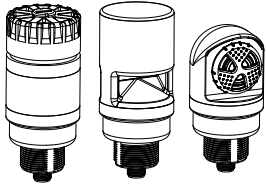


TL50A Audible Indicators



Datasheet

General-Purpose Audible Indicators

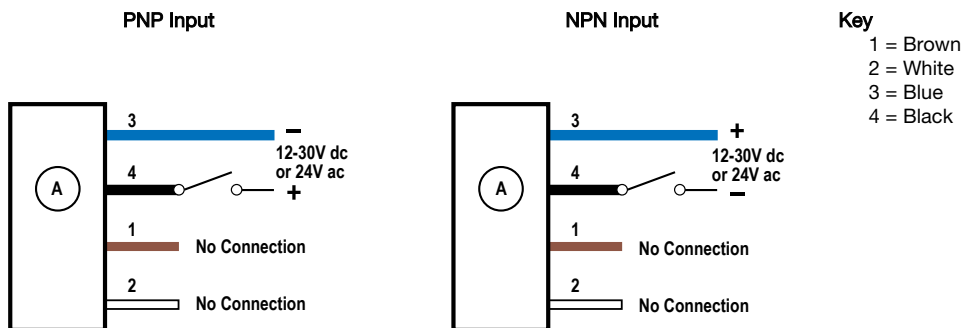


- Rugged, cost-effective and easy to install
- Compact devices are self-contained, no controller needed
- Immune to EMI and RFI interference
- Choose IP50 or Sealed IP67 model, black or light gray housing
- 12 V DC to 30 V DC, or 24 V AC operation

Models

Standard Audible Models ¹			Connection ²	Inputs
TL50AQ			Integral 4-pin M12 male quick-disconnect connector	Bimodal (NPN or PNP)
Sealed Audible Models ¹			Connection ²	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato		
TL50ALSQ	TL50ALS3Q	TL50ALS4Q	Integral 4-pin M12 male quick-disconnect connector	Bimodal (NPN or PNP)
Omni-Directional Sealed Audible Models ¹			Connection ²	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato		
TL50AOSQ	TL50AOS3Q	TL50AOS4Q	Integral 4-pin M12 male quick-disconnect connector	Bimodal (NPN or PNP)
Omni-Directional Sealed Audible Models with Intensity Adjustment ¹			Connection ²	Inputs
Continuous	Pulsed at 1.6 Hz	Staccato		
TL50AOSIQ	TL50AOS3IQ	TL50AOS4IQ	Integral 4-pin M12 male quick-disconnect connector	Bimodal (NPN or PNP)

Wiring Diagrams



¹ Models with black housing are listed. For gray housing, add the suffix "C" at the end of the cabled model number or before the "Q" in quick disconnect model numbers. For example, TL50AC or TL50ACQ.

² Integral quick disconnect models are listed.

- To order the 150 mm (6 in) PVC cable model with a M12 quick disconnect, replace the suffix "Q" with "QP" in the model number. For example, TL50AQP.
- To order the 2 m (6.5 ft) PVC cable model, omit the suffix "Q" in the model number. For example, TL50A.
- Models with a quick disconnect require a mating cordset.



Specifications

Supply Voltage and Current

12 V DC to 30 V DC; or 24 V AC (± 3 V AC) at 50 Hz to 60 Hz

Standard Audible Alarm: 25 mA maximum current

Sealed Audible Alarm: 35 mA maximum current

Omni-Directional Sealed Audible Alarm: 45 mA maximum current

Audible Alarm

Standard Audible Alarm: 2.7 kHz \pm 500 Hz oscillation frequency; maximum intensity 92 dB at 1 m (3.3 ft) (typical)

Sealed Audible Alarm: 2.9 kHz \pm 250 Hz oscillation frequency; maximum intensity 94 dB at 1 m (3.3 ft) (typical)

Omni-Directional Sealed Audible Alarm: 2.1 kHz \pm 250 Hz oscillation frequency; maximum intensity 99 dB at 1 m (3.3 ft) (typical)

Audible Adjustment

Standard Audible Alarm: Unscrew the cover (up to 1.5 turns maximum) to adjust the audible intensity (do not exceed 1.5 turns or the cover may detach during operation). For maximum intensity, rotate the center plug 180° counterclockwise to remove it.

Sealed Audible Alarm and Omni-Directional Sealed Audible Alarm with Intensity Adjustment: Rotate the front cover until the desired intensity is reached.

Typical Reduction in Sound Intensity with Audible Adjustment (maximum to minimum):

- **Standard Audible Alarm:** 30 dB
- **Sealed Audible Alarm:** 20 dB
- **Omni-Directional Sealed Audible Alarm:** 12 dB

Connections

Integral 4-pin M12 male quick-disconnect connector, 150 mm (6 in) PVC cable with an M12 quick disconnect, or 2 m (6.5 ft) integral PVC cable, depending on model
Models with a quick disconnect require a mating cordset

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)

Operating Conditions

-20 °C to +50 °C (-4 °F to +122 °F)

95% at +50 °C maximum relative humidity (non-condensing)

Environmental Rating

UL Type 4X Indoor and UL Type 23

Standard models: IP50

Sealed models: IP67

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

Certifications

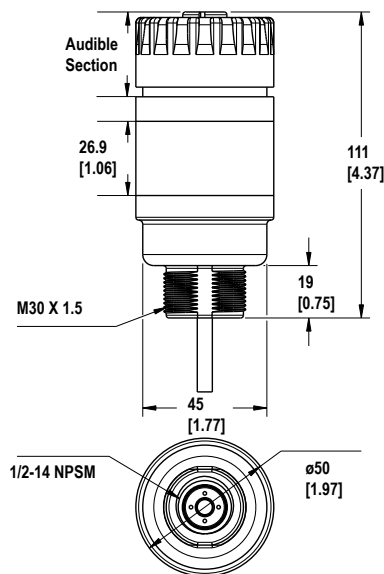


Banner Engineering Europe Park Lane, Culliganlaan 2F
bus 3, 1831 Diegem, BELGIUM

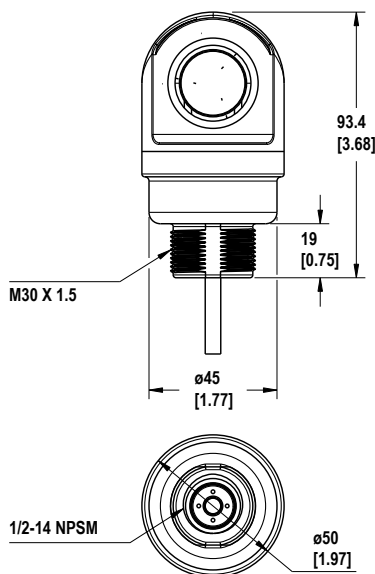
Turck Banner LTD Blenheim House, Blenheim Court,
Wickford, Essex SS11 8YT, Great Britain

Dimensions

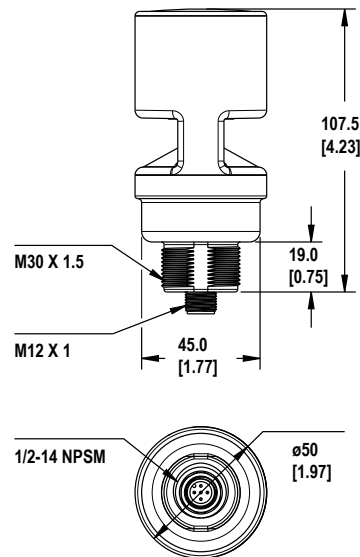
Standard Audible Models



Sealed Audible Models



Omni-Directional Models



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

Accessories

Cordsets

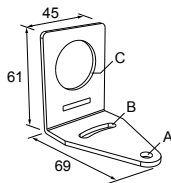
4-Pin Threaded M12 Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	2 m (6.56 ft)	Straight		
MQDC-415	5 m (16.4 ft)			
MQDC-430	9 m (29.5 ft)			
MQDC-450	15 m (49.2 ft)	Right-Angle		
MQDC-406RA	2 m (6.56 ft)			
MQDC-415RA	5 m (16.4 ft)			
MQDC-430RA	9 m (29.5 ft)			
MQDC-450RA	15 m (49.2 ft)			<p>1 = Brown 2 = White 3 = Blue 4 = Black 5 = Unused</p>

Mounting Brackets

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

SMB30A

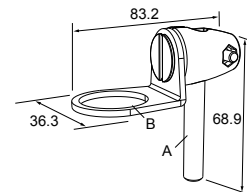
- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel



Hole center spacing: A to B=40
Hole size: A=ø 6.3, B= 27.1 x 6.3, C=ø 30.5

SMB30FA

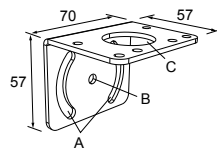
- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-ga. 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric and inch size bolt available



Bolt thread: SMB30FA, A= 3/8 - 16 x 2 in; SMB30FAM10, A= M10 - 1.5 x 50
Hole size: B= ø 30.1

SMB30MM

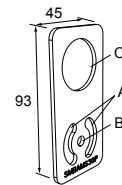
- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor



Hole center spacing: A = 51, A to B = 25.4
Hole size: A = 42.6 x 7, B = ø 6.4, C = ø 30.1

SMBAMS30P

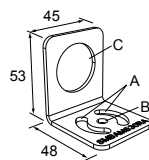
- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. 300 series stainless steel



Hole center spacing: A=26.0, A to B=13.0
Hole size: A=26.8 x 7.0, B=ø 6.5, C=ø 31.0

SMBAMS30RA

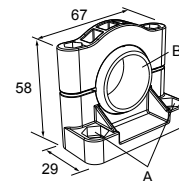
- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. (2.6 mm) cold-rolled steel



Hole center spacing: A=26.0, A to B=13.0
Hole size: A=26.8 x 7.0, B=ø 6.5, C=ø 31.0

SMB30SC

- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
- Stainless steel mounting and swivel locking hardware included

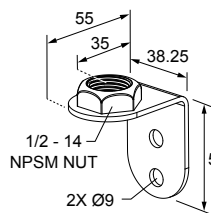


Hole center spacing: A=ø 50.8
Hole size: A=ø 7.0, B=ø 30.0

LMBE12RA35

- Direct mounting of stand-off pipe, with common bracket type
- Zinc-plated steel
- 1/2-14 NPSM nut
- Mounting distance from the wall to the center of the 1/2-14 NPSM nut is 35 mm

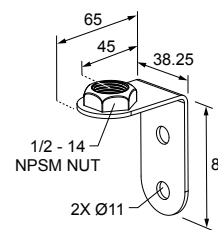
Hole center spacing: 20.0



LMBE12RA45

- Direct mounting of stand-off pipe, with common bracket type
- Zinc-plated steel
- 1/2-14 NPSM nut
- Mounting distance from the wall to the center of the 1/2-14 NPSM nut is 45 mm

Hole center spacing: 35.0



Pipe Mounting Flange

Pipe Mounting Flange			
Model	Features	Construction	
SA-F12	<ul style="list-style-type: none"> • Elevated-use stand-off pipes (½ in, NPSM/DN15) • M5 mounting hardware and nitrile gasket included 	Die-cast zinc base with black paint	
SA-F12-3	<ul style="list-style-type: none"> • Elevated-use stand-off pipes (½ in, NPSM/DN15) • M4 mounting hardware and nitrile blend gasket included 	Black Polycarbonate	

LMB Sealed Right-Angle Bracket

Model	Description	Construction	
LMB30RA	Direct-Mount Models: Bracket kit with base, 30 mm adapter, set screw, fasteners, O-rings, and gaskets.	Black polycarbonate	
LMB30RAC		Gray polycarbonate	
LMBE12RA	Pipe-Mount Models: Bracket kit with base, ½-14 pipe adapter, set screw, fasteners, O-rings, and gaskets. For use with stand-off pipe (listed and sold separately).	Black polycarbonate	
LMBE12RAC		Gray polycarbonate	

Elevated Mount System

Model	Features			Components												
SA-M30TE12 - Black Acetal	<ul style="list-style-type: none"> • Streamlined black acetal or white UHMW stand-off pipe adapter/cover • Connects between 30 mm light base and ½ in. NPSM/DN15 pipe • Mounting hardware included 															
SA-M30TE12C - White UHMW																
<table border="1"> <tr> <th>Polished 304 Stainless Steel</th> <th>Black Anodized Aluminum</th> <th>Clear Anodized Aluminum</th> </tr> <tr> <td>SOP-E12-150SS 150 mm (6 in) long</td> <td>SOP-E12-150A 150 mm (6 in) long</td> <td>SOP-E12-150AC 150 mm (6 in) long</td> </tr> <tr> <td>SOP-E12-300SS 300 mm (12 in) long</td> <td>SOP-E12-300A 300 mm (12 in) long</td> <td>SOP-E12-300AC 300 mm (12 in) long</td> </tr> <tr> <td>SOP-E12-900SS 900 mm (36 in) long</td> <td>SOP-E12-900A 900 mm (36 in) long</td> <td>SOP-E12-900AC 900 mm (36 in) long</td> </tr> </table>	Polished 304 Stainless Steel	Black Anodized Aluminum	Clear Anodized Aluminum	SOP-E12-150SS 150 mm (6 in) long	SOP-E12-150A 150 mm (6 in) long	SOP-E12-150AC 150 mm (6 in) long	SOP-E12-300SS 300 mm (12 in) long	SOP-E12-300A 300 mm (12 in) long	SOP-E12-300AC 300 mm (12 in) long	SOP-E12-900SS 900 mm (36 in) long	SOP-E12-900A 900 mm (36 in) long	SOP-E12-900AC 900 mm (36 in) long	<ul style="list-style-type: none"> • Elevated-use stand-off pipe (½ in. NPSM/DN15) • Polished 304 stainless steel, black anodized aluminum, or clear anodized aluminum surface • ½ in. NPT thread at both ends • Compatible with most industrial environments 			
Polished 304 Stainless Steel	Black Anodized Aluminum	Clear Anodized Aluminum														
SOP-E12-150SS 150 mm (6 in) long	SOP-E12-150A 150 mm (6 in) long	SOP-E12-150AC 150 mm (6 in) long														
SOP-E12-300SS 300 mm (12 in) long	SOP-E12-300A 300 mm (12 in) long	SOP-E12-300AC 300 mm (12 in) long														
SOP-E12-900SS 900 mm (36 in) long	SOP-E12-900A 900 mm (36 in) long	SOP-E12-900AC 900 mm (36 in) long														
SA-E12M30 - Black Acetal	<ul style="list-style-type: none"> • Streamlined black acetal or white UHMW mounting base adapter/cover • Connects between ½ in. NPSM/DN15 pipe and 30 mm (1-3/16 in) drilled hole • Mounting hardware included 															
SA-E12M30C - White UHMW																

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