



# Sensing Accessories

## Mounting Brackets . . . . . page 350

- Using the right bracket ensures optimum performance from your Banner sensors.
- Stainless steel and reinforced thermoplastic polyester mounts reduce installation time and lower total installed cost.
- Choice includes angled, through-hole brackets and split-clamp models that mount to a flat surface.
- Versatile swivel-mount models mount flat and have an adjustable ball to position the sensor at any angle.
- Custom brackets can be designed for your unique applications.



## Quick-Disconnect (QD) Cables . . . . . page 378

- Allow sensors to be replaced or moved quickly, minimizing downtime.
  - Pico- (M8), Euro-(M12), and Mini-styles are available for dc powered sensors.
  - Micro- and Mini-styles are available for ac powered sensors.
  - Choose straight or right-angle connectors.



## Retroreflectors and Tape . . . . . page 391

- Banner offers a complete line of high-quality acrylic targets, high-temperature targets and adhesive-backed retroreflective tapes (not shown).
- Numerous sizes, shapes and mounting options meet your application requirements.
- New high-reflectivity models dramatically increase sensing ranges, with reflectivity factors up to 3x.
- Maximum temperature ratings range from 50° to 480° C.
- Various mounting options are available.



## EZ-LIGHT™ Indicator Lights . . . . . page 402

- Indicator lights show the status of remote or inaccessible sensors, mimicking the sensor's indicators.
- Four model families are available: the 18 mm barrel-shaped, 18 or 30 mm T-style and the dome-shaped K50L.
- A single light displays multiple colors, eliminating the need for multiple post or stack lights.



## Miscellaneous

<b>Apertures and Aperture Kits</b> . . . . .	<b>page 406</b>
<b>Replacement Lens Assemblies</b> . . . . .	<b>408</b>
<b>Alignment Tools</b> . . . . .	<b>409</b>
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**Brackets**

Accessories



# Banner Bracket



WORLD-BEAM® Q12	MINI-BEAM® 2	WORLD-BEAM® QS18	MINI-BEAM®	WORLD-BEAM® QS30	OMNI-BEAM™														
T8	V51	V52	V53	V54	Q23	S18	M18	T18	Q25	S30	SM30/SM130	T30	Q40	PicoDot®	QM42	Q45	Q60	D10	D12

Page	References	T8	V51	V52	V53	V54	Q23	S18	M18	T18	Q25	S30	SM30/SM130	T30	Q40	PicoDot®	QM42	Q45	Q60	D10	D12	
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166																						
172																						
354	DIN-35-..																					
354	MSMB-3																					
355	SMB1815SF																					
355	SMB18A																					
355	SMB18FA																					
356	SMB18Q																					
356	SMB18SF																					
356	SMB18UR																					
356	SMB3018SC																					
357	SMB30A																					
357	SMB30FA																					
357	SMB30MM																					
357	SMB30Q																					
358	SMB30SC																					
358	SMB30SK																					
358	SMB30SUS																					
358	SMB30UR																					
359	SMB312B																					
359	SMB312PD																					
359	SMB312S																					
359	SMB42T																					
360	SMB46A																					
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361	SMB55A																					
361	SMB55F																					
361	SMB55RA																					
361	SMB55S																					
362	SMB8MM																					
362	SMBAMS18P																					
362	SMBAMS18RA																					
362	SMBAMS30P																					
363	SMBAMS30RA																					
363	SMBAMSBRA																					
363	SMBAMSLT3IP																					
363	SMBAMSLT3P																					
364	SMBAMSQ60IP																					
364	SMBAMSQ60P																					
365	SMBLG																					
366	SMBLGA																					
366	SMBLT31																					
366	SMBLT32																					

ACCESSORIES





# Banner Bracket



WORLD-BEAM® Q12	T8	MINI-BEAM® 2	VS1	VS2	VS3	VS4	WORLD-BEAM® QS18	MINI-BEAM®	Q23	S18	M18	T18	Q25	WORLD-BEAM® QS30	S30	SM30/SM130	T30	Q40	PicoDot®	QM42	Q45	OMNI-BEAM™	Q60	D10	D12
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Page	References	44	47	50	53	56	59	62	66	75	88	92	92	98	103	108	115	119	123	127	131	134	140	153	159	166	172	
366	SMBLT3IP																											
367	SMBLT7																											
367	SMBLT7F																											
367	SMBLX																											
367	SMBLXR																											
368	SMBPVA1																											
368	SMBPVA2																											
368	SMBPVA..																											
368	SMBPVA..A																											
368	SMBPVA..AB																											
369	SMBPVA..C																											
369	SMBPVA6																											
369	SMBPVA7																											
369	SMBPVA8																											
370	SMBPVA9																											
370	SMBPVD..A																											
370	SMBPVD..AB																											
370	SMBQ12A	●																										
370	SMBQ12T	●																										
371	SMBQ50																											
371	SMBQ60																									●		
371	SMBQC50																											
371	SMBQS12PD			●																								
372	SMBQS12S			●																								
372	SMBQS18A										●																	
372	SMBQS18AF										●																	
372	SMBQS18RA										●																	
373	SMBQS18Y										●																	
373	SMBQS30L																	●										
373	SMBQS30LT																	●										
373	SMBQS30Y																	●										
374	SMBQS30YL																	●										
374	SMBR55F01																									●	●	
374	SMBR55FRA																									●	●	
374	SMBSL																											
375	SMBT18Y																											
375	SMBVS1S																											
375	SMBVS1SC																											
375	SMBVS1T																											
376	SMBVS1TC																											
376	SMBVS2RA																											
376	SMBVS3S																											
376	SMBVS3T																											
377	SMBVS4SRA																											
377	SMH241F																											

ACCESSORIES



# Brackets

## Accessories

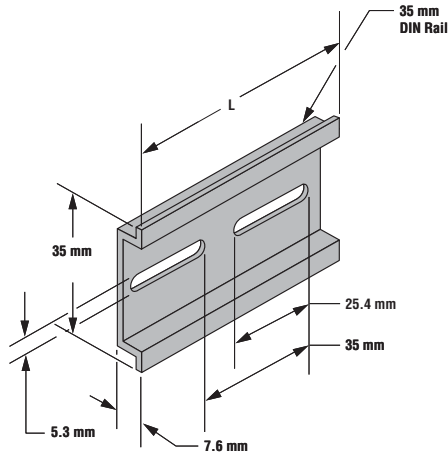
### DIN-35..

• DIN rail is available in 70, 105 and 140 mm lengths



#### Used With

- D10
- D12
- R55F
- MINI-ARRAY
- High-Resolution MINI-ARRAY



Models	Length (L)
DIN-35-70	70 mm
DIN-35-105	105 mm
DIN-35-140	140 mm



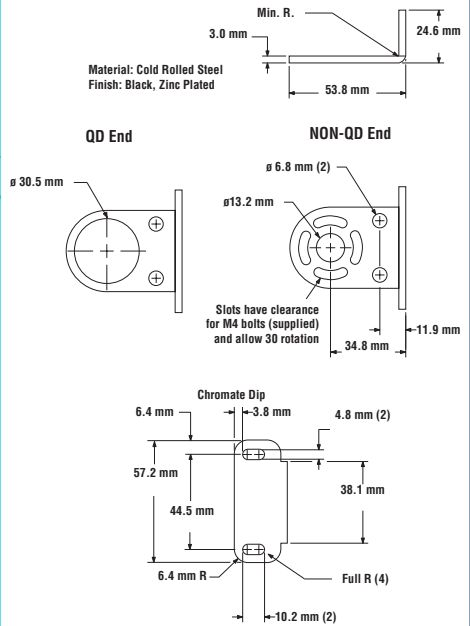
### MSMB-3

- 11-ga. cold-rolled steel with black corrosion-resistant zinc chromate finish
- Two-bracket replacement kit for the brackets that come with the emitter/receiver



#### Used With

- MINI-ARRAY
- High-Resolution MINI-ARRAY



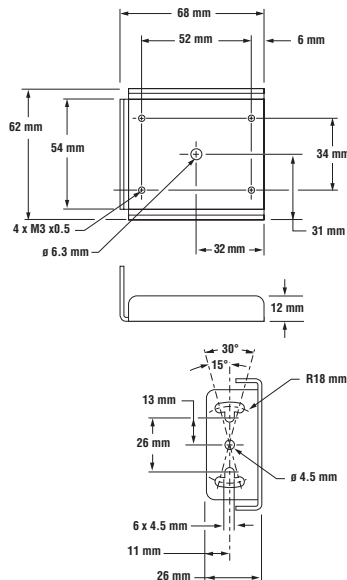
### RMB50

- Protective mounting bracket for retroreflective targets
- 14-ga. 316 stainless steel
- Includes stainless steel M3 x 0.5 hardware



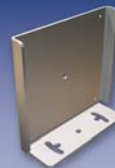
#### Used With

- Reflectors:
- BRT-60X40C
  - BRT-2X2
  - BRT-50D
  - BRT-50R



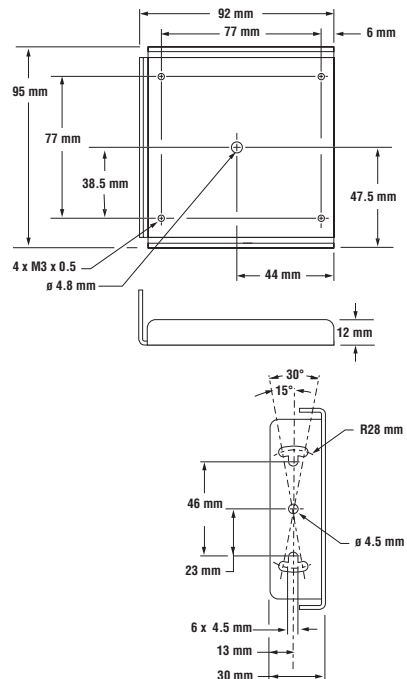
### RMB85

- Protective mounting bracket for retroreflective targets
- 14-ga. 316 stainless steel
- Includes stainless steel M3 x 0.5 hardware



#### Used With

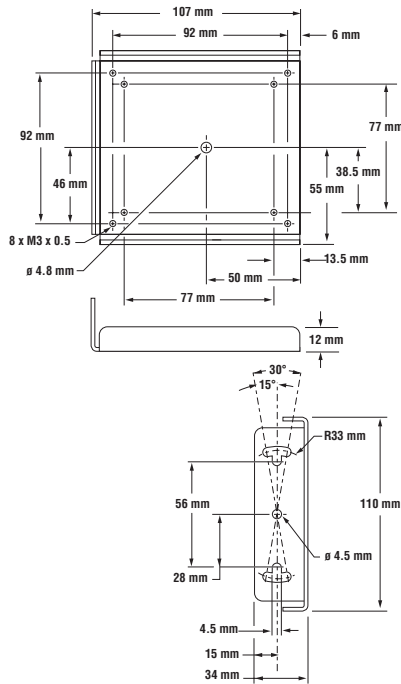
- Reflectors:
- BRT-3
  - BRT-77X77C



ACCESSORIES

**RMB100**

- Protective mounting bracket for retroreflective targets
- 14-ga. 316 stainless steel
- Includes stainless steel M3 x 0.5 hardware



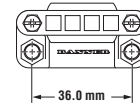
**Used With**

- Reflectors:
- BRT-92X92C..
  - BRT-77X77C
  - BRT-3
  - BRT-84



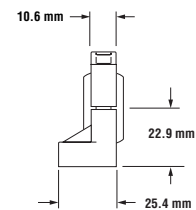
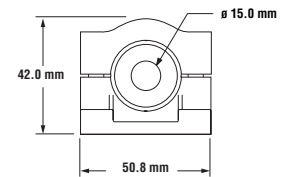
**SMB1815SF**

- Swivel with set screws for mounting sensors by the cable hub
- Black reinforced thermoplastic polyester
- Includes stainless steel swivel locking hardware and hex wrench



**Used With**

- T18
- T18U
- T30
- T30U
- EZ-LIGHT T18
- EZ-LIGHT T30

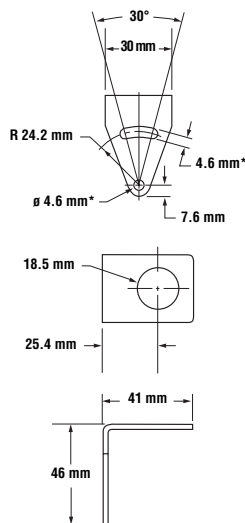


**SMB18A**

- 12-ga. stainless steel right-angle mounting bracket with a curved mounting slot for versatility and orientation
- Clearance for M4 (#8) hardware



\* Use 4 mm (#8) screws to mount bracket. Drill screw holes 24.2 mm apart.



**Used With**

- QS18
- MINI-BEAM
- M18
- Q25
- S18
- T18
- T-GAGE M18T
- S18U
- QS18U
- Q45UR Barrels
- T18U
- EZ-LIGHT T18
- EZ-LIGHT M18

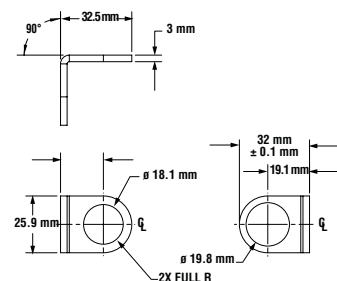


**SMB18FA**

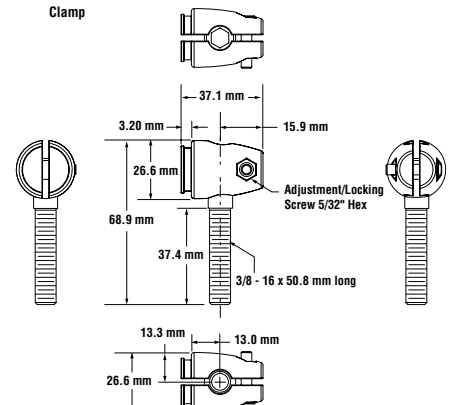
- 14-ga. 304 stainless steel
- 18 mm swivel bracket with tilt and pan movement for precision adjustment



18 mm Bracket



Clamp



**Used With**

- QS18
- MINI-BEAM
- M18
- T18
- Q25
- S18U
- QS18U
- Q45UR Barrels
- T18U
- SMBQS18A
- SMBQS18Y
- EZ-LIGHT T18
- EZ-LIGHT M18

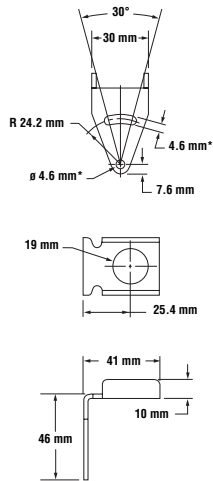


### SMB18Q

- 18 mm angled flanged bracket
- 12-ga. stainless steel



\* Use 4 mm (#8) screws to mount bracket.  
Drill screw holes 24.2 mm apart.



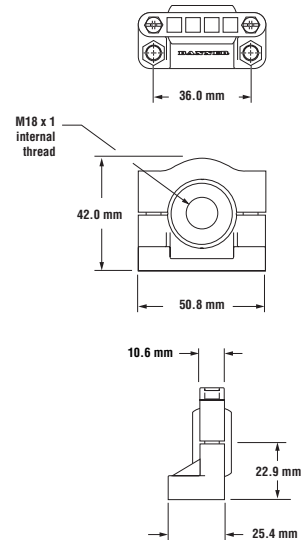
#### Used With

- QS18
- MINI-BEAM
- S18
- M18
- T18
- Q25
- S18U
- QS18U
- Q45UR Barrels
- T18U
- EZ-LIGHT T18
- EZ-LIGHT M18



### SMB18SF

- 18 mm swivel bracket with M18 x 1 internal thread
- Black thermoplastic polyester
- Includes stainless steel swivel locking hardware



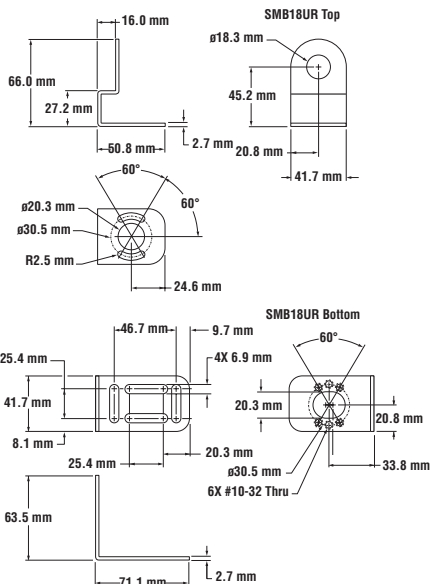
#### Used With

- QS18
- MINI-BEAM
- S18
- M18
- T18
- Q25
- T-GAGE M18T
- S18U
- QS18U
- Q45UR Barrels
- T18U
- EZ-LIGHT T18
- EZ-LIGHT M18



### SMB18UR

- 2-piece universal swivel bracket for 18 mm sensors
- 300 series stainless steel
- Includes stainless steel swivel locking hardware



#### Used With

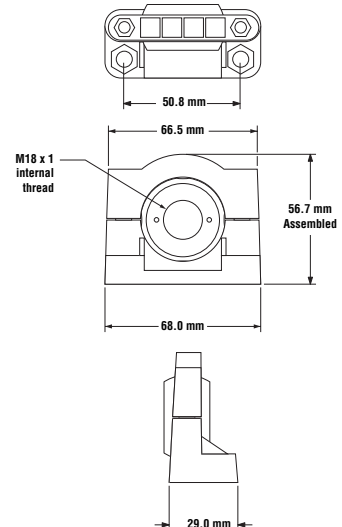
- QS18\*
- MINI-BEAM
- S18
- M18
- T18
- Q25
- T-GAGE M18T
- S18U
- QS18U\*
- Q45UR Barrels
- T18U
- EZ-LIGHT T18
- EZ-LIGHT M18



\* Contact factory to verify compatibility with integral QD models.

### SMB3018SC

- 18 mm swivel barrel for side mount bracket
- Black reinforced thermoplastic polyester
- Includes stainless steel swivel locking hardware



#### Used With

- QS18
- MINI-BEAM
- Q23
- QM42/QMT42
- S18
- T18
- Q25
- S18U
- QS18U
- Q45UR Barrels
- T18U
- EZ-LIGHT T18





**SMB30A**

- 12-ga. stainless steel right-angle mounting bracket with curved slot for versatility and orientation
- Clearance for M6 (1/4") hardware

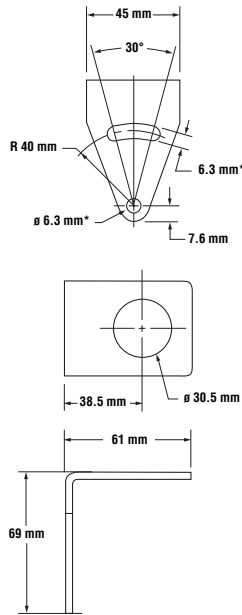


**Used With**

- QS30
- SM30
- S30
- T30
- Q40
- Q45
- OMNI-BEAM
- OTB, LTB, STB & VTB
- QT50U
- T30U
- Q45U
- Q45UR
- K50
- EZ-LIGHT K50L
- EZ-LIGHT T30



\* Use 5 mm (#10) screws to mount bracket. Drill screw holes 40.0 mm apart.



**SMB30FA**

- 14-ga. 304 stainless steel
- 30 mm swivel bracket with tilt and pan movement for precision adjustment

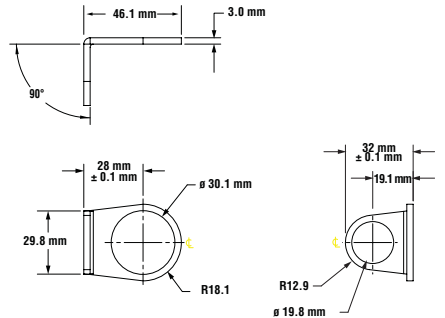


**Used With**

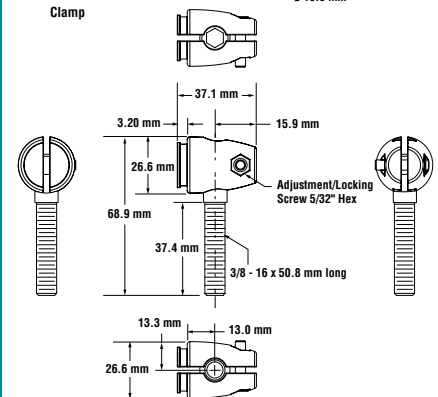
- QS30
- SM30
- Q45
- OMNI-BEAM
- OTB, LTB, STB & VTB
- QT50U
- Q45U
- Q45UR
- K50
- EZ-LIGHT K50L



30 mm Bracket



Clamp



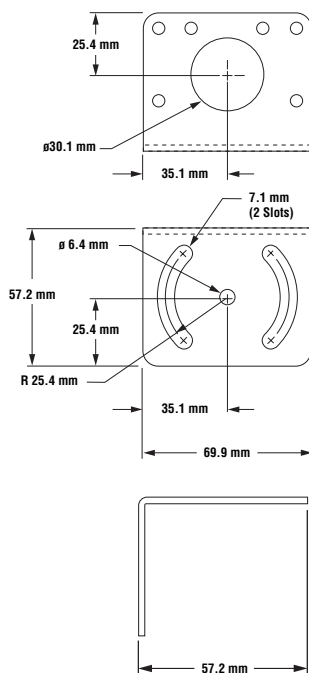
**SMB30MM**

- 30 mm 12-ga. stainless steel bracket with curved mounting slots for versatility and orientation
- Clearance for M6 (1/4") hardware



**Used With**

- QS30
- SM30
- Q45
- OMNI-BEAM
- OTB, LTB, STB & VTB
- QT50U
- Q45U
- Q45UR
- K50
- EZ-LIGHT K50L



**SMB30Q**

- 30 mm angled flanged mounting bracket
- Stainless steel

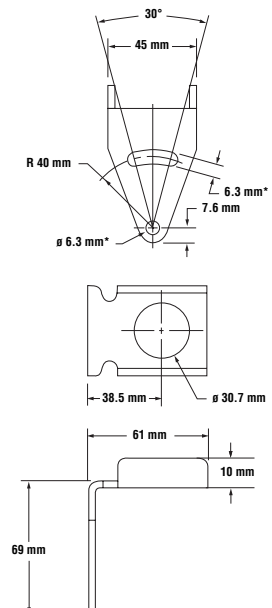


**Used With**

- QS30
- SM30
- S30
- T30
- Q40
- Q45
- OMNI-BEAM
- OTB, LTB, STB & VTB
- Q45U
- Q45UR
- K50
- EZ-LIGHT K50L
- EZ-LIGHT T30



\* Use 5 mm (#10) screws to mount bracket. Drill screw holes 40.0 mm apart.



# Brackets

## Accessories

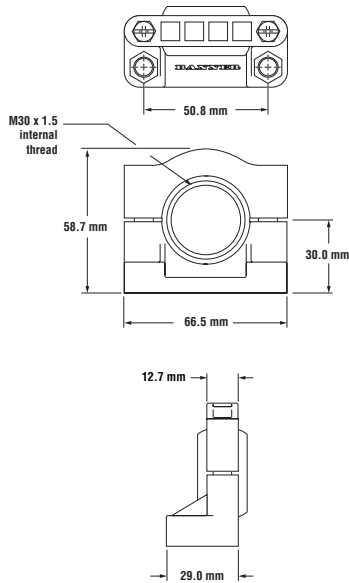
### SMB30SC

- 30 mm swivel bracket
- Black reinforced thermoplastic polyester
- Includes stainless steel mounting and swivel locking hardware



#### Used With

- QS30
- SM30
- S30
- T30
- Q40
- Q45
- OMNI-BEAM
- OTB, LTB, STB & VTB
- QT50U
- Q45U
- Q45UR
- K50
- EZ-LIGHT K50L
- EZ-LIGHT T30



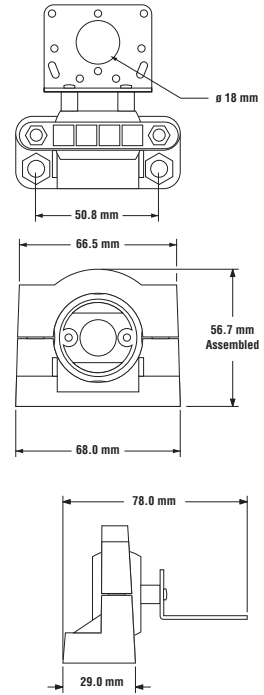
### SMB30SK

- Flat-mount swivel bracket with extended range of motion
- Black reinforced thermoplastic polyester and 316 stainless steel
- Includes stainless steel swivel locking hardware



#### Used With

- QS18
- MINI-BEAM
- Q23
- QM42/QMT42
- S18
- M18
- T18
- Q25
- S18U
- QS18U
- Q45UR Barrels
- T18U
- EZ-LIGHT T18
- EZ-LIGHT M18



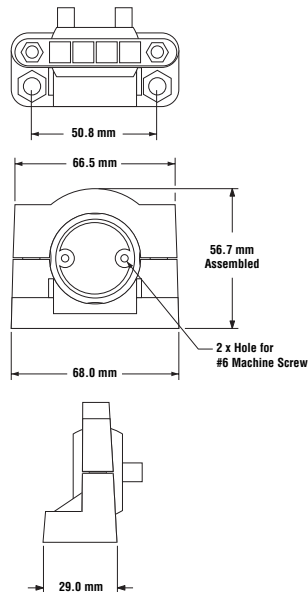
### SMB30SUS

- Side-mount swivel bracket with extended range of motion
- Black reinforced thermoplastic polyester
- Includes stainless steel swivel locking hardware



#### Used With

- QS18
- MINI-BEAM
- Q23
- QM42/QMT42
- QS18U



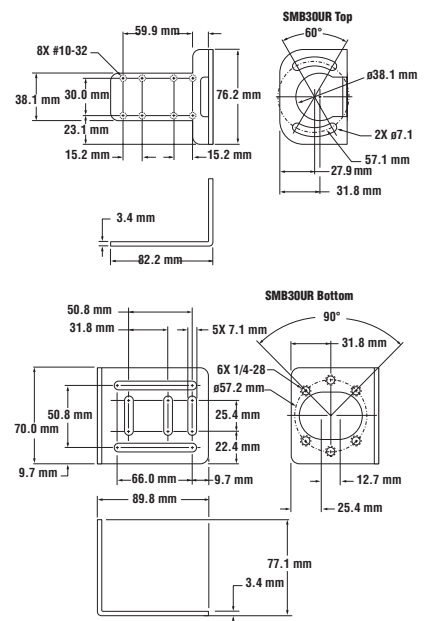
### SMB30UR

- 2-piece universal swivel bracket for limit-switch style sensors
- 300 series stainless steel
- Includes stainless steel swivel locking hardware



#### Used With

- Q45
- OMNI-BEAM
- Q45U
- Q45UR



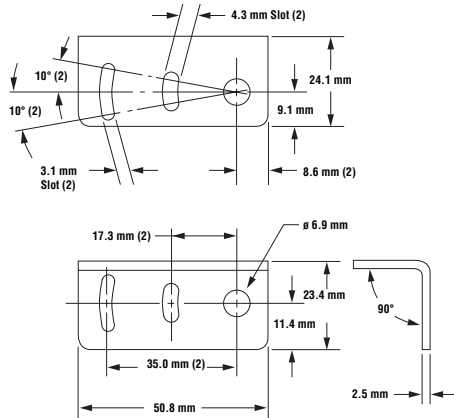
**SMB312B**

- Stainless steel 2-axis, bottom mounting bracket
- Includes mounting foot



**Used With**

- MINI-BEAM



**SMB312PD**

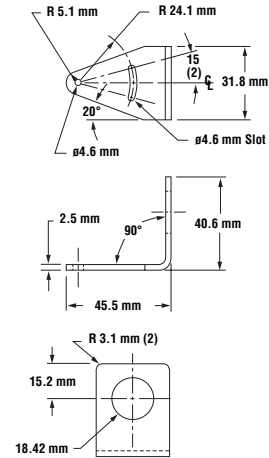
- Stainless steel 18 mm barrel-mounting bracket

NOTE: Not for use with plastic fiber optic models



**Used With**

- QS18
- MINI-BEAM
- S18
- M18
- T18
- Q25
- S18U
- T-GAGE M18T
- QS18U
- Q45UR Barrels
- T18U
- EZ-LIGHT T18
- EZ-LIGHT M18



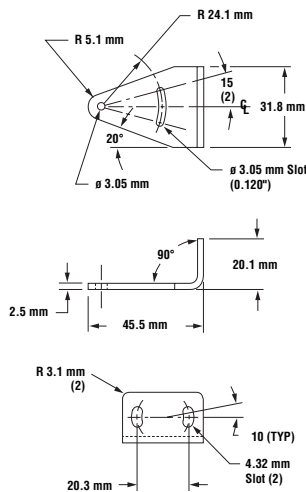
**SMB312S**

- Stainless steel 2-axis side-mounting bracket



**Used With**

- QS18
- MINI-BEAM
- Q23
- QM42/QMT42
- QS18U



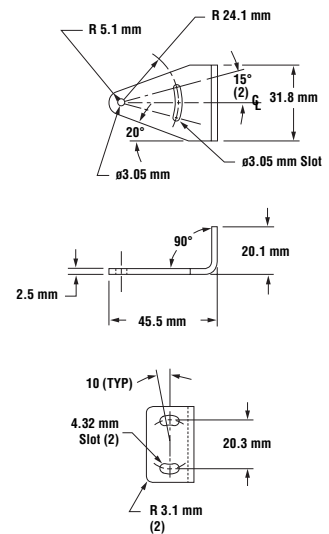
**SMB42T**

- 2-axis side mounting bracket
- Stainless steel
- Includes M3 sensor mounting hardware



**Used With**

- QM42/QMT42



# Brackets

## Accessories

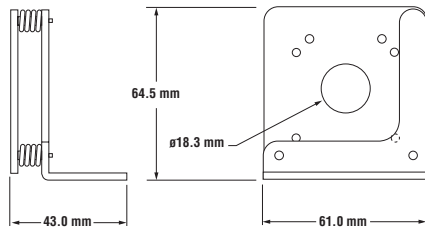
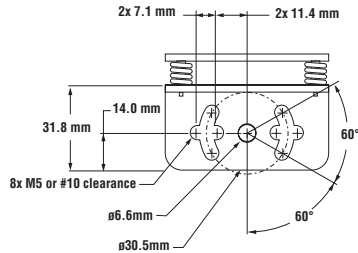
### SMB46A

- 2-piece 12-ga. stainless steel bracket assembly with precision sensor alignment adjustment
- Includes 2 mm hex key



#### Used With

- QS18 Laser Emitters
- S18 Laser Emitters
- PicoDot
- QS18U



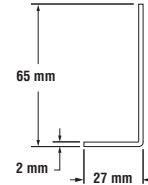
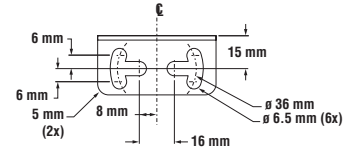
### SMB46L

- L bracket
- 14-ga. 316 stainless steel



#### Used With

- QS18
- MINI-BEAM
- Q23/QH23
- QS30
- PicoDot
- QM42/QMT42
- QS18U



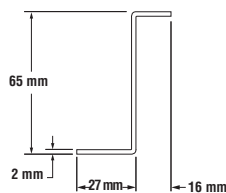
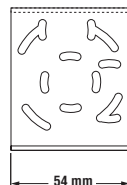
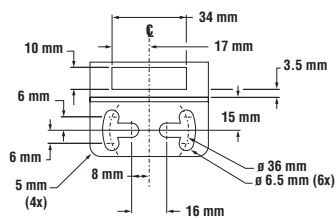
### SMB46S

- S bracket
- 14-ga. 316 stainless steel



#### Used With

- QS18
- MINI-BEAM
- Q23/QH23
- QS30
- PicoDot
- QM42/QMT42
- QS18U



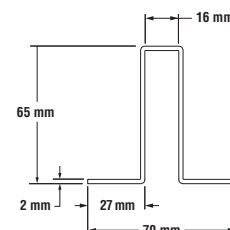
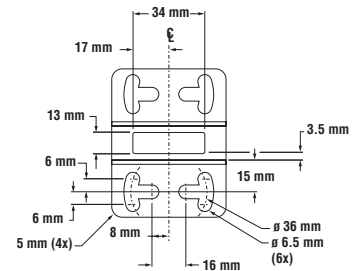
### SMB46U

- U bracket
- 14-ga. 316 stainless steel




#### Used With

- QS18
- MINI-BEAM
- Q23/QH23
- QS30
- PicoDot
- QM42/QMT42
- QS18U



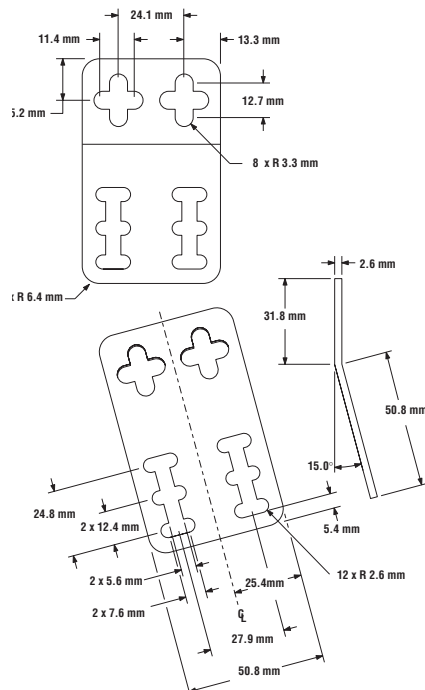
### SMB55A

- 15° offset bracket
- 12-ga. stainless steel



**Used With**


- R58E
- QL55



**MORE INFO ONLINE**

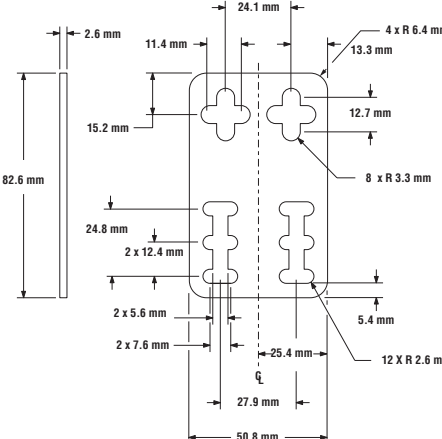
### SMB55F

- Flat-mount bracket
- 12-ga. stainless steel



**Used With**


- R58E
- QL55



**MORE INFO ONLINE**

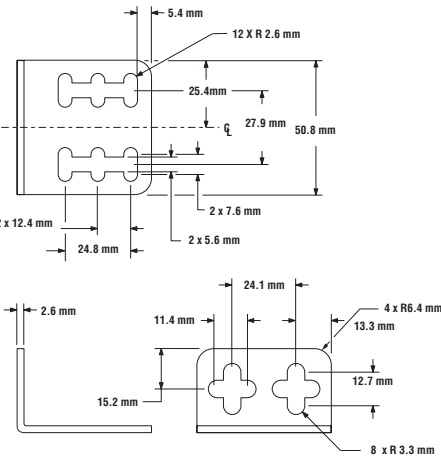
### SMB55RA

- Right-angle bracket
- 12-ga. stainless steel



**Used With**


- R58E
- QL55



**MORE INFO ONLINE**

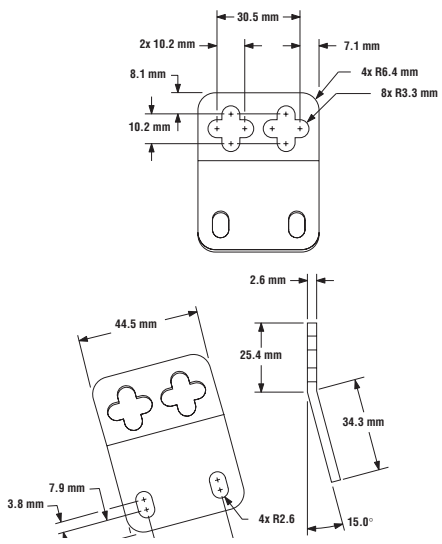
### SMB55S

- 15° offset bracket
- 12-ga. stainless steel



**Used With**

- R58E
- QL55



**MORE INFO ONLINE**

ACCESSORIES

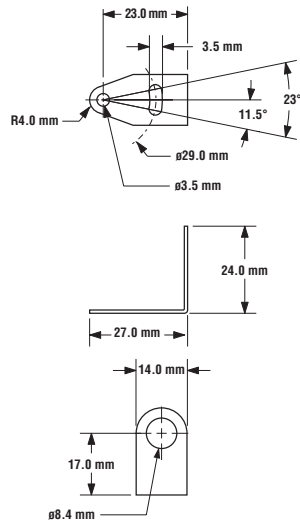
**SMB8MM**

- Right-angle bracket
- 300 series stainless steel



**Used With**

- T8
- IT23S (Glass Fiber)
- BT23S (Glass Fiber)



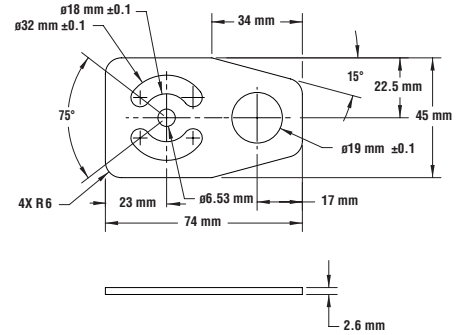
**SMBAMS18P**

- 12-ga. 300 series stainless steel
- Flat SMBAMS series bracket with 18 mm hole for mounting sensors
- Articulation slots for 90+° of rotation



**Used With**

- QS18
- MINI-BEAM
- S18
- M18
- T18
- T-GAGE M18T
- S18U
- Q45UR Barrels
- T18U
- QS18U
- EZ-LIGHT T18
- EZ-LIGHT M18



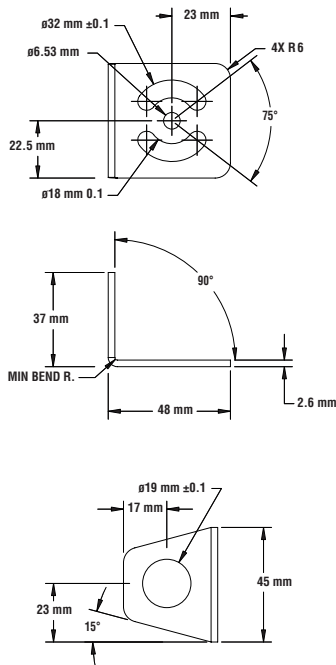
**SMBAMS18RA**

- 12-ga. 300 series stainless steel
- Right-angle SMBAMS series bracket with 18 mm hole for mounting sensors
- Articulation slots for 90+° of rotation



**Used With**

- QS18
- MINI-BEAM
- S18
- M18
- T18
- S18U
- Q45UR Barrels
- T18U
- QS18U
- EZ-LIGHT T18
- EZ-LIGHT M18



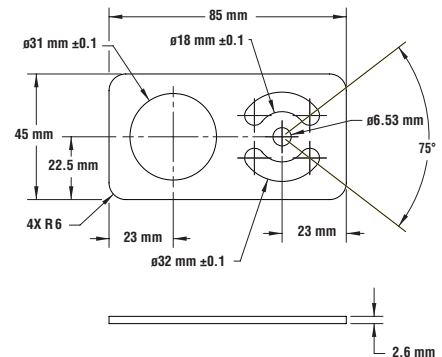
**SMBAMS30P**

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



**Used With**

- QS30
- S30
- SM30/SMI30
- T30
- Q40
- Q45
- OMNI-BEAM
- OTB, LTB, STB & VTB
- QT50U
- T30U
- Q45U
- Q45UR
- K50
- EZ-LIGHT T30
- EZ-LIGHT K50L



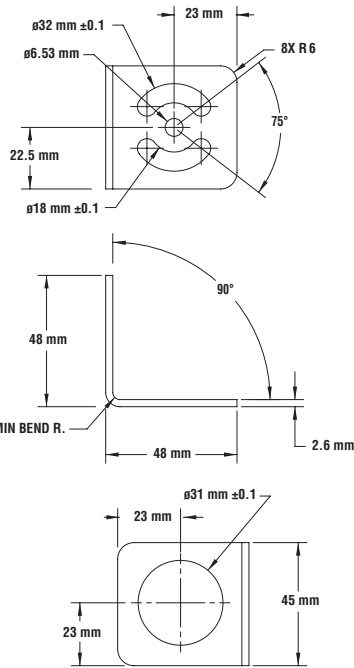
**SMBAMS30RA**

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



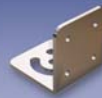
**Used With**

- QS30
- S30
- SM30/SMI30
- T30
- Q40
- Q45
- OMNI-BEAM
- OTB, LTB, STB & VTB
- QT50U
- T30U
- Q45U
- Q45UR
- K50
- EZ-LIGHT T30
- EZ-LIGHT K50L



**SMBAMSBRA**

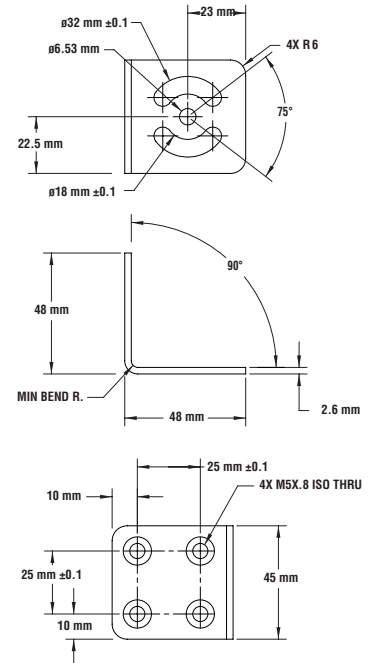
- 12-ga. 300 series stainless steel
- Right-angle base piece for SMBAMS series of versatile mounting hardware
- Four point hole pattern to integrate with articulation slots in SMBAMS series brackets



**Used With**

- SMBAMSBRA\*
- SMBAMS18P
- SMBAMS18RA
- SMBAMS30P
- SMBAMS30RA
- SMBAMSLT3IP
- SMBAMSLT3P
- SMBAMSQ60IP
- SMBAMSQ60P

\* Multiple SMBAMSBRA base brackets can be integrated together to allow for additional points of articulation.



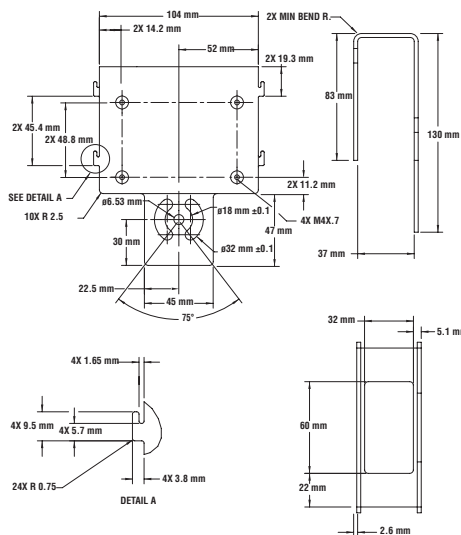
**SMBAMSLT3IP**

- 12-ga. 300 series stainless steel
- Industrial protection SMBAMS series bracket for LT3 offers protection and replaceable window
- Articulation slots for 90+° of rotation



**Used With**

- LT3



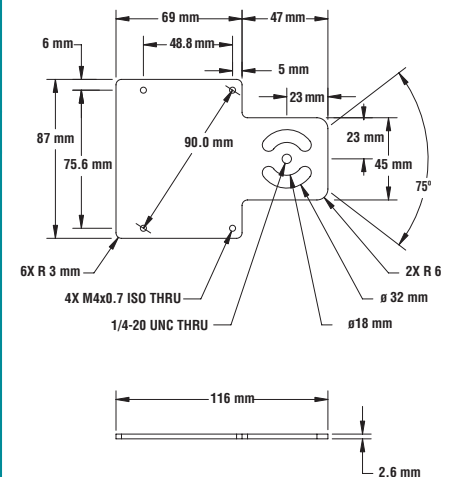
**SMBAMSLT3P**

- 12-ga. 300 series stainless steel
- Flat SMBAMS series bracket for mounting LT3
- Articulation slots for 90+° of rotation



**Used With**

- LT3



# Brackets

## Accessories

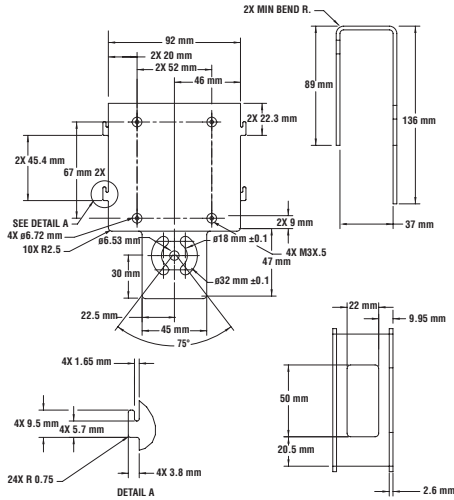
### SMBAMSQ60IP

- 12-ga. 300 series stainless steel
- Industrial protection SMBAMS series bracket for Q60 offers protection and replaceable window
- Articulation slots for 90+° of rotation



Used With

• Q60



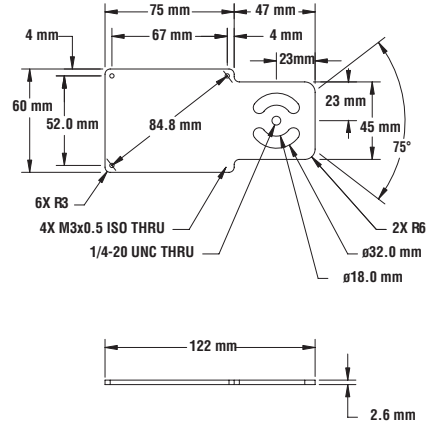
### SMBAMSQ60P

- 12-ga. 300 series stainless steel
- Flat SMBAMS series bracket for mounting Q60
- Articulation slots for 90+° of rotation



Used With

• Q60



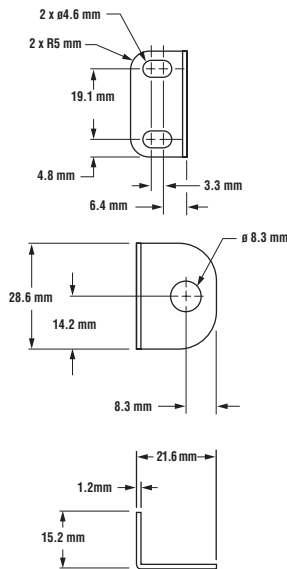
### SMBF

- Right-angle bracket for glass fiber optics with 5/16" - 24 threaded tip
- 18-ga. stainless steel



Used With

• Glass fiber with 5/16" - 24 threaded tip



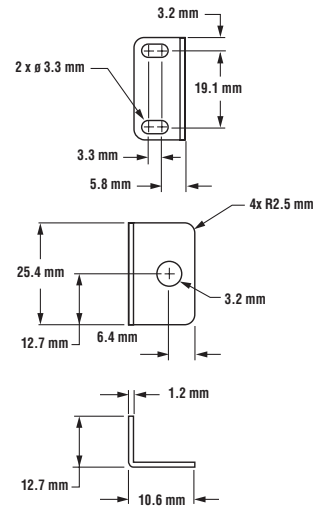
### SMBFP3

- Right-angle bracket for plastic fiber optics with 3 mm threaded tip
- 18-ga. stainless steel



Used With

• Plastic fiber with M3 tip



ACCESSORIES



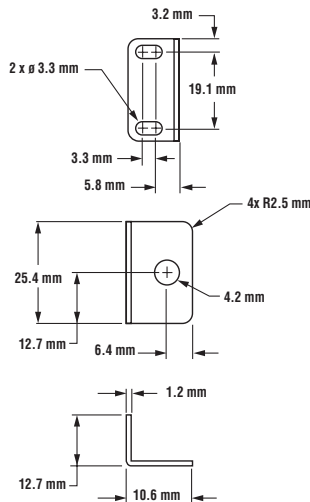
**SMBFP4**

- Right-angle bracket for plastic fiber optics with 4 mm threaded tip
- 18-ga. stainless steel



**Used With**

- Plastic fiber with M4 tip



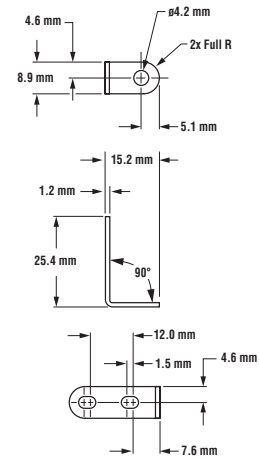
**SMBFP4N**

- Low-profile right-angle bracket for plastic fiber optics with 4 mm threaded tip
- 18-ga. stainless steel



**Used With**

- Plastic fiber with M4 tip



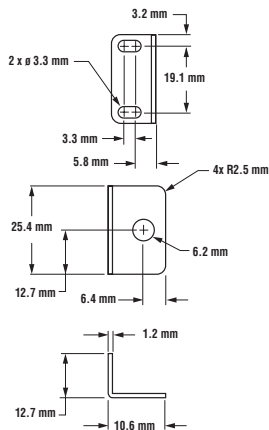
**SMBFP6**

- Low-profile right-angle bracket for plastic fiber optics with 6 mm threaded tip
- 18-ga. stainless steel



**Used With**

- Plastic fiber with M6 tip



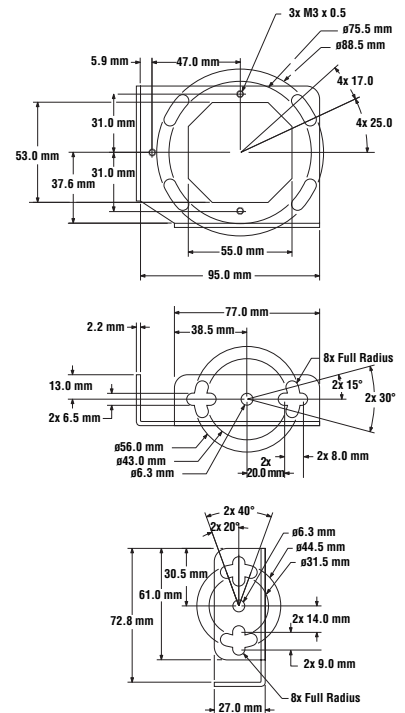
**SMBLG**

- LG Series sensor mounting bracket
- 304 stainless steel



**Used With**

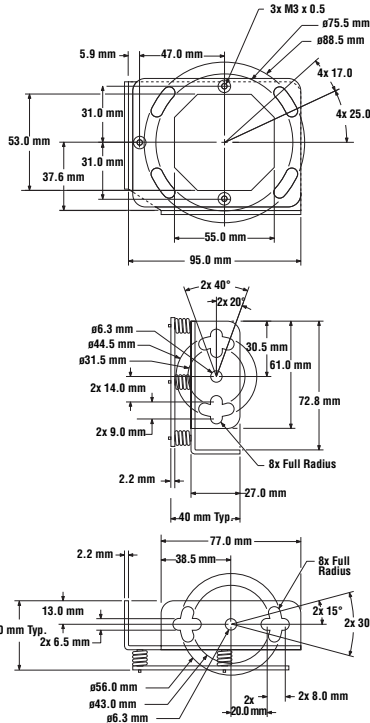
- LG5
- LG10



ACCESSORIES

**SMBLGA**

- LG Series adjustable bracket assembly
- Precision adjustment screws
- 304 stainless steel



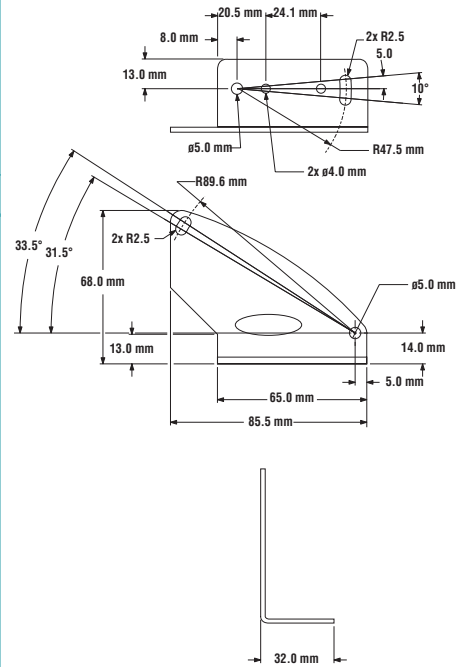
**Used With**

- LG5
- LG10



**SMBLT31**

- Right-angle bracket
- 300 stainless steel



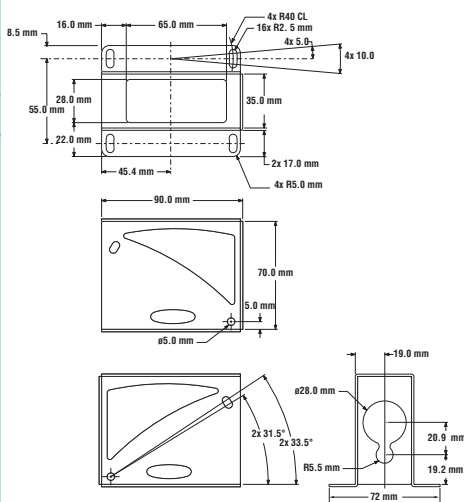
**Used With**

- LT3



**SMBLT32**

- Full protection bracket
- 300 stainless steel
- Includes mounting hardware



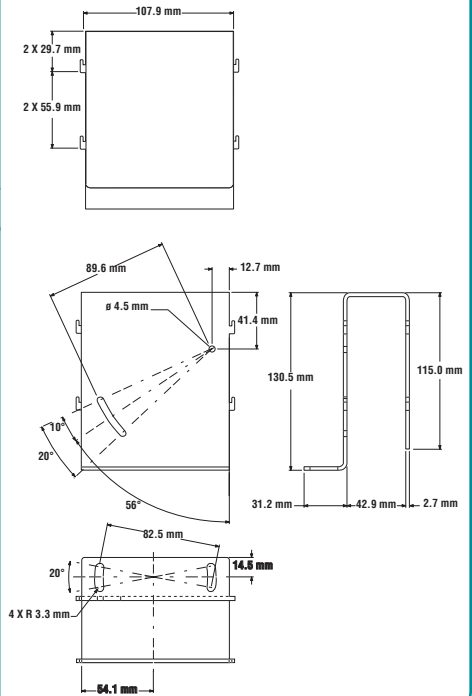
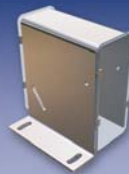
**Used With**

- LT3



**SMBLT3IP**

- Replaceable window for welding environments
- Stainless steel construction
- Includes 2 weld splatter replacement windows




**Used With**

- LT3



### SMBLT7

- Right-angle bracket
- 300 series stainless steel
- Fine-adjust accessory available (model SMBLT7F)




**Used With**

- LT7

**MORE INFO ONLINE**

### SMBLT7F

- Fine-adjust accessory bracket is available
- 304 series stainless steel
- Includes mounting hardware
- Requires SMBLT7 (sold separately)



**Used With**


- LT7\*

\* Shown mounted on SMBLT7 (not included)

**MORE INFO ONLINE**

### SMBLX

- End-cap brackets; set of 2
- Zinc-plated cold rolled steel



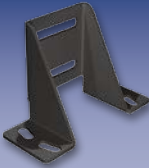
**Used With**

- LX

**MORE INFO ONLINE**

### SMBLXR

- Back-mount bracket for secure one-end mounting
- Zinc-plated cold rolled steel



**Used With**

- LX

**MORE INFO ONLINE**

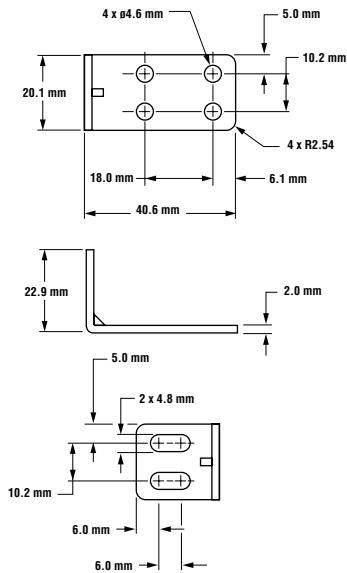
ACCESSORIES

# Brackets

## Accessories

### SMBPVA1

- Right-angle bracket for PVA and PVD products
- 303 stainless steel



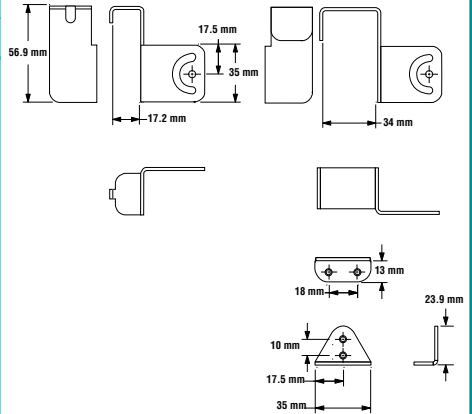
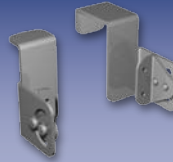
#### Used With

- PVA
- PVD



### SMBPVA11

- Pair of two-piece swivel brackets for mounting to one 5/16" metal rack system
- Articulation slot for ±90° rotation
- May be used with SMBPVA..C bracket



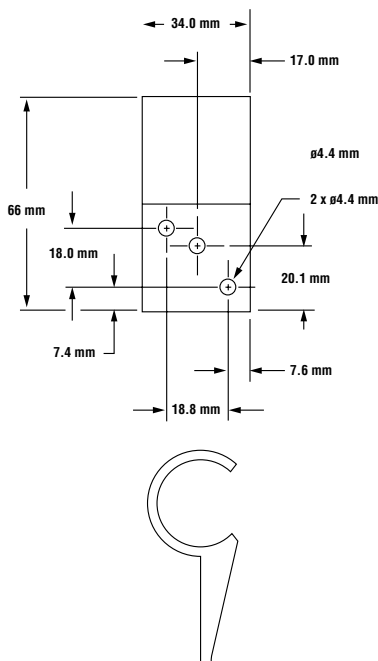
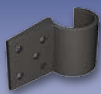
#### Used With

- PVD
- SMBPVD..A
- SMBPVD..AB



### SMBPVA2

- Set of 4 molded brackets
- Snaps onto standard 28 mm diameter pipe
- 2 required per PVA or PVD sensor



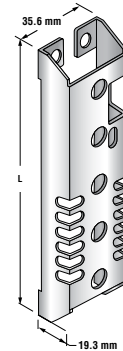
#### Used With

- PVA
- PVD
- SMBPVA..
- SMBPVA..A
- SMBPVA..AB
- SMBPVD..A
- SMBPVD..AB



### SMBPVA.. SMBPVA..A SMBPVA..AB

- Protects sensor from impact; provides DIP-switch and/or indicator light exposure (depending on model)
- Heavy-duty, cold-rolled steel zinc finish
- May be used with SMPBVA..C for mounting to SMBPVA7 or SMBPVA8 brackets



#### Used With


- PVA (See Chart)
- SMBPVA..C Bracket



Models	DIP Switch Access	Indicator Light Exposed	Length (L)	Used With
SMBPVA5	Yes	Yes	139.7 mm	PVA100
SMBPVA5A	Yes	No		
SMBPVA5AB	No	No		
SMBPVA10	Yes	Yes	268.2 mm	PVA225
SMBPVA10A	Yes	No		
SMBPVA10AB	No	No		
SMBPVA13	Yes	Yes	343.3 mm	PVA300
SMBPVA13A	Yes	No		
SMBPVA13AB	No	No		
SMBPVA16	Yes	Yes	418.2 mm	PVA375
SMBPVA16A	Yes	No		
SMBPVA16AB	Yes	No		

### SMBPVA..C

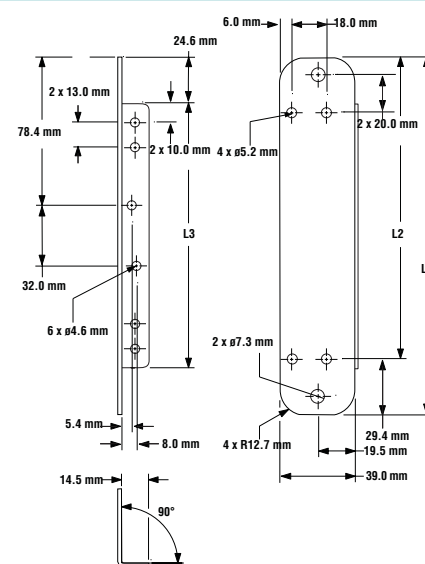
- Back-mounted bracket for mounting to SMBPVA7 or SMBPVA8 brackets
- Cold-rolled steel zinc finish



**Used With**

- SMBPVA7\*
- SMBPVA8\*

\* Sensor must be mounted to a SMBPVA..C bracket.




Model	L1	L2	L3
SMBPVA5C	188.7 mm	159.6 mm	139.5 mm
SMBPVA10C	317.2 mm	258.6 mm	268.0 mm

**MORE INFO ONLINE**

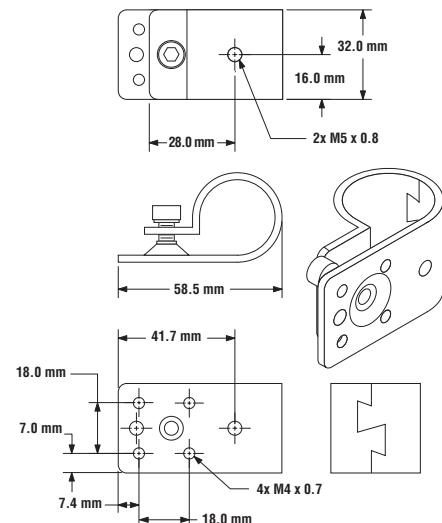
### SMBPVA6

- Set of 4 molded brackets
- Brackets clamp onto 28 mm pipe for more information
- Request data sheet p/n 64900 for more information



**Used With**


- PVA
- PVD
- SMBPVA..
- SMBPVA..A
- SMBPVA..AB
- SMBPVD..A
- SMBPVD..AB



**MORE INFO ONLINE**

### SMBPVA7

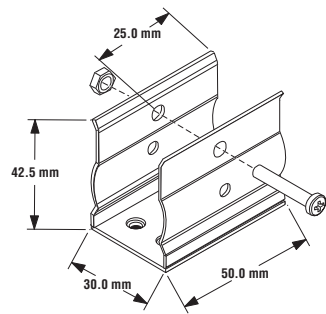
- One-piece bracket for mounting to 28 mm (11/8") dia. pipe
- Black-painted steel
- Requires SMBPVA..C for mounting at an angle ±90°



**Used With**

- PVA\*
- PVD\*
- SMBPVA5C
- SMBPVA10C


\* Sensor must be mounted to a SMBPVA..C bracket.



**MORE INFO ONLINE**

### SMBPVA8

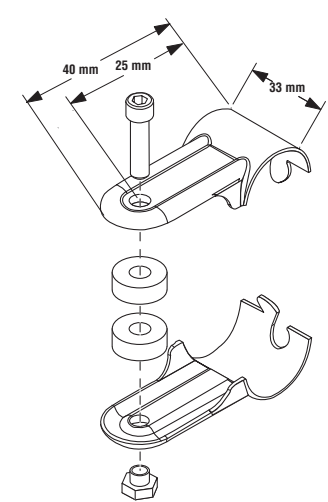
- Heavy-duty 2-part bracket mounts to 28 mm (11/8") dia. pipe
- Cold-rolled steel zinc finish
- Requires SMBPVA..C for mounting



**Used With**

- PVA\*
- PVD\*
- SMBPVA5C
- SMBPVA10C

\* Sensor must be mounted to a SMBPVA..C bracket.



**MORE INFO ONLINE**

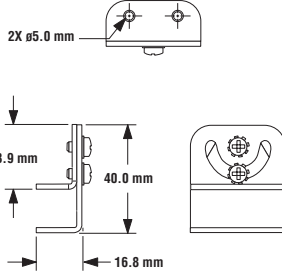
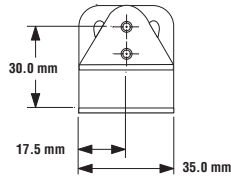
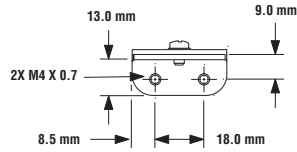
ACCESSORIES

# Brackets

## Accessories

### SMBPVA9

- Pair of 2-piece swivel brackets
- Mount directly to sensor or to SMBPVD100(225) protective brackets
- Designed for mounting sensor to "look down"



#### Used With

- PVA
- PVD
- SMBPVA..A
- SMBPVA..AB
- SMBPVD..
- SMBPVD..A
- SMBPVD..AB



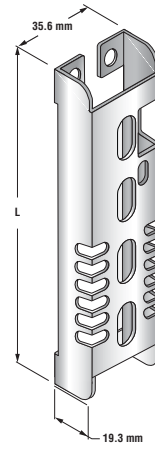
### SMBPVD..A SMBPVD..AB

- Heavy-duty brackets for protection; DIP-switch access
- Cold-rolled steel zinc finish
- May be used with SMBPVA..C for mounting to SMBPVA7 or SMBPVA8 brackets



#### Used With

- PVD100
- PVD225
- SMBPVA9
- SMBPVA2



Model	DIP Switch Access	Length (L)	Used With
SMBPVD100A	Yes	140 mm	PVD100
SMBPVD100AB	No	140 mm	PVD100
SMBPVD225A	Yes	269 mm	PVD225
SMBPVD225AB	No	269 mm	PVD225



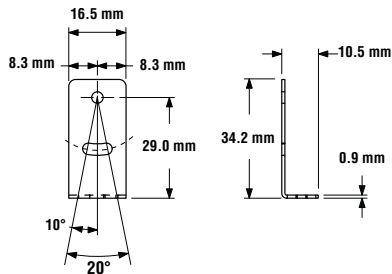
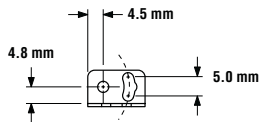
### SMBQ12A

- Adjustable right-angle bracket
- 300 series stainless steel 20 gauge



#### Used With

- Q12



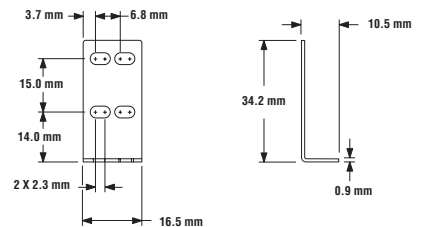
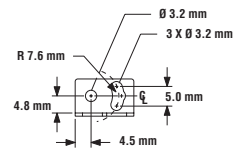
### SMBQ12T

- Right-angle bracket
- 20-ga. 300 series stainless steel




#### Used With

- Q12



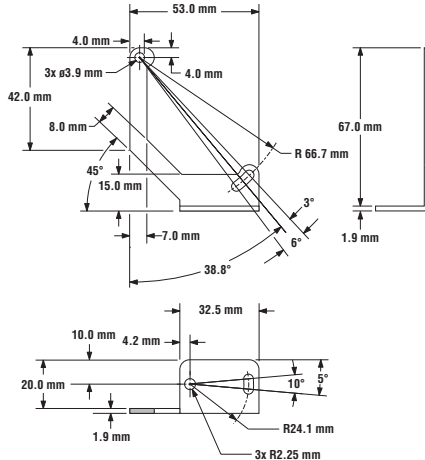
### SMBQ50

- Right-angle bracket
- 14-ga. 304 stainless steel



**Used With**


- Q50



**MORE INFO ONLINE**

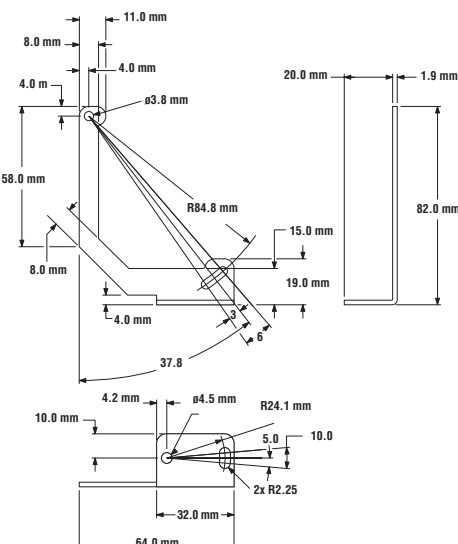
### SMBQ60

- Right-angle bracket
- 14-ga. 304 stainless steel



**Used With**


- Q60



**MORE INFO ONLINE**

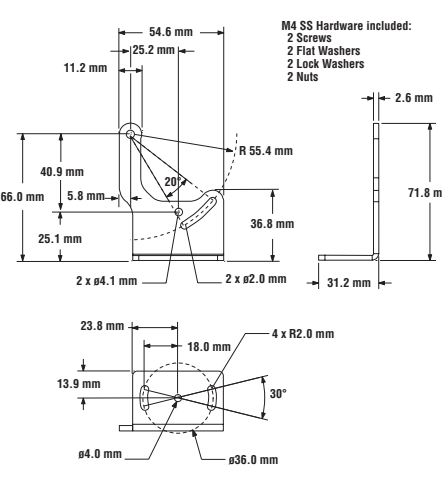
### SMBQC50

- Multi-directional stainless steel L-bracket
- Variety of mounting options



**Used With**

- QC50
- QCX50




M4 SS Hardware included:  
2 Screws  
2 Flat Washers  
2 Lock Washers  
2 Nuts

**MORE INFO ONLINE**

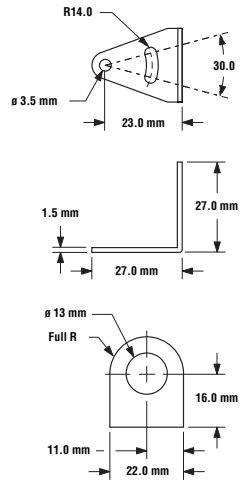
### SMBQS12PD

- Right-angle, side-mount bracket
- 16-ga. 300 series stainless steel



**Used With**

- MINI-BEAM2



**MORE INFO ONLINE**

ACCESSORIES

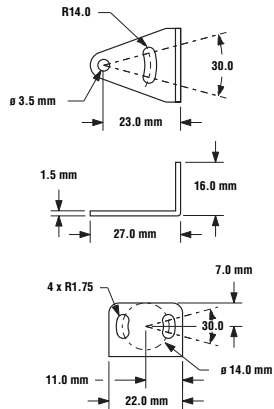
### SMBQS12S

- Right-angle, 12 mm nose-mount bracket
- 16-ga. 300 series stainless steel



#### Used With

- MINI-BEAM2



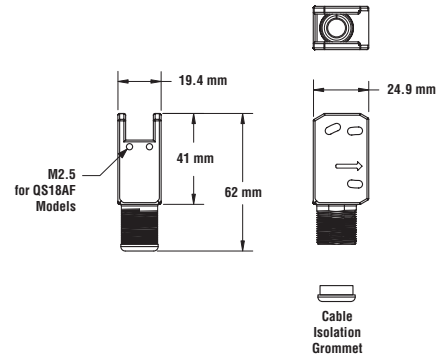
### SMBQS18A

- Die-cast bracket for 18 mm holes or in combination with a swivel bracket
- Wrap-around bracket for protection
- Includes metal hex nut, lock washer and grommet



#### Used With

- QS18
- QS18U



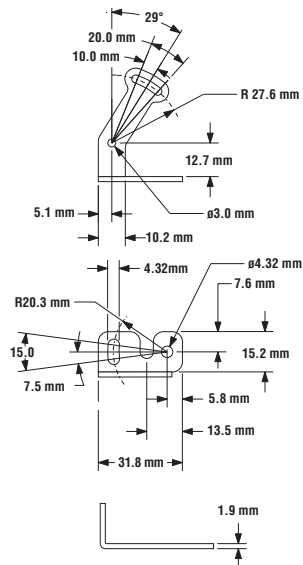
### SMBQS18AF

- 14-ga. 304 stainless steel
- Right-angle mounting bracket



#### Used With

- QS18AF (only)



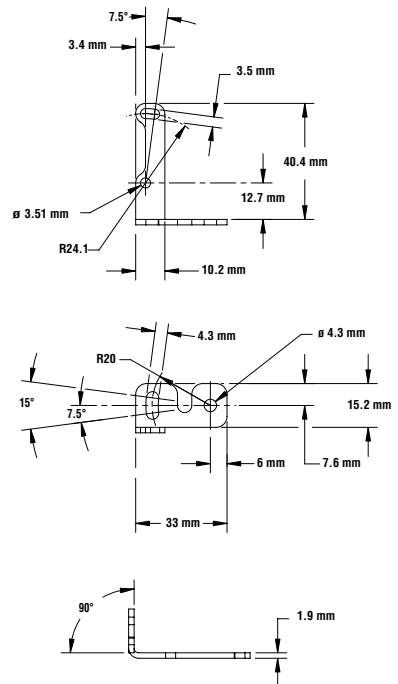
### SMBQS18RA

- 14-ga. 304 stainless steel
- Right-angle mounting bracket



#### Used With


- QS18 (except QS18AF)
- QS18U





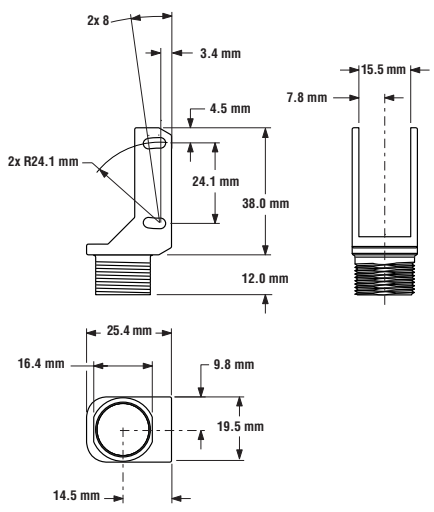

### SMBQS18Y

- Die-cast bracket for 18 mm holes
- Includes metal hex nut and lock washer
- Cabled units tilt  $\pm 8^\circ$




**Used With**

- QS18
- QS18U

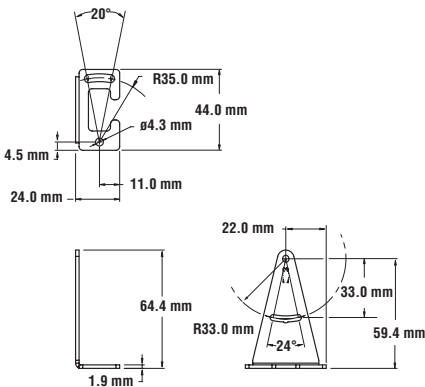

### SMBQS30L

- 14-ga. stainless steel right-angle bracket for cable models
- Clearance for M4 (#8) hardware
- $\pm 12^\circ$  tilt adjustment




**Used With**

- QS30

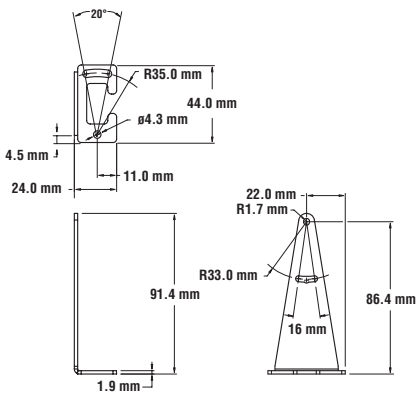

### SMBQS30LT

- 14-ga. stainless steel tall right-angle bracket for QD models
- $\pm 8^\circ$  tilt adjustment




**Used With**

- QS30 with integral QDs

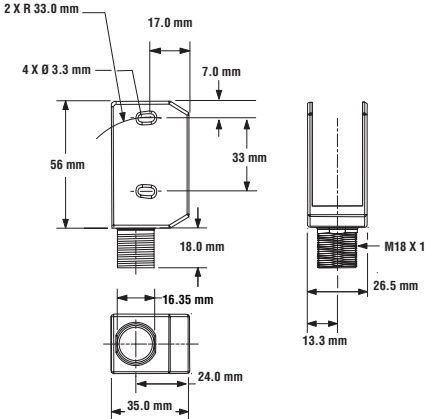

### SMBQS30Y

- Heavy-duty die-cast bracket
- M18 vertical mounting option
- $\pm 8^\circ$  tilt adjustment with cabled units
- Includes nuts and lock washer



**Used With**

- QS30

ACCESSORIES

# Brackets

## Accessories

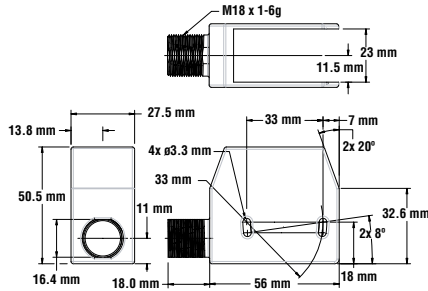
### SMBQS30YL

- Heavy-duty die-cast bracket designed for industrial protection
- Replaceable window
- M18 vertical mount option
- Includes nuts and lock washer



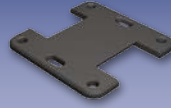
#### Used With

- QS30



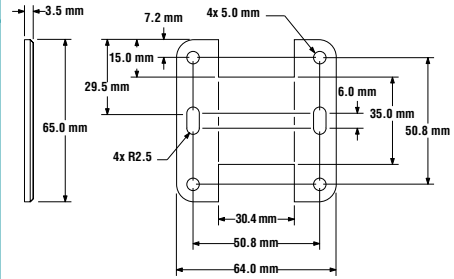
### SMBR55F01

- Molded PBT polyester
- Flat-mounting bracket
- Eliminates need for DIN rail



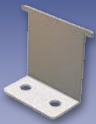
#### Used With

- R55F
- D10
- D12



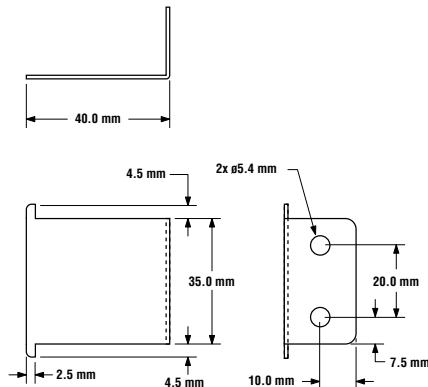
### SMBR55FRA

- 19-ga. stainless steel
- Side-mounting bracket
- Eliminates need for DIN rail



#### Used With

- R55F
- D10
- D12



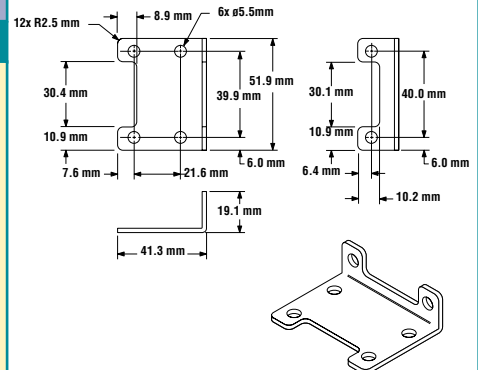
### SMBSL

- 304 stainless steel angled bracket
- Includes hardware



#### Used With

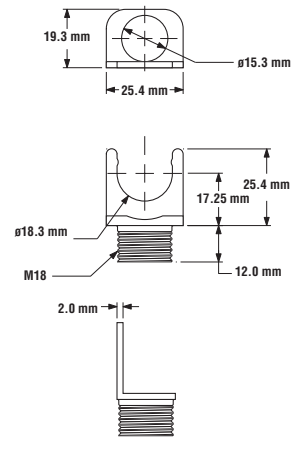
- SL10
- SL30



ACCESSORIES

**SMBT18Y**

- Die-cast bracket for mounting into 18 mm holes
- Includes metal hex nut
- For use with Euro-style QD connectors and cabled versions



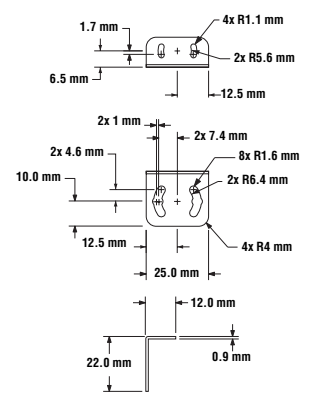
**Used With**

- T18
- T18U
- EZ-LIGHT T18



**SMBVS1S**

- Short bracket
- 18-ga. stainless steel



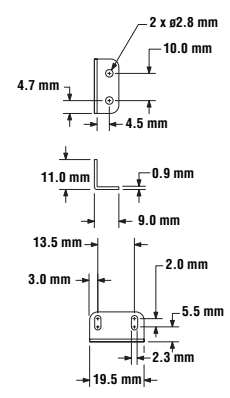
**Used With**

- VS1



**SMBVS1SC**

- Short bracket
- 18-ga. stainless steel



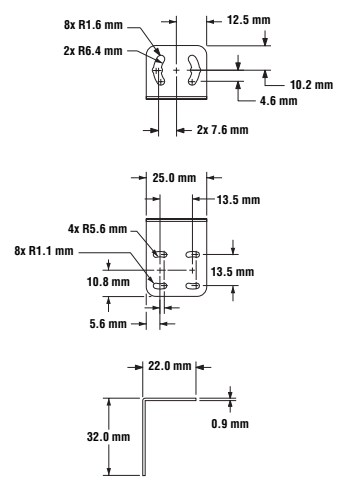
**Used With**

- VS1



**SMBVS1T**

- Tall bracket
- Stainless steel



**Used With**

- VS1



ACCESSORIES

# Brackets

## Accessories

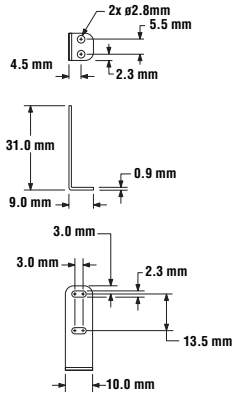
### SMBVS1TC

- Tall compact bracket
- 300 stainless steel



#### Used With

- VS1



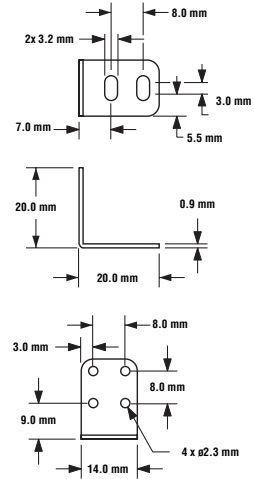
### SMBVS2RA

- Right-angle bracket
- Stainless steel



#### Used With

- VS2



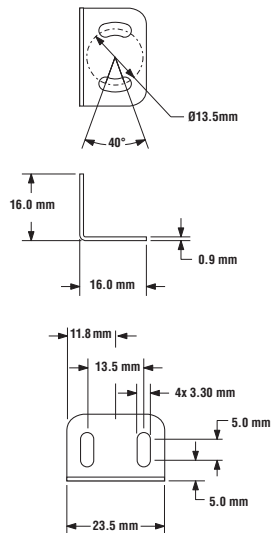
### SMBVS3S

- Right-angle bracket
- 300 stainless steel



#### Used With

- VS3



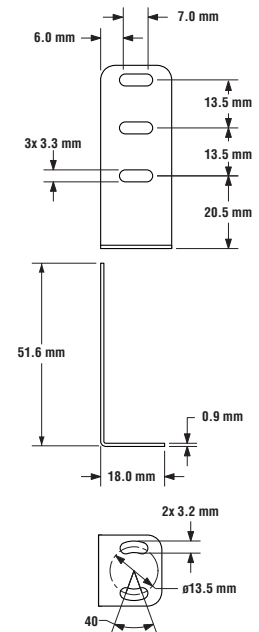
### SMBVS3T

- Right-angle tall bracket
- 300 stainless steel



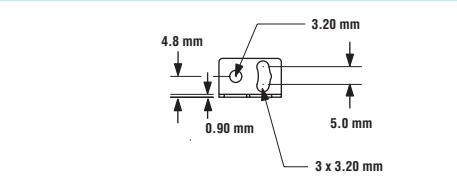
#### Used With

- VS3



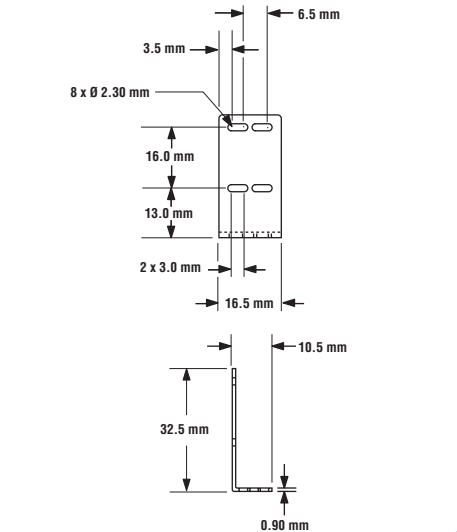
**SMBVS4SRA**

- Right-angle bracket
- 300 series stainless steel



**Used With**

- VS4



**SMH241F**

- Nut strap replaces two M3 mounting nuts and washers
- 16-ga. stainless steel



**Used With**

- QS18
- MINI-BEAM
- Q23/QH23
- QM42/QMT42
- QS18U



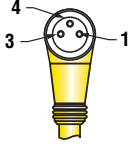
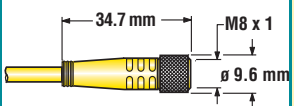
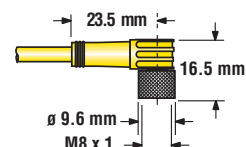
# Quick-Disconnect Cables – Pico-Style (M8)

Accessories

## 3-Pin Threaded Pico-Style Cables

**Cable:** PVC jacket, 3 x 24 AWG  
**Connector:** PUR body, nickel-plated brass coupling nut, gold-plated contacts  
**Voltage/Current Rating:** 125V ac/dc, 4.0 A  
**Temperature:** +105° C

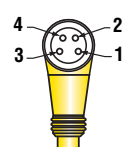
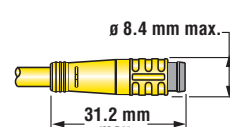


Female Pinout	Model	Style	Length	Dimensions	Used With
 1 = Brown 3 = Blue 4 = Black	PKG3M-2	Straight	2 m		<ul style="list-style-type: none"> <li>• T8</li> <li>• VS1</li> <li>• VS2</li> <li>• VS3</li> <li>• VS4</li> <li>• SLM</li> </ul>
	PKG3M-9	Straight	9 m		
	PKW3M-2	Right-Angle	2 m		
	PKW3M-9	Right-Angle	9 m		

## 4-Pin Snap-On Pico-Style Cables

**Cable:** PVC jacket, 3 x 26 AWG  
**Connector:** PUR body, snap lock, POM locking sleeve (right-angle only), gold-plated contacts  
**Voltage/Current Rating:** 125V ac/dc, 4.0 A  
**Temperature:** +105° C



Female Pinout	Model	Style	Length	Dimensions	Used With
 1 = Brown 2 = White 3 = Blue 4 = Black	PKG4-2	Straight	2 m		<ul style="list-style-type: none"> <li>• MINI-BEAM 2</li> <li>• QS18</li> <li>• Q23</li> <li>• D12</li> <li>• D10A</li> </ul>
	PKW4Z-2	Right-Angle	2 m		

ACCESSORIES

### 4-Pin Snap-On Pico-Style Cables with Shield

**Cable:** PVC jacket, 4 x 26 AWG with 26 AWG drain wire  
**Connector:** PUR body, snap lock, POM locking sleeve (right-angle only), nickel-plated brass coupling nut, gold-plated contacts  
**Voltage/Current Rating:** 125V ac/dc, 4.0 A    **Temperature:** +105° C



Female Pinout	Model	Style	Length	Dimensions	Used With
 1 = Brown 2 = White 3 = Blue 4 = Black	PKG4S-2	Straight	2 m		• QS18U
	PKW4ZS-2	Right-Angle	2 m		

### 4-Pin Threaded Pico-Style Cables

**Cable:** PVC jacket, 4 x 26 AWG  
**Connector:** PUR body, snap lock, nickel-plated brass coupling nut, gold-plated contacts  
**Voltage/Current Rating:** 125V ac/dc, 4.0 A  
**Temperature:** +105° C



Female Pinout	Model	Style	Length	Dimensions	Used With
 1 = Brown 2 = White 3 = Blue 4 = Black	PKG4M-2	Straight	2 m		• Q12
	PKG4M-9	Straight	9 m		
	PKW4M-2	Right-Angle	2 m		
	PKW4M-9	Right-Angle	9 m		

### 6-Pin Snap-On Pico-Style Cables

**Cable:** PVC jacket, 6 x 26 AWG  
**Connector:** PUR body, POM locking sleeve, gold-plated contacts  
**Voltage/Current Rating:** 125V ac/dc, 2.0 A  
**Temperature:** +105° C



Female Pinout	Model	Style	Length	Dimensions	Used With
 1 = Brown    4 = Black 2 = White    5 = Gray 3 = Blue      6 = Pink	PKG6Z-2	Straight	2 m		• D10 • FI22
	PKG6Z-9	Straight	9 m		
	PKW6Z-2	Right-Angle	2 m		
	PKW6Z-9	Right-Angle	9 m		

ACCESSORIES

## 4-Pin Euro-Style Cables

**Cable:** PVC jacket, polyurethane connector body, chrome-plated brass coupling nut  
**Conductors:** 22 or 20 AWG high-flex stranded, gold-plated contacts  
**Voltage Rating:** 250V ac/300V dc  
**Temperature:** -40° to +90° C



Female Pinout	Model	Style	Length	Dimensions	Used With
<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>	MQDC-406	Straight	2 m		<ul style="list-style-type: none"> <li>• QS18</li> <li>• OMNI-BEAM (QDH suffix)</li> <li>• Q45 dc sensors (Q5 suffix)</li> <li>• MINI-BEAM dc SM312 sensors</li> <li>• S18, M18, T18, Q25, S30, T30, Q40</li> <li>• QM42</li> <li>• QL50/QL55</li> <li>• SLM</li> <li>• T18U</li> <li>• K50</li> <li>• PVA</li> <li>• VTB and STB</li> <li>• EZ-LIGHT</li> </ul>
	MQDC-415	Straight	5 m		
	MQDC-430	Straight	9 m		
	MQDC-406RA	Right-Angle	2 m		
	MQDC-415RA	Right-Angle	5 m		
	MQDC-430RA	Right-Angle	9 m		

## 4-Pin Euro-Style Cables with Shield

**Cable:** PVC jacket, polyurethane connector body, chrome-plated brass coupling nut  
**Conductors:** 22 or 20 AWG high-flex stranded, gold-plated contacts  
**Voltage Rating:** 250V ac/300V dc  
**Temperature:** -40° to +90° C



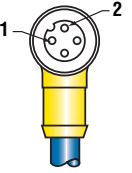
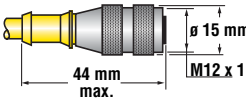
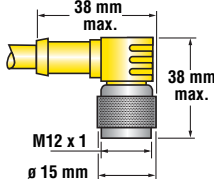
Female Pinout	Model	Style	Length	Dimensions	Used With
<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>	MQDEC2-406	Straight	2 m		<ul style="list-style-type: none"> <li>• QS18U</li> </ul>
	MQDEC2-415	Straight	5 m		
	MQDEC2-430	Straight	9 m		
	MQDEC2-406RA	Right-Angle	2 m		
	MQDEC2-415RA	Right-Angle	5 m		
	MQDEC2-430RA	Right-Angle	9 m		



### 4-Pin Euro-Style Cables (for use with NAMUR sensors)

Cable: PVC jacket, polyurethane connector body, chrome-plated brass coupling nut  
 Conductors: 22 or 20 AWG high-flex stranded, gold-plated contacts  
 Voltage Rating: 250V ac/300V dc  
 Temperature: -40° to +90° C

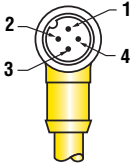
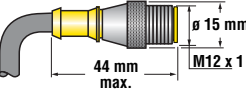
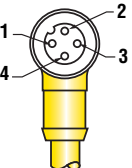
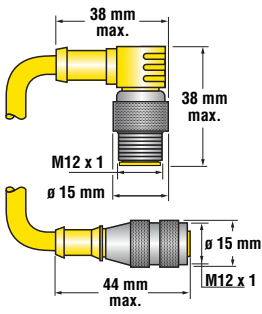


Female Pinout	Model	Style	Length	Dimensions	Used With
 <p>1 = Brown 2 = Blue</p>	MQD9-406	Straight	2 m		<ul style="list-style-type: none"> <li>MINI-BEAM &amp; Q45 NAMUR sensors</li> </ul>
	MQD9-415	Straight	5 m		
	MQD9-406RA	Right-Angle	2 m		
	MQD9-415RA	Right-Angle	5 m		

### 4-Pin Euro-Style Cables - Double Ended

Cable: PVC jacket, polyurethane connector body, chrome-plated brass coupling nut  
 Conductors: 22 or 20 AWG high-flex stranded, gold-plated contacts  
 Voltage Rating: 250V ac/300V dc  
 Temperature: -40° to +90° C



Pinout	Model	Style	Length	Dimensions	Used With
<p><b>Male</b></p> 	MQDEC-403SS	Male Straight/ Female Straight	1 m		<ul style="list-style-type: none"> <li>QS18</li> <li>OMNI-BEAM (QDH suffix)</li> <li>Q45 dc sensors (Q5 suffix)</li> <li>MINI-BEAM dc SM312 sensors</li> <li>S18, M18, T18, Q25, S30, T30, Q40</li> <li>QM42</li> <li>T18U</li> <li>PVA</li> <li>VTB and STB</li> <li>EZ-LIGHT</li> </ul>
	MQDEC-406SS		2 m		
	MQDEC-412SS		4 m		
	MQDEC-420SS		7 m		
	MQDEC-430SS		10 m		
<p><b>Female</b></p>  <p>1 = Brown 2 = White 3 = Blue 4 = Black</p>	MQDEC-450SS	15 m			
	MQDEC-403RS	1 m			
	MQDEC-406RS	2 m			
	MQDEC-412RS	4 m			
	MQDEC-420RS	7 m			
	MQDEC-430RS	10 m			
MQDEC-450RS	15 m				

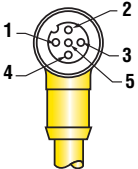
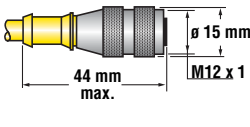
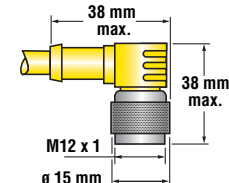


ACCESSORIES

## 5-Pin Euro-Style Cables

**Cable:** PVC jacket, polyurethane connector body, chrome-plated brass coupling nut  
**Conductors:** 22 or 20 AWG high-flex stranded, gold-plated contacts  
**Voltage Rating:** 250V ac/300V dc  
**Temperature:** -40° to +90° C

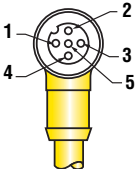
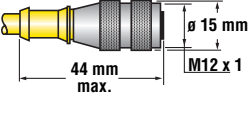
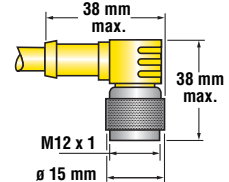


Female Pinout	Model	Style	Length	Dimensions	Used With
 <p>1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray</p>	<b>MQDC1-506</b>	Straight	2 m		<ul style="list-style-type: none"> <li>• MINI-BEAM <i>Expert</i></li> <li>• QS30</li> <li>• PicoDot</li> <li>• Q45 Laser Retro</li> <li>• R55F</li> <li>• SL30 &amp; SL30E</li> <li>• SL10 &amp; SL10E</li> <li>• SLC1</li> <li>• Q60</li> <li>• PVD</li> <li>• STB</li> <li>• VTB (2-color)</li> </ul>
	<b>MQDC1-515</b>	Straight	5 m		
	<b>MQDC1-530</b>	Straight	9 m		
	<b>MQDC1-506RA</b>	Right-Angle	2 m		
	<b>MQDC1-515RA</b>	Right-Angle	5 m		
	<b>MQDC1-530RA</b>	Right-Angle	9 m		

## 5-Pin Euro-Style Cables with Shield

**Cable:** PVC jacket, polyurethane connector body, chrome-plated brass coupling nut  
**Conductors:** 22 or 20 AWG high-flex stranded, gold-plated contacts  
**Voltage Rating:** 250V ac/300V dc  
**Temperature:** -40° to +90° C

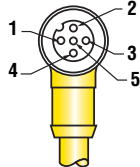
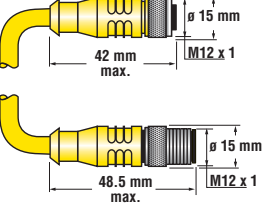
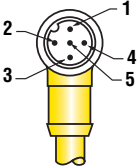


Female Pinout	Model	Style	Length	Dimensions	Used With
 <p>1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray</p>	<b>MQDEC2-506</b>	Straight	2 m		<ul style="list-style-type: none"> <li>• Q50</li> <li>• R58E</li> <li>• M-GAGE Q7M</li> <li>• M-GAGE S18M</li> <li>• QT50U dc sensors</li> <li>• S18U</li> <li>• T30U</li> <li>• Q45U</li> <li>• Q45UR</li> <li>• T-GAGE M18T</li> <li>• LX</li> </ul>
	<b>MQDEC2-515</b>	Straight	5 m		
	<b>MQDEC2-530</b>	Straight	9 m		
	<b>MQDEC2-506RA</b>	Right-Angle	2 m		
	<b>MQDEC2-515RA</b>	Right-Angle	5 m		
	<b>MQDEC2-530RA</b>	Right-Angle	9 m		

### 5-Pin Euro-Style Cables - Double Ended

**Cable:** PVC jacket, polyurethane connector body, chrome-plated brass coupling nut  
**Conductors:** 22 or 20 AWG high-flex stranded, gold-plated contacts  
**Voltage Rating:** 250V ac/300V dc  
**Temperature:** -40° to +90° C



Pinout	Model	Style	Length	Dimensions	Used With
<b>Female</b> 	DEE2R-51D	Female Straight/ Male Straight	0.3 m		<ul style="list-style-type: none"> <li>• MINI-BEAM Expert</li> <li>• QS30</li> <li>• PicoDot</li> <li>• Q45 Laser Retro</li> <li>• R55F</li> <li>• SL30 &amp; SL30E</li> <li>• SL10 &amp; SL10E</li> <li>• SLC1</li> <li>• Q60</li> <li>• PVD</li> <li>• STB</li> <li>• VTB (2-color)</li> </ul>
	DEE2R-53D		1 m		
	DEE2R-58D		2.4 m		
<b>Male</b> 	DEE2R-515D		4.5 m		
	DEE2R-525D		8 m		
	DEE2R-550D		15 m		
	DEE2R-575D		23 m		
	DEE2R-5100D		30 m		

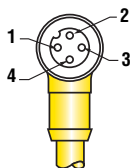
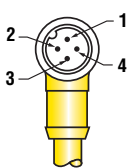
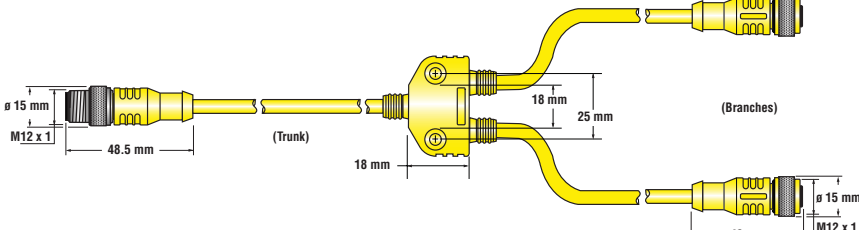
1 = Brown  
 2 = White  
 3 = Blue  
 4 = Black  
 5 = Gn/Ye



### 4-Pin Euro-Style Splitter Cables

**Cable:** PVC jacket, polyurethane connector body, chrome-plated brass coupling nut  
**Conductors:** 22 AWG high-flex stranded, gold-plated contacts  
**Temperature:** -40° to +90° C  
**Voltage Rating:** 250V ac/300V dc



Connections				
Pinout	Model	Branches	Trunk	Used With
<b>Female</b> 	CSB-M1240M1240*	4-Pin Euro QD No Branch Female	No Trunk Male	<ul style="list-style-type: none"> <li>• Sensors w/4-pin Euro QD</li> <li>• EZ-LIGHT</li> </ul>
	CSB-M1241M1241		0.3 m Male	
	CSB-M1248M1241		2.5 m Male	
	CSB-M12415M1241		5 m Male	
	CSB-M12425M1241		8 m Male	
	CSB-UNT425M1241		8 m Unterminated	
<b>Male</b> 				
	<b>Dimensions</b>			
				

1 = Brown  
 2 = White  
 3 = Blue  
 4 = Black



ACCESSORIES

\* CSB-M1240M1240 replaces models number MDCVB4T.

## 8-Pin Euro-Style Cables with Shield

**Cable:** PVC jacket, polyurethane connector body, chrome-plated brass coupling nut  
**Conductors:** 22 or 20 AWG high-flex stranded, gold-plated contacts  
**Voltage Rating:** 250V ac/300V dc  
**Temperature:** -40° to +90° C



Female Pinout	Model	Style	Length	Dimensions	Used With
<p>1 = White    5 = Gray                  2 = Brown   6 = Pink                  3 = Green   7 = Blue                  4 = Yellow   8 = Shield</p>	<p><b>MQDC-806</b>  <b>MQDC-815</b>  <b>MQDC-830</b></p>	<p>Straight                  Straight                  Straight</p>	<p>2 m                  5 m                  9 m</p>		<ul style="list-style-type: none"> <li>• LT3</li> <li>• LG5</li> <li>• LG10</li> </ul>

## 8-Pin Euro-Style Cables with Open-Shield

**Cable:** PVC jacket, polyurethane connector body, chrome-plated brass coupling nut  
**Conductors:** 22 or 20 AWG high-flex stranded, gold-plated contacts  
**Voltage Rating:** 250V ac/300V dc  
**Temperature:** -40° to +90° C

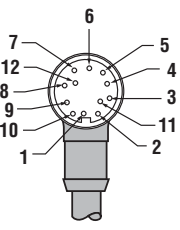



Female Pinout	Model	Style	Length	Dimensions	Used With
<p>1 = White    5 = Gray                  2 = Brown   6 = Pink                  3 = Green   7 = Blue                  4 = Yellow   8 = Red</p>	<p><b>MQDC2S-806</b>  <b>MQDC2S-815</b>  <b>MQDC2S-830</b></p>	<p>Straight                  Straight                  Straight</p>	<p>2 m                  5 m                  9 m</p>		<ul style="list-style-type: none"> <li>• QC50</li> <li>• QCX50</li> </ul>

### 12-Pin M16 Cable

Cable: PVC jacket, nickel-plated brass coupling nut  
 Conductors: 22 AWG  
 Voltage Rating: 250V ac  
 Temperature: -30° to +80° C

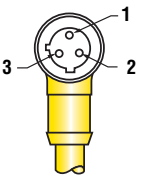
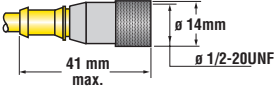
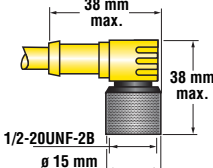


Female Pinout	Model	Style	Length	Dimensions	Used With
 <p>1 = White    7 = Red                  2 = Brown   8 = Black                  3 = Green   9 = Violet                  4 = Yellow   10 = Gy/Pk                  5 = Gray    11 = Rd/Bu                  6 = Pink    12 = Blue</p>	<p>MQDC-1210ST                      MQDC-1230ST</p>	<p>Straight                      Straight</p>	<p>3 m                      10 m</p>		<p>• LT7</p>

## 3-Pin Micro-Style Cables

Cable: PVC jacket, 3 x 22 AWG  
 Connector: PUR body, nickel-plated brass coupling nut, gold-plated contacts  
 Voltage/Current Rating: 250V ac/dc, 4.0 A  
 Temperature: +105° C

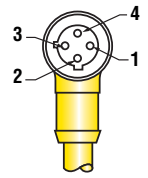
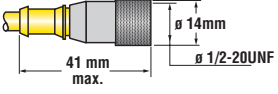
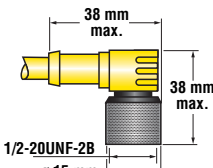


Female Pinout	Model	Style	Length	Dimensions	Used With
 <p>1 = Green 2 = Red/Black 3 = Red/White</p>	<b>MQDC-306</b>	Straight	2 m		<ul style="list-style-type: none"> <li>MINI-BEAM ac SM2A312 sensors</li> </ul>
	<b>MQDC-315</b>	Straight	5 m		
	<b>MQDC-330</b>	Straight	9 m		
	<b>MQDC-306RA</b>	Right-Angle	2 m		
	<b>MQDC-315RA</b>	Right-Angle	5 m		
	<b>MQDC-330RA</b>	Right-Angle	9 m		

## 4-Pin Micro-Style Cables

Cable: PVC jacket, 4 x 22 AWG  
 Connector: PUR body, nickel-plated brass coupling nut, gold-plated contacts  
 Voltage/Current Rating: 250V ac/dc, 4.0 A  
 Temperature: +105° C

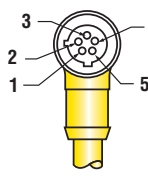
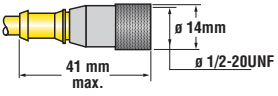
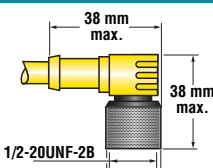


Female Pinout	Model	Style	Length	Dimensions	Used With
 <p>1 = Red/Black 2 = Red/White 3 = Red 4 = Green</p>	<b>MQAC-406</b>	Straight	2 m		<ul style="list-style-type: none"> <li>Q45 ac series (suffix Q1)</li> <li>S18, M18, T18, Q25, S30, T30 &amp; Q40 ac sensors (suffix Q1)</li> <li>Q60</li> </ul>
	<b>MQAC-415</b>	Straight	5 m		
	<b>MQAC-430</b>	Straight	9 m		
	<b>MQAC-406RA</b>	Right-Angle	2 m		
	<b>MQAC-415RA</b>	Right-Angle	5 m		
	<b>MQAC-430RA</b>	Right-Angle	9 m		

## 5-Pin Micro-Style Cables with Shield

Cable: PVC jacket, 5 x 22 AWG with 22 AWG drain wire  
 Connector: PUR body, nickel-plated brass coupling nut, gold-plated contacts  
 Voltage/Current Rating: 250V ac/dc, 4.0 A  
 Temperature: +105° C

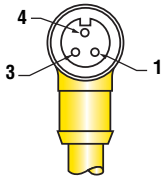
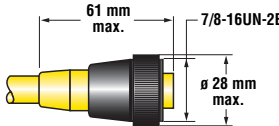
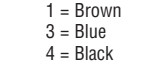
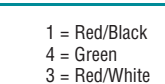


Female Pinout	Model	Style	Length	Dimensions	Used With
 <p>1 = Brown 2 = White 3 = Yellow 4 = Black 5 = Blue</p>	<b>MQVR3S-506</b>	Straight	2 m		<ul style="list-style-type: none"> <li>QT50U Universal Voltage</li> </ul>
	<b>MQVR3S-515</b>	Straight	5 m		
	<b>MQVR3S-530</b>	Straight	9 m		
	<b>MQVR3S-506RA</b>	Right-Angle	2 m		
	<b>MQVR3S-515RA</b>	Right-Angle	5 m		
	<b>MQVR3S-530RA</b>	Right-Angle	9 m		

### 3-Pin Mini-Style Cables

**Cable:** PVC jacket, polyurethane connector body, nylon coupling nut  
**Conductors:** 18 AWG high-flex stranded, PVC insulation, gold-plated contacts  
**Voltage Rating:** 250V ac/300V dc  
**Temperature:** -40° to +80° C



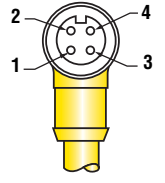
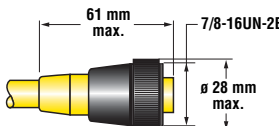
Female Pinout	Model	Style	Length	Dimensions	Used With
 <p>1 = Brown 3 = Blue 4 = Black</p>	<b>MBCC-306</b>	Straight	2 m		<ul style="list-style-type: none"> <li>• Q45</li> </ul>
	<b>MBCC-312</b>	Straight	4 m		
	<b>MBCC-330</b>	Straight	9 m		
 <p>1 = Red/Black 4 = Green 3 = Red/White</p>	<b>SMICC-306</b>	Straight	2 m		<ul style="list-style-type: none"> <li>• SMI30 Intrinsically Safe dc sensors</li> </ul>
	<b>SMICC-312</b>	Straight	4 m		
	<b>SMICC-330</b>	Straight	9 m		
 <p>1 = Red/Black 4 = Green 3 = Red/White</p>	<b>SM30CC-306</b>	Straight	2 m	<ul style="list-style-type: none"> <li>• SM30 2-wire ac sensors</li> </ul>	
	<b>SM30CC-312</b>	Straight	4 m		



### 4-Pin Mini-Style Cables

**Cable:** PVC jacket, polyurethane connector body, nylon coupling nut  
**Conductors:** 18 AWG high-flex stranded, PVC insulation, gold-plated contacts  
**Voltage Rating:** 250V ac/300V dc  
**Temperature:** -40° to +80° C



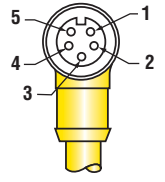
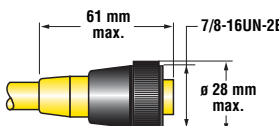
Female Pinout	Model	Style	Length	Dimensions	Used With
 <p>1 = Brown 2 = White 3 = Blue 4 = Black</p>	<b>MBCC-406</b>	Straight	2 m		<ul style="list-style-type: none"> <li>• Q45 dc sensors (suffix Q)</li> <li>• OMNI-BEAM dc power blocks</li> <li>• SM30 dc sensors</li> <li>• OTB w/solid-state output</li> <li>• STB</li> </ul>
	<b>MBCC-412</b>	Straight	4 m		
	<b>MBCC-430</b>	Straight	9 m		



### 5-Pin Mini-Style Cables

**Cable:** PVC jacket, polyurethane connector body, nylon coupling nut  
**Conductors:** 18 AWG high-flex stranded, PVC insulation, gold-plated contacts  
**Voltage Rating:** 250V ac/300V dc  
**Temperature:** -40° to +80° C



Female Pinout	Model	Style	Length	Dimensions	Used With
 <p>1 = Black 2 = Blue 3 = Yellow 4 = Brown 5 = White</p>	<b>MBCC-506</b>	Straight	2 m		<ul style="list-style-type: none"> <li>• Q45 Laser Retro</li> <li>• OMNI-BEAM ac power blocks</li> <li>• OMNI-BEAM dc w/ e/m relay</li> <li>• OTB &amp; LTB w/ SPDT relay</li> <li>• Q45 5-wire ac</li> <li>• STB</li> </ul>
	<b>MBCC-512</b>	Straight	4 m		
	<b>MBCC-530</b>	Straight	9 m		



ACCESSORIES

## 5-Pin Mini-Style Cables with Shield

**Cable:** PVC jacket, polyurethane connector body, nylon coupling nut  
**Conductors:** 18 AWG high-flex stranded, PVC insulation, gold-plated contacts  
**Voltage Rating:** 250V ac/300V dc  
**Temperature:** -40° to +80° C



Female Pinout	Model	Style	Length	Dimensions	Used With
<p>1 = Black 2 = Blue 3 = Yellow 4 = Brown 5 = White</p>	<b>MBCC2-506</b>	Straight	2 m		<ul style="list-style-type: none"> <li>• QT50U</li> <li>• Q45U</li> <li>• Q45UR</li> </ul>
	<b>MBCC2-512</b>	Straight	4 m		
	<b>MBCC2-530</b>	Straight	9 m		

## 5-Pin Mini-Style Cables with Shield and "Twisted Pair"

**Cable:** PVC jacket, polyurethane connector body, nylon coupling nut  
**Conductors:** 18 AWG high-flex stranded, PVC insulation, gold-plated contacts  
**Temperature:** -40° to +80° C  
**Voltage Rating:** 250V ac/300V dc

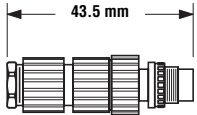
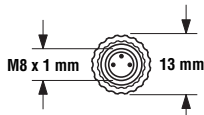
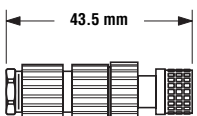
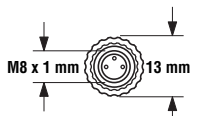
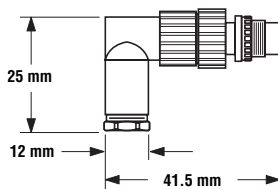
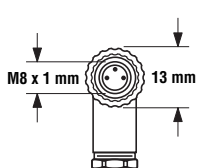
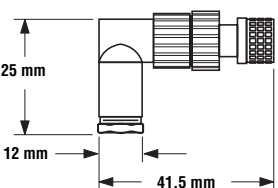
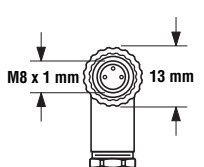
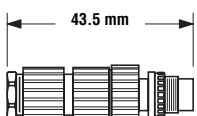
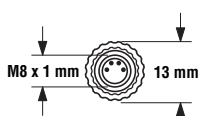
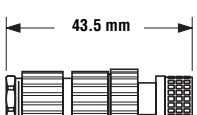
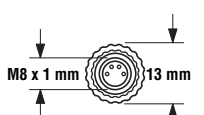
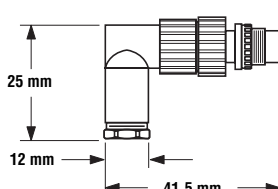
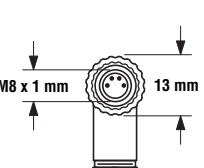
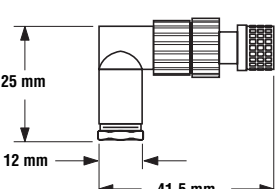
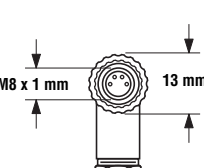


Pinout	Model	Style	Length	Dimensions	Used With
<p>1 = Black 2 = Blue 3 = Drain 4 = Brown 5 = White</p>	<b>QDC-515C</b>	Female Straight	5 m		<ul style="list-style-type: none"> <li>• MINI-ARRAY</li> <li>• High-Resolution MINI-ARRAY</li> </ul>
	<b>QDC-525C</b>		8 m		
	<b>QDC-550C</b>		15 m		
	<b>MAQDC-575C</b>		22 m		
	<b>MAQDC-5100C</b>		30 m		
	<b>MAQDC-5125C</b>		38 m		
	<b>MAQDC-5150C</b>		45 m		



### Pico-Style Field-Wireable Connectors (M8)

Contacts: Gold-plated, rated 60V ac/dc max., 4 A max.  
 Cable Diameter: 4.0 to 5.0 mm  
 Temperature: -25° to +70° C  
 Environmental Rating: NEMA 6P, IP67

Style	Model	Gender	Dimensions	Pin-out
3-Pin Straight	FIC-M8M3	Male		
	FIC-M8F3	Female		
3-Pin Right-Angle	FIC-M8M3A	Male		
	FIC-M8F3A	Female		
4-Pin Straight	FIC-M8M4	Male		
	FIC-M8F4	Female		
4-Pin Right-Angle	FIC-M8M4A	Male		
	FIC-M8F4A	Female		

ACCESSORIES

## Euro-Style Field-Wireable Connectors (M12)

Contacts: Gold-plated; 4-pin models rated 250V ac/dc max., 4 A max.; 5-pin models rated 50V ac/dc max., 4 A max.

Cable Diameter: 4.0 to 5.0 mm

Temperature: -25° to +90° C

Environmental Rating: NEMA 6P, IP67

Style	Model	Gender	Dimensions	Pin-out
4-Pin Straight	FIC-M12M4	Male		
	FIC-M12F4	Female		
4-Pin Right-Angle	FIC-M12M4A	Male		
	FIC-M12F4A	Female		
5-Pin Straight	FIC-M12M5	Male		
	FIC-M12F5	Female		
5-Pin Right-Angle	FIC-M12M5A	Male		
	FIC-M12F5A	Female		

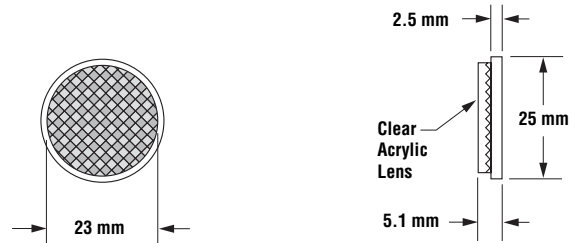
**BRT-6**

Description: Round, acrylic target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 65° C



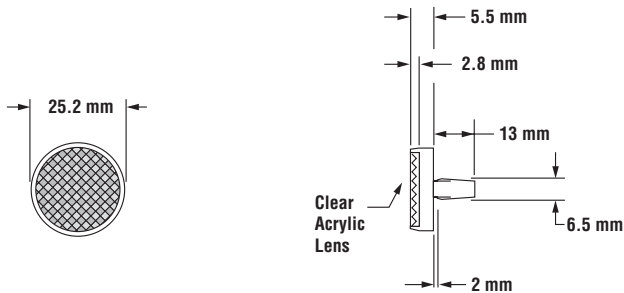
**BRT-1**

Description: Round, acrylic target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 65° C



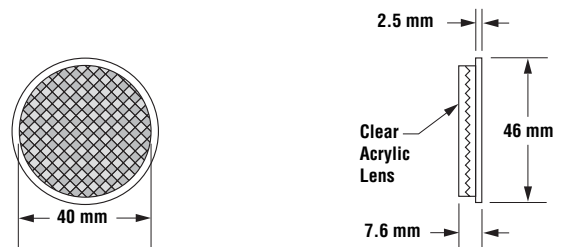
**BRT-25R**

Description: Round, rivet-secured acrylic target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 50° C



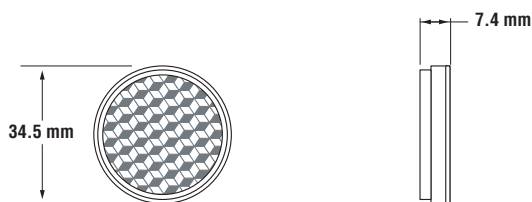
**BRT-1.5**

Description: Round, acrylic target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 65° C



**BRT-34**

Description: Round, acrylic target  
 Reflectivity Factor: 1.2  
 Max. Temperature: 65° C



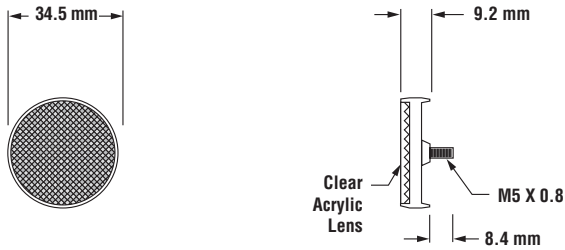
**BRT-34T**

Description: Round, acrylic target includes mounting tape  
 Reflectivity Factor: 1.2  
 Max. Temperature: 65° C



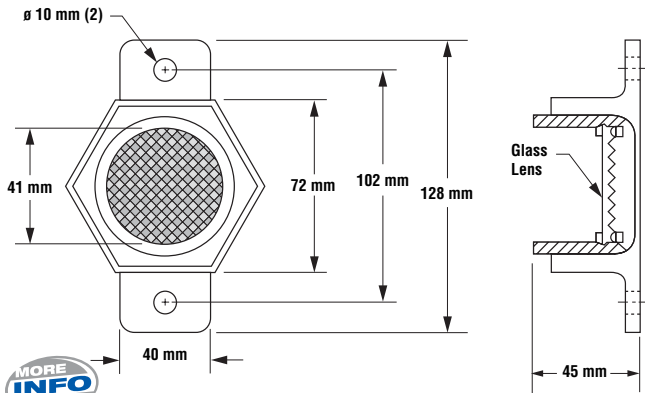
**BRT-35DM**

Description: Round, acrylic target  
 Reflectivity Factor: 1.2  
 Max. Temperature: 50° C  
 Other: This target has micro-prism geometry.



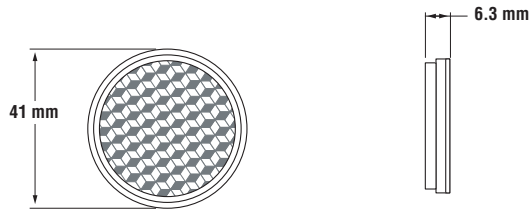
**BRT-41AHT**

Description: Round, borosilicate (Pyrex type) glass target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 200° C



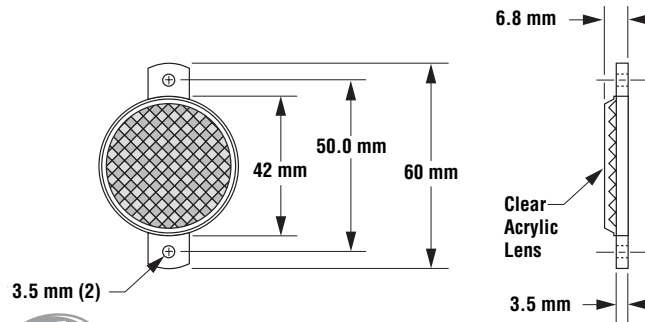
**BRT-42**

Description: Round, acrylic target  
 Reflectivity Factor: 1.2  
 Max. Temperature: 65° C



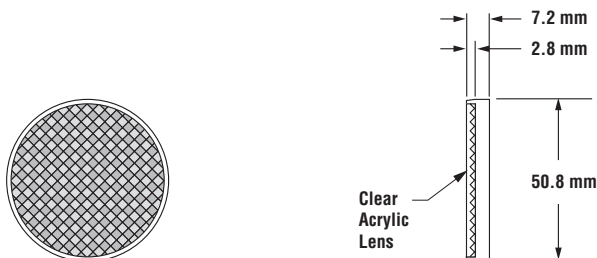
**BRT-42A**

Description: Round, acrylic target  
 Reflectivity Factor: 1.2  
 Max. Temperature: 50° C



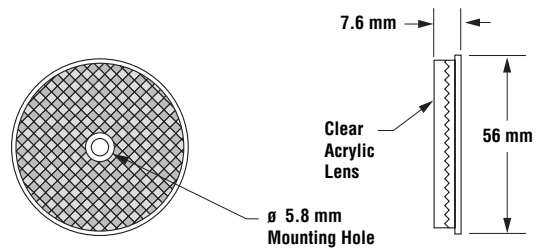
**BRT-42D**

Description: Round, acrylic target  
 Reflectivity Factor: 1.2  
 Max. Temperature: 50° C



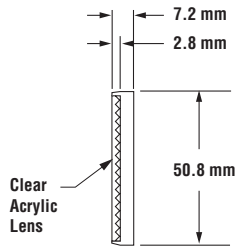
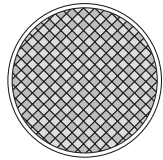
**BRT-2A**

Description: Round, acrylic target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 65° C



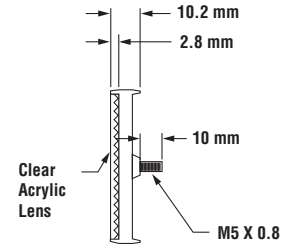
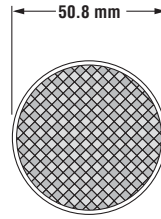
**BRT-50**

Description: Round, acrylic target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 65° C



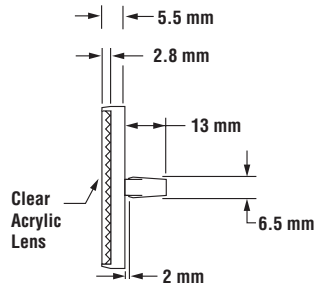
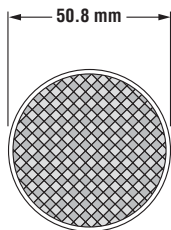
**BRT-50D**

Description: Round, acrylic target with mounting stud.  
 Reflectivity Factor: 1.0  
 Max. Temperature: 65° C  
 Other: Optional brackets are available. See Brackets on page 354.



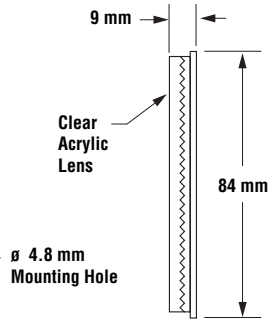
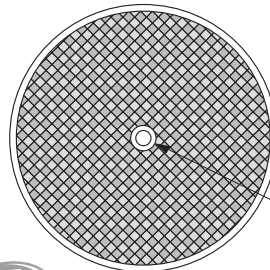
**BRT-50R**

Description: Round, rivet-secured acrylic target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 50° C  
 Other: Optional brackets are available. See Brackets on page 354.



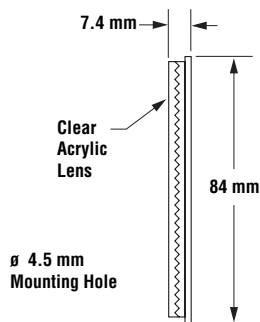
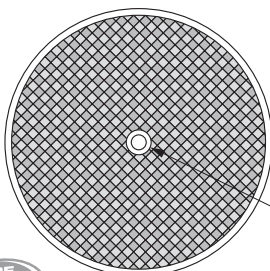
**BRT-3**

Description: Round, acrylic target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 65° C  
 Other: Optional brackets are available. See Brackets on pages 354 and 355.



**BRT-84**

Description: Round, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 65° C  
 Other: Optional brackets are available. See Brackets on pages 354 and 355.

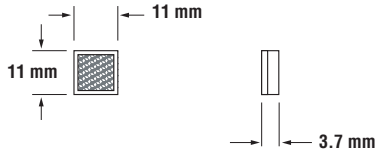


# Reflectors

## Accessories

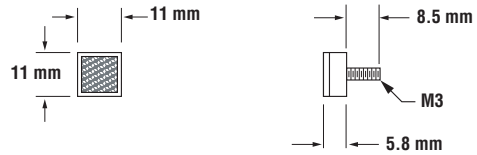
### BRT-11X11M

**Description:** Square, acrylic target  
**Reflectivity Factor:** 1.2  
**Max. Temperature:** 65° C  
**Other:** This target has micro-prism geometry.



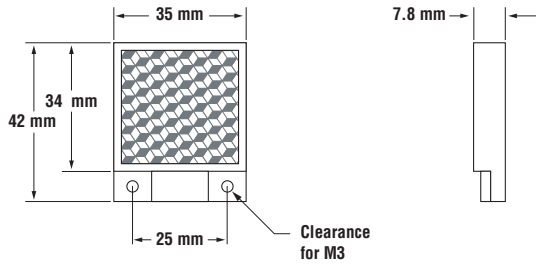
### BRT-11X11MD

**Description:** Square, acrylic target with mounting stud  
**Reflectivity Factor:** 1.2  
**Max. Temperature:** 65° C  
**Other:** This target has micro-prism geometry.



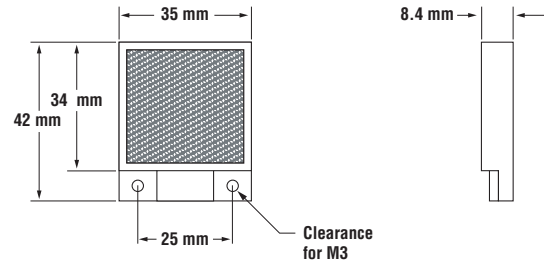
### BRT-35X35B

**Description:** Square, acrylic target  
**Reflectivity Factor:** 1.3  
**Max. Temperature:** 65° C



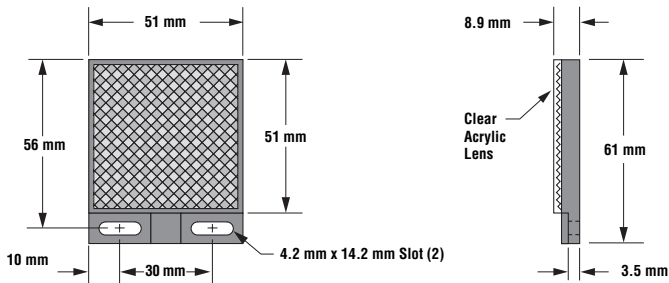
### BRT-35X35BM

**Description:** Square, acrylic target  
**Reflectivity Factor:** 1.2  
**Max. Temperature:** 65° C  
**Other:** This target has micro-prism geometry.



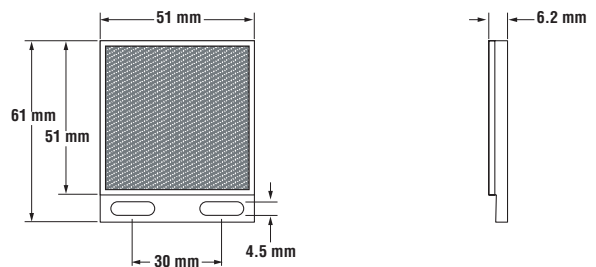
### BRT-2X2

**Description:** Square, acrylic target  
**Reflectivity Factor:** 1.0  
**Max. Temperature:** 50° C  
**Other:** Optional brackets are available. See Brackets on page 354.



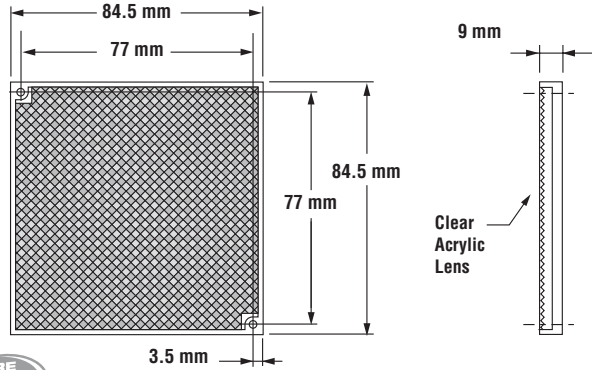
### BRT-51X51BM

**Description:** Square, acrylic target  
**Reflectivity Factor:** 1.5  
**Max. Temperature:** 50° C  
**Other:** This target has micro-prism geometry. Optional brackets are available on page 354. Replaces reflector BRT-36X40BM.



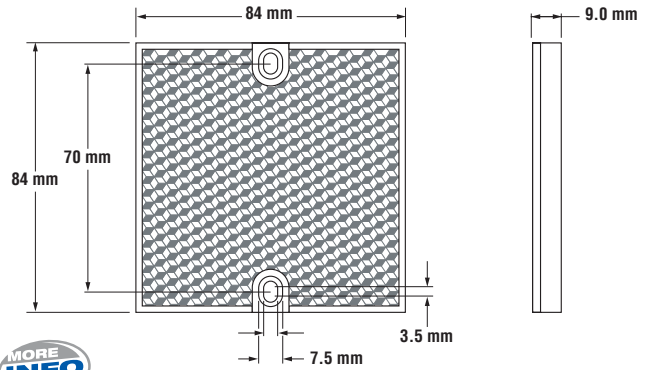
**BRT-77X77C**

Description: Square, acrylic target  
 Reflectivity Factor: 2.0  
 Max. Temperature: 50° C  
 Other: Optional brackets are available. See Brackets on pages 354 and 355.



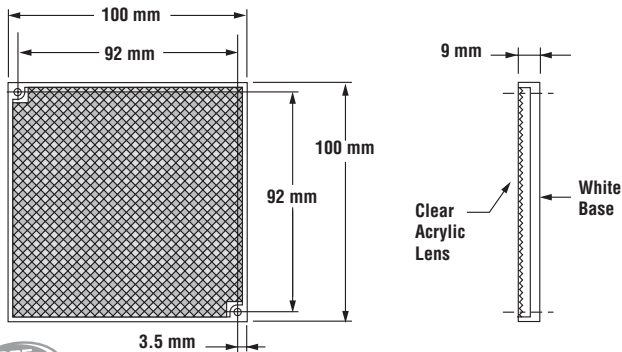
**BRT-84X84A**

Description: Square, acrylic target  
 Reflectivity Factor: 2.0  
 Max. Temperature: 50° C



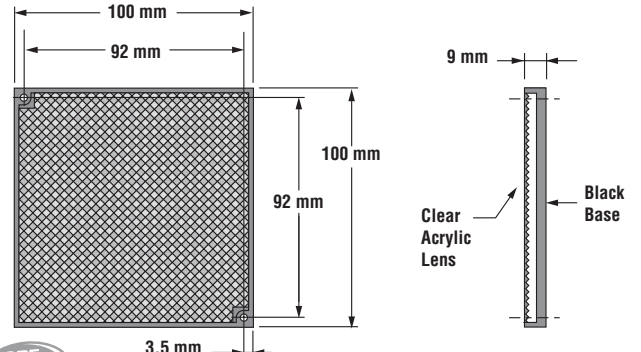
**BRT-92X92C**

Description: Square, acrylic target  
 Reflectivity Factor: 3.0  
 Max. Temperature: 50° C  
 Other: Optional brackets are available. See Brackets on page 355.



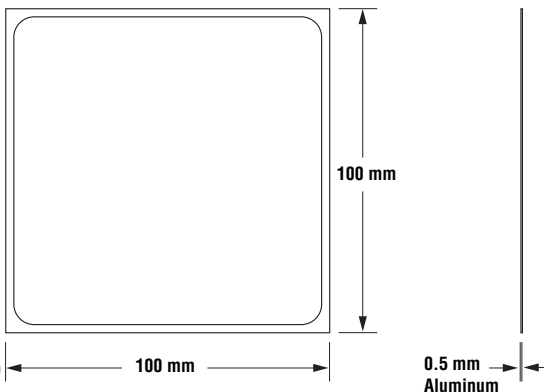
**BRT-92X92CB**

Description: Square, acrylic target with black mounting base  
 Reflectivity Factor: 3.0  
 Max. Temperature: 50° C  
 Other: Optional brackets are available. See Brackets on page 355.



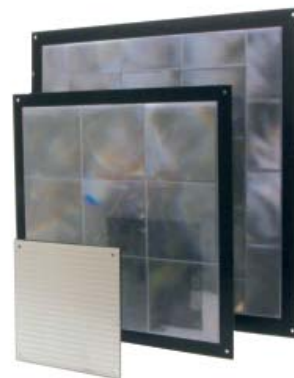
**BRT-4HT**

Description: Square, aluminum target  
 Reflectivity Factor: 0.15  
 Max. Temperature: 480° C  
 Other: This target is not recommended for polarized retroreflective sensors.



**BRT-250**  
**BRT-540**  
**BRT-700**

• 250 x 250 mm  
 • 540 x 540 mm  
 • 700 x 700 mm  
 Other: Square reflector with rigid aluminum backing for use with LT7



# Reflectors

## Accessories

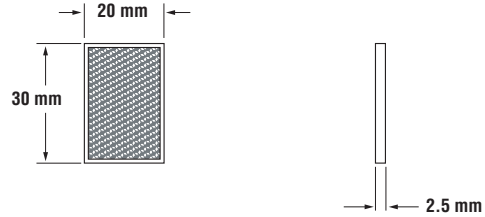
### BRT-23X14CM

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.2  
 Max. Temperature: 65° C  
 Other: This target has micro-prism geometry.



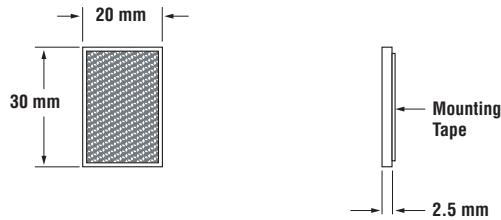
### BRT-30X20M

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.2  
 Max. Temperature: 65° C



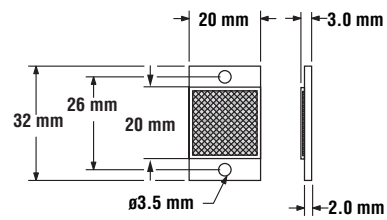
### BRT-30X20MT

Description: Rectangular, acrylic target includes mounting tape  
 Reflectivity Factor: 1.2  
 Max. Temperature: 65° C



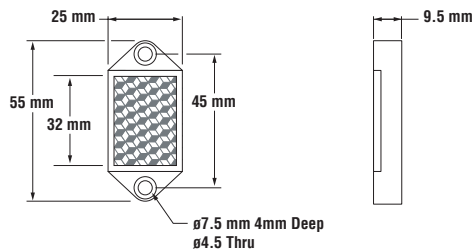
### BRT-32X20AM

Description: Rectangular, thin profile acrylic target  
 Reflectivity Factor: 1.2  
 Max. Temperature: 65° C  
 Other: This target has micro-prism geometry.



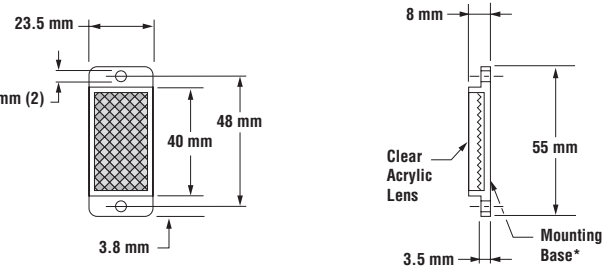
### BRT-32X22A

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.3  
 Max. Temperature: 65° C



### BRT-35X20A BRT-35X20AB

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 50° C  
 Other: White mounting base (SMB-35X20A) or black mounting base (SMB-35X20AB)



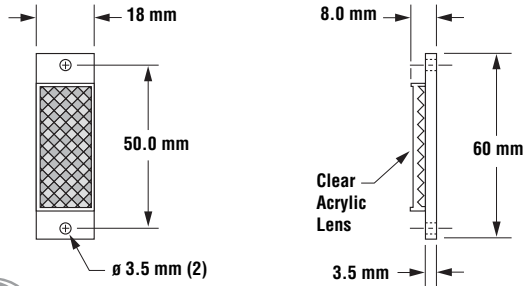
\* Mounting base available in white (model BRT-35X20A) or black (model BRT-35X20AB).

ACCESSORIES



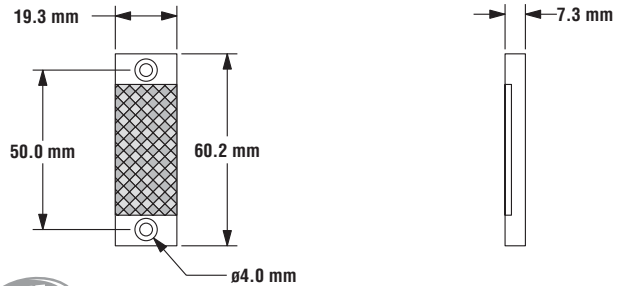
**BRT-40X18A**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 50° C



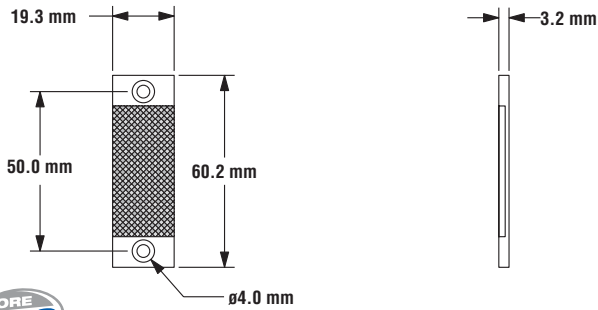
**BRT-40X19A**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.3  
 Max. Temperature: 50° C



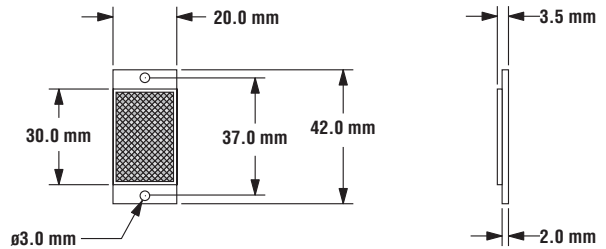
**BRT-40X19AM**

Description: Rectangular, thin profile acrylic target  
 Reflectivity Factor: 1.2  
 Max. Temperature: 50° C  
 Other: This target has micro-prism geometry.



**BRT-40X20AM**

Description: Rectangular, thin profile acrylic target  
 Reflectivity Factor: 1.2  
 Max. Temperature: 50° C  
 Other: This target has micro-prism geometry.



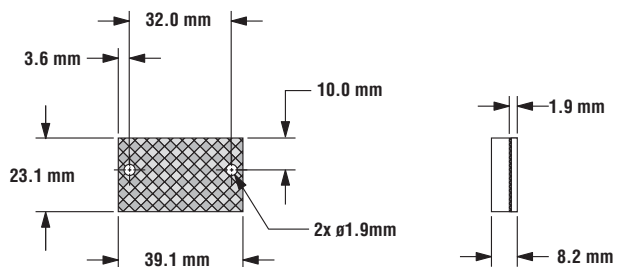
**BRT-40X23**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 50° C



**BRT-40X23A**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 50° C

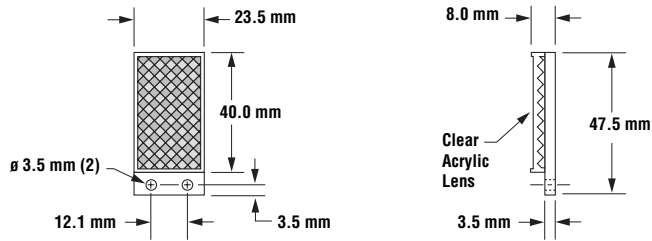


# Reflectors

## Accessories

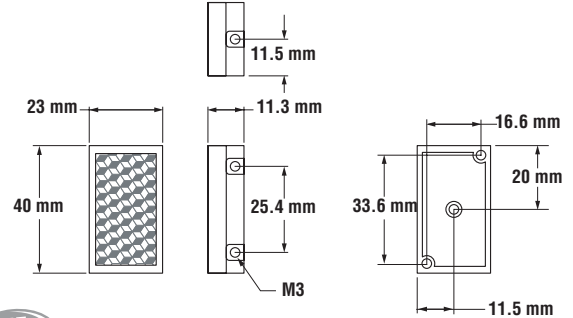
### BRT-40X23B

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 50° C



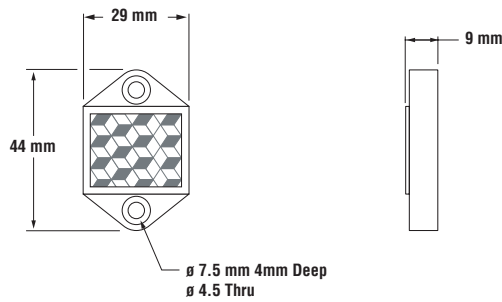
### BRT-40X23ABC

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 50° C



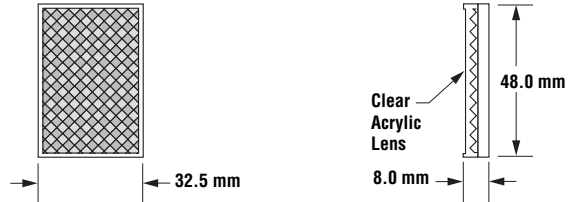
### BRT-44X29A6

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.1  
 Max. Temperature: 50° C  
 Other: 6 mm facets; close to the face retroreflective sensing with bifurcated lenses.



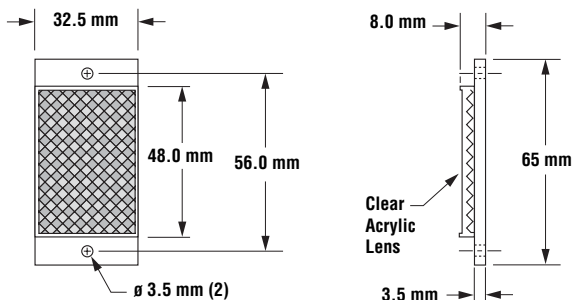
### BRT-48X32

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 50° C



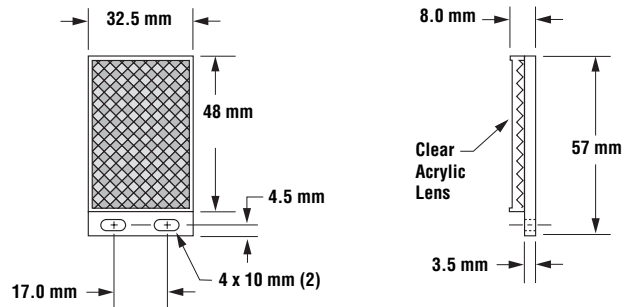
### BRT-48X32A

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 50° C



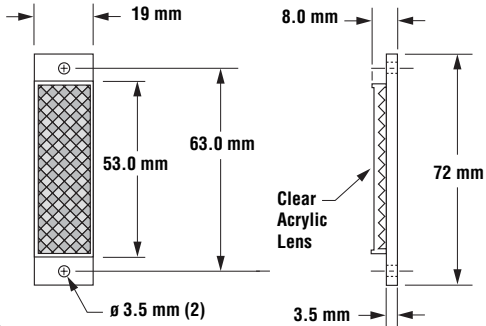
### BRT-48X32B

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.0  
 Max. Temperature: 50° C



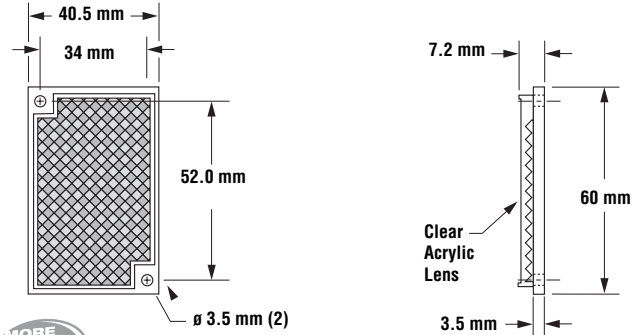
**BRT-53X19A**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 50° C



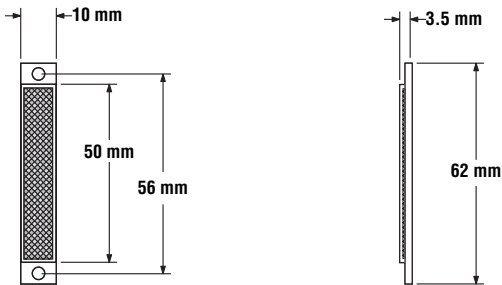
**BRT-60X40C**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 50° C  
 Other: This target has micro-prism geometry. Optional brackets are available. See page 354.



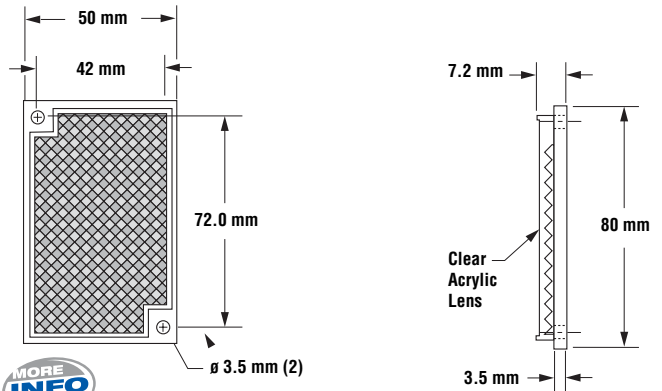
**BRT-62X10AM**

Description: Rectangular, thin profile acrylic target  
 Reflectivity Factor: 1.2  
 Max. Temperature: 65° C  
 Other: This target has micro-prism geometry.



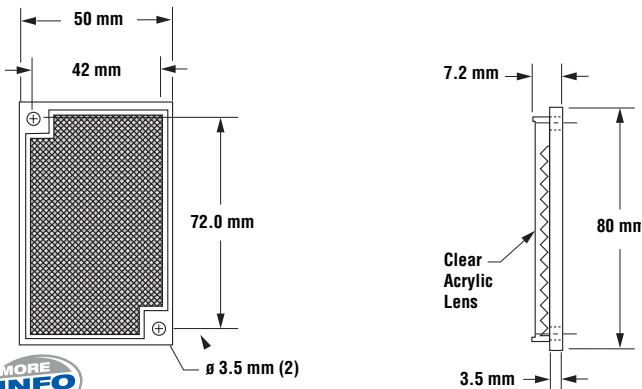
**BRT-80X50C**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 65° C



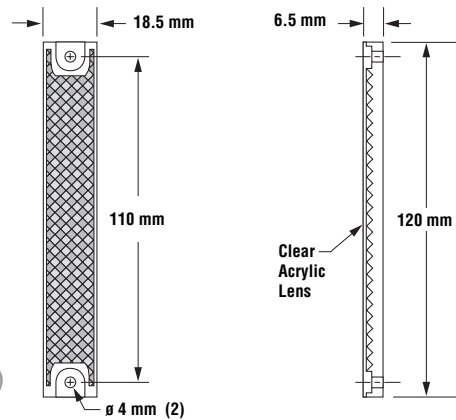
**BRT-80X50CM**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 65° C  
 Other: This target has micro-prism geometry.



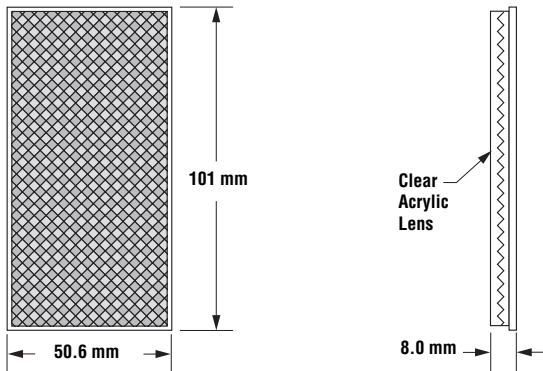
**BRT-100X18A**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 50° C



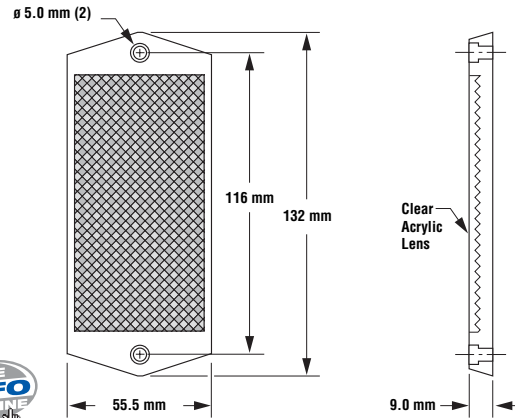
**BRT-100X50**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.5  
 Max. Temperature: 50° C



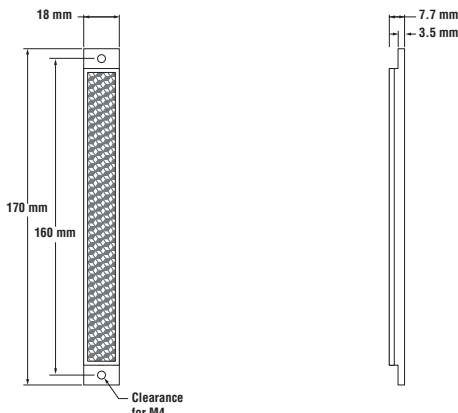
**BRT-100X55A**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.5  
 Max. Temperature: 50° C



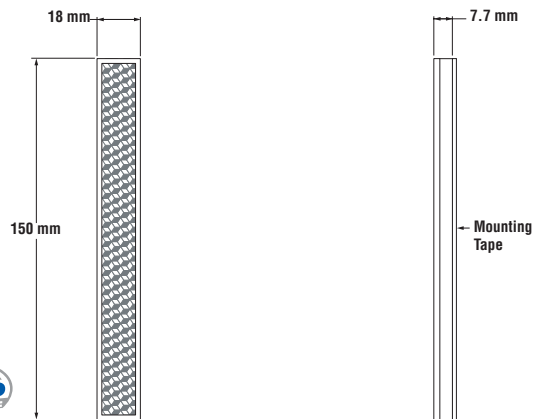
**BRT-150X18A**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 65° C



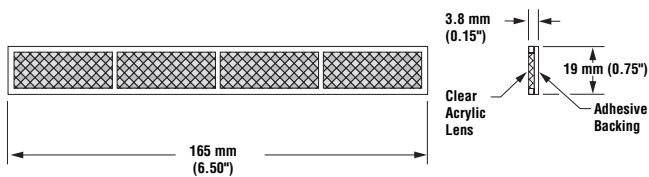
**BRT-150X18T**

Description: Rectangular, acrylic target includes mounting tape  
 Reflectivity Factor: 1.4  
 Max. Temperature: 65° C



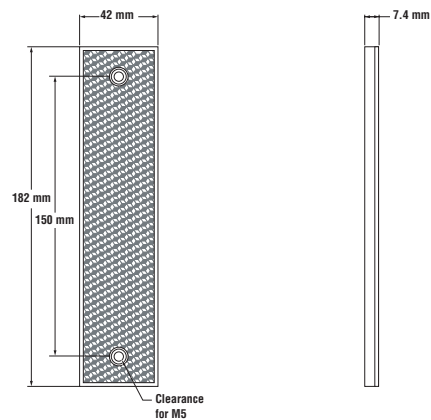
**BRT-L**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 0.8  
 Max. Temperature: 65° C



**BRT-180X40A**

Description: Rectangular, acrylic target  
 Reflectivity Factor: 1.4  
 Max. Temperature: 50° C



### Retroreflective Tape

**NOTE:** Sensing range and signal strength at any given sensor-to-target distance will vary due to target reflectivity and target area. A "Reflectivity Factor" is included for each target model to help predict sensor performance, relative to the excess gain curve plotted for target model BRT-3. Consider, also, target area when predicting performance. Changing to a high reflectivity reflector (like BRT-92x92C) may also extend sensor range and/or reduce the need for frequent reflector maintenance. A high reflectivity factor AND large surface area are needed for maximum range.

Model	Reflectivity Factor	Maximum Temperature	Size	Unit
BRT-THG-3X3-10	0.7	60° C	75 x 75 mm	10 per pack
BRT-THG-4X4-5	0.7	60° C	100 x 100 mm	5 per pack
BRT-THG-8.5X11-2	0.7	60° C	216 x 280 mm	2 per pack
BRT-THG-18X36	0.7	60° C	457 x 914 mm	Single sheet
BRT-THG-1-100	0.7	60° C	25 mm wide	2.5 m length
BRT-THG-2-100	0.7	60° C	50 mm wide	2.5 m length
BRT-THG-3-100	0.7	60° C	75 mm wide	2.5 m length
BRT-T-100 <sup>†</sup>	0.2	65° C	25 mm wide	2.5 m length
BRT-THT-100 <sup>†</sup>	0.07	175° C	25 mm wide	2.5 m length
BRT-TVHG2X2*	0.8	60° C	50 x 50 mm	4 per pack
BRT-TVHG-8X10P	0.8	60° C	203 x 254 mm	1 per pack



**NOTE:** Retroreflective material has a pressure-sensitive adhesive. For maximum adhesion, surfaces must be clean and dry before applying. For best results, use full size; target may be trimmed as necessary.

- <sup>†</sup> These targets are not recommended for polarized retroreflective sensors.
- \* These are sealed micro-prism style pieces and may not be cut.  
Suitable for use with Laser sensors, VS3 sensors and SME312LPC model sensors.  
Not suggested for close range (less than 102 mm) except with VS3 sensors.

# EZ-LIGHT™

## Indicator Lights for Industrial Environments

- Displays the status of remote or inaccessible sensors
- Replaces cumbersome post or stack lights with a single compact, unobtrusive and inexpensive unit
- Installs without certified personnel, conveniently near the operator
- Available in straight, right-angle and dome-shaped housings
- Displays one, two, or three colors, depending on model
- Eliminates bulb replacement with long-lasting LEDs
- Compatible with PLC or other logic-level control outputs
- Features IP67-rated water- and oil-tight housing for direct machine mounting



**GOOD Part  
or RUN Mode**



**BAD Part  
or STOP Mode**



### 3 Color General Purpose

- Red/yellow/green multifunction display
- 18 mm barrel, dome-shaped and 18 or 30 mm T-style housing
- Optional custom LED colors
- NPN or PNP input
- 4-pin Euro-style integral QD



### 3 Color 7 Function

- Multiple colors and flashing multifunction display
- 18 mm barrel, dome-shaped and 30 mm T-style housing
- NPN or PNP input
- 4-pin Euro-style integral QD

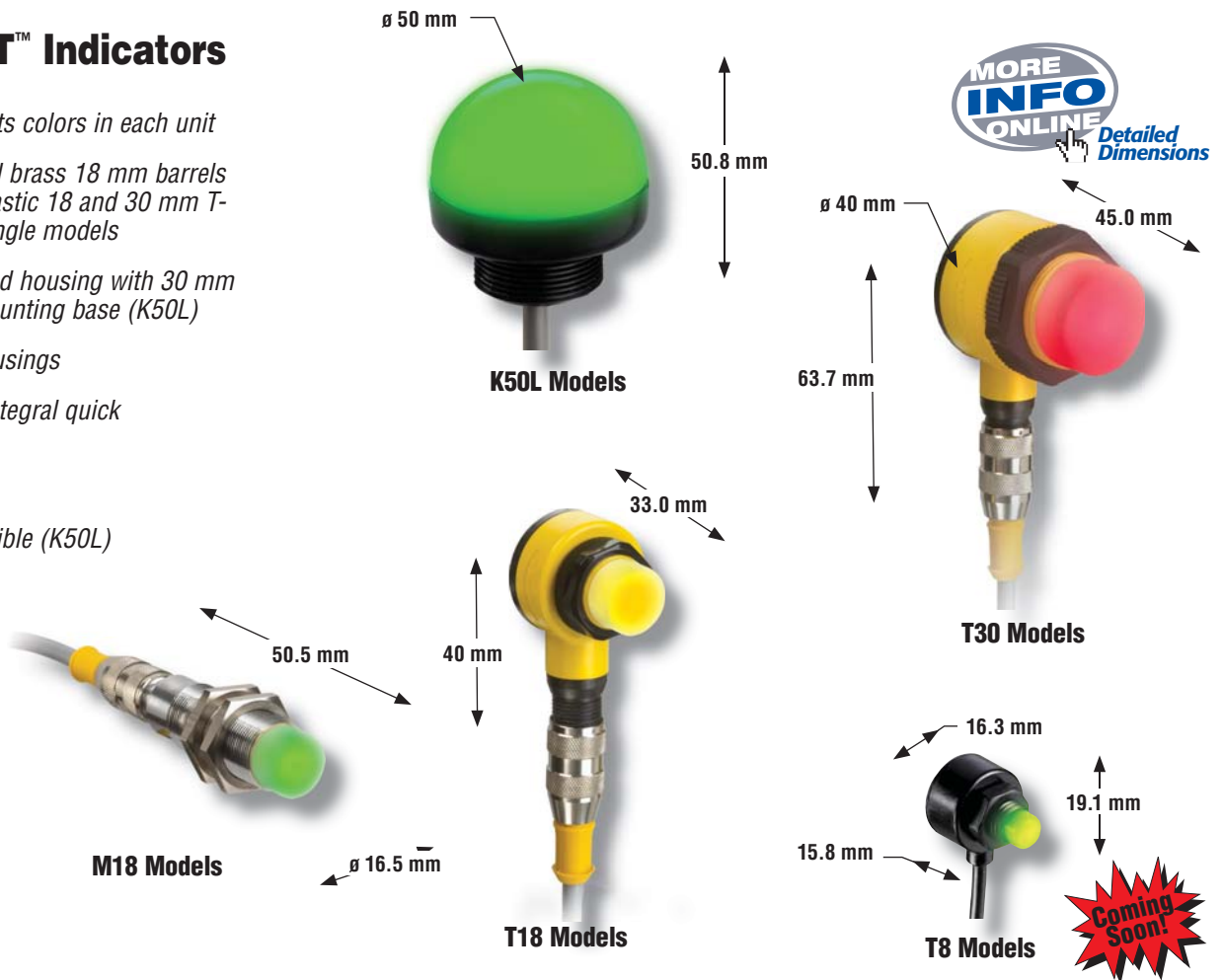


### 2 Color for Use with Sensors

- Yellow and green remote indicator
- 18 mm barrel, dome-shaped and 18 or 30 mm T-style housing
- NPN or PNP input
- 4-pin Euro-style integral QD





## EZ-LIGHT™ Indicators

- Multiple lights colors in each unit
- Nickel-plated brass 18 mm barrels or thermoplastic 18 and 30 mm T-style right-angle models
- Dome-shaped housing with 30 mm threaded mounting base (K50L)
- IEC IP67 housings
- Euro-style integral quick disconnect
- DC operated
- AS-i compatible (K50L)



### EZ-LIGHT™, 3-Color General Purpose



Model	Construction	Connection*	LED Function**	Inputs	Data Sheet
 M18GRYPQ M18GRYNQ	18 mm mount Nickel-plated brass	4-pin Euro QD	Lights independently selected: • Green • Red • Yellow	PNP	121899
				NPN	
 T18GRYPQ T18GRYNQ	18 mm mount Thermoplastic polyester			PNP	
				NPN	
 T30GRYPQ T30GRYNQ	30 mm mount Thermoplastic polyester			PNP	
				NPN	
 K50LGRYPQ K50LGRYNQ	30 mm mount Thermoplastic polyester			PNP	
				NPN	

\* QD models are listed. For 2 m cable model, omit suffix **Q** from model number (example, **M18GRYP**). A model with a QD requires a mating cable (see page 380).

\*\* Contact factory for other colors and color combinations.

### EZ-LIGHT™, 3-Color, 7-Function



	Model	Construction	Connection*	LED Function**	Inputs	Data Sheet						
	M18GRY2PQ	18 mm mount Nickel-plated brass	4-pin Euro QD†	Choose Red, Yellow or Green ON, flashing or alternating	PNP	121902						
	M18GRY2NQ				NPN							
	T30GRY2PQ	30 mm mount Thermoplastic polyester			4-pin Euro QD†		Choose Red, Yellow or Green ON, flashing or alternating	PNP	121902			
	T30GRY2NQ							NPN				
	K50LGRY2PQ	30 mm mount Thermoplastic polyester						4-pin Euro QD†		Choose Red, Yellow or Green ON, flashing or alternating	PNP	121902
	K50LGRY2NQ										NPN	

### EZ-LIGHT™, 2-Color for Use with Sensors



	Model	Construction	Connection*	LED Function**	Inputs	Data Sheet						
	M18GYX7PQ	18 mm mount Nickel-plated brass	4-pin Euro QD††	Use with binary photoelectric and proximity sensors to duplicate the sensor's indicator function. When the sensor is powered, the indicator is Green. When the sensor's output is energized, the indicator is Yellow.	PNP	121900						
	M18GYX7NQ				NPN							
	T18GYX7PQ	18 mm mount Thermoplastic polyester			4-pin Euro QD††		Use with binary photoelectric and proximity sensors to duplicate the sensor's indicator function. When the sensor is powered, the indicator is Green. When the sensor's output is energized, the indicator is Yellow.	PNP	121900			
	T18GYX7NQ							NPN				
	T30GYX7PQ	30 mm mount Thermoplastic polyester						4-pin Euro QD††		Use with binary photoelectric and proximity sensors to duplicate the sensor's indicator function. When the sensor is powered, the indicator is Green. When the sensor's output is energized, the indicator is Yellow.	PNP	121900
	T30GYX7NQ										NPN	
	K50LGYX7PQ	30 mm mount Thermoplastic polyester	4-pin Euro QD††	Use with binary photoelectric and proximity sensors to duplicate the sensor's indicator function. When the sensor is powered, the indicator is Green. When the sensor's output is energized, the indicator is Yellow.		PNP					121900	
	K50LGYX7NQ					NPN						

\* QD models are listed. For 2 m cable model, omit suffix Q from model number (example, M18GRY2P). A model with a QD requires a mating cable (see page 380).

\*\* Contact factory for other colors and color combinations.

† If cables other than Banner 4-pin Euro QD are used, a 5-pin cable may be required.

†† For use with 4-pin Euro-style QD cables or with Splitter cable (CSB-M12...).



## EZ-LIGHT™ Indicator Light Specifications

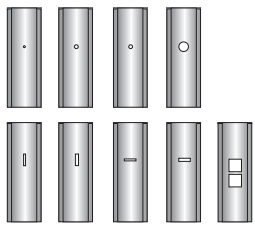
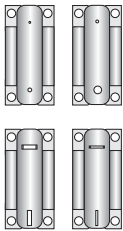
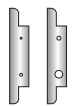
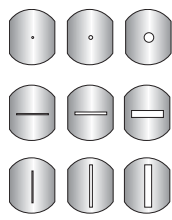
<b>Supply Voltage and Current</b>	<b>K50L models:</b> 18 to 30V dc at 75 mA max. <b>M18 and T18 models:</b> 10 to 30V dc at 50 mA max. <b>T30 models:</b> 10 to 30V dc at 75 mA max.
<b>Indicators</b>	<b>3-color General Purpose and 3-Color, 7-Function models:</b> 3 independently selected LEDs: Green, Red, Yellow  <b>2-color for Use with Sensors:</b> Green and Yellow, when connected to binary 3-wire or 4-wire sensors.  For other colors/combinations, contact Factory for availability.
<b>Input Response Time</b>	<b>3-Color, 7-Function models only:</b> <b>Indicator ON:</b> 250 milliseconds max. <b>Indicator OFF:</b> 10 milliseconds max.
<b>Indicator Flash Rate</b>	<b>3-Color, 7-Function models only:</b> <b>Single color:</b> 1 second flash rate (500 milliseconds ON) <b>Three color:</b> 1.5 second rotation rate (500 milliseconds per color)
<b>Environmental Rating</b>	Fully encapsulated, IEC IP67
<b>Connections</b>	4-pin Euro-style QD or 4-wire, 2 m integral cable.
<b>Operating Temperature</b>	-20° to +50° C
<b>Wiring Diagrams</b>	SP11 (p. 491)

### Apertures and Aperture Kits

Opposed-mode sensors may be fitted with apertures which narrow or shape the effective beam of the sensor to more closely match the size of profile of the object to be sensed. A common example is the use of "line" or "slit" type aperture when wire or thread is being sensed.

Model	Aperture Description	Units	Product	Used With
APQS18-020	Circular, 0.5 mm dia.	6		<ul style="list-style-type: none"> <li>• QS18 Opposed-mode</li> </ul>
APQS18-040	Circular, 1.0 mm dia.	6		
APQS18-100	Circular, 2.5 mm dia.	6		
APQS18-020H	Horizontal, slotted, 0.5 x 6.4 mm	6		
APQS18-040H	Horizontal, slotted, 1.0 x 6.4 mm	6		
APQS18-100H	Horizontal, slotted, 2.5 x 6.4 mm	6		
APQS18-020V	Vertical, slotted, 0.5 x 12.7 mm	6		
APQS18-040V	Vertical, slotted, 1.0 x 12.7 mm	6		
APQS18-100V	Vertical, slotted, 2.5 x 12.7 mm	6		
APQS18-DVHX2	Kit with 2 of each aperture	18		
AP19-00	Blank	2		<ul style="list-style-type: none"> <li>• Q23 Opposed-mode</li> </ul>
AP23-04S <sup>†</sup>	Slot, 1.0 mm	2		
AP23-06S <sup>†</sup>	Slot, 1.5 mm	2		
AP23-10S <sup>†</sup>	Slot, 2.5 mm	2		
AP23-12S <sup>†</sup>	Slot, 3.0 mm	2		
AP23-0203 <sup>††</sup>	Round, 0.5 & 0.8 mm dia.	2		
AP23-0404 <sup>††</sup>	Round, 1.0 & 1.0 mm dia.	2		
AP23-0406 <sup>††</sup>	Round, 1.0 & 1.5 mm dia.	2		
AP23-1012 <sup>††</sup>	Round, 2.5 & 3.0 mm dia.	2		
<sup>†</sup> Slotted apertures have a vertical and horizontal slot of equal width. <sup>††</sup> Round apertures have two circular holes of different diameters.				
AP31-020	Circular, 0.5 mm dia.	20		<ul style="list-style-type: none"> <li>• MINI-BEAM Opposed-mode</li> </ul>
AP31-040	Circular, 1.0 mm dia.	20		
AP31-100	Circular, 2.5 mm dia.	20		
AP31-020H	Horizontal, slotted, 0.5 x 6.4 mm	20		
AP31-040H	Horizontal, slotted, 1.0 x 6.4 mm	20		
AP31-100H	Horizontal, slotted, 2.5 x 6.4 mm	20		
AP31-200H	Horizontal, slotted, 5.1 x 6.4 mm	20		
AP31-020V	Vertical, slotted, 0.5 x 12.7 mm	20		
AP31-040V	Vertical, slotted, 1.0 x 12.7 mm	20		
AP31-100V	Vertical, slotted, 2.5 x 12.7 mm	20		
AP31-200V	Vertical, slotted, 5.1 x 12.7 mm	20		
AP31-DVHX2	Kit with 2 of each aperture above	22		
AP18SC*	Kit includes 3 round apertures of: 0.5, 1.0 & 2.5 mm dia.	3		• S18 & M18
AP18SR*	Kit includes 3 rectangular apertures of: 0.5, 1.0 & 2.5 mm dia.	3		• S18 & M18
AP18SCN*	Kit includes 3 round apertures of: 0.5, 1.0 & 2.5 mm dia.	3		• T18
AP18SRN*	Kit includes 3 rectangular apertures of: 0.5, 1.0 & 2.5 mm dia.	3		• T18
APG18S	Kit with glass lens to protect plastic sensor lens from chemical environments	1		• S18, M18 & T18
* Kits include Teflon FEP <sup>®</sup> lens, o-ring and thread-on housing.				
APG30S	Kit includes: a thread-on stainless steel housing, a flat glass lens, two quad-ring seals, and 3 round and 3 slotted aperture disks	1		• SM30

## Apertures and Aperture Kits (cont'd)

Model	Aperture Description	Units	Product	Used With
APQ12-5	Circular, 0.5 mm dia.	10		• Q12 Opposed-mode
APQ12-1	Circular, 1.0 mm dia.	10		
APQ12-1.5	Circular, 1.5 mm dia.	10		
APQ12-2	Circular, 2.0 mm dia.	10		
APQ12-.5H	Horizontal, slotted, 0.5 mm dia.	10		
APQ12-1H	Horizontal, slotted, 1.0 mm dia.	10		
APQ12-.5V	Vertical, slotted, 0.5 mm dia.	10		
APQ12-1V	Vertical, slotted, 1.0 mm dia.	10		
APQ12-4S	Protective jacket, 4 mm square	10		
APKQ12	Kit containing 2 of each aperture above	18		
APVS2-0204	Circular, 2 openings, 0.5 & 1.0 mm dia.	2		• VS2 Opposed-mode
APVS2-0608	Circular, 2 openings, 1.5 and 2.0 mm dia.	2		
APVS2-02R	Horizontal (1) and vertical (1), slotted, 0.5 mm wide	2		
APVS2-04R	Horizontal (1) and vertical (1), slotted, 1.0 mm wide	2		
APVS4-0206	Circular, 2 openings, 0.5 & 1.5 mm dia.	2		• VS4 Opposed-mode
APVS4-0408	Circular, 2 openings, 1.0 & 2.0 mm dia.	2		
APQS30-040	Circular, 1.0 mm dia.	6		• QS30 Opposed-mode
APQS30-100	Circular, 2.5 mm dia.	6		
APQS30-200	Circular, 5 mm dia.	6		
APQS30-040H	Horizontal, slotted, 1 x 12 mm	6		
APQS30-100H	Horizontal, slotted, 2.5 x 12 mm	6		
APQS30-200H	Horizontal, slotted, 5 x 12 mm	6		
APQS30-040V	Vertical, slotted, 1 x 17 mm	6		
APQS30-100V	Vertical, slotted, 2.5 x 17 mm	6		
APQS30-200V	Vertical, slotted, 5 x 17 mm	6		
APQS30-DVHX2	Kit with 3 of each aperture above	18		

## Replacement Lens Assemblies


Lens assemblies are field-replaceable. In addition, some lenses may be used to convert from one sensing mode to another, or to change the sensing range of a particular sensor. The possible conversions are listed in the table below.

Model	Replacement Lens for	Possible Sensing Mode or Range Changes	Used With
<b>UC-300AG</b> <b>UC-300BZ</b> <b>UC-300C.7</b> <b>UC-300C2</b> <b>UC-300E</b> <b>UC-300EL</b> <b>UC-300EPD</b> <b>UC-300F</b> <b>UC-300FP</b> <b>UC-300FP2</b> <b>UC-300L</b> <b>UC-300LP</b> <b>UC-300RPD</b>	LVAG W and DBZ C, CV and CVG C2 and CV2 E and R EL and RL EPD F and FV FP (old style) FP LV and D LP RPD	Change LV to LVAG Change D to DBZ and F to DBZ Change CV2 to CV Change CV to CV2 — Extend range of E/R — Change D to F and DBZ to F — — Change F to D, LVAG to LV and DBZ to D — —	• MINI-BEAM
<b>UC-45L</b> <b>UC-45LL</b> <b>UC-45LLP</b> <b>UC-45LP</b> <b>UC-45D</b> <b>UC-45F</b> <b>UC-45FP</b> <b>UC-45C</b> <b>UC-45C4</b>	E, R, DL, DX and LV LL LLP LP D F and FV FP CV CV4	N/A	• Q45
<b>OUC-C</b> <b>OUC-D</b> <b>OUC-F</b> <b>OUC-FP</b> <b>OUC-L</b> <b>OUC-LAG</b>	CV, CVB and CVG D F, FAC, FV, FVB, FVG, FX, EF and RF FP, FPB and FPG DX, LV, E and R LVAG and LVAGC	N/A	• OMNI-BEAM

Laser Alignment Tools					
Model	Description	Supply Voltage	Used With	Data Sheet	
LAT-1	 <ul style="list-style-type: none"> <li>Simplifies the alignment of any opposed-mode sensor pair</li> <li>Class 2 visible red laser beam</li> <li>Aluminum housing with black anodized finish</li> <li>Rated NEMA 1; IEC IP50</li> </ul>	9V battery for 20 hours of continuous use	• Opposed-mode sensors	54599	
LAT-2	 <p>LAT-2 shown with LT7</p> <ul style="list-style-type: none"> <li>Allows for long distance alignment greater than 50 m</li> <li>Clip-on attachment for sensor</li> </ul>	—	• LT7	120244	
LAT1812	 <ul style="list-style-type: none"> <li>Enables easy sensor alignment at long distances</li> <li>Kit includes one SMB1812 bracket and M12 laser emitter (Class 2 visible red laser)</li> <li>Clip-on attachment for 18 mm threaded barrel sensors</li> </ul>	10 to 30V dc	• 18 mm threaded barrel sensors	—	
LAT3012	 <ul style="list-style-type: none"> <li>Enables easy sensor alignment at long distances</li> <li>Kit includes one SMB3012 bracket and M12 laser emitter (Class 2 visible red laser)</li> <li>Clip-on attachment for 30 mm threaded barrel sensors</li> </ul>	10 to 30V dc	• 30 mm threaded barrel sensors	—	


### BEAM-TRACKER™ Alignment Tool

The BEAM-TRACKER is a low-cost, wireless, battery-operated, and completely self-contained photoelectric diagnostic sensor. It is a quick and simple way to evaluate photoelectric system performance. It receives light from all modulated photoelectric emitters and transmits light to receivers to check the system operation. It has a built-in frequency emitter that will be detected by any Banner photoelectric receiver, as well as by those of most other photoelectric manufacturers. It is a valuable tool for locating the center of the beam when installing long-range opposed-mode photoelectric sensor pairs and for locating sources of severe EMI and RFI noise.

Model	Supply Voltage	Beam	Construction	Data Sheet	
BT-1	 <p>9V battery for 10 hours of continuous use</p>	70 kHz infrared	Cyclocac® T case	03490	

### Portable Demo Box


The Portable Demo Box is used to power dc self-contained photoelectric sensors for testing purposes. It is battery-powered and features bicolor LEDs which indicate not only sensor output status, but also output type (NPN or PNP). It is designed around the 4-pin Euro-style connector, but cable adapters are available to convert to Pico-style or Mini-style connectors. A 4-pin wiring barrier is mounted on the top of the box to allow connection of cabled dc sensors.

Model	Supply Voltage	Cable Type	Cable Adapters	Data Sheet
DBQ5 	3 - 9V battery	4-pin Euro	Euro-to-Pico p/n 39536  Euro-to-Mini p/n 39537	—

### Portable Programming Box

The handheld Portable Programming Box communicates with the M-GAGE and T-GAGE, enabling you to remotely configure a sensor that is underground or otherwise inaccessible.






Model	Supply Voltage	Optional 115V ac Adapter	Used With	Data Sheet
DPB1 	2 - 9v battery	p/n 111367	<ul style="list-style-type: none"> <li>• M-GAGE</li> <li>• T-GAGE</li> </ul>	—

### Power Supplies and Interface Modules

The power supplies provide a low-cost interface between ac power supply and dc-operated sensors. They can source up to 100 milliamps. All models are available with integral TEACH push button and remote TEACH function. The interface module is a passive module that allows additional status indicators to be located in the user's control cabinet. It provides remote indication and TEACH capability.



Model	Description	Sensor Input	Input Supply	Sensor Supply	Data Sheet
PS24-1N 	Power Supply e/m relay output, status lights, and TEACH button	NPN	24V ac	15V dc	123566
PS24-1P		PNP			
PS115-1N 		NPN	115V ac		
PS115-1P		PNP			
SIM-525T 	Passive Interface Module Status lights and TEACH button	—	10-30V dc	—	123240