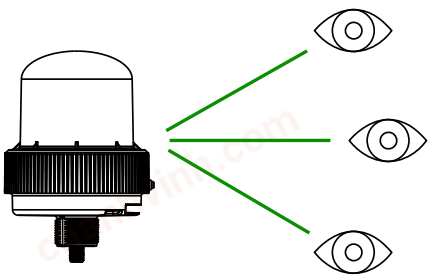
Multiply the values shown in the chart by the maximum candela values in the Max. Candela table:

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Polar Candela Distribution





Base Candela

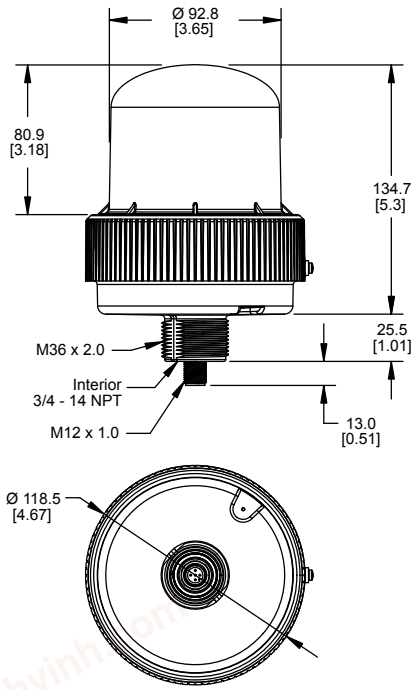
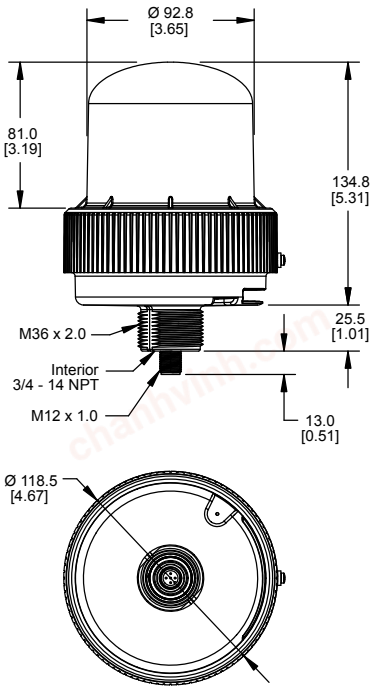
Green	46
Yellow	67
Red	20
Blue	21
White	76

Candela Viewing Angle Example – Red

Angle	Factor	Base[4]	Candela
120 (top view)	0.7	20	14
90 (side view)	1	20	20
60 (bottom view)	0.7	20	14

Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.

Standard Models	Audible Models
	

[4] Red shown. See Base Candela table.

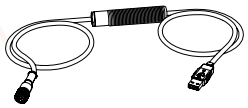
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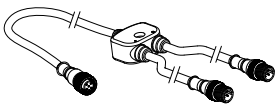
Accessories

Pro Editor Hardware

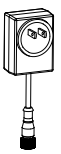
MQDC-506-USB
- Pro Converter Cable
- 1.83 m (6 ft) length 5-pin M12 quick disconnect to Device and USB to PC
- Required for connection to the configuration software



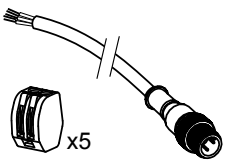
CSB-M1251FM1251M
- 5-pin parallel Y splitter (Male-Male-Female)
- For full Pro Editor preview capability
- Requires external power supply, sold separately



PSW-24-1
- 24 V DC, 1 A power supply
- 2 m (6.5 ft) PVC cable with M12 quick disconnect
- Provides external power with splitter cable, sold separately

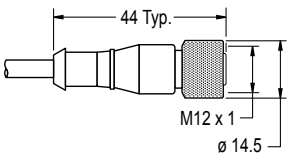
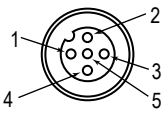
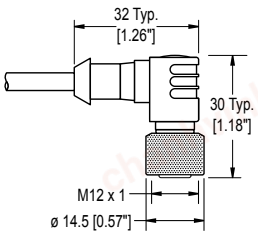


ACC-PRO-CABLE5
- Mating accessory for cabled and terminal models
- 150 mm (6 inch) PVC cable with M12 quick disconnect
- Lever wire nuts included (qty 5)
- Required to connect cabled models and screw terminal models to Pro Converter Cable, sold separately



Cordsets

5-Pin Single-Ended M12 Female Cordsets

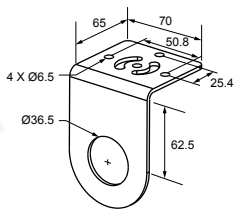
Model	Length	Style	Dimensions	Pinout (Female)
MQDC1-501.5	0.5 m (1.5 ft)	Straight		
MQDC1-503	0.9 m (2.9 ft)			
MQDC1-506	2 m (6.5 ft)			
MQDC1-515	5 m (16.4 ft)			
MQDC1-530	9 m (29.5 ft)			
MQDC1-560	18 m (59 ft)			
MQDC1-5100	31 m (101.7 ft)			
MQDC1-506RA	2 m (6.5 ft)	Right-Angle		1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray
MQDC1-515RA	5 m (16.4 ft)			
MQDC1-530RA	9 m (29.5 ft)			
MQDC1-560RA	19 m (62.3 ft)			

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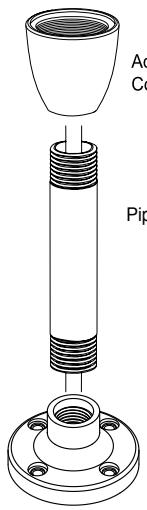
Brackets

LMB36RA
- Indicator light right-angle mounting
- 36 mm mounting hole
- Stainless steel



Elevated Mount System

Elevated Mount System (1/2" Pipes)

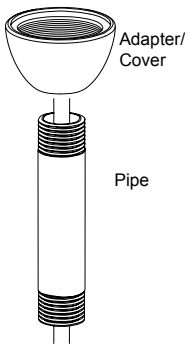


Adapter/Cover Model	Description
SA-M36E12	• Adapter from M36 thread to ½-14 NPSM thread • Streamlined black plastic mounting base adapter/cover • Drilled hole

Black Anodized Aluminum, ½ in. NPT Pipe Models	Clear Anodized Aluminum, ½ in. NPT Pipe Models	Description
SOP-E12-150A, 150 mm (6 in) long	**SOP-E12-150AC**, 150 mm (6 in) long	• Elevated-use stand-off pipe • Threaded at both ends • Compatible with most industrial environments
SOP-E12-300A, 300 mm (12 in) long	**SOP-E12-300AC**, 300 mm (12 in) long	
SOP-E12-600A, 600 mm (24 in) long	-	
SOP-E12-900A, 900 mm (36 in) long	**SOP-E12-900AC**, 900 mm (36 in) long	

Mounting Base Model	Description
SA-F12	• Elevated-use stand-off pipes (½ in, NPSM/DN15) • M5 mounting hardware and nitrile gasket included • Die-cast zinc base with black paint

Elevated Mount System (3/4" Pipes)



Adapter/Cover Model	Description
SA-M36SOP	• M36 thread adapter with clearance for ¾ pipe mount • Streamlined black plastic mounting base adapter/cover • Drilled hole

Black Anodized Aluminum, ¾ in. NPT Pipe Models	Description
SOP-E34-150A, 150 mm (6 in) long	• Elevated-use stand-off pipe • Threaded at both ends • Compatible with most industrial environments
SOP-E34-300A, 300 mm (12 in) long	
SOP-E34-600A, 600 mm (24 in) long	
SOP-E34-900A, 900 mm (36 in) long	

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