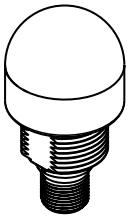
K30 Pro Devices with PICK-IQ™

Datasheet

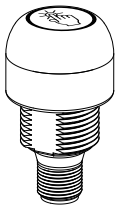
30 mm Multicolor RGB Devices (Indicator and Touch)

This datasheet contains limited information on K30 Pro Devices with PICK-IQ™. For complete information on configuration, performance, troubleshooting, dimensions, and accessories, please refer to the PICK-IQ™ Devices Instruction Manual. Go to www.bannerengineering.com and search 206185 to view the PICK-IQ™ Devices Instruction Manual or 209995 to view the Device Register Map. Use of this document assumes familiarity with pertinent industry standards and practices.

- PICK-IQ™ gives full access to color, flashing, rotating, and dimming settings as well as advanced animations such as dynamic sequence mode and LED control
- Output settings, including on and off delays, output function, and output state are also available with PICK-IQ
- PICK-IQ brings faster response speed and simplified programming to Modbus RTU communication



Indicator



Touch Button

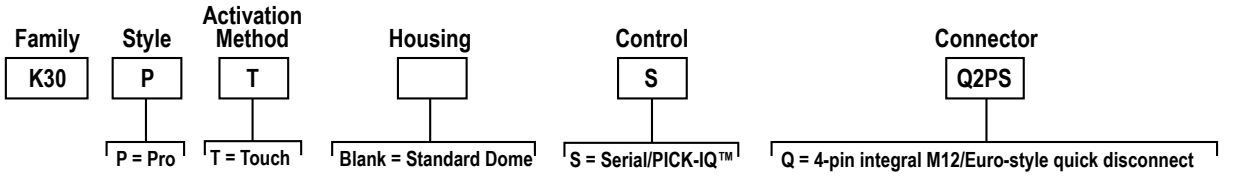
WARNING:

- **Do not use this device for personnel protection**
- Using this device for personnel protection could result in serious injury or death.
- This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A device failure or malfunction can cause either an energized (on) or de-energized (off) output condition.

Models

Touch Button Models

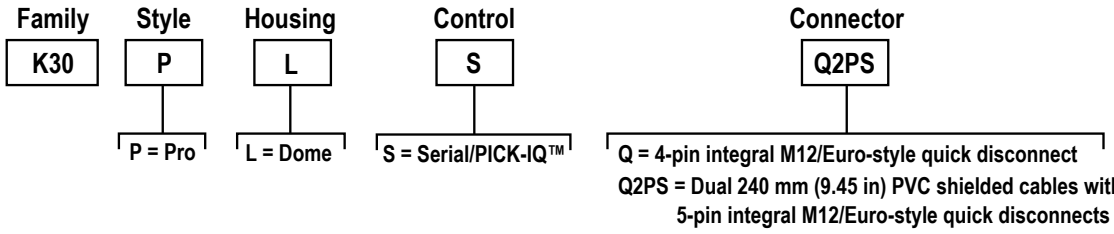
- Excellent immunity to false triggering by water spray, oils, and other foreign materials
- Rated IEC IP67 and IP69K per DIN 40050-9
- Can be actuated with bare hands or gloves; adjustable sensitivity



Models with a quick disconnect require a mating cordset

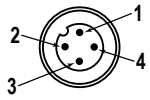
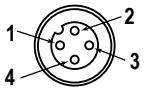
Indicator Models

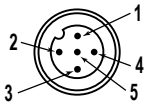
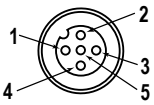
- Bright, uniform indicator light
- Rated IEC IP67 and IP69K per DIN 40050-9



Wiring

Compatible cordsets can be found in the PICK-IQ™ Devices Instruction Manual (206185).

Wiring for the Q Models				
4-pin M12/Euro-style Male	4-pin M12/Euro-style Female	Pin	Wire Color	Connection
		1	brown	10 V DC to 30 V DC
		3	blue	DC common
		4	black	RS-485 (-)
		2	white	RS-485 (+)

Wiring for the Q2PS Models				
5-pin M12/Euro-style Male	5-pin M12/Euro-style Female	Pin	Wire Color	Connection
		1	brown	10 V DC to 30 V DC
		3	blue	DC common
		4	black	RS-485 (-)
		2	white	RS-485 (+)
		5	gray	Shield

Specifications

Supply Voltage
10 V DC to 30 V DC

Supply Current
Indicator Models:
60 mA maximum current at 10 V DC
28 mA typical at 24 V DC
Touch Models:
65 mA maximum at 10 V DC
30 mA typical at 24 V DC

Supply Protection Circuitry
Protected against reverse polarity and transient voltages

Operating Conditions
–40 °C to +50 °C (–40 °F to +122 °F)
Humidity: 90% at +50 °C maximum relative humidity (non-condensing)
Storage: –40 °C to +70 °C (–40 °F to +158 °F)

Environmental Rating
IEC IP67, IP69K per DIN 40050-9[1]

Touch Dwell Time
If touch dwells for longer than 60 seconds, the output will revert to the untouched state

Touch Response Time
Input Response: 5 ms minimum
Touch Response: 300 ms maximum (Standard Sensitivity touch response)

Mounting
M22 × 1.5 threaded base, maximum torque 4.5 N·m (40 in·lbf)

Construction
Base, Dome, and Nut: Polycarbonate

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)

Connections
Integral 4-pin M12/Euro-style male quick disconnect or dual 240 mm (9.4 in) shielded PVC cables with 5-pin M12/Euro-style quick disconnects, depending on model
Models with a quick disconnect require a mating cordset

Certifications

Default Indicator Characteristics

Color	Dominant Wavelength (nm) or Color Temperature (CCT)	Color Coordinates[2]		Lumen Output (Typical at 25 °C)	
		x	y	Touch Button Models	Indicator Models
Green	522	0.154	0.700	7.7	8.7
Red	620	0.689	0.309	3.1	3.6
Yellow	576	0.467	0.463	7.8	8.9
Blue	466	0.140	0.054	1.7	1.9
White	5700K	0.328	0.337	9.6	10.7
Cyan	493	0.157	0.331	8.7	9.9
Magenta	–	0.392	0.186	4.2	4.6
Amber	589	0.556	0.420	5.8	6.4
Rose	–	0.525	0.237	3.5	3.9
Lime Green	562	0.383	0.523	10	11.5
Sky Blue	486	0.145	0.240	9.2	10.5
Orange	599	0.616	0.370	4.6	5.1
Violet	–	0.224	0.099	3.4	3.9
Spring Green	508	0.155	0.524	8	9

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.

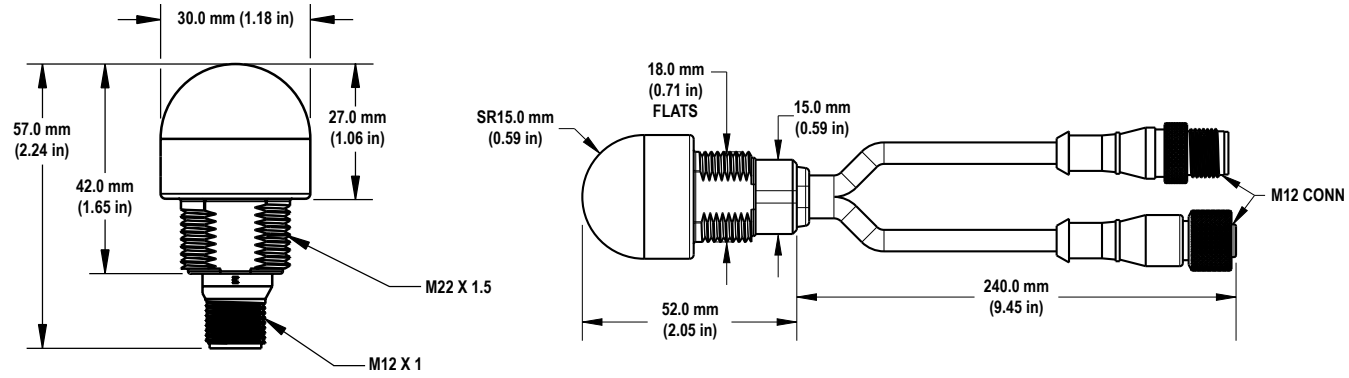
Supply Wiring (AWG)	Required Overcurrent Protection (Amps)
20	5.0
22	3.0
24	2.0
26	1.0
28	0.8
30	0.5

1 Q2PS models must be installed to protect the cable and cable entrance from high-pressure spray to meet IP69K.
2 Refer to the CIE 1931 (x,y) Chromaticity Diagram to show equivalent color with indicated color coordinates. Actual coordinates may differ ± 5%.

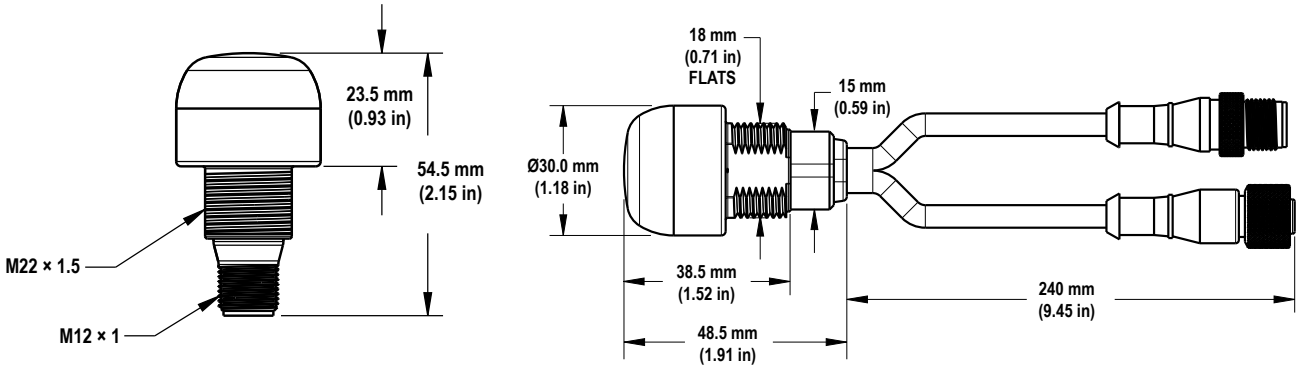
Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise.

Indicator Models



Touch Button Models



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For patent information, see www.bannerengineering.com/patents.

FCC Part 15 and CAN ICES-3 (B)/NMB-3(B)

This device complies with part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the manufacturer.

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K30PLSQ