

☉ Magnet Switch Table

For Cylinder Model	Bore size	Two wire electronic type	Three wire electronic NPN type	Three wire electronic PNP type	Two wire reed switch type	Reed Switch Photo
SD	Φ20-100 (Front face installation)	HX-01D	HX-01N	HX-01P	HX-01R	
SE/SHY/SHZ/ESWT	Full series					
SQ/SQM/EU/EUK/ EUM/EUP/SF/SFM/ SQK/SG//EMQ/ELS/ ELQ/EXH/ESWT *SHY/SHZ(except Φ 10)	Full series	HX-07D HX-29D	HX-07N HX-29N	HX-07P HX-29P	HX-07R	 HX-07  HX-29
Note:Short stroke please use HX-29 series due to limited space.						
SD/EN	Full series (Side installation)	HX-11D	HX-11N	HX-11P	HX-11R	
RAL/RA/IA/SJ/ SM/EG/NEG/NCM	Full series	HX-13D	HX-13N	HX-13P	HX-13R	
TBC/XBC/ VBC/LBC	Full series	HX-21D	HX-21N	HX-21P	HX-21R	
FVBC/EXSM/ EXSWM/SF/SFM	Full series	HX-31D	HX-31N	HX-31P	HX-31R	
FVBC/EXSM/ EXSWM/SF/SFM	Full series	-	-	-	HX-65R	

Item/ Model	Electronic type			Reed switch	
	D	N	P	R	
Wiring method	2-Wire type	3-Wire type		2-Wire type	
Wire color	White	Black		Gray	
Sensor type	Without contact			With contact	
Operating voltage	10-28V DC	5-30V DC		5-240V AC/DC	
Switching current	50mA max	200mA max		100mA max	
Contact rating	1.4W max	6W max		10W max	
Response sepeed	High frequency			Low frequency	
Service life	Ultra long			Long	
Shock	Almost no impact			Easy to damage	
Sensing range	Almost using in all cylinders			Narrow range of sensing	
Action range	4-5mm from switch on to off			7-10mm from switch on to off	
Accuracy	Excellent			Ordinary	

Note: According to above chart, please give priority to electronic type.

HX-01

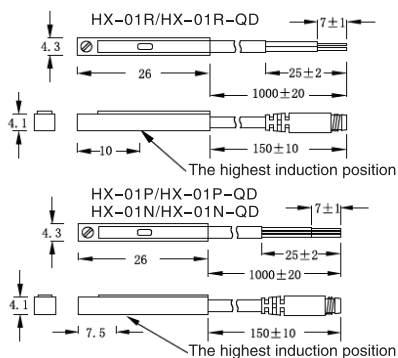
Magnet Switch



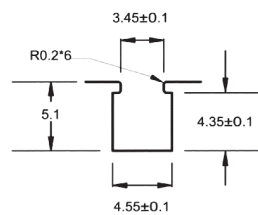
How to Order?

HX	-	01	D	-	2M
Product code		Series NO.	Switch Type D: Two wire without contact switch N: NPN type P: PNP type R: Two wire reed switch		Wirelength 1M:1M 2M:2M 5M:5M 10M:10M QD8: QD8Male connector QD12: QD12Male connector Note:The standard wire length of the quick connector is 0.15m. Other wire lengths cannot be ordered

Dimension

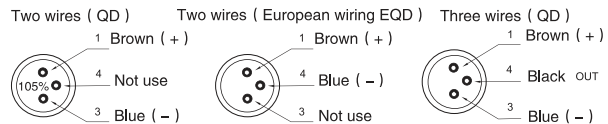


Groove Dimension



Suitable for cylinder:
SD/SE/SHY/SHZ/ESWT

M8/M12 male wiring diagram



Specifications

Type	HX-01D	HX-01N	HX-01P	HX-01R
Connect Diagram				
Parameter				
Wiring method	2-Wire Type	3-Wire Type		2-Wire Type
Switching logic		Electronic type N.O.		SPST Normally Open
Sensor type	None contact type	NPN type (Input)	PNP type (Output)	Reed switch
Operating voltage	10-28V DC	5-30V DC		5-240V DC/AC
Max. switching current	50mA max	200mA max.		100mA max.
Contact rating	1.4 W max	6W max.		10W max.
Current consumption	40 μ A max @24V	8mA max @24V (Switch Active)		None
Voltage drop	2.8 V max.	1 V max. @200mA DC		2.5 V max.
Leakage current	90 μ A max @28V	0.01mA max.		None
Indicator		Red LED		
Max. exchange frequency		1000Hz		200Hz
Temperature range		-10 - 70°C		
Shock		50G		30G
Vibration		9G		
Enclosure classification		IEC 529 IP67 (NEMA 6)		
Protection circuit		3, 4		1
Cable	2.6 Φ , 2C, Black color, oil resistance PVC	2.6 Φ , 3C, Black color, oil resistance PVC		2.6 Φ , 2C, Gray color, oil resistance PVC
Switch sensitive		40-750G		70G

HX-07

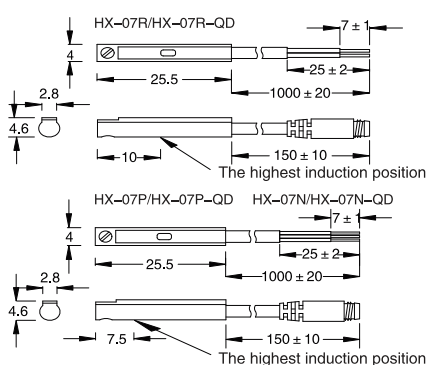
Magnet Switch



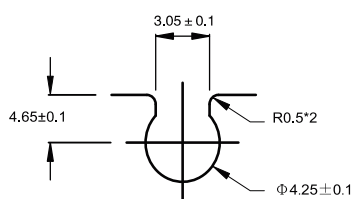
How to Order?

HX	-	07	D	-	2M
Product code		Series NO.	Switch Type D: Two wire without contact switch N: NPN type P: PNP type R: Two wire reed switch		Wirelength 1M:1M 2M:2M 5M:5M 10M:10M QD8: QD8Male connector QD12: QD12Male connector Note: The standard wire length of the quick connector is 0.15m. Other wire lengths cannot be ordered

Dimension



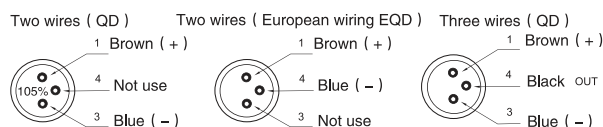
Groove Dimension



Suitable for cylinder:

SQ/SQM/EU/EUK/
EUM/EUP/SF/SFM/
SQK/SG//EMQ/ELS/
ELQ/EXH/ESWT
*SHY/SHZ(except Φ 10)

M8/M12 male wiring diagram



Specifications

Type	HX-07D	HX-07N	HX-07P	HX-07R
Connect Diagram				
Parameter				
Wiring method	2-Wire Type	3-Wire Type		2-Wire Type
Switching logic	Electronic no contact type N.O.			SPST Normally Open
Sensor type	None contact type	NPN type (Input)	PNP type (Output)	Reed switch
Operating voltage	10-28V DC	5 - 30V DC		5-240V DC/AC
Max. switching current	50mA max	200mA max.		100mA max.
Contact rating	1.4 W max	6W max.		10W max.
Current consumption	40 μAmax @24V	8mAmax @24V(Switch Active)		None
Voltage drop	2.8 V max.	1 V max. @200mA DC		2.5 V max.
Leakage current	90 μAmax @28V	0.01mA max.		None
Indicator	Red LED			
Max. exchange frequency	1000Hz			200Hz
Temperature range	-10 - 70℃			
Shock	50G			30G
Vibration	9G			
Enclosure classification	IEC 529 IP67 (NEMA 6)			
Protection circuit	2、4	3、4		1
Cable	2.6Φ,2C,Black color,oil resistance PVC	2.6Φ,3C,Black color,oil resistance PVC		2.6Φ,2C,Gray color,oil resistance PVC
Switch sensitive	40-750G			70G

HX-11

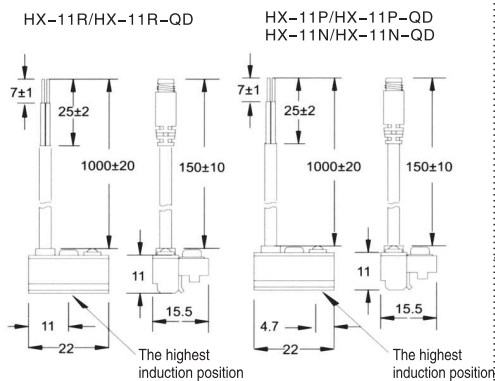
Magnet Switch



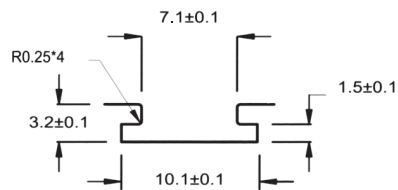
How to Order?

HX	-	11	D	-	2M
Product code		Series NO.	Switch Type D: Two wire without contact switch N: NPN type P: PNP type R: Two wire reed switch		Wirelength 1M:1M 2M:2M 5M:5M 10M:10M QD8: QD8Male connector QD12: QD12Male connector Note:The standard wire length of the quick connector is 0.15m. Other wire lengths cannot be ordered

Dimension

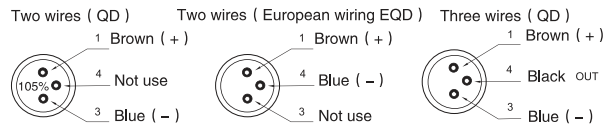


Groove Dimension



Suitable for cylinder:
SD/EN

M8/M12 male wiring diagram



Specifications

Type	HX-11D	HX-11N	HX-11P	HX-11R
Connect Diagram				
Parameter				
Wiring method	2-Wire Type	3-Wire Type		2-Wire Type
Switching logic		Electronic type N.O.		SPST Normally Open
Sensor type	None contact type	NPN type (Input)	PNP type (Output)	Reed switch
Operating voltage	10-28V DC	5-30V DC		5-240V DC/AC
Max. switching current	50mA max	200mA max.		100mA max.
Contact rating	1.4 W max	6W max.		10W max.
Current consumption	40 μ Amax@24V	20mAmax@24V(Switch Active)		None
Voltage drop	2.8 V max.	1 V max.@200mA DC		2.5 V max.
Leakage current	90 μ Amax@28V	0.01mA max.		None
Indicator		Red LED		
Max. exchange frequency		1000Hz		200Hz
Temperature range		-10-70°C		
Shock		50G		30G
Vibration		9G		
Enclosure classification		IEC 529 IP67 (NEMA 6)		
Protection circuit	2、4	3、4		1
Cable	3.3Φ,2C,Black color,oil resistance PVC	3.3Φ,3C,Black color,oil resistance PVC		3.3Φ,2C,Gray color,oil resistance PVC
Switch sensitive		40-750G		40-50G

HX-13

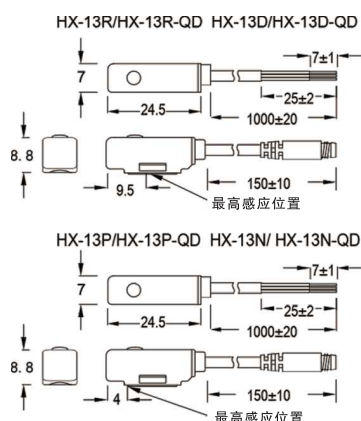
Magnet Switch



How to Order?

HX		-	13		D	-	2M		-	A		20	
Product code			Series NO.		Switch Type		Wirelength			Bore material		Bore code	
					D: Two wire without contact switch		1M:1M			Blank: No binding belt			
					N: NPN type		2M:2M			A: Aluminum alloy barrel			
					P: PNP type		5M:5M			(with binding belt)			
					R: Two wire reed switch		10M:10M			S: Stainless steel barrel			
										(with binding belt)			
							QD8: QD8Male connector						
							QD12: QD12Male connector						
							Note:The standard wire length of the quick connector is 0.15m. Other wire lengths cannot be ordered						

Dimension

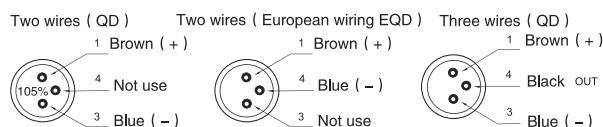


Installation

Detailed mounting method refer to page 1.127-1.129

Suitable for cylinder:
RAL/RA/IA/SJ/
SM/EG/NEG/NCM

M8/M12 male wiring diagram



Specifications

Type	HX-13D	HX-13N	HX-13P	HX-13R
Connect Diagram				
Parameter				
Wiring method	2-Wire Type	3-Wire Type		2-Wire Type
Switching logic	Electronic no contact type N.O.			SPST Normally Open
Sensor type	None contact type	NPN type (Input)	PNP type (Output)	Reed switch
Operating voltage	10-28V DC	5-30V DC		5-240V DC/AC
Max. switching current	50mA max	200mA max.		100mA max.
Contact rating	1.4 W max	6W max.		10W max.
Current consumption	40 μAmax @24V	8mAmax @24V(Switch Active)		None
Voltage drop	2.8 V max.	1 V max. @200mA DC		2.5 V max.
Leakage current	90 μAmax @28V	0.01mA max.		None
Indicator	Red LED			
Max. exchange frequency	1000Hz			200Hz
Temperature range	-10 - 70℃			
Shock	50G			30G
Vibration	9G			
Enclosure classification	IEC 529 IP67 (NEMA 6)			
Protection circuit	2、4	3、4		1
Cable	3.2Φ,2C,Black color,oil resistance PVC	3.2Φ,3C,Black color,oil resistance PVC		3.2Φ,2C,Black color,oil resistance PVC
Switch sensitive		45-750G		50G

HX-21

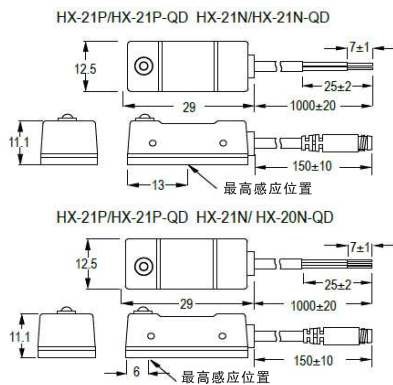
Magnet Switch



How to Order?

HX	-	21	D	-	2M
Product code		Series NO.	Switch Type D: Two wire without contact switch N: NPN type P: PNP type R: Two wire reed switch		Wirelength 1M:1M 2M:2M 5M:5M 10M:10M QD8: QD8Male connector QD12: QD12Male connector Note:The standard wire length of the quick connector is 0.15m. Other wire lengths cannot be ordered

Dimension

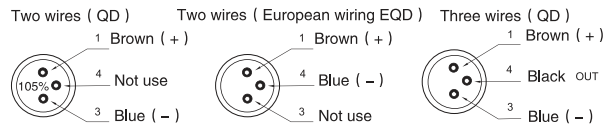


Installation

Detailed mounting method refer to page 1.127-1.129

Suitable for cylinder:
TBC/XBC/VBC/LBC

M8/M12 male wiring diagram



Specifications

Type	HX-21D	HX-21N	HX-21P	HX-21R
Connect Diagram				
Parameter				
Wiring method	2-Wire Type	3-Wire Type		2-Wire Type
Switching logic		Electronic type N.O.		SPST Normally Open
Sensor type	None contact type	NPN type (Input) PNP type (Output)		Reed switch
Operating voltage	5-30V DC	5-30V DC		5-240V DC/AC
Max. switching current	50mA max	200mA max.		100mA max.
Contact rating	1.4 W max	6W max.		10W max.
Current consumption	40 μ Amax@24V	20mAmax@24V(Switch Active)		None
Voltage drop	2.8 V max.	1 V max.@200mA DC		2.5 V max.
Leakage current	90 μ Amax@28V	0.01mA max.		None
Indicator		Red LED		
Max. exchange frequency		1000Hz		200Hz
Temperature range		-10 - 70°C		
Shock		50G		30G
Vibration		9G		
Enclosure classification		IEC 529 IP67 (NEMA 6)		
Protection circuit	2、4	3、4		1
Cable	3.8 Φ ,2C,White color,oil resistance PVC	3.8 Φ ,3C,Black color,oil resistance PVC		3.8 Φ ,2C,Gray color,oil resistance PVC
Switch sensitive		40-750G		55-65G

HX-29

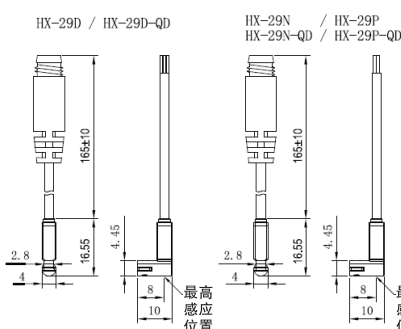
Magnet Switch



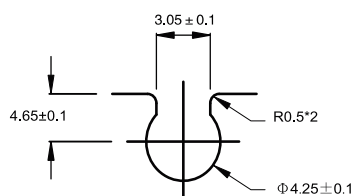
How to Order?

HX	-	29	D	-	2M
Product code		Series NO.	Switch Type D: Two wire without contact switch N: NPN type P: PNP type R: Two wire reed switch		Wire length 1M: 1M 2M: 2M 5M: 5M 10M: 10M QD8: QD8 Male connector QD12: QD12 Male connector Note: The standard wire length of the quick connector is 0.15m. Other wire lengths cannot be ordered

Dimension

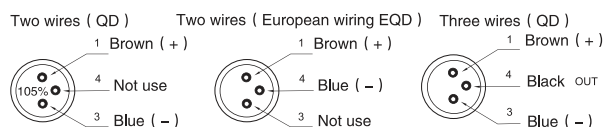


Groove Dimension



Suitable for cylinder:
SQ/SQM/EU/EUK/
EUM/EUP/SF/SFM/
SQK/SG//EMQ/ELS/
ELQ/EXH/ESWT
*SHY/SHZ(except $\Phi 10$)

M8/M12 male wiring diagram



Specifications

Type	HX-29D	HX-29N	HX-29P
Connect Diagram			
Parameter			
Wiring method	2-Wire Type	3-Wire Type	
Switching logic	Electronic no contact type N.O.		
Sensor type	None contact type	NPN type (Input)	PNP type (Output)
Operating voltage	10-28V DC	5-30V DC	
Max. switching current	50mA max	200mA max.	
Contact rating	1.4 W max	6W max.	
Current consumption	40 μ Amax @ 24V	8mAmax@ 24V(Switch Active)	
Voltage drop	2.8 V max.	1 V max. @200mA DC	
Leakage current	90 μ Amax @ 28V	0.01mA max.	
Indicator	Red LED		
Max. exchange frequency	1000Hz		
Temperature range	-10 - 70℃		
Shock	50G		
Vibration	9G		
Enclosure classification	IEC 529 IP67 (NEMA 6)		
Protection circuit	4	3、4	
Cable	2.6Φ,2C,Black color,oil resistance PVC	2.6Φ,3C,Black color,oil resistance PVC	
Switch sensitive	40-750G		

HX-31

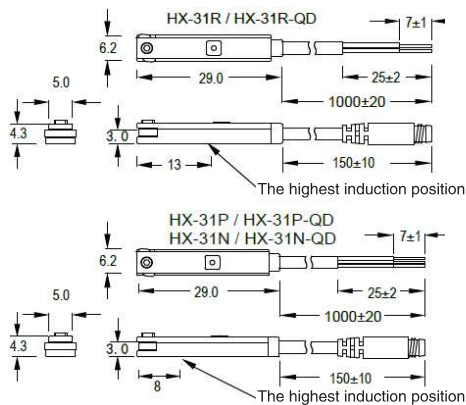
Magnet Switch



How to Order?

HX	-	31	D	-	2M
Product code		Series NO.	Switch Type D: Two wire without contact switch N: NPN type P: PNP type R: Two wire reed switch		Wirelength 1M:1M 2M:2M 5M:5M 10M:10M QD8: QD8Male connector QD12: QD12Male connector Note:The standard wire length of the quick connector is 0.15m. Other wire lengths cannot be ordered

Dimension

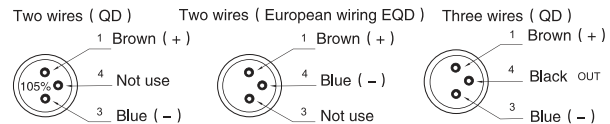


Groove Dimension



Suitable for cylinder:
FVBC/EXSM/
EXSWM/SF/SFM

M8/M12 male wiring diagram



Type	HX-31D	HX-31N	HX-31P	HX-31R
Connect Diagram				
Parameter				
Wiring method	2-Wire Type	3-Wire Type		2-Wire Type
Switching logic		Electronic type N.O.		SPST Normally Open
Sensor type	None contact type	NPN type (Input)	PNP type (Output)	Reed switch
Operating voltage	10-28V DC	5-30V DC		5-240V DC/AC
Max. switching current	50mA max	200mA max.		100mA max.
Contact rating	1.4 W max	6W max.		10W max.
Current consumption	40 μ A max @ 24V	14(N)/17(P)mA max (Switch Active)		None
Voltage drop	2.8 V max.	1 V max. @ 200mA DC		2.5 V max.
Leakage current	90 μ A max @ 28V	0.01mA max.		None
Indicator		Red LED		
Max. exchange frequency		1000Hz		200Hz
Temperature range		-10 - 70°C		
Shock		50G		30G
Vibration		9G		
Enclosure classification		IEC 529 IP67 (NEMA 6)		
Protection circuit	2, 4	3, 4		1
Cable	2.9 Φ , 2C, White color, oil resistance PVC	2.9 Φ , 3C, Black color, oil resistance PVC		2.9 Φ , 2C, Gray color, oil resistance PVC
Switch sensitive		40-750G		40G

HX-65

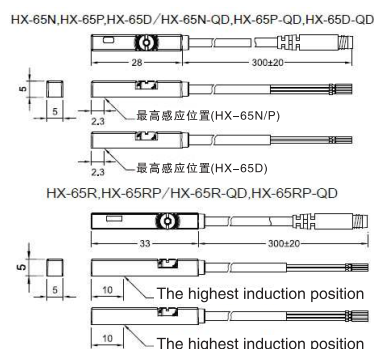
Magnet Switch



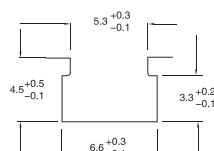
How to Order?

HX	-	65	D	-	2M
Product code		Series NO.	Switch Type D: Two wire without contact switch N: NPN type P: PNP type R: Two wire reed switch		Wire length 1M: 1M 2M: 2M 5M: 5M 10M: 10M QD8: QD8 Male connector QD12: QD12 Male connector Note: The standard wire length of the quick connector is 0.15m. Other wire lengths cannot be ordered

Dimension

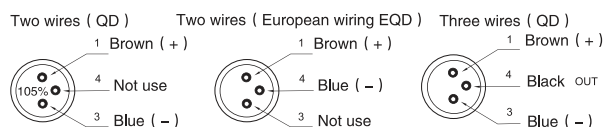


Groove Dimension



Suitable for cylinder:
FVBC/EXSM/
EXSWM/SF/SFM

M8/M12 male wiring diagram

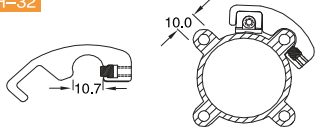
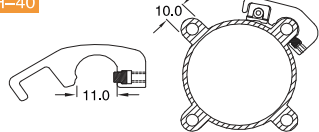
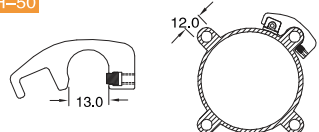
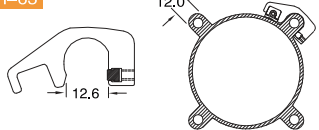
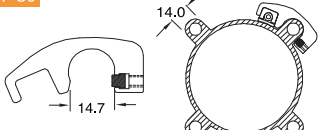
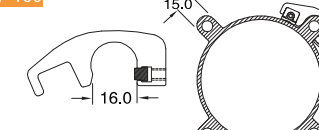
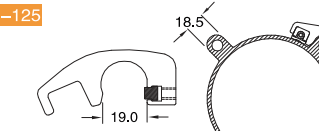
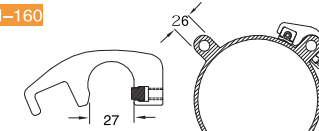
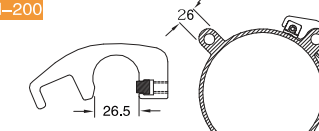
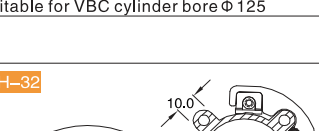
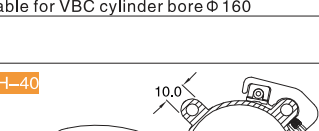
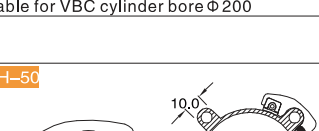
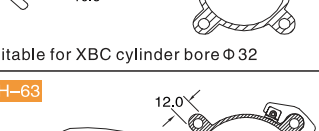
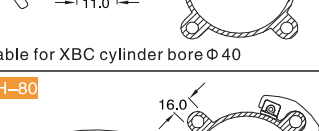
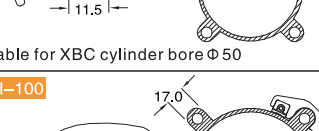


Type	HX-65D	HX-65N	HX-65P	HX-65R
Connect Diagram				
Parameter				
Wiring method	2-Wire Type	3-Wire Type		2-Wire Type
Switching logic	Electronic no contact type N.O.			SPST Normally Open
Sensor type	None contact type	NPN type (Input)	PNP type (Output)	Reed switch
Operating voltage	10-28V DC	5 - 30V DC		5-240V DC/AC
Max. switching current	50mA max	200mA max.		100mA max.
Contact rating	1.4 W max	6W max.		10W max.
Current consumption	40 μ Amax @24V	8mAmax@24V DC (Switch Active)		None
Voltage drop	2.8 V max.	1 V max.@200mA DC		2.5 V max.
Leakage current	90 μ Amax @28V	0.01mA max.		None
Indicator	Red LED			
Max. exchange frequency	1000Hz			200Hz
Temperature range	-10 - 70℃			
Shock	50G			30G
Vibration	9G			
Enclosure classification	IEC 529 IP67 (NEMA 6)			
Protection circuit	2、4	3、4		1
Cable	2.6 Φ ,2C,Black color,oil resistance PVC	2.6 Φ ,3C,Black color,oil resistance PVC		2.6 Φ ,2C,Black color,oil resistance PVC
Switch sensitive		40-750G		70G

IH/UH Bracket

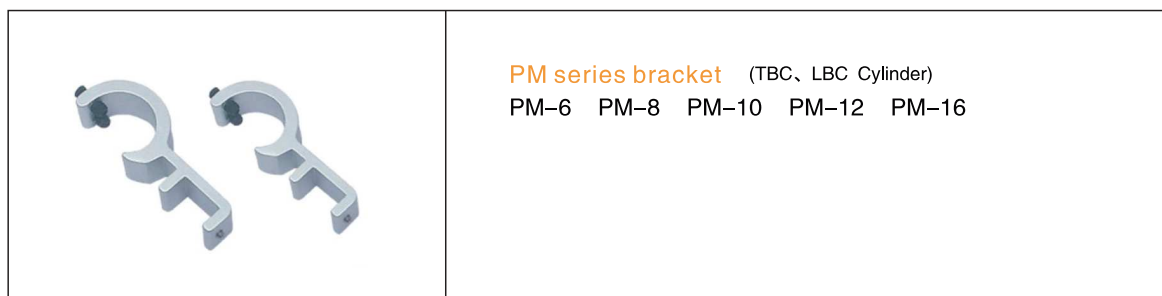
Dimension

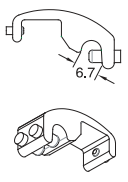
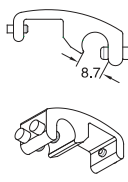
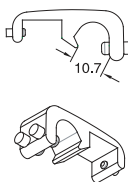
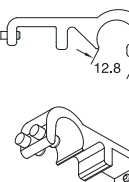
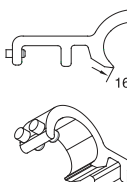
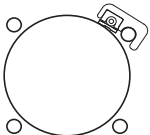
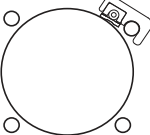
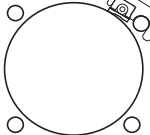
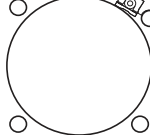
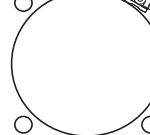
	IH series bracket (VBC profile barrel) IH-32 IH-40 IH-50 IH-63 IH-80 IH-100 IH-125 IH-160 IH-200 UH series bracket (XBC profile barrel) UH-32 UH-40 UH-50 UH-63 UH-80 UH-100
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IH-32  Suitable for VBC cylinder bore Φ 32	IH-40  Suitable for VBC cylinder bore Φ 40	IH-50  Suitable for VBC cylinder bore Φ 50
IH-63  Suitable for VBC cylinder bore Φ 63	IH-80  Suitable for VBC cylinder bore Φ 80	IH-100  Suitable for VBC cylinder bore Φ 100
IH-125  Suitable for VBC cylinder bore Φ 125	IH-160  Suitable for VBC cylinder bore Φ 160	IH-200  Suitable for VBC cylinder bore Φ 200
UH-32  Suitable for XBC cylinder bore Φ 32	UH-40  Suitable for XBC cylinder bore Φ 40	UH-50  Suitable for XBC cylinder bore Φ 50
UH-63  Suitable for XBC cylinder bore Φ 63	UH-80  Suitable for XBC cylinder bore Φ 80	UH-100  Suitable for XBC cylinder bore Φ 100

PM Bracket

Dimension

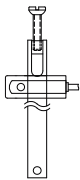
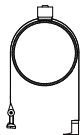
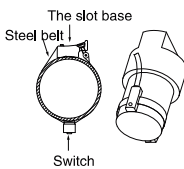
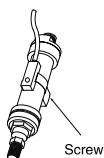


PM-6	PM-8	PM-10	PM-12	PM-16
				
				
Suitable for TBC32/40/50 LBC32/40 Diameter of tie-rod $\Phi 5 \sim \Phi 6$	Suitable for TBC63 LBC50/63 Diameter of tie-rod $\Phi 7 \sim \Phi 8$	Suitable for TBC80/100 LBC80/100 Diameter of tie-rod $\Phi 8.5 \sim \Phi 10$	Suitable for TBC125 LBC125 Diameter of tie-rod $\Phi 10.5 \sim \Phi 12$	Suitable for TBC160 LBC160/200 Diameter of tie-rod $\Phi 14 \sim \Phi 16$

PAB

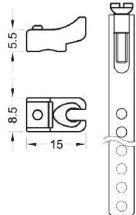
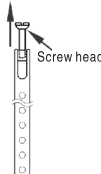
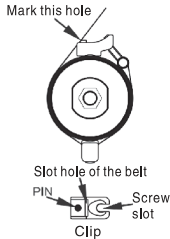
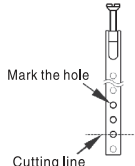
Mounting Band

◎ PAB series fixed steel belt (Fixed size for round body cylinder, HX-13 auto switch)

	Step 1	Step 2	Step 3	Step 4
	Put the magnetic switch in the steel belt. 	Get around the steel belt and magnetic switch. 	Insert the steel belt into the slot, adjust the release of the switch, tighten the screw on the steel belt. 	After adjusting the position of magnetic switch, fixed steel belt 
PAB - S 2 0 Bore S: The Round Barrel Cylinder (stainless steel material) Applicable to bore: 06、08、10、12、16、20、25、32、40、50、63 A: The Round Barrel Cylinder (alluminum alloy material) Applicable to bore: 16、20、25、32、40				

Note: This steel belt cannot be used in EG series round cylinder

◎ PAB-13 series mounting band (Universal for HX-13 auto switch)

	PAB-13; Suitable for Φ6 ~ Φ63	Step 1	Step 2	Step 3	Step 4
		1. Loosen the screw on the steel belt first 2. Make sure that three to four circle of thread at the bottom of the screw is still in the nut	1. Get the steel belt through the hole at the bottom of HX-13 2. Put the screw head into the slot of the clip 3. Get the steel belt around the cylinder as below picture, then tighten the steel belt 4. Mark on the round hole of the nearest PIN of the belt	1. Loosen the steel belt 2. Mark the hole as below picture, and cut the belt on the second hole away from the mark hole	1. Put the belt that's just been cut down into the slot hole of the steel belt 2. Put the chuck PIN onto the mark hole 3. Use the thumb to press down the steel belt along th chuck, bending the belt 4. Assemble the switch and the cylinder as below picture, then adjust the position of magnet switch, lock the screw, then you could fix it.
					 ⚠ Attention! Please don't lock the screw with too much force, otherwise might cause damage on magnet switch or cylinder.