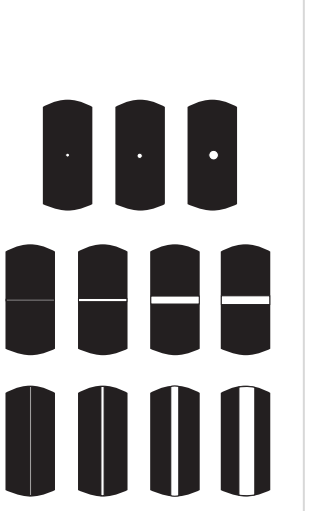
Aperture Kits

Aperture Kits for the MINI-BEAM Opposed-Mode Series Sensors

Opposed-mode MINI-BEAM sensors may be fitted with apertures that narrow or shape the effective beam of the sensor to more closely match the size or profile of the object to be sensed, for example, the use of “line” (or “slit”) apertures for sensing wire or thread. Aperture material: black PBT

MINI-BEAM Opposed-Mode Aperture Kits			
Aperture Kit	**Description**	**Pieces**	
Circular			
AP31-020	0.5 mm dia.	20	
AP31-040	1 mm dia.	20	
AP31-100	2.5 mm dia.	20	
Horizontal Slot			
AP31-020H	0.5 x 6.4 mm	20	
AP31-040H	1 x 6.4 mm	20	
AP31-100H	2.5 x 6.4 mm	20	
AP31-200H	5.1 x 6.4 mm	20	
Vertical Slot			
AP31-020V	0.5 x 12.7 mm	20	
AP31-040V	1 x 12.7 mm	20	
AP31-100V	2.5 x 12.7 mm	20	
AP31-200V	5.1 x 12.7 mm	20	
Kit			
AP31-DVHX2	2 of each aperture	2	

Aperture Kit	Range (Standard Group I and II Sensor Pairs)				Range (Group I Sensor Pairs with UC-300EL Upper Covers Substituted)	
	Aperture on Both Emitter and Receiver		Aperture on Receiver Only			
	Group I Sensors	Group II Sensors	Group I Sensors	Group II Sensors	Aperture on Both Emitter and Receiver	Aperture on Receiver Only
AP31-020	89 mm	102 mm	457 mm	1.5 m	127 mm	914 mm
AP31-040	330 mm	457 mm	940 mm	3.2 m	183 mm	2 m
AP31-100	1.5 m	3 m	2.5 m	8.2 m	2.1 m	5.8 m
AP31-020H	406 mm	1.8 m	965 mm	9.1 m	864 mm	3.4 m
AP31-040H	914 mm	4 m	1.8 m	12.5 m	1.8 m	5.2 m
AP31-100H	2.3 m	10.4 m	2.9 m	20.7 m	5.2 m	8.5 m
AP31-200H	2.8 m	21.3 m	3 m	24.4 m	8.2 m	11 m
AP31-020V	457 mm	1.7 m	1 m	8.2 m	1 m	3.4 m
AP31-040V	1 m	5.5 m	1.8 m	15.8 m	2.1 m	5.5 m
AP31-100V	2.3 m	10.7 m	2.9 m	22.9 m	6.1 m	8.5 m
AP31-200V	2.8 m	22.9 m	3 m	25.9 m	8.5 m	11 m

GROUP I Emitter/ Receiver Pairs (see Range): SMU31E/SMU31R

GROUP II Emitter/ Receiver Pairs (see Range): SMU31EL/SMU31RL

Example: The MINI-BEAM SMU1E/SMU31R sensor pair is in Group I. With an AP31-040 circular aperture on the receiver only, range is 940 mm (37 in). With AP31-040 apertures on both emitter and receiver, range is 330 mm (13 in). Group I range with AP31-040 apertures and UC-300EL upper covers on both units is 483 mm (19 in); range with receiver aperture only is 2.0 m (80 in).

Original Instructions
30-Oct-25

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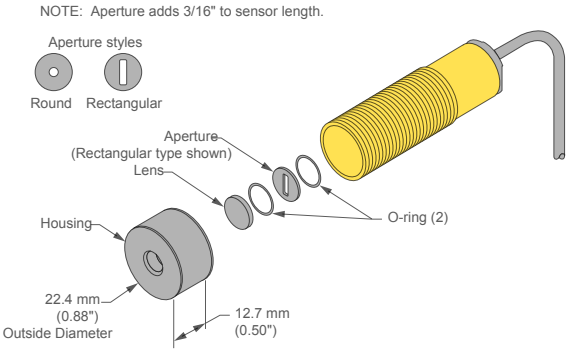
b_51957139
p/n: b_51957139 Rev. A

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

Aperture Kits for the M18, S18, T18, TM18, and YM18 Series Sensors



AP18SC Aperture Kit

Kit includes black acetal round apertures of 0.5 mm (0.02 in), 1 mm (0.04 in), and 2.5 mm (0.10 in) diameter. Each kit also includes a thread-on aperture housing, a Teflon FEP® lens, and two 0-rings.

Used with S18, M18.



AP18SCN Aperture Kit

Kit includes black acetal round apertures of 0.5 mm (0.02 in), 1.0 mm (0.04 in), and 2.5 mm (0.10 in) diameter.

Used with T18, TM18 models.



AP18SR Aperture Kit

Kit includes black acetal rectangular apertures of 0.5 mm (0.02 in) wide, 1.0 mm (0.04 in) wide, and 2.5 mm (0.10 in) wide. Each kit also includes a thread-on aperture housing, a Teflon FEP® lens, and two 0-rings.

Used with S18, M18.



AP18SRN Aperture Kit

Kit includes black acetal rectangular apertures of 0.5 mm (0.02 in), 1.0 mm (0.04 in), and 2.5 mm (0.10 in) wide. Each kit also includes a thread-on housing, Teflon® FEP® lens, and o-ring.

Used with T18, TM18



APG18S Aperture Kit

Kit with glass lens to protect plastic sensor lens from chemical environments and weld splatter damage.

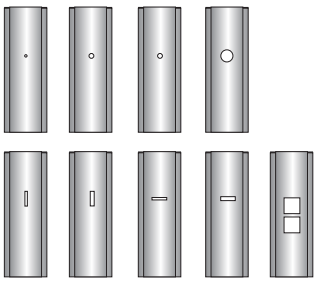
Used with S18, M18, T18, TM18, and Q4X



Aperture Kits for the Q12 Opposed-Mode Series Sensors

The Q12 apertures are 300 series stainless steel.

Model	Description	Pieces	Reduced Sensor Range (Two Apertures Used)	
Circular				
APQ12-.5	0.5 mm (0.02 in) diameter	10	60 mm (2.4 in)	
APQ12-1	1 mm (0.04 in) diameter	10	190 mm (7.5 in)	
APQ12-1.5	1.5 mm (0.06 in) diameter	10	400 mm (15.7 in)	
APQ12-2	2 mm (0.08 in) diameter	10	725 mm (28.5 in)	
Horizontal Slot				
APQ12-.5H	0.5 mm (0.02 in)	10	350 mm (13.8 in)	
APQ12-1H	1 mm (0.04 in)	10	725 mm (28.5 in)	
Vertical Slot				
APQ12-.5V	0.5 mm (0.02 in)	10	450 mm (17.7 in)	



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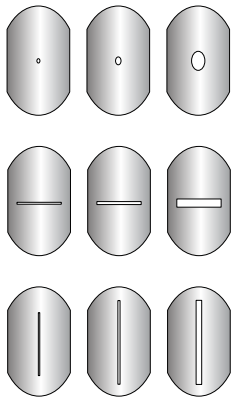
Model	Description	Pieces	Reduced Sensor Range (Two Apertures Used)	
APQ12-1V	1 mm (0.04 in)	10	900 mm (35.4 in)	
Protective Jacket				
APQ12-4S	4 mm (0.16 in) square	10	2000 mm (78.7 in)	
APKQ12	Kit containing two of each aperture above	18	—	

Aperture Kits for the QS18 Opposed-Mode Series Sensors

The QS18 apertures are 302 stainless steel.

Model	Description	Pieces	
Circular			
APQS18-020	0.5 mm dia.	6	
APQS18-040	1.0 mm dia.	6	
APQS18-100	2.5 mm dia.	6	
Horizontal Slot			
APQS18-020H	0.5 mm × 6.4 mm	6	
APQS18-040H	1 mm × 6.4 mm	6	
APQS18-100H	2.5 mm × 6.4 mm	6	
Vertical Slot			
APQS18-020V	0.5 mm × 12.7 mm	6	
APQS18-040V	1 mm × 12.7 mm	6	
APQS18-100V	2.5 mm × 12.7 mm	6	
Kit			
APQS18-DVHX2	2 of each aperture	18	



Aperture Kits for the Q2X Series Sensors

The Q2X apertures are 304 stainless steel.

Model	Description	Pieces
APQ2X-1	Circular aperture, 1 mm (0.04 in) diameter	2
APQ2X-1.5	Circular aperture, 1.5 mm (0.06 in) diameter	2
APQ2X-2	Circular aperture, 2 mm (0.08 in) diameter	2
APQ2X-VH	Cross-talk avoidance polarizing filter	4

Aperture Kits for the Q20 Opposed-Mode Series Sensors

The Q20 apertures are 300 series stainless steel.

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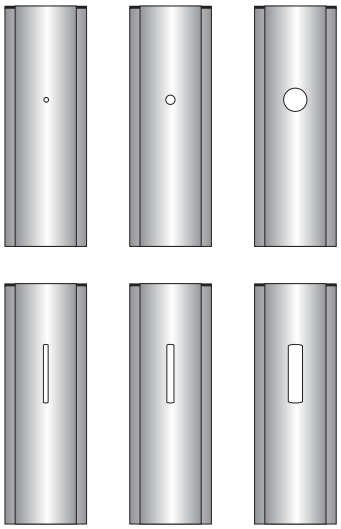
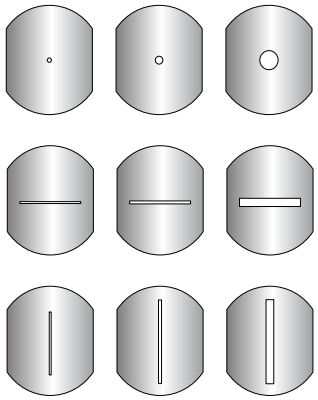
Model		Reduced Sensor Range E/R (two apertures used)	Reduced Sensor Range EL/RL (two apertures used)	Description
Circular				
APQ20-0.5	0.5 mm (0.02") dia.	0.10 m (0.33 ft)	0.18 m (0.6 ft)	
APQ20-1	1 mm (0.04") dia.	0.35 m (1.14 ft)	0.66 m (2.1 ft)	
APQ20-2	2 mm (0.08") dia.	1.5 m (4.9 ft)	2.9 m (9.5 ft)	
Vertical Slot				
APQ20-0.5V	0.5 mm (0.02") dia.	1.4 m (4.6 ft)	2.3 m (7.5 ft)	
APQ20-1V	1 mm (0.04") dia.	2.8 m (9.2 ft)	4.8 m (15.7 ft)	
APQ20-2V	2 mm (0.08") dia.	5.8 m (19.0 ft)	8.6 m (28.2 ft)	
APK-Q20	Includes two of each type			

Aperture Kits for the QS30 Opposed-Mode Series Sensors

The QS30 apertures are 300 series stainless steel.

Model	Description	Pieces	
Circular			
APQS30-040	1 mm (0.04 in) diameter	6	
APQS30-100	2.5 mm (0.10 in) diameter	6	
APQS30-200	5 mm (0.20 in) diameter	6	
Horizontal Slot			
APQS30-040H	1 mm × 12 mm (0.04 in × 0.47 in)	6	
APQS30-100H	2.5 mm × 12 mm (0.10 in × 0.47 in)	6	
APQS30-200H	5 mm × 12 mm (0.20 in × 0.47 in)	6	
Vertical Slot			
APQS30-040V	1 mm × 17 mm (0.04 in x 0.67 in)	6	
APQS30-100V	2.5 mm × 17 mm (0.10 in × 0.67 in)	6	
APQS30-200V	5 mm × 17 mm (0.20 in × 0.67 in)	6	
APQS30-DVHX2	Kit containing two of each aperture above	18	
APQS30-DVH	Kit containing one each of aperture models: APQS30-040, APQS30-040H, APQS30-040V	18	

Aperture Kits for the S12 Series Sensors

Model	Description	Dimensions
AP12SC	Includes lens, o-ring, thread-on housing, and 3 circular black acetal apertures with openings of: • 0.5 mm (0.02 inch) diameter • 1 mm (0.04 inch) diameter • 2.5 mm (0.10 inch) diameter	
AP12SR	Includes lens, o-ring, thread-on housing, and 3 rectangular black acetal apertures with openings of: • 0.5 mm (0.02 inch) wide • 1 mm (0.04 inch) wide • 2.5 mm (0.10 inch) wide	

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Aperture Kits for the SM30 and SMI30 Opposed-Mode Sensors

APG30S

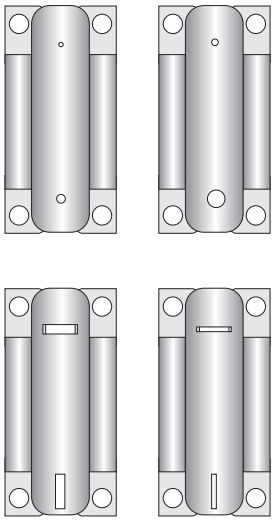
Kit includes black acetal round apertures of 0.05 in, 0.12 in, and 0.70 in diameter; slotted widths of 1 mm (0.04 in), 2.5 mm (0.10 in), and 5 mm (0.20 in.)

Used with SM30 and SMI30 models.

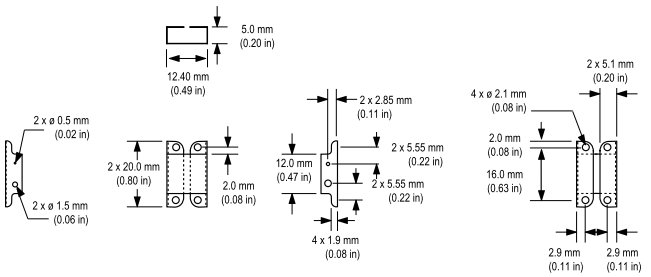
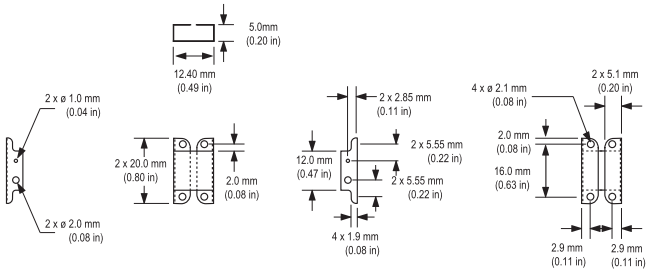


Aperture Kits for the VS2 Opposed-Mode Series Sensors

The VS2 apertures are 300 series stainless steel.

Model	Description	
Circular		
APVS2-0204	Two openings, 0.5 mm (0.02 in) and 1 mm (0.04 in) diameter	
APVS2-0608	Two openings, 1.5 mm (0.06 in) and 2 mm (0.08 in) diameter	
Horizontal and Vertical Slot		
APVS2-02R	One each, 0.5 mm (0.02 in) wide	
APVS2-04R	One each, 1.0 mm (0.04 in) wide	

Aperture Kits for the VS4 Series Sensors

Model	Description	Dimensions
APVS4-0206	• 2-holed aperture • 0.5 mm (0.02 in) and 1.5 mm (0.06 in) diameter holes • 300 series stainless steel	
APVS4-0408	• 2-holed aperture • 1 mm (0.04 in) and 2 mm (0.08 in) diameter holes • 300 series stainless steel	

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