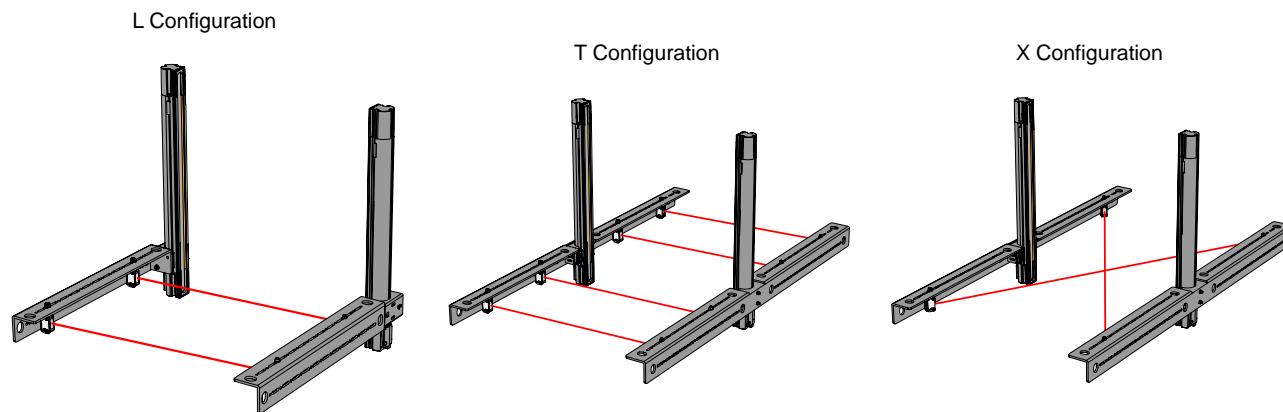


## Datasheet

Use the S4BA Mute Arm Sensor Kit to create a mute system with a pair of S4B safety light curtains and a Banner Safety Controller.

The S4BA Mute Arm Sensor Kit is available in three configurations:

- L Configuration
- T Configuration
- X Configuration



The S4B Mute Arm Sensor Kit can be directly mounted to a flat surface. The kit can also be mounted to the S4B Safety Light Curtain system's mounting brackets, S4BA-MBK-16 (or for the T and X system, directly to a stand). Connect the included Q20-2 sensors and the light curtains to the muting device. The use of an appropriate molded junction block, such as R95-6M125-M128-S4BM, can simplify wiring.

Standard Banner S4BA-Q20-2PLP-Q5 sensors are installed on the Mute Arm Sensor Kit along with retroreflective targets (reflectors). S4BA-Q20-2PLP-Q5 sensors are standard Q20-2 sensors, but with a 600 mm cable and quick disconnect. Refer to the Q20-2 datasheet (p/n 227993) for the specifications and more information.

## Models

Model	Description	Sensor Arms	Reflector Arms	Q20-2 Sensors <sup>(1)</sup>	Reflectors <sup>(2)</sup>
<b>S4BA-ML-LPQ20</b>	S4BA L-Configuration Mute Arm Sensor Kit	1	1	2	2
<b>S4BA-MT-LPQ20</b>	S4BA T-Configuration Mute Arm Sensor Kit	2	2	4	4
<b>S4BA-MX-LPQ20</b>	S4BA X-Configuration Mute Arm Sensor Kit	2	2	2	2

Hardware is included to attach the Q20-2 sensors and reflectors to the mute arms. Hardware to attach the mute arms to the S4B bracket and/or mounting surface is user-supplied.

## Mounting Instructions

Use the following instructions to mount the S4BA Q20-2 Mute Arm Sensor Kit using an L mute arm or a T and X mute arm.

M4 mounting hardware is user-supplied.

### Mounting the L Mute Arm

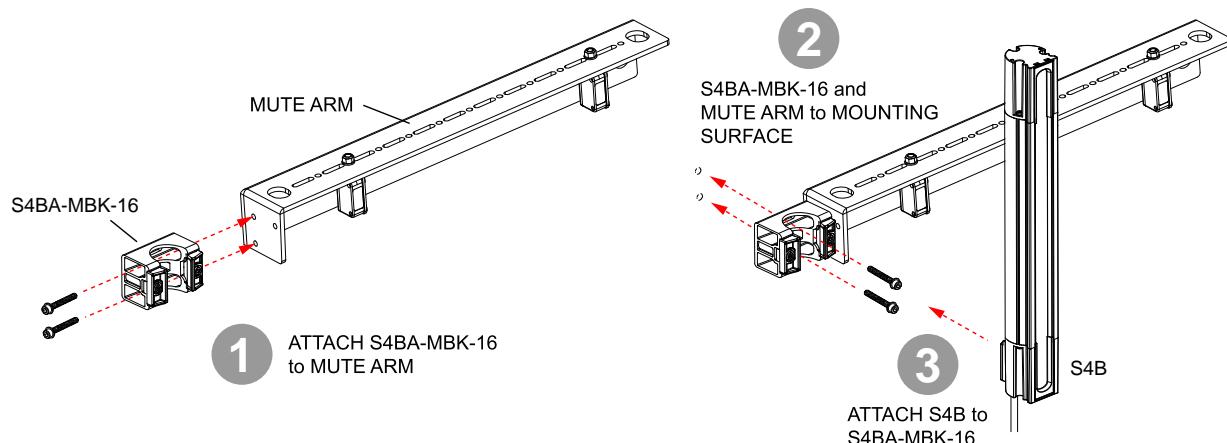
Mounting to a S4BA-MBK-16 bracket.

1. Review and follow all mechanical installation considerations in the S4B manual, p/n 230287.
2. Align and mount the S4BA-MBK-16 brackets as described in the *Mounting the S4BA-MBK-16 Side-Mount Bracket* section of the manual. The mute arm can be mounted to one of the brackets that will be used to mount the S4B, or an extra bracket can be used.

<sup>(1)</sup> Pre-installed on the sensor arms.

<sup>(2)</sup> Pre-installed on the reflector arms.

*Mounting the Mute Arm*



3. Attach the mute arm to the side of the bracket with the user-supplied M4 hardware.
4. Insert the S4B unit into the brackets and finish mounting the S4B.
5. Attach the Q20-2 units and the reflectors to the mute arms with the supplied hardware.

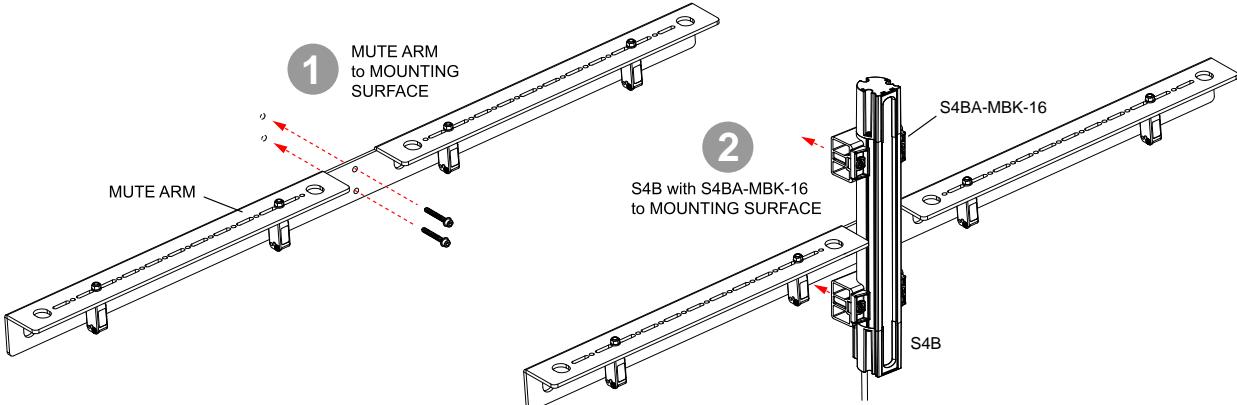
## Mount Using T and X Mute Arm

Mount the T and X mute arms in conjunction with the S4BA-MBK-16 brackets or separate from the brackets. This first mounting option is separate from the brackets. The second option is in conjunction with the brackets.

### Option 1: Mount Behind the S4B

1. Review and follow all mechanical installation considerations in the S4B manual, p/n 230287.
2. Align and mount the mute arm bracket in the same line as the centerline holes of the S4BA-MBK-16 brackets, as described in the *Mounting the S4BA-MBK-16 Side-Mount Bracket* section of the manual.

*Mount Behind the S4B Unit*

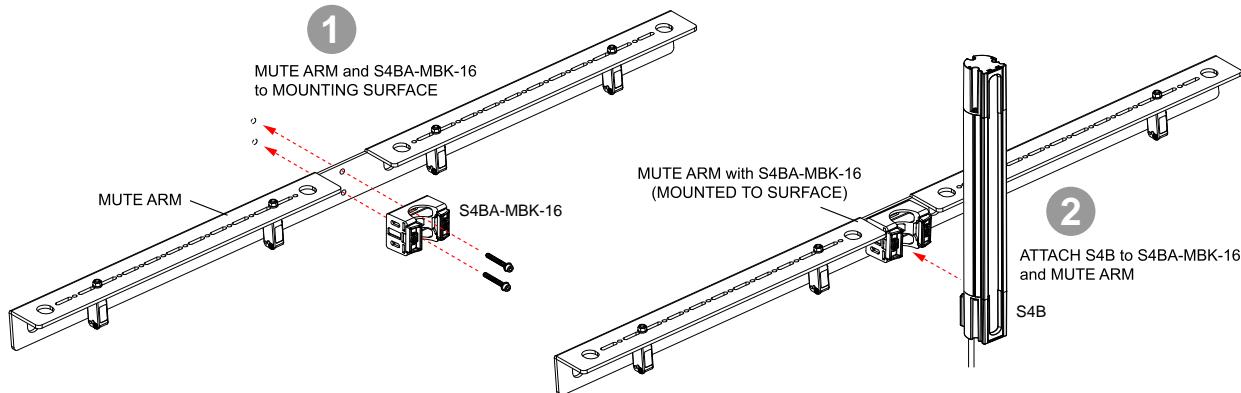


3. Mount the mute arm bracket behind the S4B unit.
4. Place the S4BA-MBK-16 brackets where needed to mount the unit (above or below the mute arm bracket, but not on it).
5. Attach the Q20-2 units and the reflectors to the mute arms with the supplied hardware.

### Option 2: Mount with the S4BA-MBK-16

1. Review and follow all mechanical installation considerations in the S4B manual, p/n 230287.
2. Align and mount the mute arm bracket in the same line as the centerline holes of the S4BA-MBK-16 brackets, as described in the *Mounting the S4BA-MBK-16 Side-Mount Bracket* section of the manual.

## Mount with the S4BA-MBK-16 Bracket



3. Mount the S4BA-MBK-16 bracket and the mute arm bracket by placing the S4BA-MBK-16 on the mute arm bracket and attaching it to the mounting surface.
4. Mount the other S4BA-MBK-16 brackets in line with the mute arm by placing them on the spacer plates included with the Mute Arm Sensor Kit and securing them to the mounting surface.
5. Insert the S4B unit into the brackets and finish the mounting process per the S4B instructions.
6. Attach the Q20-2 units and the reflectors to the mute arms with the supplied hardware.

## Alternate Mounting Method

Mount the mute arms directly on a solid surface via the holes and slots in the mute arm bracket.

## Wiring

4-pin M12 Male	Pin	Wire Color	Description
1	1	Brown	24 V
2	2	White	When set to DO, turns on when Q20-2 does not see reflector
3	3	Blue	0 V
4	4	Black	When set to DO, turns on when Q20-2 sees the reflector

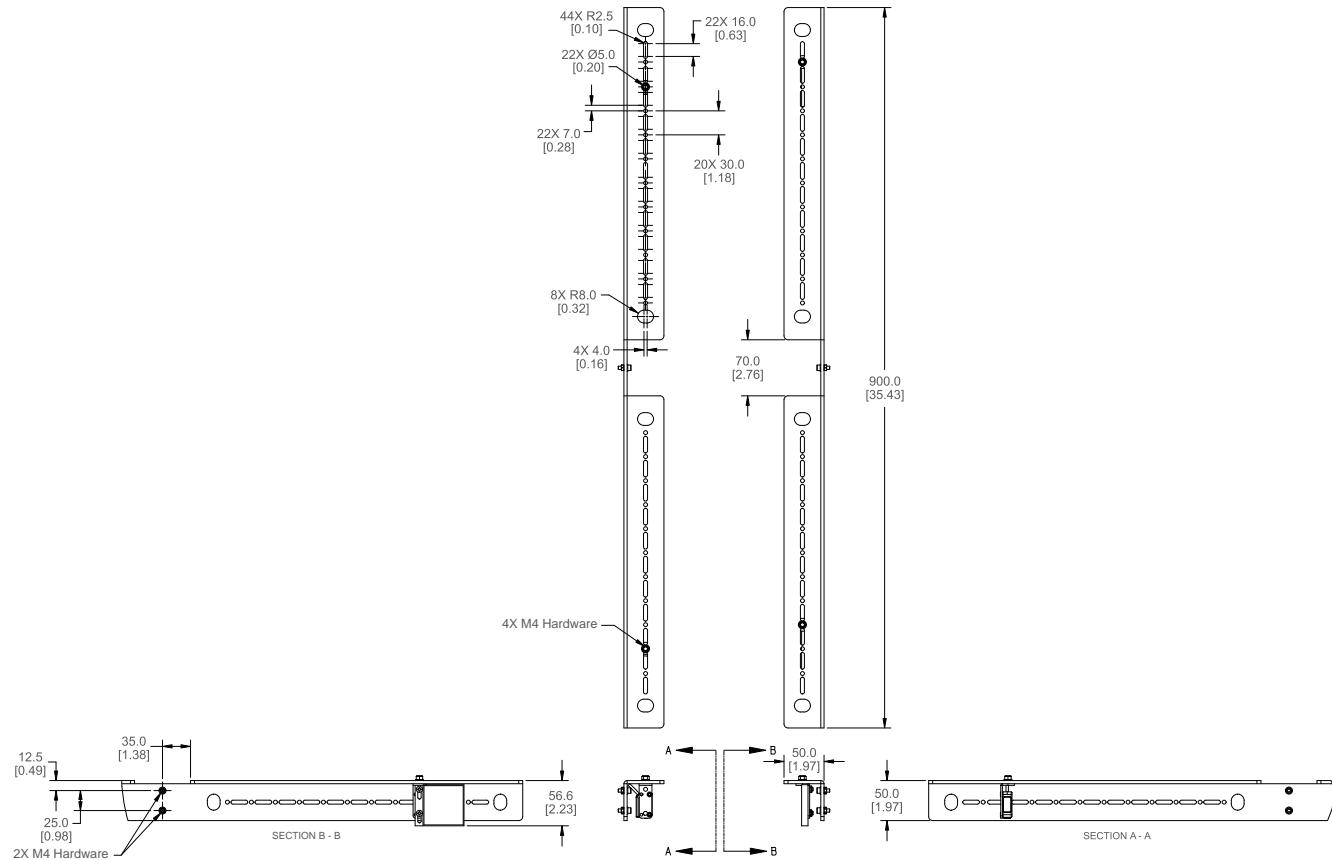
## Specifications

### Construction

Material: 6 GA. (4 mm) aluminum

Finish: Black anodized

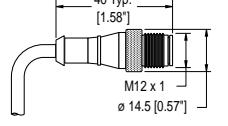
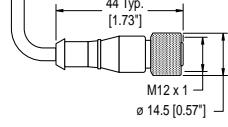
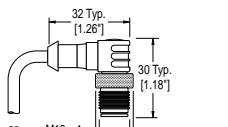
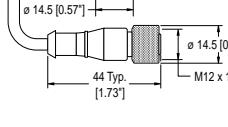
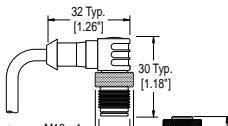
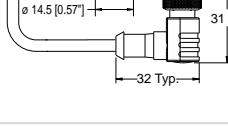
## Dimensions

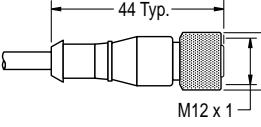
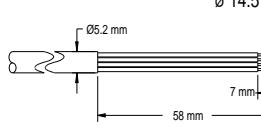
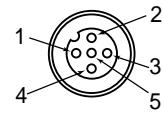
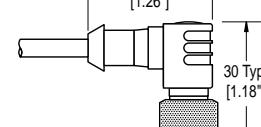
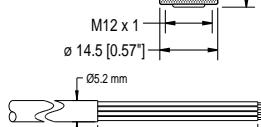
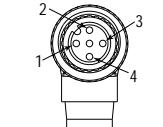


## Accessories for the Mute Arm Sensor Kit

Model	Description
<b>R95-6M125-M128-S4BM</b>	Muting connection box
<b>S4BA-Q20-2VPLP-Q5</b>	Q20-2 retroreflective mute sensor with 600 mm cable and M12 quick disconnect connector
<b>BRT-2x2</b>	Retroreflective target (reflector) for use with mute sensor

5-Pin Double-Ended M12 Female to M12 Male Cordsets					
Model	Length	Style	Dimensions	Pinout (Male)	Pinout (Female)
MQDEC-501SS	0.31 m (1.02 ft)	Male Straight/Female Straight			
MQDEC-503SS	0.91 m (2.99 ft)				
MQDEC-506SS	1.83 m (6 ft)				
MQDEC-512SS	3.66 m (12 ft)				
MQDEC-515SS	5 m (16.4 ft)				
MQDEC-530SS	9 m (29.5 ft)				
MQDEC-550SS	15 m (49.2 ft)			1 = Brown 2 = White 3 = Blue	4 = Black 5 = Gray

4-Pin Double-Ended M12 Female to M12 Male Cordsets				
Model	Length	Style	Dimensions	Pinout
MQDEC-401SS	0.31 m (1 ft)	Male Straight / Female Straight	 	 
MQDEC-403SS	0.91 m (2.99 ft)			
MQDEC-406SS	1.83 m (6 ft)			
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-415SS	4.58 m (15 ft)			
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30.2 ft)			
MQDEC-450SS	15.2 m (49.9 ft)			
MQDEC-403RS	0.91 m (2.99 ft)			
MQDEC-406RS	1.83 m (6 ft)			
MQDEC-412RS	3.66 m (12 ft)			
MQDEC-420RS	6.10 m (20 ft)			
MQDEC-430RS	9.14 m (30.2 ft)			
MQDEC-450RS	15.2 m (49.9 ft)			
MQDEC-403RR	0.9 m (2.9 ft)	Male Right-Angle / Female Straight	 	 
MQDEC-406RR	1.8 m (5.9 ft)			
MQDEC-412RR	3.6 m (11.8 ft)			
MQDEC-420RR	6.1 m (20 ft)		 	

4-Pin Single-Ended M12 Female Cordsets							
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)						
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)						
1 = Brown 2 = White 3 = Blue 4 = Black 5 = Not used							
							

## Safety Controllers

Safety Controllers provide a fully configurable, software-based safety logic solution for monitoring safety and non-safety devices.

For additional models and XS26 expansion modules, see instruction manual p/n [174868](#).

### *Safety controller models*

Non-Expandable Models	Expandable Models	Description
<b>SC26-2</b>	<b>XS26-2</b>	26 convertible I/O and 2 redundant solid-state safety outputs
<b>SC26-2d</b>	<b>XS26-2d</b>	26 convertible I/O and 2 redundant solid-state safety outputs with display
<b>SC26-2e</b>	<b>XS26-2e</b>	26 convertible I/O and 2 redundant solid-state safety outputs with Ethernet
<b>SC26-2de</b>	<b>XS26-2de</b>	26 convertible I/O and 2 redundant solid-state safety outputs with display and Ethernet
<b>SC10-2oe</b>		10 inputs, 2 redundant relay safety outputs (3 contacts each) (ISD and Ethernet compatible)
	<b>XS26-ISDd</b>	26 inputs, 2 redundant solid-state safety outputs with display, Ethernet, and 8 ISD channels

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