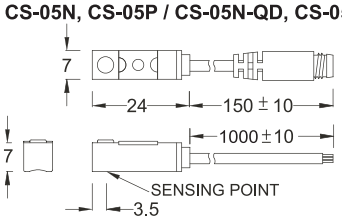
CS-05 SERIES

RoHS

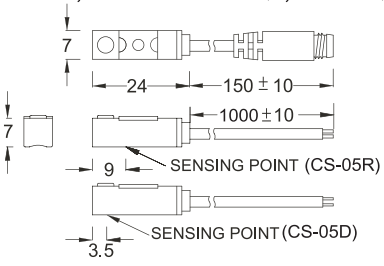
Magnetic switch

■ DIMENSION

CS-05N, CS-05P / CS-05N-QD, CS-05P-QD



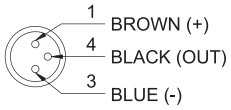
CS-05R, CS-05D / CS-05R-QD,CS-05D-QD



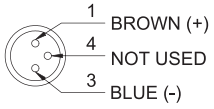
Unit:mm

■ QD PINOUT

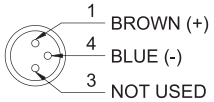
***3 wire QD wiring**



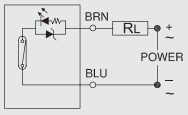
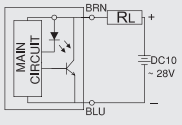
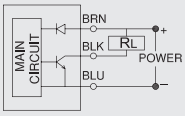
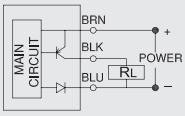
***2 wire QD wiring**



***2 wire EQD wiring**

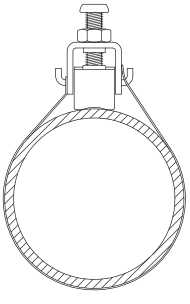


■ SPECIFICATION

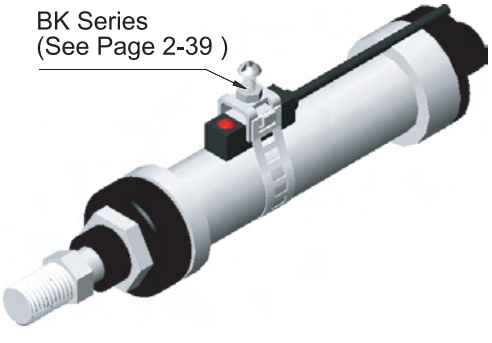
TYPE	CS-05R	CS-05D	CS-05N	CS-05P
CONNECT DIAGRAM / CHARACTERISTICS				
WIRING METHOD	2-Wire Type		3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open		
SENSOR TYPE	Reed Switch	--	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~240V DC/AC	10~28V DC	5~30V DC	
SWITCHING CURRENT	100 mA max.	50 mA max.	200 mA. max.	
CONTACT RATING	10 W max.	1.5 W max.	6W max.	
CURRENT CONSUMPTION	–		8 mA @ 24V DC max.	
VOLTAGE DROP	3.0 V max.	3.5 V max.	1 V @ 200mA max.	
LEAKAGE CURRENT	--	0.8 mA max.	0.01 mA max.	
INDICATOR	Red LED			Green LED
CABLE	ø2.8, 2C, PVC		ø2.8, 3C, PVC	
OPERATING FREQUENCY	200 Hz	1000 Hz		
MAGNET REQUIREMENT (NOTE 1)	50 Gauss Parallel	40 Gauss Parallel		
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)			
SHOCK (NOTE 2)	30 G	50 G		
VIBRATION (NOTE 3)	9 G			
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)			
PROTECTION CIRCUIT (NOTE 4)	1	2, 4	2, 3, 4	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ MOUNTING CLAMPS



BK Series
(See Page 2-39)



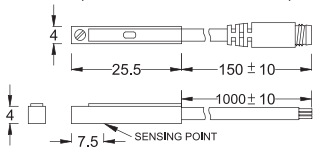
CS-06 SERIES

RoHS

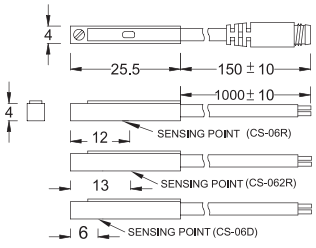
Magnetic switch

■ DIMENSION

CS-06N, CS-06P / CS-06N-QD, CS-06P-QD



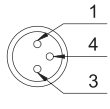
CS-06R, CS-062R,CS-06D /
CS-06R-QD, CS-062R-QD,CS-06D-QD



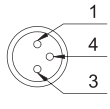
Unit:mm

■ QD PINOUT

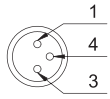
***3 wire QD wiring**



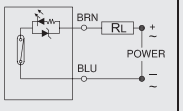
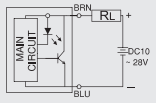
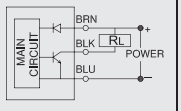
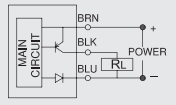
***2 wire QD wiring**



***2 wire EQD wiring**

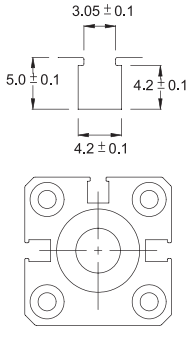


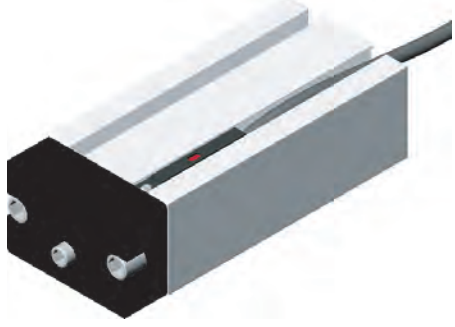
■ SPECIFICATION

TYPE	CS-06R	CS-062R	CS-06D	CS-06N	CS-06P
CONNECT DIAGRAM / CHARACTERISTICS					
WIRING METHOD	2-Wire Type			3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open		Solid State Output, Normally Open		
SENSOR TYPE	Reed Switch		--	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~120V DC/AC	5~240V DC/AC	10~28V DC	5~30V DC	
SWITCHING CURRENT	100 mA max.		4~40 mA max.	200 mA. max.	
CONTACT RATING	10 W max.		1.5 W max.	6W max.	
CURRENT CONSUMPTION	--			8 mA @ 24V DC max.	
VOLTAGE DROP	3.5 V max.			1 V @ 200mA max.	
LEAKAGE CURRENT	--		1 mA max.	0.01 mA max.	
INDICATOR	Red LED	Green LED	Red LED		Green LED
CABLE	ø2.8, 2C, PUR			ø2.8, 3C, PUR	
OPERATING FREQUENCY	200 Hz		1000 Hz		
MAGNET REQUIREMENT (NOTE 1)	70 Gauss Parallel		40 Gauss Parallel	30 Gauss Parallel	
TEMPERATURE RANGE	-10~70°C (+14~158°F)				
SHOCK (NOTE 2)	30 G		50 G		
VIBRATION (NOTE 3)	9 G				
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)				
PROTECTION CIRCUIT (NOTE 4)	1		4	2, 3, 4	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION





Unit:mm

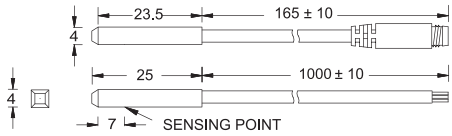
CS-10 SERIES

RoHS

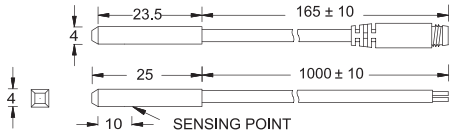
Magnetic switch

■ DIMENSION

CS-10N, CS-10P / CS-10N-QD, CS-10P-QD



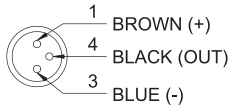
CS-10R / CS-10R-QD



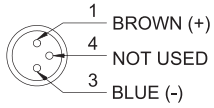
Unit:mm

■ QD PINOUT

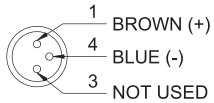
***3 wire QD wiring**



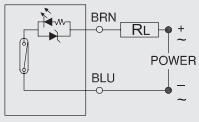
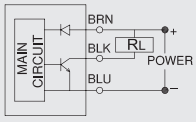
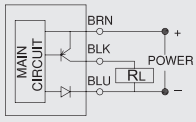
***2 wire QD wiring**



***2 wire EQD wiring**

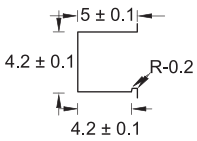


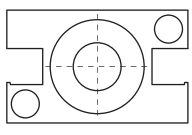
■ SPECIFICATION

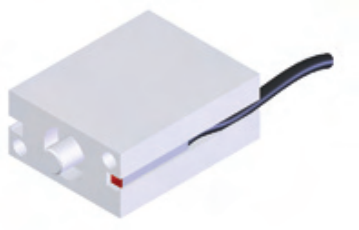
TYPE	CS-10R	CS-10N	CS-10P
CONNECT DIAGRAM / CHARACTERISTICS			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~120V DC/AC	5~30V DC	
SWITCHING CURRENT	50 mA max.	50 mA max.	
CONTACT RATING	6 W max.	1.5 W max.	
CURRENT CONSUMPTION	--	7 mA @ 24V DC max.	14 mA @ 24V DC max.
VOLTAGE DROP	3.0 V max.	0.5 V @ 50mA max.	1.2 V@ 50mA max.
LEAKAGE CURRENT	--	0.01 mA max.	
INDICATOR	Red LED	Green LED	Red LED
CABLE	ø2.8, 2C, PUR	ø2.8 , 3C, PUR	
OPERATING FREQUENCY	200 Hz	1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	40 Gauss Parallel		
TEMPERATURE RANGE	-10~70°C (+14~158°F)		
SHOCK (NOTE 2)	30 G	50 G	
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	1	3, 4	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION







Unit:mm

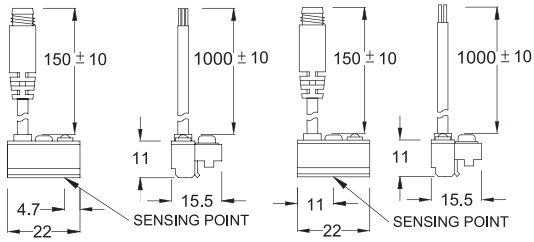
CS-11 SERIES

RoHS

Magnetic switch

■ DIMENSION

CS-11N, CS-11P
CS-11N-QD, CS-11P-QD

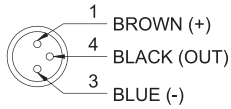


CS-11R / CS-11R-QD

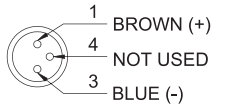
Unit:mm

■ QD PINOUT

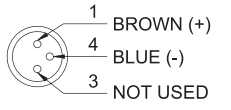
*3 wire QD wiring



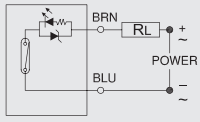
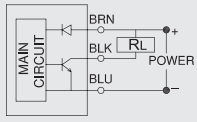
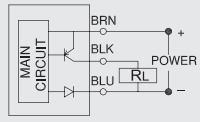
*2 wire QD wiring



*2 wire EQD wiring

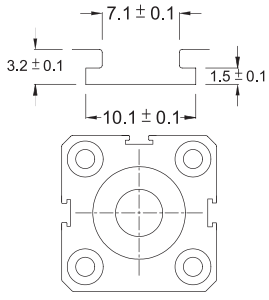


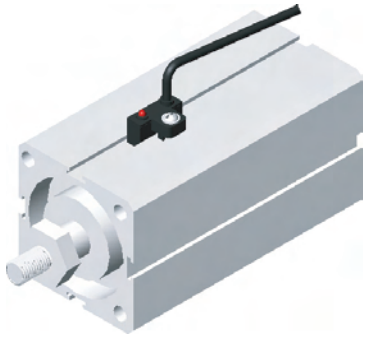
■ SPECIFICATION

TYPE	CS-11R	CS-11N	CS-11P
CONNECT DIAGRAM / CHARACTERISTICS			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~240V DC/AC	5~30V DC	
SWITCHING CURRENT	100 mA max.	200 mA max.	
CONTACT RATING	10 W max.	6 W max.	
CURRENT CONSUMPTION	--	22 mA @ 24V DC max.	20 mA @ 24V DC max.
VOLTAGE DROP	3.5 V max.	0.5 V max.	
LEAKAGE CURRENT	--	0.01 mA max.	
INDICATOR	Red LED		Green LED
CABLE	ø3.3, 2C, PVC	ø3.3, 3C, PVC	
OPERATING FREQUENCY	200 Hz	1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	60 Gauss Parallel	40 Gauss Parallel	
TEMPERATURE RANGE	-10~70°C (+14~158°F)		
SHOCK (NOTE 2)	30 G	50 G	
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	1	3, 4	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION





Unit:mm

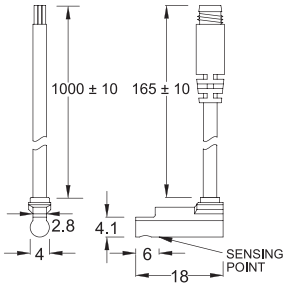
CS-16 SERIES

RoHS

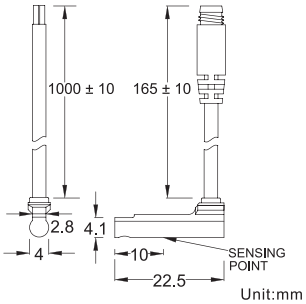
Magnetic switch

■ DIMENSION

CS-16N, CS-16P
CS-16N-QD, CS-16P-QD



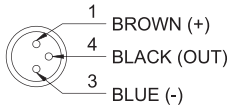
CS-16R / CS-16R-QD



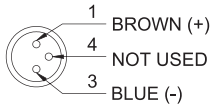
Unit:mm

■ QD PINOUT

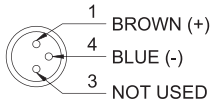
*3 wire QD wiring



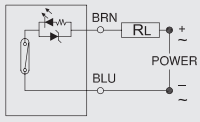
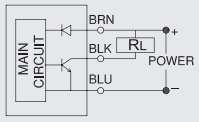
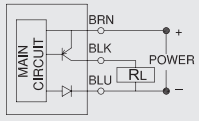
*2 wire QD wiring



*2 wire EQD wiring

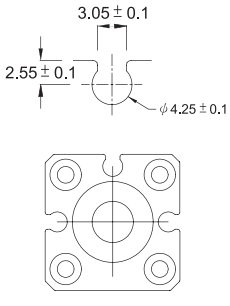


■ SPECIFICATION

TYPE	CS-16R	CS-16N	CS-16P
CONNECT DIAGRAM / CHARACTERISTICS			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~120V DC/AC	5~30V DC	
SWITCHING CURRENT	50 mA max.		
CONTACT RATING	6 W max.	1.5 W max.	
CURRENT CONSUMPTION	--	7 mA @ 24V DC max.	9 mA @ 24V DC max.
VOLTAGE DROP	2.5 V max.	1.5V @ 50mA max.	
LEAKAGE CURRENT	–	0.01 mA max.	
INDICATOR	Red LED		Green LED
CABLE	ø2.8, 2C, PUR	ø2.8, 3C, PUR	
OPERATING FREQUENCY	200 Hz	1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	40 Gauss Parallel		
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)		
SHOCK (NOTE 2)	30 G	50 G	
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	1	3, 4	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION



Unit:mm

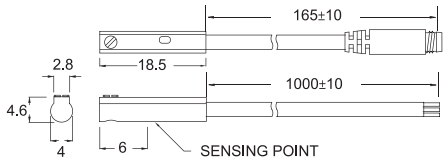
CS-18 SERIES

RoHS

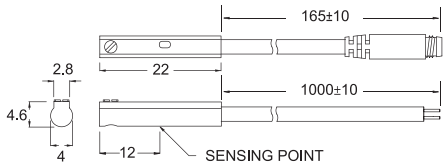
Magnetic switch

■ DIMENSION

CS-18N, CS-18P, CS-18N-NC, CS-18P-NC
/ CS-18N-QD, CS-18P-QD,CS-18N-NC-QD, CS-18P-NC-QD



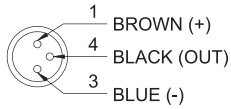
CS-18R, CS-18RH / CS-18R-QD,CS-18RH-QD



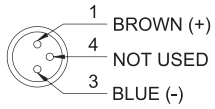
Unit:mm

■ QD PINOUT

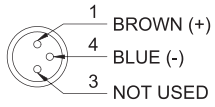
***3 wire QD wiring**



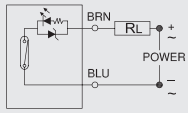
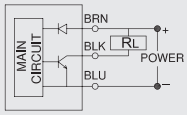
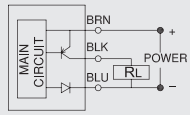
***2 wire QD wiring**



***2 wire EQD wiring**

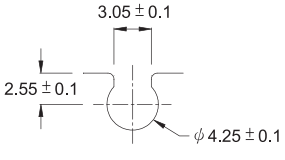


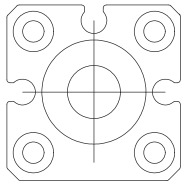
■ SPECIFICATION

TYPE	CS-18RH	CS-18R	CS-18N	CS-18N-NC	CS-18P	CS-18P-NC
CONNECT DIAGRAM / CHARACTERISTICS						
WIRING METHOD	2-Wire Type		3-Wire Type			
SWITCHING LOGIC	SPST, Normally Open		Solid State Output, Normally Open	Solid State Output, Normally Close	Solid State Output, Normally Open	Solid State Output, Normally Close
SENSOR TYPE	Reed Switch		NPN Current Sinking		PNP Current Sourcing	
OPERATING VOLTAGE	5~120V DC/AC		5~28V DC			
SWITCHING CURRENT	50 mA max.		100 mA. max.			
CONTACT RATING	6 W max.		3 W max.			
CURRENT CONSUMPTION	–		10 mA @ 24V DC max.			
VOLTAGE DROP	3.0 V max.		0.5 V @ 50 mA max.			
LEAKAGE CURRENT	--		0.05 mA max.			
INDICATOR	Red LED				Green LED	
CABLE	ø2.8, 2C, PUR		ø2.8, 3C, PUR			
OPERATING FREQUENCY	200 Hz		1000 Hz			
MAGNET REQUIREMENT (NOTE 1)	40 Gauss Parallel	60 Gauss Parallel	30 Gauss Parallel			
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)					
SHOCK (NOTE 2)	30 G		50 G			
VIBRATION (NOTE 3)	9 G					
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)					
PROTECTION CIRCUIT (NOTE 4)	1		3, 4			
SET SCREW MAX. TORQUE	1.77 in-lbs (0.2 N-m)					

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION





Unit:mm

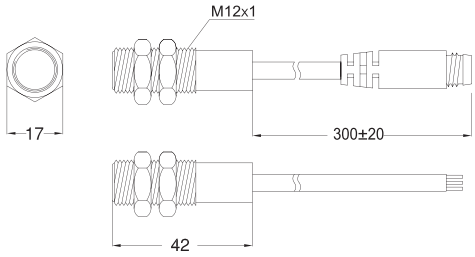
Gear tooth SW.

CS-22

RoHS

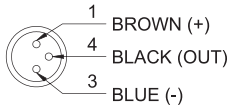
Magnetic switch

■ DIMENSION

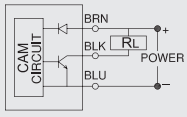


Unit:mm

■ QD PINOUT

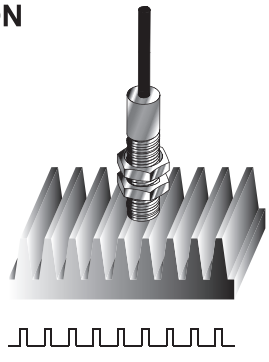


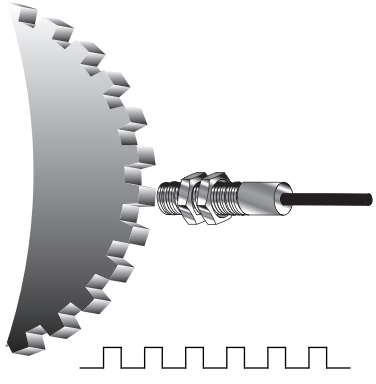
■ SPECIFICATION

TYPE	CS-22
CONNECT DIAGRAM	
CHARACTERISTICS	
WIRING METHOD	3-Wire Type
SWITCHING LOGIC	Solid State Output, Normally Open
SENSOR TYPE	NPN Current Sinking
OPERATING VOLTAGE	3.5~24 V DC
SWITCHING CURRENT	25 mA. max.
CONTACT RATING	0.6W max.
CURRENT CONSUMPTION	7 mA @ 24V DC max.
VOLTAGE DROP	0.6V max.@ 25mA
LEAKAGE CURRENT	0.01 mA max.
INDICATOR	–
CABLE	ø4.5, 3C, PVC
RESPONSE FREQUENCY	50K Hz
RESPONSE DISTANCE	2 mm max.
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)
SHOCK (NOTE 1)	50 G
VIBRATION (NOTE 2)	9 G
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)
PROTECTION CIRCUIT (NOTE 3)	2

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
2. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
3. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ APPLICATION





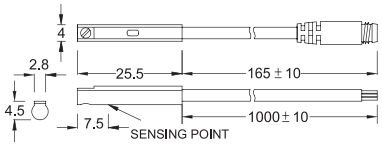
CS-20 SERIES

RoHS

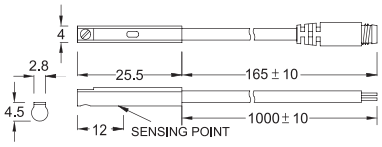
Magnetic switch

■ DIMENSION

CS-20N, CS-20P / CS-20N-QD, CS-20P-QD



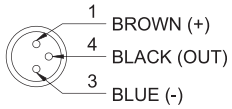
CS-20R / CS-20R-QD



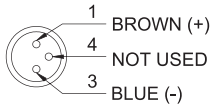
Unit:mm

■ QD PINOUT

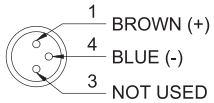
***3 wire QD wiring**



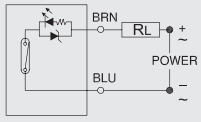
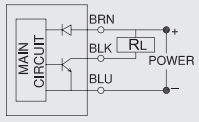
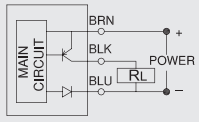
***2 wire QD wiring**



***2 wire EQD wiring**

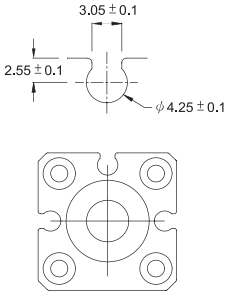


■ SPECIFICATION

TYPE	CS-20R	CS-20N	CS-20P
CONNECT DIAGRAM / CHARACTERISTICS			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~120V DC/AC	5~30V DC	
SWITCHING CURRENT	50 mA max.	50 mA max.	
CONTACT RATING	6 W max.	1.5 W max.	
CURRENT CONSUMPTION	--	12 mA @ 24V DC max.	15 mA @ 24V DC max.
VOLTAGE DROP	2.5 V max.	0.5 V @ 25mA max.	1.5 V @ 25mA max.
LEAKAGE CURRENT	--	0.01 mA max.	
INDICATOR	Red LED		Green LED
CABLE	ø2.8, 2C, PUR	ø2.8, 3C, PUR	
OPERATING FREQUENCY	200 Hz	1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	40 Gauss Parallel		
TEMPERATURE RANGE	-10~70°C (+14~158°F)		
SHOCK (NOTE 2)	30 G	50 G	
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	1	3, 4	
SET SCREW MAX. TORQUE	1.77 in-lbs (0.2 N-m)		

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION



Unit:mm

Magnetic Proximity SW.

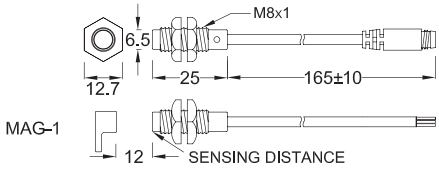
CS-28 SERIES

RoHS

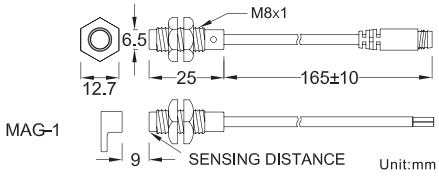
Magnetic switch

■ DIMENSION

CS-28N, CS-28P,CS-28N-NC
CS-28N-QD, CS-28P-QD, CS-28N-NC-QD

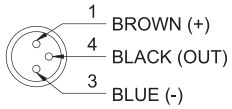


CS-28R / CS-28R-QD

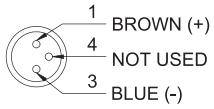


■ QD PINOUT

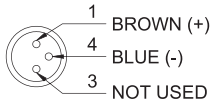
***3 wire QD wiring**



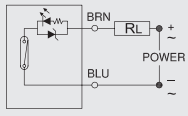
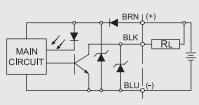
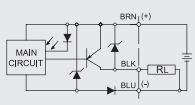
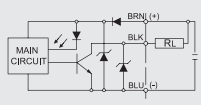
***2 wire QD wiring**



***2 wire EQD wiring**

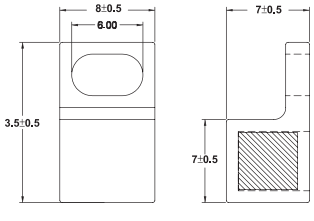


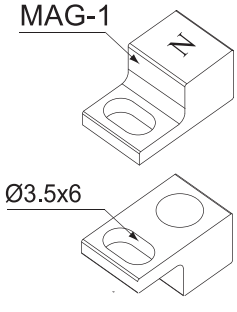
■ SPECIFICATION

TYPE	CS-28R	CS-28N	CS-28P	CS-28N-NC
CONNECT DIAGRAM / CHARACTERISTICS				
WIRING METHOD	2-Wire Type	3-Wire Type		
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open		Normally Close
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing	NPN Current Sinking
OPERATING VOLTAGE	5~120V DC/AC	5~30V DC		
SWITCHING CURRENT	40 mA max.	100 mA. max.		
CONTACT RATING	5 W max.	6W max.		
CURRENT CONSUMPTION	–	18 mA @ 24V DC max.		
VOLTAGE DROP	2.5 V max.	0.5 V max.		
LEAKAGE CURRENT	–	0.01 mA max.		
INDICATOR	Red LED		Green LED	Red LED
CABLE	ø3.3, 2C, PVC	ø3.3, 3C, PVC		
OPERATING FREQUENCY	200 Hz	1000 Hz		
SENSING DISTANCE (NOTE 1)	9 mm max.	12 mm max.		
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)			
SHOCK (NOTE 2)	30 G	50 G		
VIBRATION (NOTE 3)	9 G			
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)			
PROTECTION CIRCUIT (NOTE 4)	1	3,4		

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: MAG-1 (NdFeB Magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ NdFeB MAGNET





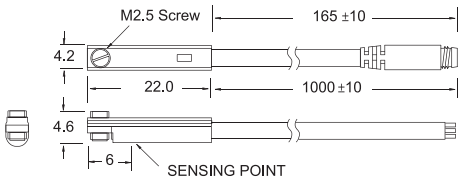
CS-25 SERIES

RoHS

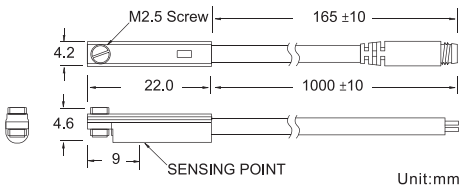
Magnetic switch

DIMENSION

CS-25N, CS-25P / CS-25N-QD, CS-25P-QD



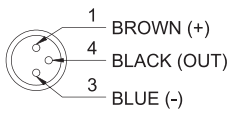
CS-25R / CS-25R-QD



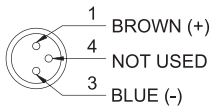
Unit:mm

QD PINOUT

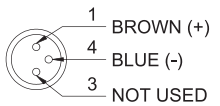
***3 wire QD wiring**



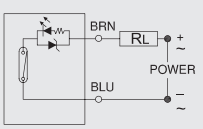
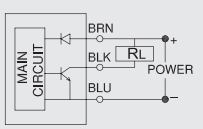
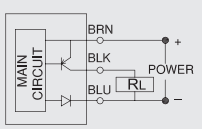
***2 wire QD wiring**



***2 wire EQD wiring**



SPECIFICATION

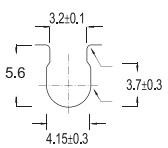
TYPE	CS-25R	CS-25N	CS-25P
CONNECT DIAGRAM / CHARACTERISTICS			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~120V DC/AC	5~30V DC	
SWITCHING CURRENT	50 mA max.	50 mA max.	
CONTACT RATING	6 W max.	1.5 W max.	
CURRENT CONSUMPTION	--	12 mA @ 24V DC max.	14 mA @ 24V DC max.
VOLTAGE DROP	2.0 V max.	0.5 V @ 25mA max.	1.5 V @ 25mA max.
LEAKAGE CURRENT	--	0.01 mA max.	
INDICATOR	Red LED		Green LED
CABLE	ø2.8, 2C, PUR	ø2.8, 3C, PUR	
OPERATING FREQUENCY	200 Hz	1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	60 Gauss Parallel	25 Gauss Parallel	
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)		
SHOCK (NOTE 2)	30 G	50 G	
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	1	3, 4	
SET SCREW MAX. TORQUE	1.77 in-lbs (0.2 N-m)		

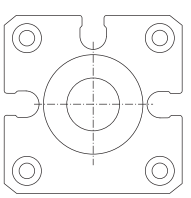
WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.

NOTE:

1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

GROOVE DIMENSION



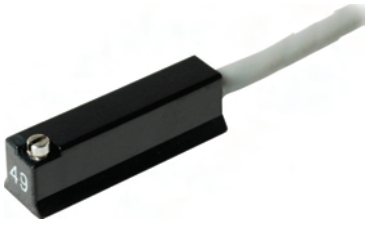


Unit:mm

CS-30 SERIES

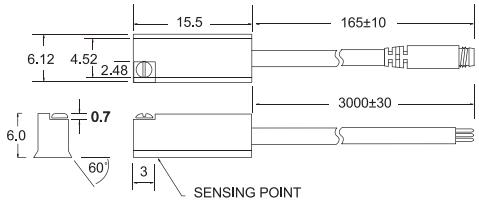
RoHS

Magnetic switch

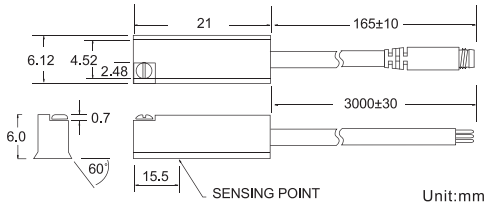


■ DIMENSION

CS-30N, CS-30P / CS-30N-QD, CS-30P-QD



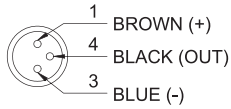
CS-30R / CS-30R-QD



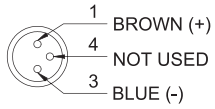
Unit:mm

■ QD PINOUT

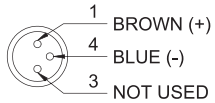
***3 wire QD wiring**



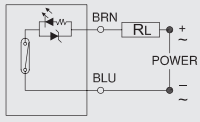
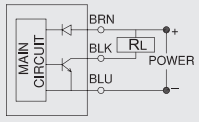
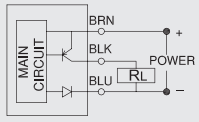
***2 wire QD wiring**



***2 wire EQD wiring**

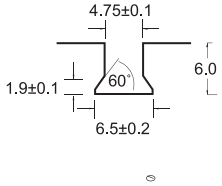


■ SPECIFICATION

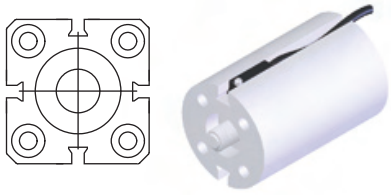
TYPE	CS-30R	CS-30N	CS-30P
CONNECT DIAGRAM / CHARACTERISTICS			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~120V DC/AC	5~30V DC	
SWITCHING CURRENT	50 mA max.	200 mA max.	
CONTACT RATING	6 W max.	6 W max.	
CURRENT CONSUMPTION	--	17 mA @ 24V DC max.	
VOLTAGE DROP	2.5 V max.	0.5 V @ 25mA max.	
LEAKAGE CURRENT	--	0.01 mA max.	
INDICATOR	Red LED		
CABLE	ø2.8, 2C, PUR	ø2.8, 3C, PUR	
OPERATING FREQUENCY	200 Hz	1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	40 Gauss Parallel		
TEMPERATURE RANGE	-10~70°C (+14~158°F)		
SHOCK (NOTE 2)	30 G	50 G	
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	1	3,4	
SET SCREW MAX. TORQUE	1.77 in-lbs (0.2 N-m)		

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

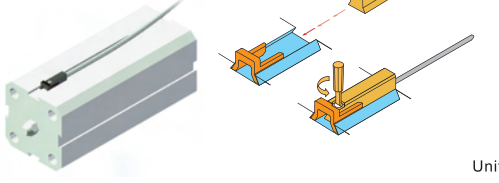
■ GROOVE DIMENSION



1/4" dovetail



3/8" dovetail adaptor



Unit:mm

CS-31

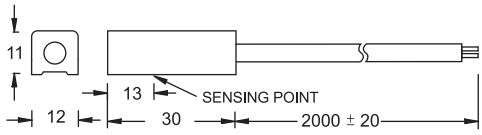
RoHS

Magnetic switch

140°HIGH TEMP

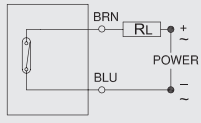
■ DIMENSION

■ No M8 Connector Option Available



Unit:mm

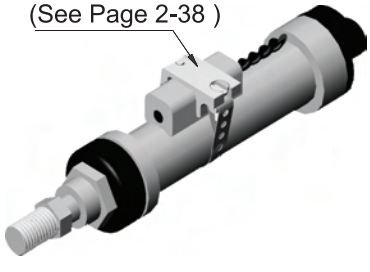
■ SPECIFICATION

TYPE	CS-31R
CONNECT DIAGRAM / CHARACTERISTICS	
WIRING METHOD	2-Wire Type
SWITCHING LOGIC	SPST, Normally Open
SENSOR TYPE	Reed Switch
OPERATING VOLTAGE	5~240V DC/AC
SWITCHING CURRENT	500 mA max.
CONTACT RATING	10 W max.
CURRENT CONSUMPTION	--
VOLTAGE DROP	0.5 V max.
LEAKAGE CURRENT	--
INDICATOR	None
CABLE	ø3.0, 2C, Teflon
OPERATING FREQUENCY	200 Hz
MAGNET REQUIREMENT (NOTE 1)	40 Gauss Parallel
TEMPERATURE RANGE	-10~140°C (+14~284°F)
SHOCK (NOTE 2)	30 G
VIBRATION (NOTE 3)	9 G
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)
PROTECTION CIRCUIT	None

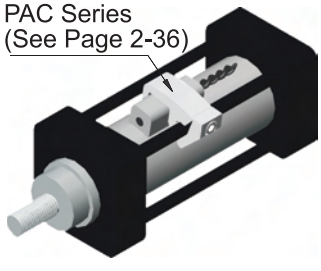
WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X ,Y, Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X ,Y, Z 3 directions / 1 hour each time.

■ MOUNTING CLAMPS

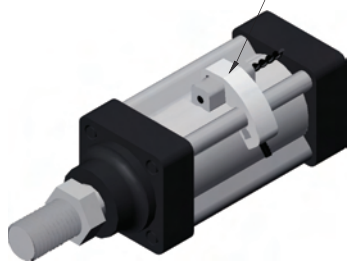
PAB Series
(See Page 2-38)



PAC Series
(See Page 2-36)



PI Series
(See Page 2-36)



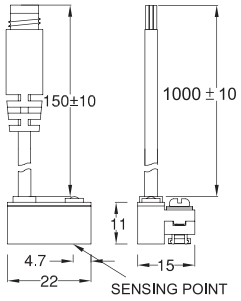
CS-33 SERIES

RoHS

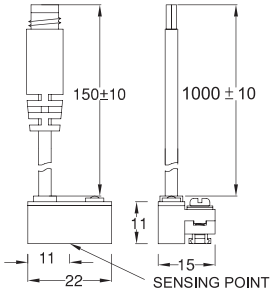
Magnetic switch

■ DIMENSION

CS-33N, CS-33P
CS-33N-QD, CS-33P-QD



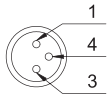
CS-33R / CS-33R-QD



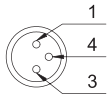
Unit:mm

■ QD PINOUT

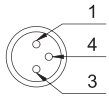
*3 wire QD wiring



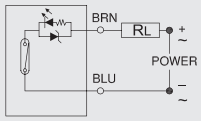
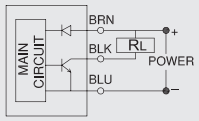
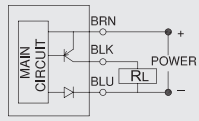
*2 wire QD wiring



*2 wire EQD wiring

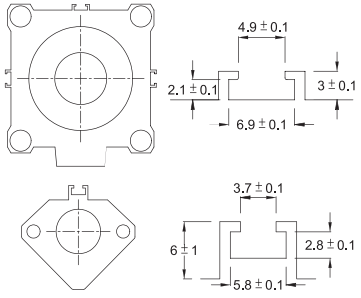


■ SPECIFICATION

TYPE	CS-33R	CS-33N	CS-33P
CONNECT DIAGRAM / CHARACTERISTICS			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~240V DC/AC	5~30V DC	
SWITCHING CURRENT	100 mA max.	200 mA max.	
CONTACT RATING	10 W max.	6 W max.	
CURRENT CONSUMPTION	--	22 mA @ 24V DC max.	
VOLTAGE DROP	3.5 V max.	0.5V @ 50mA max.	
LEAKAGE CURRENT	–	0.01 mA max.	
INDICATOR	Red LED		Green LED
CABLE	ø3.3, 2C, PVC	ø3.3, 3C, PVC	
OPERATING FREQUENCY	200 Hz	1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	60 Gauss Parallel	40 Gauss Parallel	
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)		
SHOCK (NOTE 2)	30 G	50 G	
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	1	3, 4	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION



Unit:mm

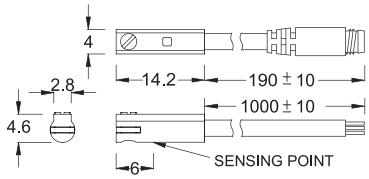
CS-36 SERIES

RoHS

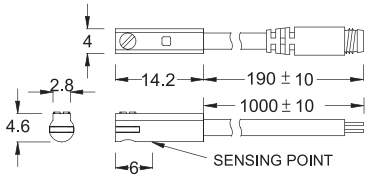
Magnetic switch

■ DIMENSION

CS-36N, CS-36P / CS-36N-QD, CS-36P-QD



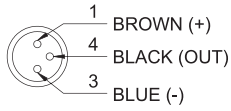
CS-36D / CS-36D-QD



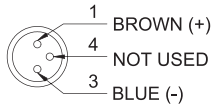
Unit:mm

■ QD PINOUT

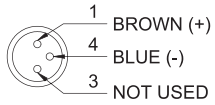
***3 wire QD wiring**



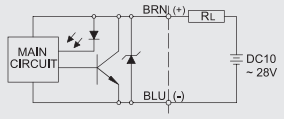
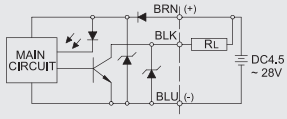
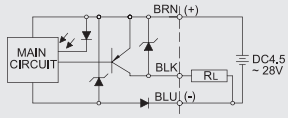
***2 wire QD wiring**



***2 wire EQD wiring**

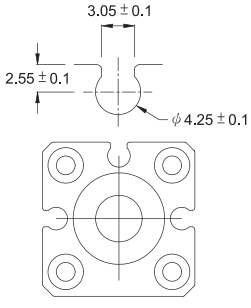


■ SPECIFICATION

TYPE	CS-36D	CS-36N	CS-36P
CONNECT DIAGRAM / CHARACTERISTICS			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	Solid State Output, Normally Open		
SENSOR TYPE	–	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	10~28V DC	4.5~28V DC	
SWITCHING CURRENT	4~20 mA max.	50 mA max.	
CONTACT RATING	0.6 W max.	1.5 W max.	
CURRENT CONSUMPTION	--	10 mA @ 24V DC max.	
VOLTAGE DROP	3.5 V max.	0.5V @ 50mA max.	
LEAKAGE CURRENT	0.8 mA max.	0.01 mA max.	
INDICATOR	Red LED		
CABLE	ø2.8, 2C, PUR	ø2.8, 3C, PUR	
OPERATING FREQUENCY	1000 Hz		
MAGNET REQUIREMENT (NOTE 1)	40 Gauss Parallel		
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)		
SHOCK (NOTE 2)	50 G		
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	4	3, 4	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION



Unit:mm

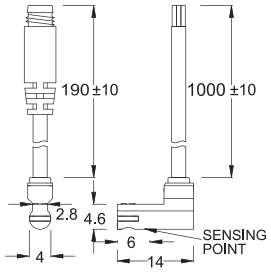
CS-37 SERIES

RoHS

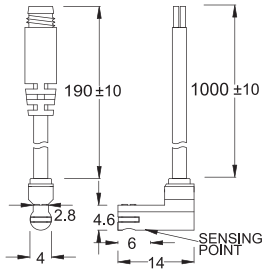
Magnetic switch

■ DIMENSION

CS-37N, CS-37P
CS-37N-QD, CS-37P-QD



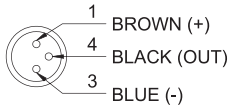
CS-37D / CS-37D-QD



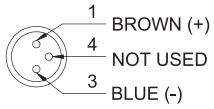
Unit:mm

■ QD PINOUT

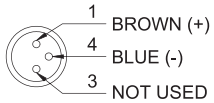
*3 wire QD wiring



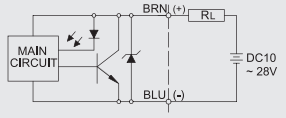
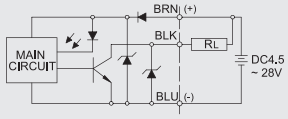
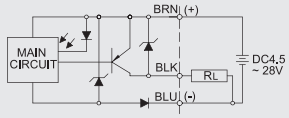
*2 wire QD wiring



*2 wire EQD wiring

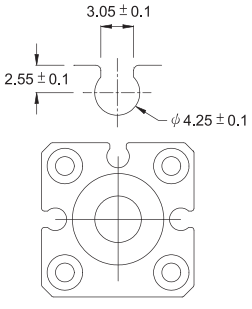


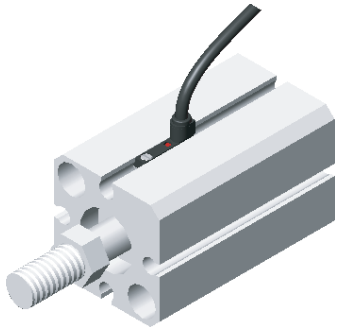
■ SPECIFICATION

TYPE	CS-37D	CS-37N	CS-37P
CONNECT DIAGRAM / CHARACTERISTICS			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	Solid State Output, Normally Open		
SENSOR TYPE	–	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	10~28V DC	4.5~28V DC	
SWITCHING CURRENT	4~20 mA max.	50 mA max.	
CONTACT RATING	0.6 W max.	1.5 W max.	
CURRENT CONSUMPTION	--	10 mA @ 24V DC max.	
VOLTAGE DROP	3.5 V max.	0.5V @ 50mA max.	
LEAKAGE CURRENT	0.8 mA max.	0.01 mA max.	
INDICATOR	Red LED		
CABLE	ø2.6, 2C, PVC	ø2.6, 3C, PVC	
OPERATING FREQUENCY	1000 Hz		
MAGNET REQUIREMENT (NOTE 1)	40 Gauss Parallel		
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)		
SHOCK (NOTE 2)	50 G		
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	4	3, 4	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION





Unit:mm

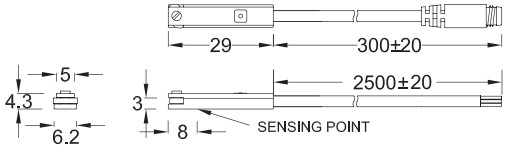
CS-40 SERIES

RoHS

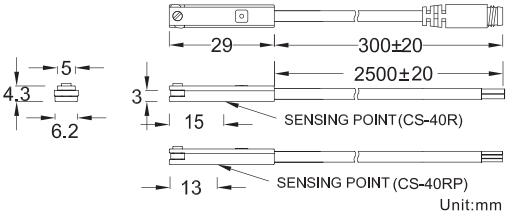
Magnetic switch

■ DIMENSION

CS-40N, CS-40P / CS-40N-QD, CS-40P-QD



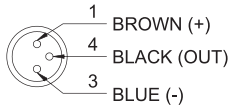
CS-40R, CS-40RP / CS-40R-QD,CS-40RP-QD



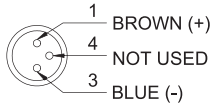
Unit:mm

■ QD PINOUT

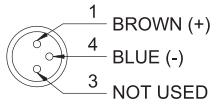
***3 wire QD wiring**



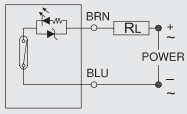
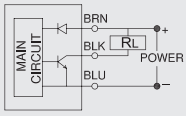
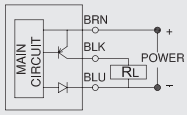
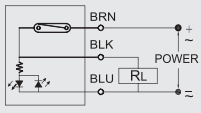
***2 wire QD wiring**



***2 wire EQD wiring**

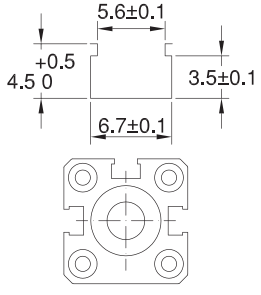


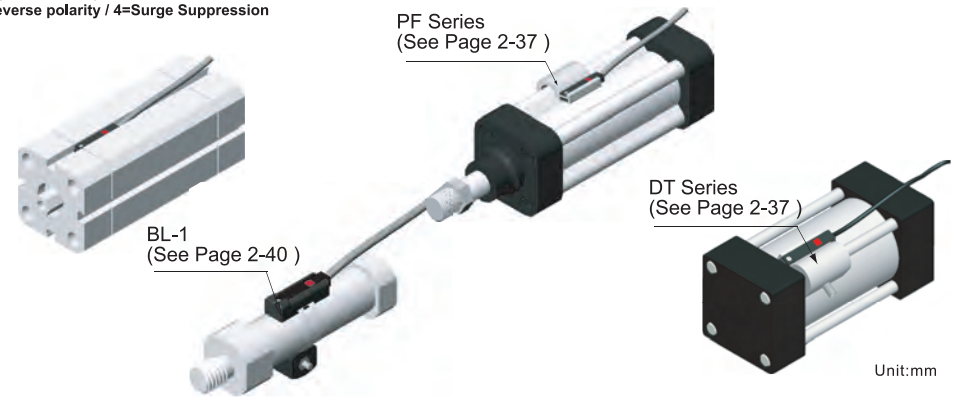
■ SPECIFICATION

TYPE	CS-40R	CS-40N	CS-40P	CS-40RP
CONNECT DIAGRAM / CHARACTERISTICS				
WIRING METHOD	2-Wire Type	3-Wire Type		
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open		SPST, Normally Open
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing	Reed Switch
OPERATING VOLTAGE	5~120V DC/AC	10~30V DC		10~30V DC/AC
SWITCHING CURRENT	100 mA max.			500 mA. max.
CONTACT RATING	10 W max.	3 W max.		10 W max.
CURRENT CONSUMPTION	--	8 mA @ 24V DC max.		10 mA @ 24V DC max.
VOLTAGE DROP	3.5 V max.	1.5 V max.		0.1 V @ 100mA max.
LEAKAGE CURRENT	--	0.01 mA max.		--
INDICATOR	Red LED		Yellow LED	
CABLE	ø3, 2C, PUR	ø3, 3C, PUR		
OPERATING FREQUENCY	200 Hz	1000 Hz		200 Hz
MAGNET REQUIREMENT (NOTE 1)	50 Gauss Parallel	45 Gauss Parallel		
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)			
SHOCK (NOTE 2)	30 G	50 G		30 G
VIBRATION (NOTE 3)	9 G			
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)			
PROTECTION CIRCUIT (NOTE 4)	1	2, 3, 4		1

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION





Unit:mm

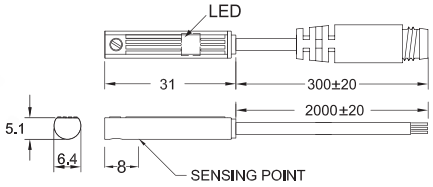
CS-45 SERIES

RoHS

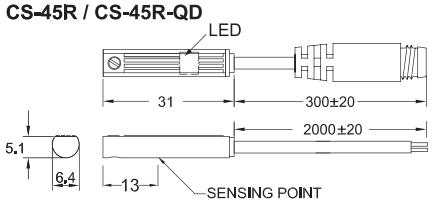
Magnetic switch

■ DIMENSION

CS-45N, CS-45P / CS-45N-QD, CS-45P-QD



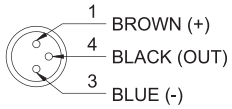
CS-45R / CS-45R-QD



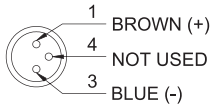
Unit:mm

■ QD PINOUT

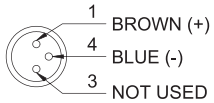
***3 wire QD wiring**



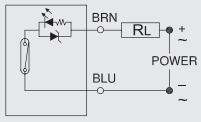
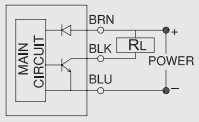
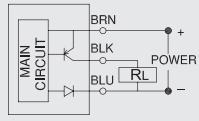
***2 wire QD wiring**



***2 wire EQD wiring**

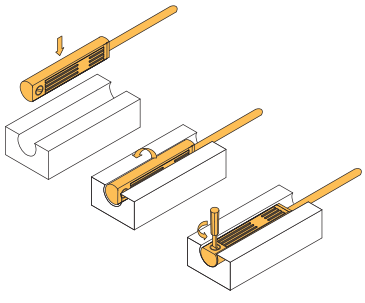


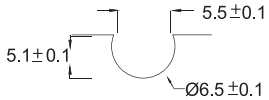
■ SPECIFICATION

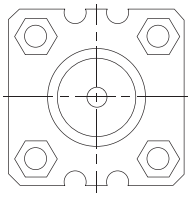
TYPE	CS-45R	CS-45N	CS-45P
CONNECT DIAGRAM / CHARACTERISTICS			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~240V DC/AC	5~30V DC	
SWITCHING CURRENT	100 mA max.		
CONTACT RATING	10 W max.	3 W max.	
CURRENT CONSUMPTION	--	17 mA @ 24V DC max.	14 mA @ 24V DC max.
VOLTAGE DROP	2.5 V @ 50 mA max.	1.5V max.	
LEAKAGE CURRENT	–	0.01 mA max.	
INDICATOR	Red LED		Yellow LED
CABLE	ø2.8, 2C, PUR	ø2.8, 3C, PUR	
OPERATING FREQUENCY	200 Hz	1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	60 Gauss Parallel		
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)		
SHOCK (NOTE 2)	30 G	50 G	
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	1	2, 3, 4	

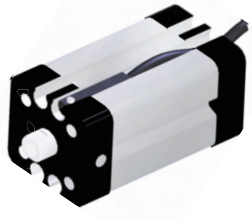
WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X ,Y, Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X ,Y, Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION









Unit:mm

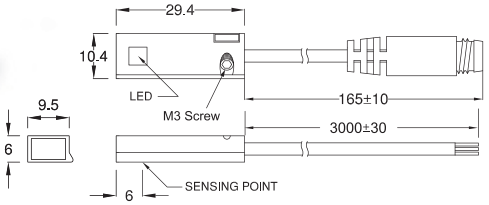
CS-47 SERIES

RoHS

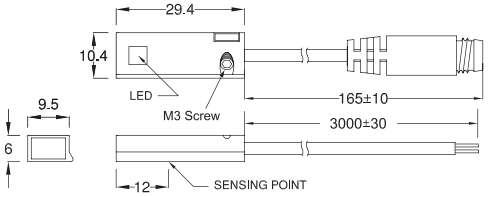
Magnetic switch

■ DIMENSION

CS-47N, CS-47P / CS-47N-QD, CS-47P-QD

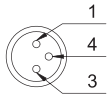


CS-47R / CS-47R-QD

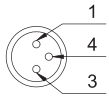


■ QD PINOUT

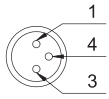
***3 wire QD wiring**



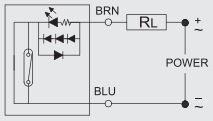
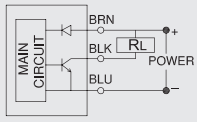
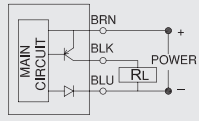
***2 wire QD wiring**



***2 wire EQD wiring**

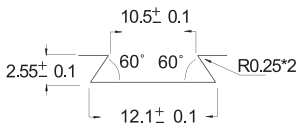


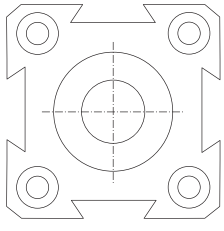
■ SPECIFICATION

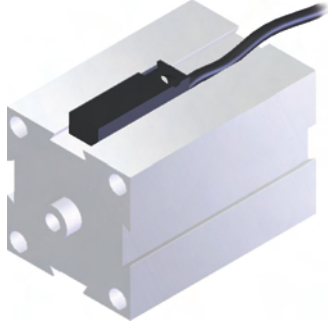
TYPE	CS-47R	CS-47N	CS-47P
CONNECT DIAGRAM			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~240V DC/AC	5~30V DC	
SWITCHING CURRENT	500 mA max.	200 mA max.	
CONTACT RATING	10 W max.	6 W max.	
CURRENT CONSUMPTION	--	22 mA @ 24V DC max.	20 mA @ 24V DC max.
VOLTAGE DROP	3.0 V max.	2.0 V max.	2.5 V max.
LEAKAGE CURRENT	–	0.01 mA max.	
INDICATOR	Yellow LED		
CABLE	ø2.8, 2C, PVC	ø2.8, 3C, PUR	
OPERATING FREQUENCY	200 Hz	1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	40 Gauss Parallel		
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)		
SHOCK (NOTE 2)	30 G	50 G	
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	1	2, 3, 4	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION







Unit:mm

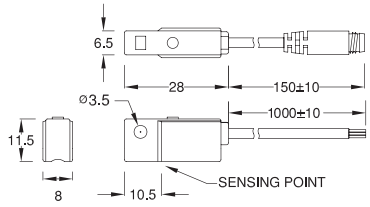
CS-48 SERIES

RoHS

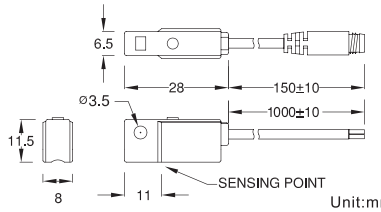
Magnetic switch

■ DIMENSION

CS-48N, CS-48P / CS-48N-QD, CS-48P-QD



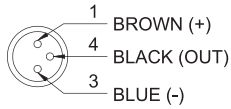
CS-48R / CS-48R-QD



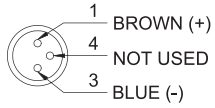
Unit:mm

■ QD PINOUT

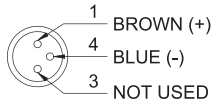
***3 wire QD wiring**



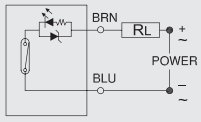
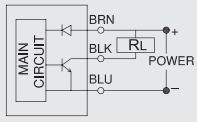
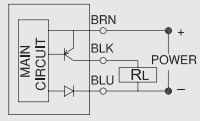
***2 wire QD wiring**



***2 wire EQD wiring**

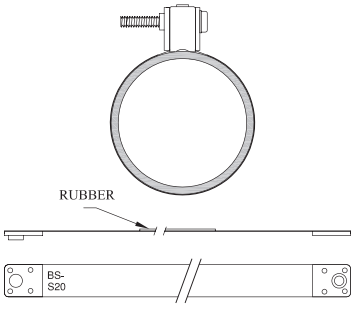


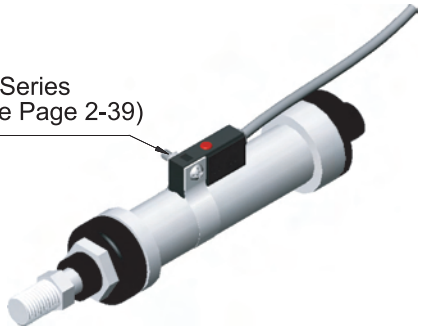
■ SPECIFICATION

TYPE	CS-48R	CS-48N	CS-48P
CONNECT DIAGRAM / CHARACTERISTICS			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~240V DC/AC	5~28V DC	
SWITCHING CURRENT	100 mA max.	50 mA max.	
CONTACT RATING	10 W max.	1.5 W max.	
CURRENT CONSUMPTION	--	10 mA @ 24V DC max.	
VOLTAGE DROP	2.5 V max.	1.5V @ 50 mA max.	
LEAKAGE CURRENT	--	0.01 mA max.	
INDICATOR	Red LED		Green LED
CABLE	ø3.3, 2C, PVC	ø3.3, 3C, PVC	
OPERATING FREQUENCY	200 Hz	1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	100 Gauss Parallel	75 Gauss Parallel	
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)		
SHOCK (NOTE 2)	30 G	50 G	
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	1	3, 4	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X ,Y, Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X ,Y, Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ MOUNTING CLAMPS



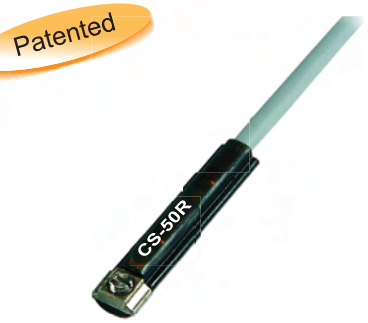


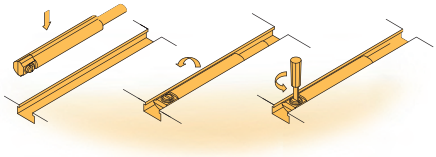
CS-50 SERIES

RoHS

Magnetic switch

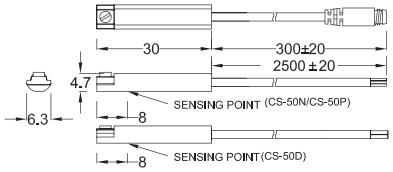
Patented



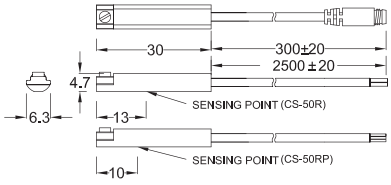


■ DIMENSION

CS-50N, CS-50P, CS-50D / CS-50N-QD, CS-50P-QD, CS-50D-QD



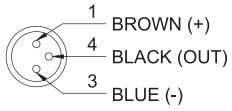
CS-50R, CS-50RP / CS-50R-QD,CS-50RP-QD



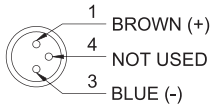
Unit:mm

■ QD PINOUT

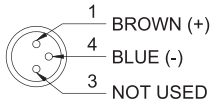
***3 wire QD wiring**



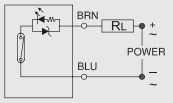
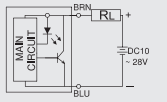
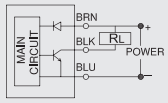
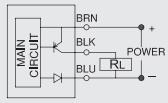
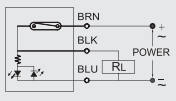
***2 wire QD wiring**



***2 wire EQD wiring**



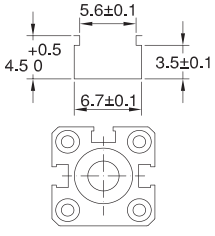
■ SPECIFICATION

TYPE	CS-50R	CS-50D	CS-50N	CS-50P	CS-50RP
CONNECT DIAGRAM / CHARACTERISTICS					
WIRING METHOD	2-Wire Type		3-Wire Type		
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open			SPST, Normally Open
SENSOR TYPE	Reed Switch	--	NPN Current Sinking	PNP Current Sourcing	Reed Switch
OPERATING VOLTAGE	5~240V DC/AC	10~28V DC	10~30V DC		10~30V DC/AC
SWITCHING CURRENT	100 mA max.	50 mA max.	200 mA. max		500 mA. max
CONTACT RATING	10 W max.	1.5 W max.	6W max.		10W max.
CURRENT CONSUMPTION	–		20 mA @ 24V DC max.		5 mA @ 24V DC max.
VOLTAGE DROP	3.0 V max.	3.5 V max.	1.5 V max.		0.1 V @ 100mA max.
LEAKAGE CURRENT	--	0.8 mA max.	0.05 mA max.		--
INDICATOR	Red LED			Yellow LED	
CABLE	ø3, 2C, PUR		ø3, 3C, PUR		
OPERATING FREQUENCY	200 Hz	1000 Hz			200 Hz
MAGNET REQUIREMENT (NOTE 1)	65 Gauss Parallel				
TEMPERATURE RANGE	-10~70°C (+14~158°F)				
SHOCK (NOTE 2)	30 G	50 G			30 G
VIBRATION (NOTE 3)	9 G				
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)				
PROTECTION CIRCUIT (NOTE 4)	1	2, 4	2, 3, 4		1

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X ` Y ` Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X ` Y ` Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

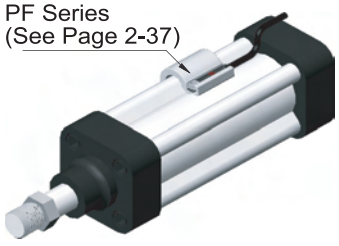
■ GROOVE DIMENSION

CS-50 & CS-51 series can be applied to many kind of cylinders

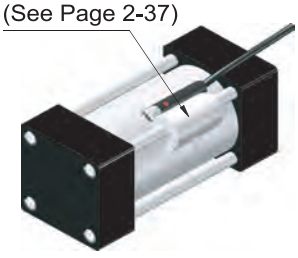


BL-1 (Not for CS-51)
(See Page 2-40)

PF Series
(See Page 2-37)



DT Series
(See Page 2-37)



CS-51 SERIES

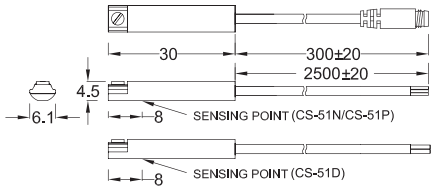
RoHS

Magnetic switch

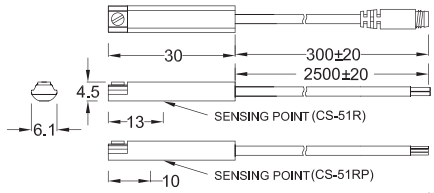
Patented

■ DIMENSION

CS-51N, CS-51P, CS-51D / CS-51N-QD, CS-51P-QD, CS-51D-QD



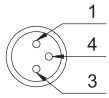
CS-51R, CS-51RP / CS-51R-QD,CS-51RP-QD



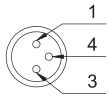
Unit:mm

■ QD PINOUT

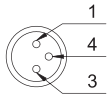
***3 wire QD wiring**



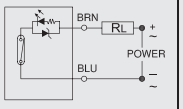
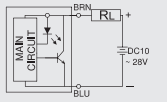
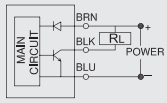
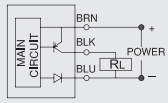
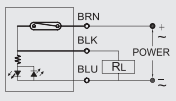
***2 wire QD wiring**



***2 wire EQD wiring**



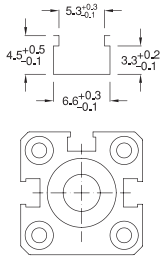
■ SPECIFICATION

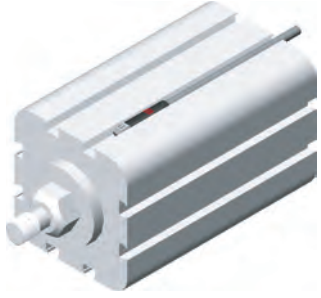
TYPE	CS-51R	CS-51D	CS-51N	CS-51P	CS-51RP
CONNECT DIAGRAM / CHARACTERISTICS					
WIRING METHOD	2-Wire Type		3-Wire Type		
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open			SPST, Normally Open
SENSOR TYPE	Reed Switch	--	NPN Current Sinking	PNP Current Sourcing	Reed Switch
OPERATING VOLTAGE	5~240V DC/AC	10~28V DC	10~30V DC		10~30V DC/AC
SWITCHING CURRENT	100 mA max.	50 mA max.	200 mA. max		500 mA. max
CONTACT RATING	10 W max.	1.5 W max.	6W max.		10W max.
CURRENT CONSUMPTION	–		20 mA @ 24V DC max.		5 mA @ 24V DC max.
VOLTAGE DROP	3.0 V max.	3.5 V max.	1.5 V max.		0.1 V @100mA max.
LEAKAGE CURRENT	--	0.8 mA max.	0.05 mA max.		--
INDICATOR	Red LED			Yellow LED	
CABLE	ø3, 2C, PUR		ø3, 3C, PUR		
OPERATING FREQUENCY	200 Hz	1000 Hz			200 Hz
MAGNET REQUIREMENT (NOTE 1)	65 Gauss Parallel				
TEMPERATURE RANGE	-10~70°C (+14~158°F)				
SHOCK (NOTE 2)	30 G	50 G			30 G
VIBRATION (NOTE 3)	9 G				
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)				
PROTECTION CIRCUIT (NOTE 4)	1	2, 4	2, 3, 4		1

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X ` Y ` Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X ` Y ` Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION

CS-50 & CS-51 series can be applied to many kind of cylinders





Unit:mm

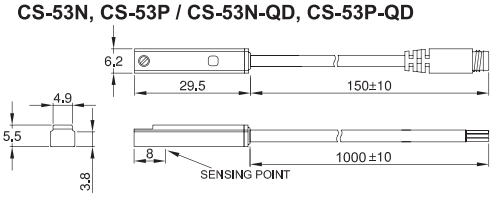
CS-53 SERIES

RoHS

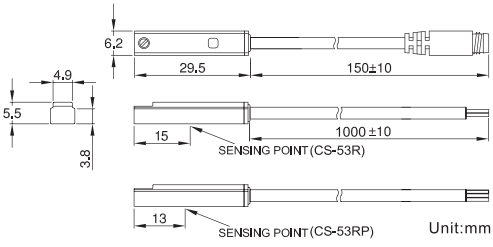
Magnetic switch

■ DIMENSION

CS-53N, CS-53P / CS-53N-QD, CS-53P-QD



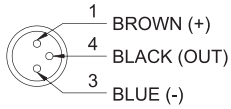
CS-53R, CS-53RP / CS-53R-QD,CS-53RP-QD



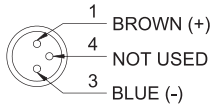
Unit:mm

■ QD PINOUT

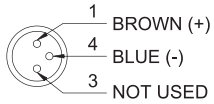
*3 wire QD wiring



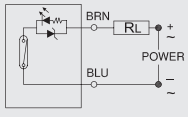
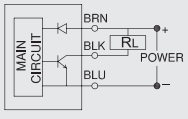
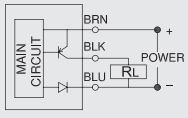
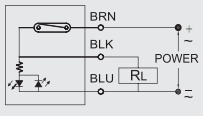
*2 wire QD wiring



*2 wire EQD wiring

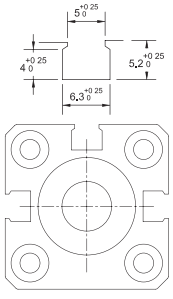


■ SPECIFICATION

TYPE	CS-53R	CS-53N	CS-53P	CS-53RP
CONNECT DIAGRAM / CHARACTERISTICS				
WIRING METHOD	2-Wire Type	3-Wire Type		
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open		SPST, Normally Open
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing	Reed Switch
OPERATING VOLTAGE	5~240V DC/AC	10~30V DC		10~30V DC/AC
SWITCHING CURRENT	100 mA max.			500 mA. max.
CONTACT RATING	10 W max.	3 W max.		10 W max.
CURRENT CONSUMPTION	--	8 mA @ 24V DC max.		10 mA @ 24V DC max.
VOLTAGE DROP	3.5 V max.	1.5 V max.		0.1 V @ 100mA max.
LEAKAGE CURRENT	--	0.01 mA max.		--
INDICATOR	Red LED		Yellow LED	
CABLE	ø3, 2C, PUR	ø3, 3C, PUR		
OPERATING FREQUENCY	200 Hz	1000 Hz		200 Hz
MAGNET REQUIREMENT (NOTE 1)	70 Gauss Parallel	45 Gauss Parallel		60 Gauss Parallel
TEMPERATURE RANGE	-10~70°C (+14~158°F)			
SHOCK (NOTE 2)	30 G	50 G		30 G
VIBRATION (NOTE 3)	9 G			
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)			
PROTECTION CIRCUIT (NOTE 4)	1	2, 3, 4		1

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION



Unit:mm

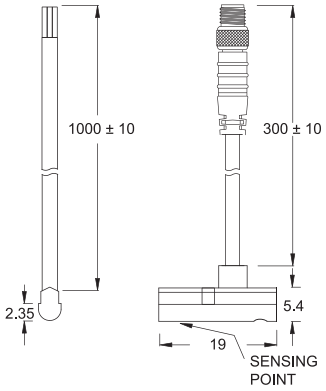
CS-56 SERIES

RoHS

Magnetic switch

■ DIMENSION

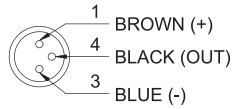
CS-56N, CS-56P / CS-56N-SW, CS-56P-SW



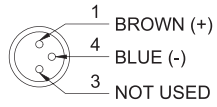
Unit:mm

■ SW PINOUT

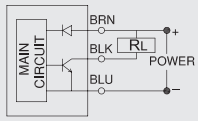
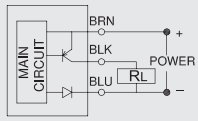
***3 wire SW wiring**



***2 wire ESW wiring**



■ SPECIFICATION

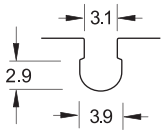
TYPE	CS-56N	CS-56P
CONNECT DIAGRAM / CHARACTERISTICS		
WIRING METHOD	3-Wire Type	
SWITCHING LOGIC	Solid State Output, Normally Open	
SENSOR TYPE	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	10~30V DC	
SWITCHING CURRENT	200 mA max.	
CONTACT RATING	6 W max.	
CURRENT CONSUMPTION	8 mA @ 24V DC max.	
VOLTAGE DROP	1.5V @ 200 mA max.	
LEAKAGE CURRENT	0.01 mA max.	
INDICATOR	Yellow LED	
CABLE	ø2.5, 3C, PUR	
OPERATING FREQUENCY	1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	30 Gauss Parallel	
TEMPERATURE RANGE	-10~60˚C (+14~140˚F)	
SHOCK (NOTE 2)	50 G	
VIBRATION (NOTE 3)	9 G	
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)	
PROTECTION CIRCUIT (NOTE 4)	2	

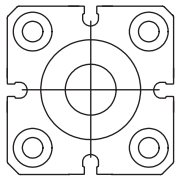
WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.

NOTE:

1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X ,Y, Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X ,Y, Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION





Unit:mm

CS-60 SERIES

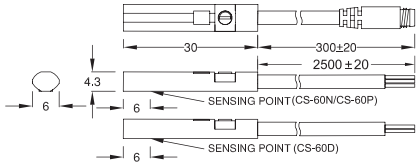
RoHS

Magnetic switch

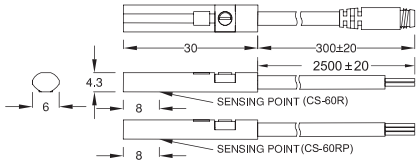
Patented

■ DIMENSION

CS-60N, CS-60P, CS-60D / CS-60N-QD, CS-60P-QD, CS-60D-QD



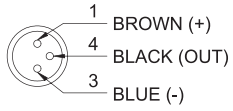
CS-60R, CS-60RP / CS-60R-QD,CS-60RP-QD



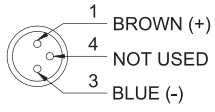
Unit:mm

■ QD PINOUT

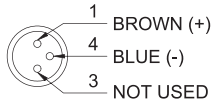
***3 wire QD wiring**



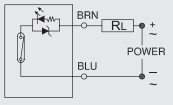
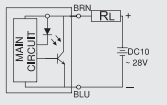
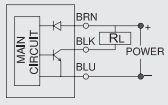
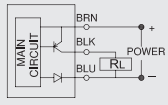
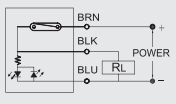
***2 wire QD wiring**



***2 wire EQD wiring**

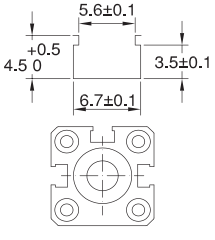


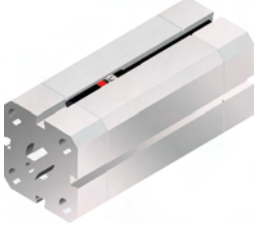
■ SPECIFICATION

TYPE	CS-60R	CS-60D	CS-60N	CS-60P	CS-60RP
CONNECT DIAGRAM / CHARACTERISTICS					
WIRING METHOD	2-Wire Type		3-Wire Type		
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open			SPST, Normally Open
SENSOR TYPE	Reed Switch	--	NPN Current Sinking	PNP Current Sourcing	Reed Switch
OPERATING VOLTAGE	5~120V DC/AC	10~28V DC	10~30V DC		
SWITCHING CURRENT	100 mA max.	50 mA max.	200 mA. max		500 mA. max
CONTACT RATING	10 W max.	1.5 W max.	6W max.		10W max.
CURRENT CONSUMPTION	–		20 mA @ 24V DC max.		5 mA @ 24V DC max.
VOLTAGE DROP	3.0 V max.	3.5 V max.	1.5 V max.		0.1 V @ 100mA max.
LEAKAGE CURRENT	--	0.8 mA max.	0.05 mA max.		--
INDICATOR	Red LED			Yellow LED	
CABLE	ø3, 2C, PUR		ø3, 3C, PUR		
OPERATING FREQUENCY	200 Hz	1000 Hz			200 Hz
MAGNET REQUIREMENT (NOTE 1)	65 Gauss Parallel				
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)				
SHOCK (NOTE 2)	30 G	50 G			30 G
VIBRATION (NOTE 3)	9 G				
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)				
PROTECTION CIRCUIT (NOTE 4)	1	2, 4	2, 3, 4		1

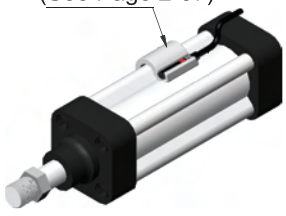
WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X ` Y ` Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X ` Y ` Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ GROOVE DIMENSION

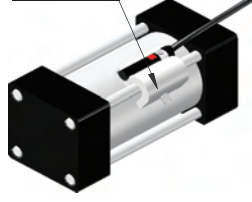




PF Series
(See Page 2-37)



DT Series
(See Page 2-37)



CS-6100 SERIES

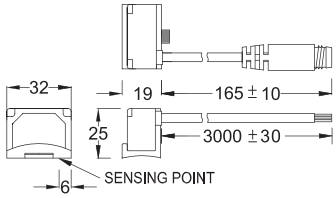
RoHS

Magnetic switch

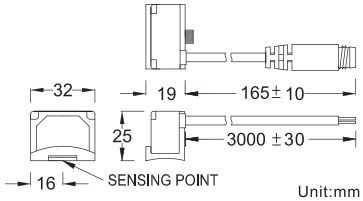
Patented

■ DIMENSION

CS-6100N, CS-6100P / CS-6100N-QD, CS-6100P-QD



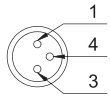
CS-6100R,CS-6100R-NC,CS-6100RT
CS-6100R-QD,CS-6100R-NC-QD,CS-6100RT-QD



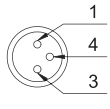
Unit:mm

■ QD PINOUT

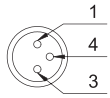
***3 wire QD wiring**



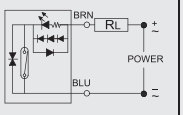
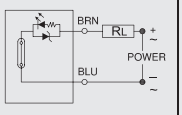
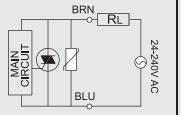
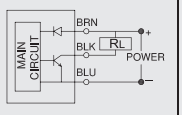
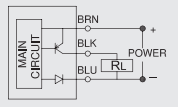
***2 wire QD wiring**



***2 wire EQD wiring**

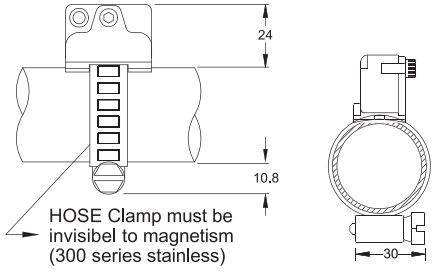


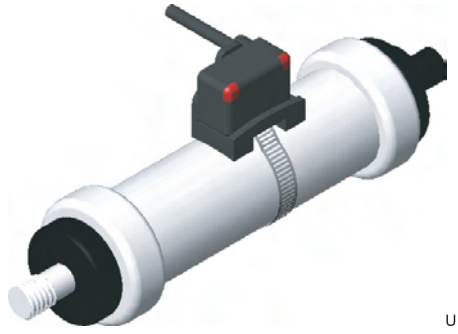
■ SPECIFICATION

TYPE	CS-6100R	CS-6100R-NC	CS-6100RT	CS-6100N	CS-6100P
CONNECT DIAGRAM / CHARACTERISTICS					
WIRING METHOD	2-Wire Type			3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	SPDT, Normally Closed	Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch		TRICA	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~240V DC/AC	5~120V DC/AC	24~240V AC Only	5~30V DC	
SWITCHING CURRENT	1 Amp. max.		4 Amp. max. 25 Amp. inrush	1 Amp. max.	
CONTACT RATING	30 W max.	20 W max.	100 W max.	30 W max.	
CURRENT CONSUMPTION	--			42 mA @ 24V DC max.	30 mA @ 24V DC max.
VOLTAGE DROP	3.5 V max.		1.0 V @ 1.5A max.	1.5 V @ 0.5A max.	
LEAKAGE CURRENT	--			0.01 mA max.	
INDICATOR	Red LED X 2			Power LED: Green, Output LED: Red	
CABLE	ø4.5, 2C, PVC			ø4.5, 3C, PVC	
OPERATING FREQUENCY	200 Hz			1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	80 Gauss Parallel	120 Gauss Parallel	80 Gauss Parallel	60 Gauss Parallel	
TEMPERATURE RANGE	-10~80°C (+14~176°F)				
SHOCK (NOTE 2)	30 G			50 G	
VIBRATION (NOTE 3)	9 G				
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)				
PROTECTION CIRCUIT (NOTE 4)	MOV, Surge Suppression			3, 4	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ MOUNTING CLAMPS





Unit:mm

CS-6200 SERIES

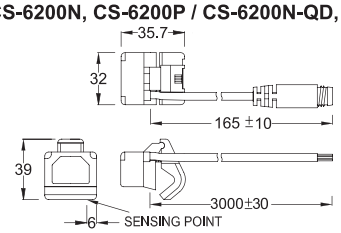
RoHS

Magnetic switch

Patented

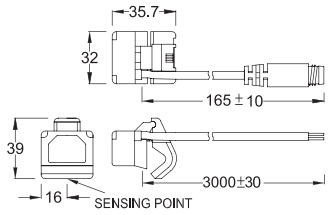
■ DIMENSION

CS-6200N, CS-6200P / CS-6200N-QD, CS-6200P-QD



CS-6200R,CS-6200R-NC,CS-6200RT

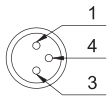
CS-6200R-QD,CS-6200R-NC-QD,CS-6200RT-QD



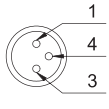
Unit:mm

■ QD PINOUT

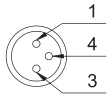
***3 wire QD wiring**



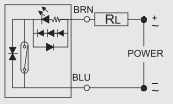
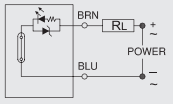
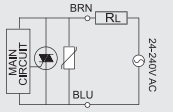
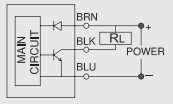
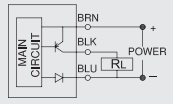
***2 wire QD wiring**



***2 wire EQD wiring**

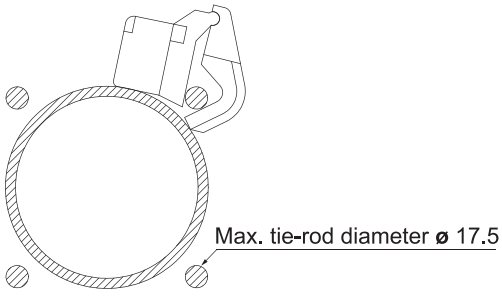


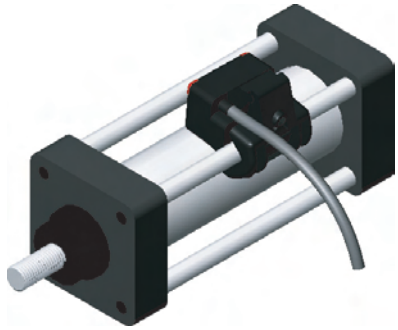
■ SPECIFICATION

TYPE	CS-6200R	CS-6200R-NC	CS-6200RT	CS-6200N	CS-6200P
CONNECT DIAGRAM / CHARACTERISTICS					
WIRING METHOD	2-Wire Type			3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	SPDT, Normally Closed	Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch		TRICA	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~240V DC/AC	5~120V DC/AC	24~240V AC Only	5~30V DC	
SWITCHING CURRENT	1 Amp. max.		4 Amp. max. 25 Amp. inrush	1 Amp. max.	
CONTACT RATING	30 W max.	20 W max.	100 W max.	30 W max.	
CURRENT CONSUMPTION	--			42 mA @ 24V DC max.	30 mA @ 24V DC max.
VOLTAGE DROP	3.5 V max.		1.0 V @ 1.5A max.	1.5 V @ 0.5A max.	
LEAKAGE CURRENT	--			0.01 mA max.	
INDICATOR	Red LEDX2			Power LED: Green, Output LED: Red	
CABLE	ø4.5, 2C, PVC			ø4.5, 3C, PVC	
OPERATING FREQUENCY	200 Hz			1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	80 Gauss Parallel	120 Gauss Parallel	80 Gauss Parallel	60 Gauss Parallel	
TEMPERATURE RANGE	-10~80°C (+14~176°F)				
SHOCK (NOTE 2)	30 G			50 G	
VIBRATION (NOTE 3)	9 G				
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)				
PROTECTION CIRCUIT (NOTE 4)	MOV, Surge Suppression			3, 4	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

■ SELF MOUNTING CLAMPS





Unit:mm

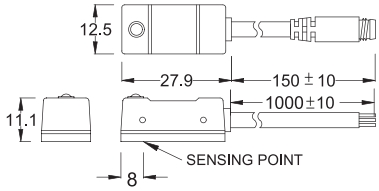
CSU-2050 SERIES

RoHS

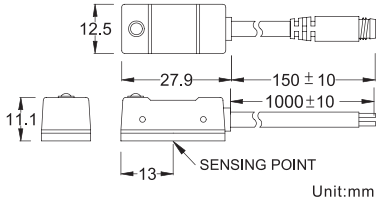
Magnetic switch

■ DIMENSION

CSU-2050N, CSU-2050P / CSU-2050N-QD, CSU-2050P-QD



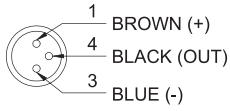
CSU-2050R / CSU-2050R-QD



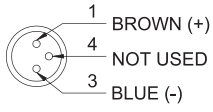
Unit:mm

■ QD PINOUT

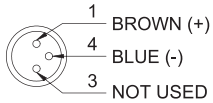
***3 wire QD wiring**



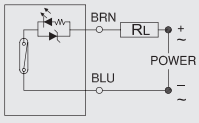
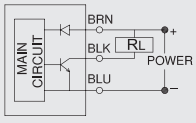
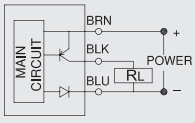
***2 wire QD wiring**



***2 wire EQD wiring**

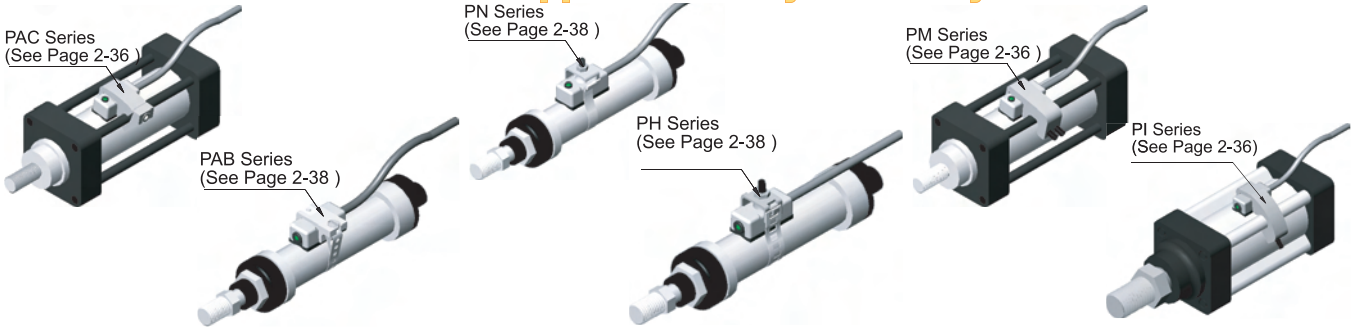


■ SPECIFICATION

TYPE	CSU-2050R	CSU-2050N	CSU-2050P
CONNECT DIAGRAM / CHARACTERISTICS			
WIRING METHOD	2-Wire Type	3-Wire Type	
SWITCHING LOGIC	SPST, Normally Open	Solid State Output, Normally Open	
SENSOR TYPE	Reed Switch	NPN Current Sinking	PNP Current Sourcing
OPERATING VOLTAGE	5~120V DC/AC	5~30V DC	
SWITCHING CURRENT	300 mA max.	200 mA max.	
CONTACT RATING	10 W max.	6 W max.	
CURRENT CONSUMPTION	–	15 mA @ 24V DC max.	
VOLTAGE DROP	3.5 V max.	1.5V max.	
LEAKAGE CURRENT	–	0.01 mA max.	
INDICATOR	Red LED		Green LED
CABLE	ø4, 2C, PVC	ø4, 3C, PVC	
OPERATING FREQUENCY	200 Hz	1000 Hz	
MAGNET REQUIREMENT (NOTE 1)	80 Gauss Parallel	40 Gauss Parallel	
TEMPERATURE RANGE	-10~70˚C (+14~158˚F)		
SHOCK (NOTE 2)	30 G	50 G	
VIBRATION (NOTE 3)	9 G		
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)		
PROTECTION CIRCUIT (NOTE 4)	1	2, 3	

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X ,Y, Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X ,Y, Z 3 directions / 1 hour each time.
4. 1=None / 2=Short-circuit / 3=Power Source Reverse polarity / 4=Surge Suppression

CSU-2050 series can be applied to many kind of cylinders



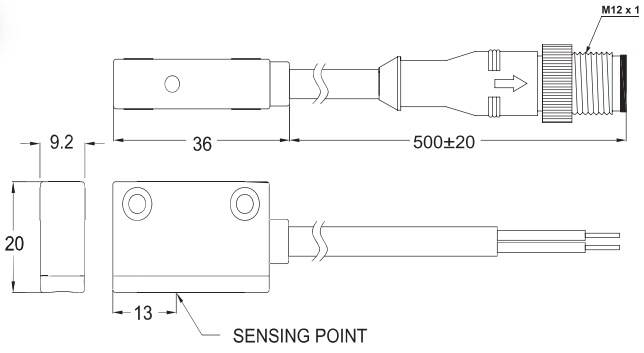
Weld-field immune SW.

CS-1000

RoHS

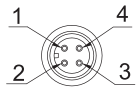
Magnetic switch

■ DIMENSION



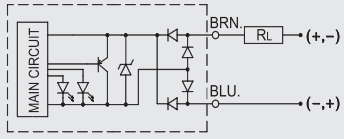
Unit:mm

■ M12 QD PINOUT



1:N/C (NO connect)
2:N/C (NO connect)
3:Blue
4:Brown

■ SPECIFICATION

TYPE	CS-1000D
CONNECT DIAGRAM	
CHARACTERISTICS	
WIRING METHOD	2-Wire Type
SWITCHING LOGIC	Solid State Output, Normally Open
SENSOR TYPE	--
OPERATING VOLTAGE	10~28 V DC
SWITCHING CURRENT	5-50 mA max.
CONTACT RATING	1.5 W max.
CURRENT CONSUMPTION	--
VOLTAGE DROP	5 V max.
LEAKAGE CURRENT	Less Then 1 mA
INDICATOR	Red LED : unstable sensing range Green LED : stable sensing range
CABLE	ø5.4, 2C, PVC
OPERATING TIME	50 ms max.
MAGNETIC FEILD RESISTANCE (NOTE 4)	16000A
MAGNET REQUIREMENT (NOTE 1)	80 Gauss Parallel
TEMPERATURE RANGE	-10~60˚C (+14~140˚F)
SHOCK (NOTE 2)	30 G
VIBRATION (NOTE 3)	9 G
ENCLOSURE CLASSIFICATION	IEC 529 IP 67 (NEMA 6)
PROTECTION CIRCUIT	Surge Suppression, Reverse Polarity

WARNING: Never exceed rating (Watt=Voltage x Amperage). Permanent demage to sensor will occur.
NOTE:
1. Measuring standard target: ø15.5Xø8X5t (Anisotropy rubber magnet)
2. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
3. Double amplitude 1.5 mm / 10Hz~55Hz~10Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.
4. The operational distance can be 0 mm between CS-1000D and welding gun (welding conductor or cable) when the welding current less than 16000 A.

■ ORDERING INFORMATION

C S - 1 0 0 0 D - [ ]

Cable Length / Connector

Blank:With 3 meter cable
2M:With 2 meter cable
4M:With 4 meter cable
QD：With M12, 4 Pin male connector

Mounting clamps

B P - 4 0 4 5

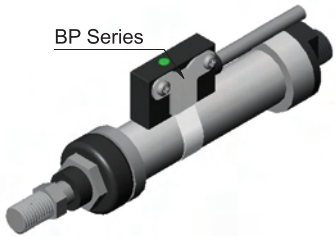
Cylinder bore size
40: φ40
50: φ50
63: φ63

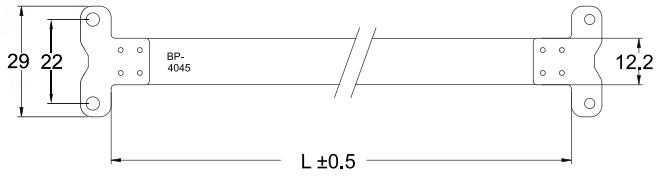
Cylinder tube outer diameter
45: φ45
47: φ47
55: φ55
58: φ58
68: φ68
72: φ72

■ MOUNTING CLAMPS

BP

clamp is designed for mounting CS-1000D on round cylinder.

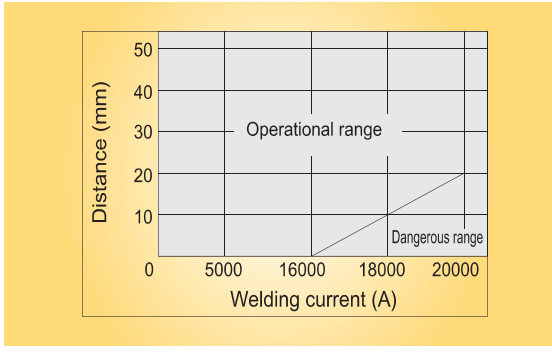




No.	Model	" L "
1	BP-4045	154
2	BP-4047	161
3	BP-5055	188
4	BP-5058	197
5	BP-6368	228
6	BP-6372	240

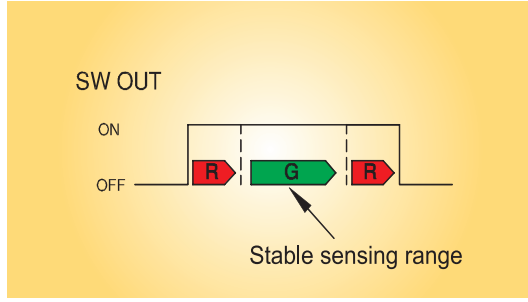
Unit:mm

■ WELD-FIELD IMMUNE



The operational distance can be 0 mm between CS-1000D and welding gun (welding conductor or cable) when the welding current less than 16000 A.

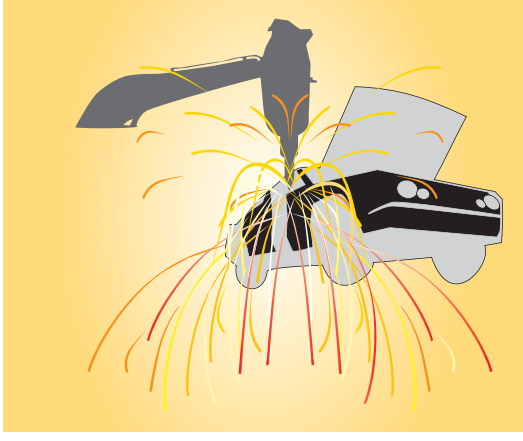
■ SWITCH OUTPUT / INDICATOR



The function of three sensing range indicators ensures the preciseness of setting position.

Unstable sensing range : Red LED light UP
Stable sensing range : Green LED light UP

■ APPLICATION ENVIRONMENT



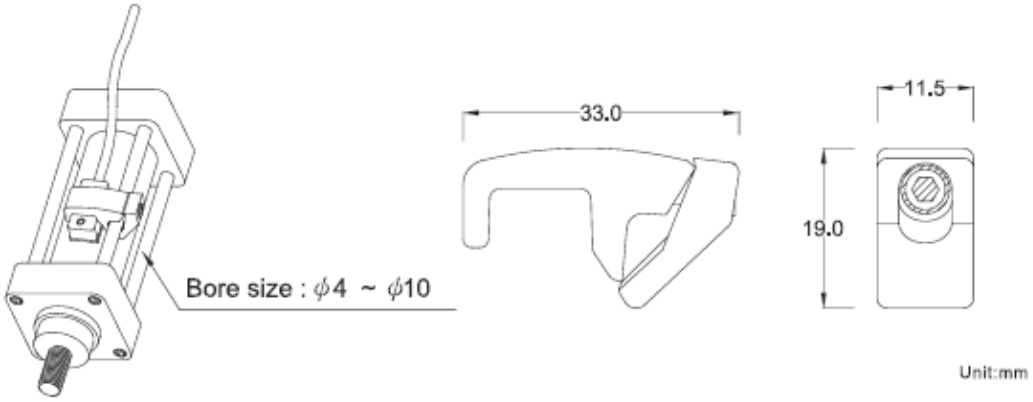
The CS-1000D can be applied in the strong magnetic field environment such as automotive manufacturing or areas near welding machine.When CS-1000D detects the magnetic AC field (50 or 60 Hz) it will keep the status of output and will not be effected.

■ APPLICATION MOUNTING

The CS-1000D detects the position of the cylinder piston and it is especially suitable for clamp cylinder.

PAC

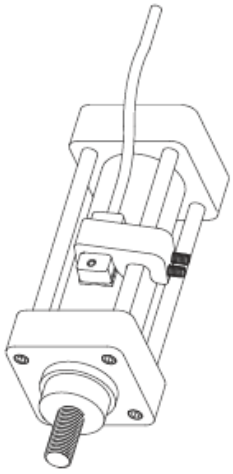
bracket is designed for mounting CSU-2050 & CS-31 series sensor on tie-rod cylinder.

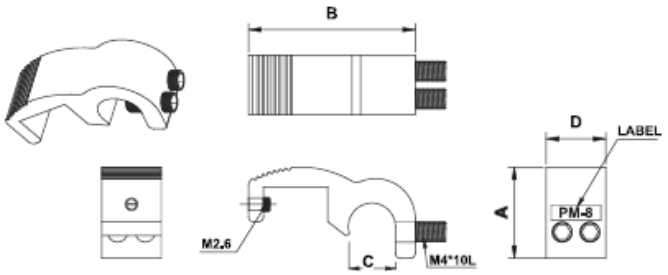


Unit:mm

PM

bracket is designed for mounting CSU-2050 & CS-31 series sensor on tie-rod cylinder.



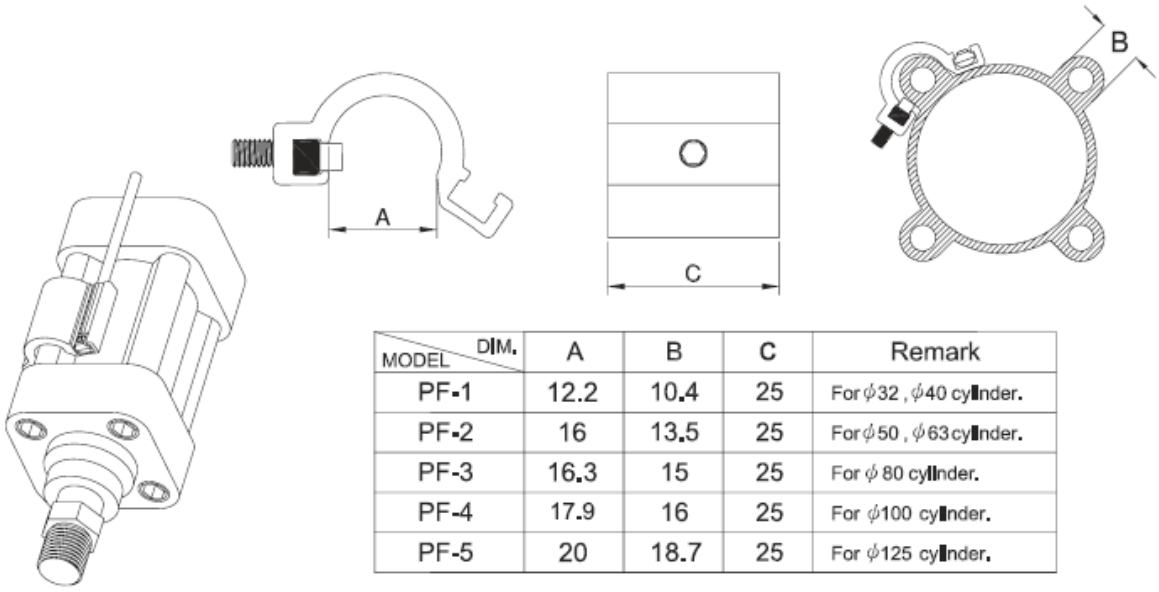


MODEL \ DIM.	A	B	C	D
PM-6	19.1	31.7	7.3	12
PM-8	18.4	33.7	9.3	12
PM-10	16.7	35.9	11.2	12
PM-12	20	35.5	11.5	12
PM-14	24	38.0	13.5	12
PM-16	24	40.0	15.5	12

Unit:mm

PF

bracket is designed for mounting CS-40 & CS-50 & CS-51 & CS-60 series sensor on ISO profile cylinder.

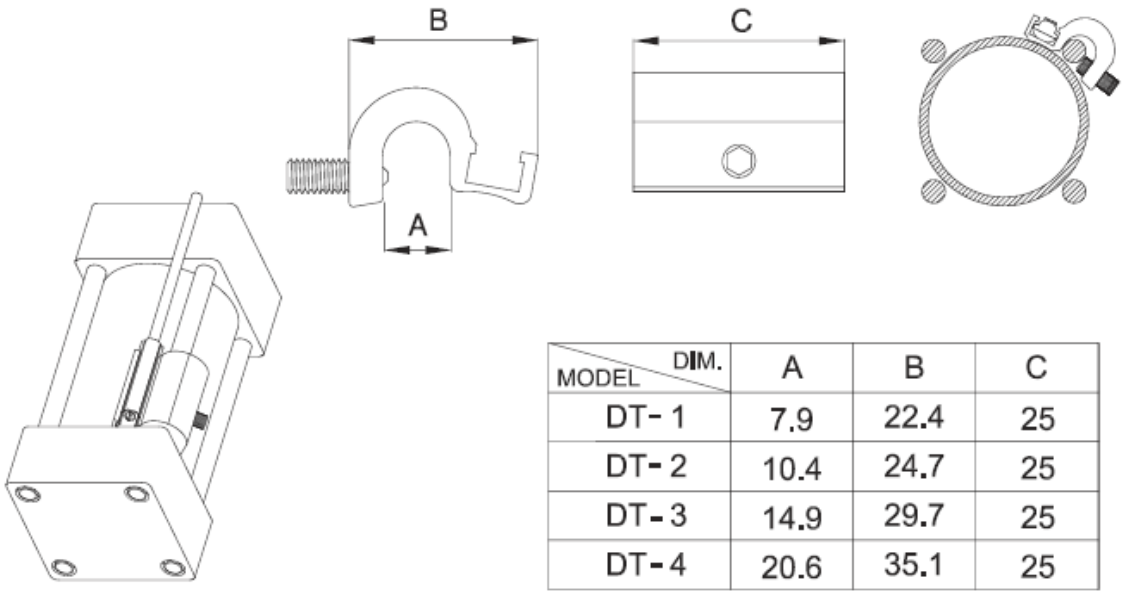


MODEL \ DIM.	A	B	C	Remark
PF-1	12.2	10.4	25	For ϕ32 , ϕ40 cylinder.
PF-2	16	13.5	25	For ϕ50 , ϕ63 cylinder.
PF-3	16.3	15	25	For ϕ 80 cylinder.
PF-4	17.9	16	25	For ϕ100 cylinder.
PF-5	20	18.7	25	For ϕ125 cylinder.

Unit:mm

DT

bracket is designed for mounting CS-40 & CS-50 & CS-51 & CS-60 series sensor on tie-rod cylinder.

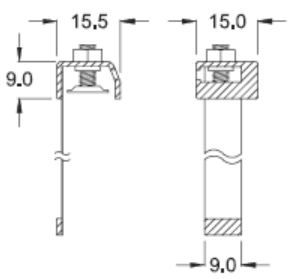


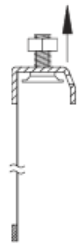
MODEL \ DIM.	A	B	C
DT-1	7.9	22.4	25
DT-2	10.4	24.7	25
DT-3	14.9	29.7	25
DT-4	20.6	35.1	25

Unit:mm

PN

clamp is designed for mounting CSU-2050 & CS-31 series sensor on round cylinder.





Step 1
Loosen screw & nut.

Step 2
Wrap the band around the cylinder & put the apex through the fastening hole.

Step 3
Pull up mounting head & place sensor under the mounting head.

Step 4
Swivel set screw to tighten band and fixing sensor. Finally swivel nut for steadying.

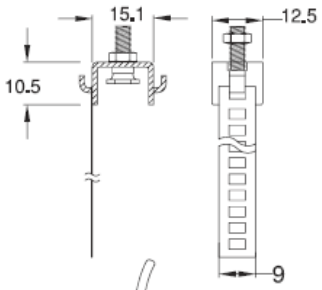
P N - S 2 0

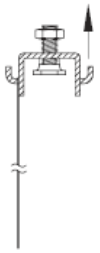
- S: For cylinder body is stainless steel.
- A: For cylinder body is aluminium alloy.
- 12: φ 12 cylinder
- 16: φ 16 cylinder
- ⋮
- 150: φ 150 cylinder

EX：PN-S25:It is use on φ 25 cylinder and material of cylinder tube is stainless.

PH

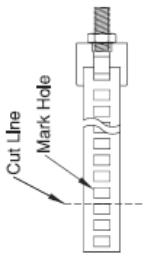
clamp is designed for mounting CSU-2050 & CS-31 series sensor on round cylinder.



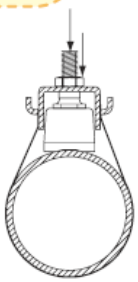


Step 1
Loosen screw & nut.

Step 2
Place sensor & wrap the band around the cylinder, Position the hook with the nearest hole on the band and mark the hole with a permanent marker.



Step 3
Remove mounting assembly. Cut the band at the nearest edge of next hole. (the one that's further away from the mounting head).



Step 4
Re-place the sensor & mounting assembly. Wrap the band & put the chosen hole on hook. Position the switch and tighten. Finally swivel nut for steadying.

PH - 1 : For φ 6 ~ φ 63 round cylinder use.
PH - 2 : For φ 6 ~ φ 125 round cylinder use.

BK

clamp is designed for mounting CS-05 series sensor on round cylinder.

Step 1
Loosen screw & nut.

Step 2
Place sensor & wrap the band around the cylinder, Position the hook with the nearest hole on the band and mark the hole with a permanent marker.

Step 3
Remove mounting assembly. Cut the band at the nearest edge of next hole. (the one that's further away from the mounting head).

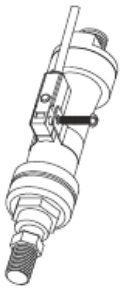
Step 4
Re-place the sensor & mounting assembly. Wrap the band & put the chosen hole on hook. Position the switch and tighten. Finally swivel nut for steadying.

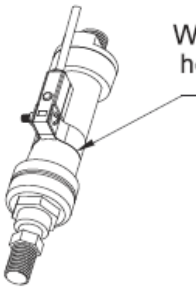
BK - 81: For ϕ6 ~ ϕ32 round cylinder use .
BK - 82: For ϕ6 ~ ϕ63 round cylinder use .

Unit:mm

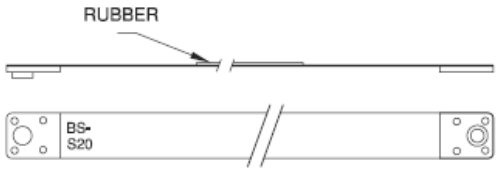
BS

clamp is designed for mounting CS-48 series sensor on round cylinder.





Wrap the band around cylinder barrel and re-insert screw head into clamp. Position the switch and tighten.



BS- S 2 0

- 12: ϕ12 cylinder
- 16: ϕ16 cylinder
- ⋮
- 50: ϕ50 cylinder

- S: For cylinder body is stainless steel.
- A: For cylinder body is aluminum alloy.

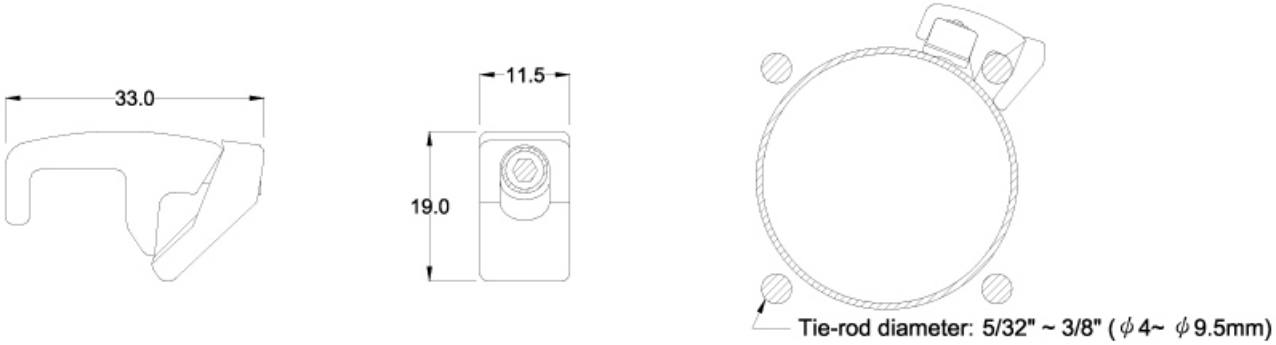
EX:BS-S25:It is use on ϕ25 cylinder and material of cylinder tube is stainless.

Unit:mm

MOUNTING BRACKETS

UTRC

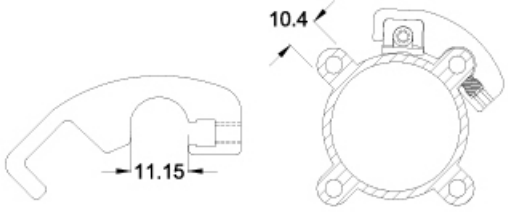
bracket is designed for mounting 2050 series sensor on tie-rod cylinder.



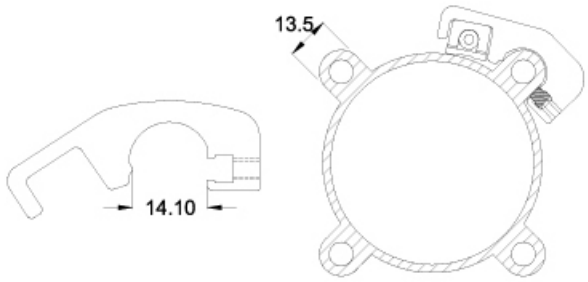
Note: Gap between tie-rod and cylinder tube must not exceed 2mm. Use URCC bracket if the gap is over 2mm

PI

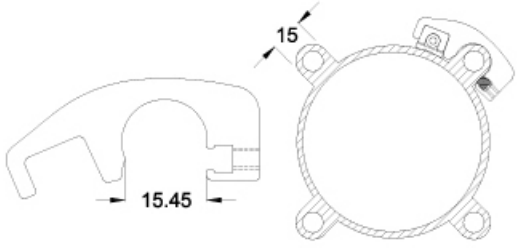
bracket is designed for mounting 2050 series sensor on extruded profile/VDMA cylinder.



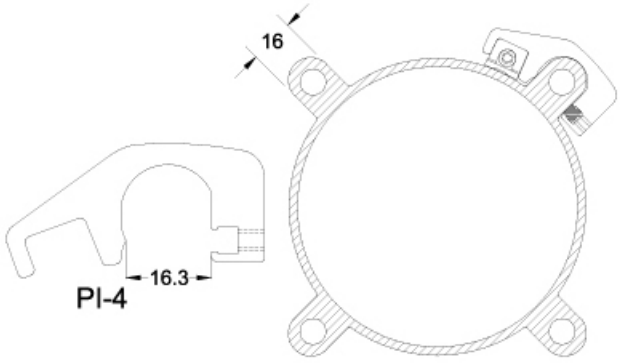
PI-1 - Fits lobe size
0.335-0.443"(8.5-11mm)



PI-2 - Fits lobe size
0.435-0.551"(11.5-14mm)



PI-3 - Fits lobe size
0.495-0.59"(12.5-15mm)



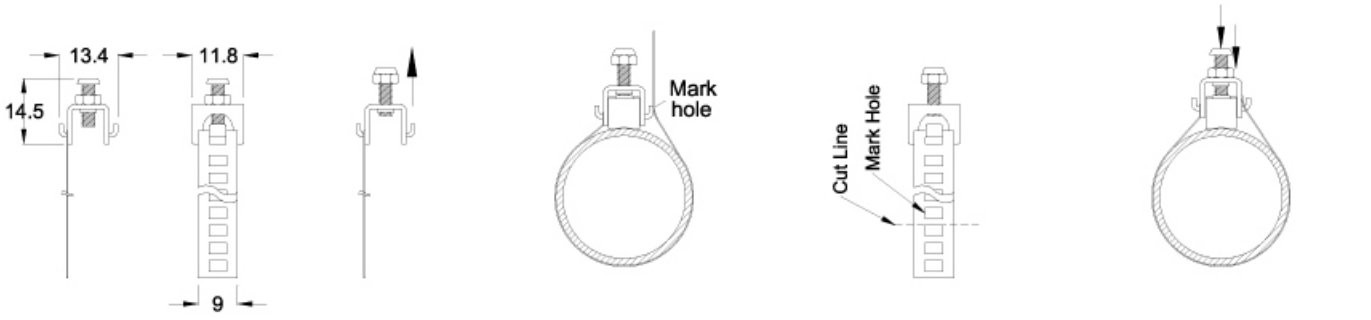
PI-4 - Fits lobe size
0.532-0.630"(13.5-16mm)

Unit : mm

MOUNTING CLAMPS

BK

clamp is designed for mounting CS-03 series sensor on round cylinder.



Step 1
Loosen screw & nut.

Step 2
Place sensor & wrap the band around the cylinder, Position the hook with the nearest hole on the band and mark the hole with a permanent marker.

Step 3
Remove mounting assembly. Cut the band at the nearest edge of next hole. (the one that's further away from the mounting head).

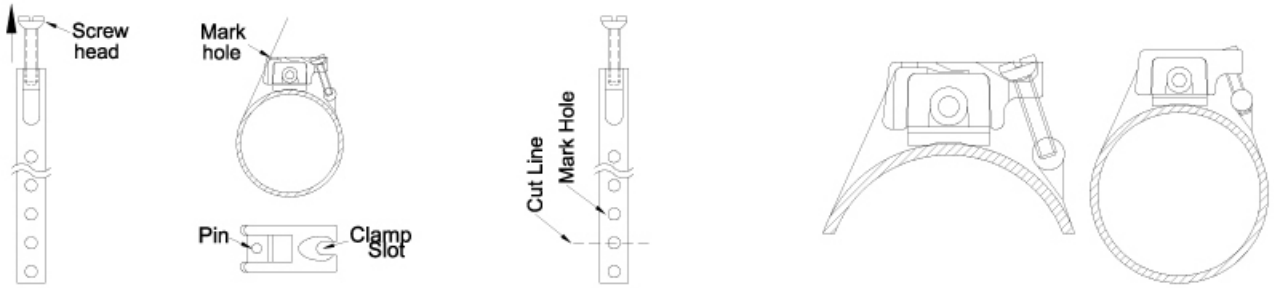
Step 4
Replace the sensor & mounting assembly. Wrap the band & put the chosen hole on hook. Position the switch and tighten. Finally swivel nut for steadying.

BK - 81: For ϕ 3/8" ~ ϕ 1-1/4" (10ϕ ~ 32ϕ mm) bore round cylinder use.

BK - 82: For ϕ 3/8" ~ ϕ 2-1/2" (10ϕ ~ 63ϕ mm) bore round cylinder use.

URCC

clamp is designed for mounting 2050 series sensor on 1/2" ~ 4" (12ϕ ~ 100ϕ mm) bore round cylinder.



Step 1
Start by keeping screw 3 to 4 turns into barrel nut on the end of the band assembly.

Step 2
Place the screw head into clamp slot and wrap the band around the cylinder, Position the pin with the nearest hole on the band and mark the hole with a permanent marker.

Step 3
Remove clamp assembly from the cylinder. Locate the marked hole that fits to the cylinder size, cut the band at midway between the above adjacent hole. (the one that's further away from the screw nut).

Step 4
Insert cut end of the band into a flat slot opposite from the clamp slot. Place the chosen hole over the pin and bend the band firmly down with thumb pressure. Then wrap the band around cylinder barrel and re-insert screw head into clamp. Position the switch and tighten.

CLAMP BL-1

BL-1

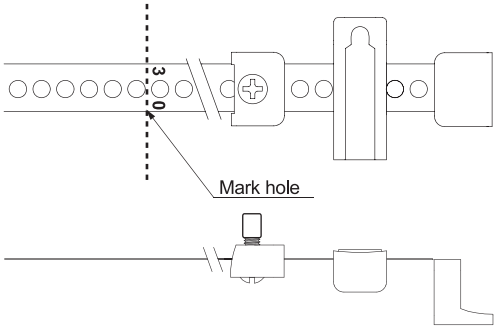
clamp is designed for mounting CS-40 & CS-50 series sensor on round cylinder.

How to use:

Example: Use with ϕ 40 stainless body cylinder

Step 1

Refer to the cylinder chart, make marking next to the 30th hole. (On the 31st hole, see below)

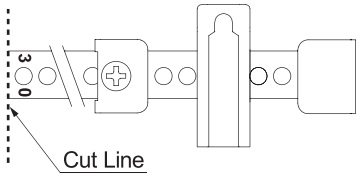


Cylinder Chart

Bore Size	Barrel Material	O.D. (mm)	Recommended mounting hole	Bore Size	Barrel Material	O.D. (mm)	Recommended mounting hole
ϕ10	Stainless	11	10	ϕ30	Aluminum	35	26
ϕ12	Stainless	13.2	11	ϕ32	Stainless	33.6	24
ϕ16	Stainless	17	14	ϕ32	Aluminum	37	27
ϕ20	Stainless	21.6	16	ϕ40	Stainless	42	30
ϕ20	Aluminum	25	19	ϕ40	Aluminum	45	32
ϕ25	Stainless	26.5	20	ϕ50	Aluminum	55	40
ϕ25	Aluminum	30	22	ϕ63	Aluminum	70	50

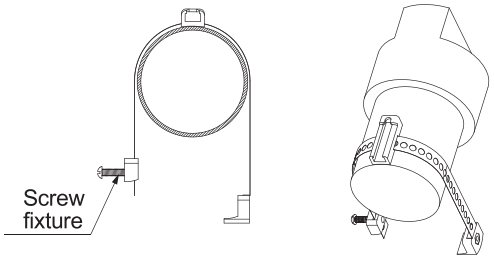
Step 2

Use cutter to cut off excessive mounting band.



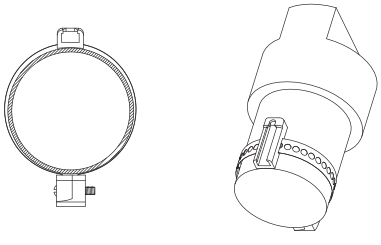
Step 3

Insert screw through screw fixture and the apropriate hole.



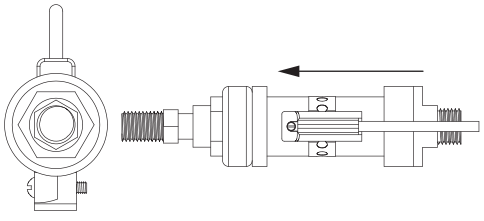
Step 4

Wrap the mounting band around the cylinder barrel and tighten the screw 3~5 turns.



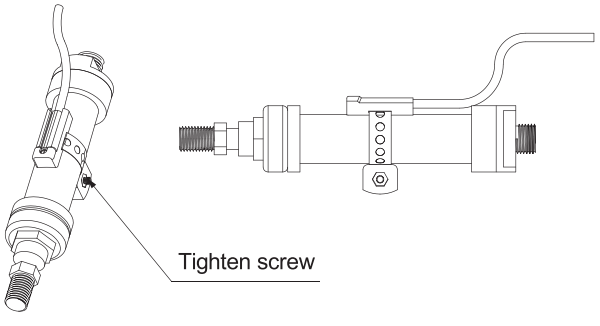
Step 5

Mount the sensor switch in the bracket.



Step 6

Position the sensor switch on cylinder and tighten screw .

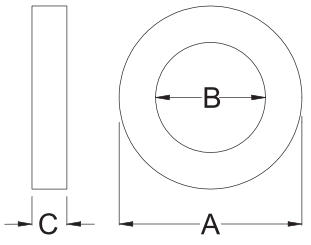


Unit:mm

ANISOTROPIC RUBBER MAGNET

MODEL \ DIM.	A / $^{+0.00}_{-0.30}$	B / $^{+0.30}_{-0.00}$	C / ±0.2
ME - 16 - 8 × 4	15.50	8.00	4.00
ME - 20 - 9 × 4	19.50	9.00	4.00
ME - 25 - 13 × 4	24.50	13.00	4.00
ME - 30 - 21 × 4	29.50	21.00	4.00
ME - 32 - 21 × 4	31.50	21.00	4.00
ME - 40 - 22 × 4	39.50	22.00	4.00
ME - 50 - 32 × 4	49.50	32.00	4.00
ME - 63 - 42 × 4	62.50	42.00	4.00
ME - 80 - 58 × 4	79.50	58.00	4.00
ME - 100 - 78 × 4	99.50	78.00	4.00
ME - 125 - 79 × 4	124.50	79.00	4.00
ME - 125 -108× 4	124.50	108.00	4.00
ME - 150 -125× 4	149.50	125.00	4.00
ME - 160 -135× 4	159.50	135.00	4.00
ME - 200 -176× 4	199.50	176.00	4.00

MODEL \ DIM.	A / $^{+0.00}_{-0.30}$	B / $^{+0.30}_{-0.00}$	C / ±0.2
ME - 16 - 8 × 5	15.50	8.00	5.00
ME - 20 - 9 × 5	19.50	9.00	5.00
ME - 25 - 13 × 5	24.50	13.00	5.00
ME - 30 - 21 × 5	29.50	21.00	5.00
ME - 32 - 21 × 5	31.50	21.00	5.00
ME - 40 - 22 × 5	39.50	22.00	5.00
ME - 50 - 32 × 5	49.50	32.00	5.00
ME - 63 - 42 × 5	62.50	42.00	5.00
ME - 80 - 58 × 5	79.50	58.00	5.00
ME - 100 - 78 × 5	99.50	78.00	5.00



CHARACTERISTIC

A. Magnetic property:

Residual flux density (Br): 2300 - 2500 gauss
Coercive force (iHC): 3000 - 3800 Oe
(bHC): 2000 - 2300 Oe
Maximum energy product:1.3 - 1.5 Mg.Oe

B. Physical property:

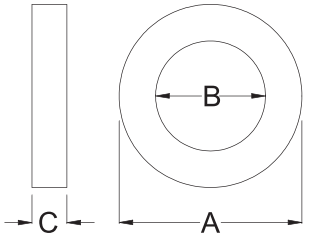
Resistant power:20 - 50 kgf/cm^2
Lengthen:5 - 20 %
Hardness (Shore D): 30 - 50
Specific gravity:3.5 - 3.7 g/cm^3

Unit:mm

ANISOTROPIC PLASTIC MAGNET

MODEL \ DIM.	A / $^{+0.00}_{-0.20}$	B / $^{+0.20}_{-0.00}$	C / ±0.2
PME - 16 - 8 × 4	15.50	8.00	4.00
PME - 20 - 9 × 4	19.50	9.00	4.00
PME - 25 - 13 × 4	24.50	13.00	4.00
PME - 30 - 21 × 4	29.50	21.00	4.00
PME - 32 - 21 × 4	31.50	21.00	4.00
PME - 40 - 22 × 4	39.50	22.00	4.00
PME - 50 - 32 × 4	49.50	32.00	4.00
PME - 63 - 42 × 4	62.50	42.00	4.00
PME - 80 - 58 × 4	79.50	58.00	4.00
PME - 100 - 78 × 4	99.50	78.00	4.00

MODEL \ DIM.	A / $^{+0.00}_{-0.20}$	B / $^{+0.20}_{-0.00}$	C / ±0.2
PME - 12 - 6 × 5	11.50	6.00	5.00
PME - 16 - 8 × 5	15.50	8.00	5.00
PME - 20 - 9 × 5	19.50	9.00	5.00
PME - 25 - 13 × 5	24.50	13.00	5.00
PME - 30 - 21 × 5	29.50	21.00	5.00
PME - 32 - 21 × 5	31.50	21.00	5.00
PME - 40 - 22 × 5	39.50	22.00	5.00
PME - 50 - 32 × 5	49.50	32.00	5.00
PME - 63 - 42 × 5	62.50	42.00	5.00
PME - 80 - 58 × 5	79.50	58.00	5.00
PME - 100 - 78 × 5	99.50	78.00	5.00



CHARACTERISTIC

A. Magnetic property:

Residual flux density (Br): 2500 - 3000 gauss
Coercive force (iHC): 2700 - 3100 Oe
(bHC): 2400 - 2500 Oe
Maximum energy product:1.8 Mg.Oe

B. Physical property:

Resistant power:80 kgf/cm^2
Lengthen: 6.7 %
Hardness (Shore D): 120
Specific gravity:3.2 g/cm^3

Unit:mm