

☉ Magnet Switch Table

For Cylinder Model	Bore size Φ20-100 (Front face installation)	Two wire electronic type	Three wire electronic NPN type	Three wire electronic PNP type	Two wire reed switch type	Reed Switch Photo
SD	Full series	HX-01D	HX-01N	HX-01P	HX-01R	
SE/SHY/SHZ/ESWT						
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 speed	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

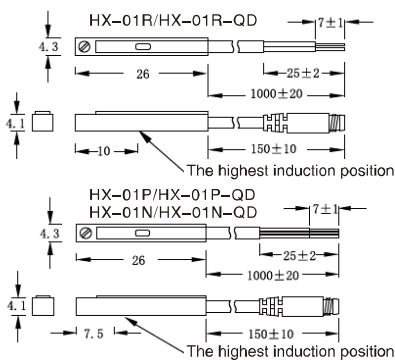
Magnet Switch



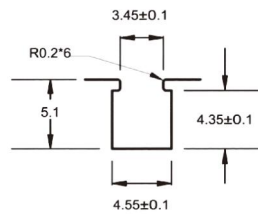
How to Order?

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 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

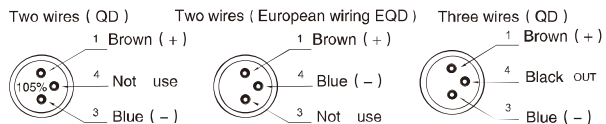


Groove Dimension



Suitable for cylinder:
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 μA 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 μA 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	2,6Φ,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

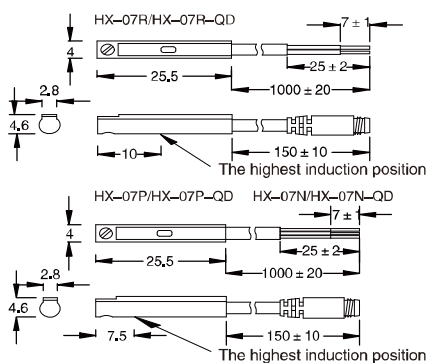
HX-07 Magnet Switch



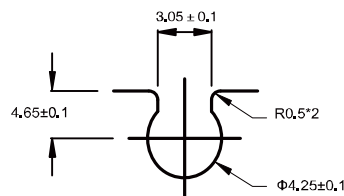
How to Order?

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 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

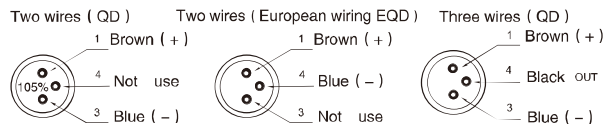


Groove Dimension



Suitable for cylinder:
 SQ/SQM/EU/EUK/
 EUM/EUP/SF/SFM/
 SQK/SG//EMQ/ELS/
 ELQ/EXH/ESWT
 *SHY/SHZ(except Φ10)

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 μA 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 μA 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	2.6Φ, 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

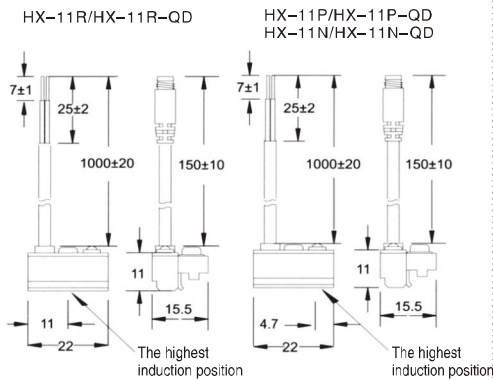
Magnet Switch



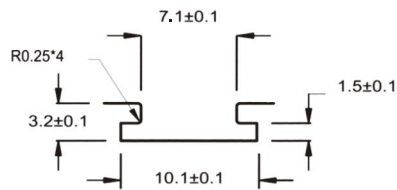
How to Order?

HX	-	11	-	D	-	2M
Product code		Series NO.		Switch Type		Wirelength
				D: Two wire without contact switch		2M:2M
				N: NPN type		5M:5M
				P: PNP type		10M:10M
				R: Two wire reed switch	
						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

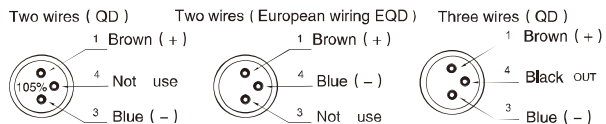
Dimension



Groove Dimension



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 μA max @ 24V	20mA max @ 24V (Switch Active)		None
Voltage drop	2.8 V max.	1 V max. @ 200mA DC		2.5 V max.
Leakage current	90 μA 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	3,3 φ, 2C, Black color, oil resistance PVC	3,3 φ, 3C, Black color, oil resistance PVC		3,3 φ, 2C, Gray color, oil resistance PVC
Switch sensitive		40-750G		40-50G

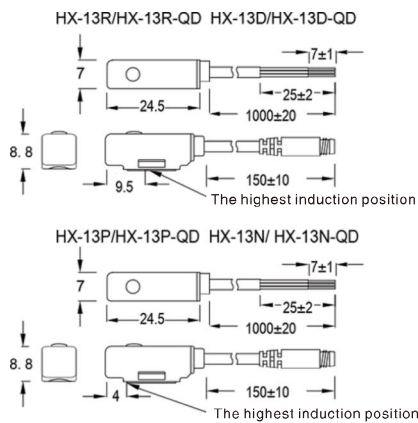
HX-13 Magnet Switch



How to Order?

HX	-	13	D	-	2M	-	A	-	20																														
Product code		Series NO.	Switch Type		Wire length		Bore material		Bore code																														
			D: Two wire without contact switch N: NPN type P: PNP type R: Two wire reed switch		2M: 2M 5M: 5M 10M: 10M		Blank: No binding belt A: Aluminum alloy barrel (with binding belt) S: Stainless steel barrel (with binding belt)		<table border="1"> <thead> <tr> <th>Bore material</th> <th>Bore code</th> </tr> </thead> <tbody> <tr><td>Aluminum alloy barrel</td><td>16: Bore16mm</td></tr> <tr><td></td><td>20: Bore20mm</td></tr> <tr><td></td><td>25: Bore25mm</td></tr> <tr><td></td><td>32: Bore32mm</td></tr> <tr><td></td><td>40: Bore40mm</td></tr> <tr><td>Stainless steel barrel</td><td>06: Bore06mm</td></tr> <tr><td></td><td>08: Bore08mm</td></tr> <tr><td></td><td>10: Bore10mm</td></tr> <tr><td></td><td>12: Bore12mm</td></tr> <tr><td></td><td>16: Bore16mm</td></tr> <tr><td></td><td>20: Bore20mm</td></tr> <tr><td></td><td>25: Bore25mm</td></tr> <tr><td></td><td>32: Bore32mm</td></tr> <tr><td></td><td>40: Bore40mm</td></tr> </tbody> </table>	Bore material	Bore code	Aluminum alloy barrel	16: Bore16mm		20: Bore20mm		25: Bore25mm		32: Bore32mm		40: Bore40mm	Stainless steel barrel	06: Bore06mm		08: Bore08mm		10: Bore10mm		12: Bore12mm		16: Bore16mm		20: Bore20mm		25: Bore25mm		32: Bore32mm		40: Bore40mm
Bore material	Bore code																																						
Aluminum alloy barrel	16: Bore16mm																																						
	20: Bore20mm																																						
	25: Bore25mm																																						
	32: Bore32mm																																						
	40: Bore40mm																																						
Stainless steel barrel	06: Bore06mm																																						
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Dimension

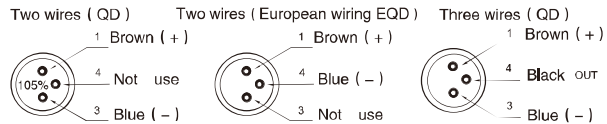


Installation

Detailed mounting method refer to page 3.175-3.177

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 μA 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 μA 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	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

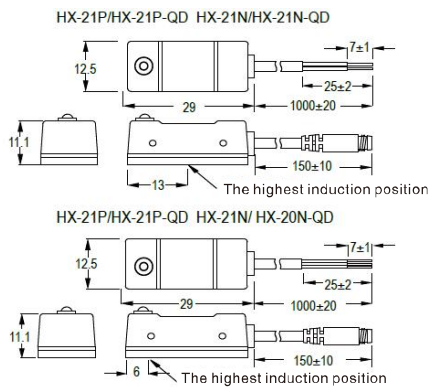
HX-21 Magnet Switch



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 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

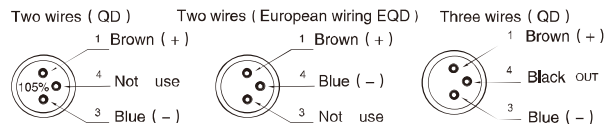


Installation

Detailed mounting method refer to page 3.175-3.177

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	3,8Φ,2C,White color,oil resistance PVC	3,8Φ,3C,Black color,oil resistance PVC		3,8Φ,2C,Gray color,oil resistance PVC
Switch sensitive		40-750G		55-65G

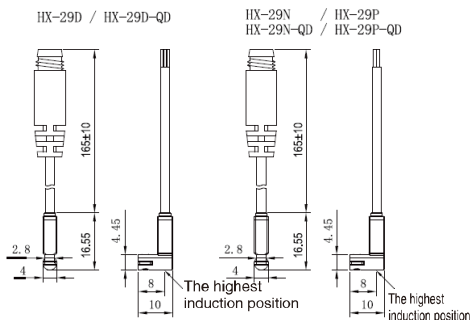
HX-29 Magnet Switch



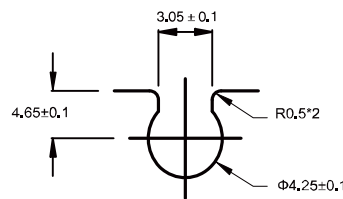
How to Order?

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 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

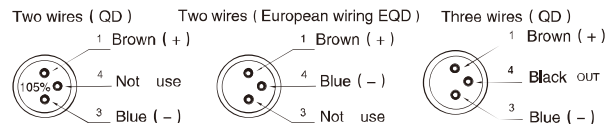


Groove Dimension



Suitable for cylinder:
SQ/SQM/EU/EUK/
EUM/EUP/SF/SFM/
SQK/SG//EMQ/ELS/
ELQ/EXH/ESWT
*SHY/SHZ(except Φ 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 μA max @ 24V	8mA max @ 24V (Switch Active)	
Voltage drop	2.8 V max.	1 V max. @ 200mA DC	
Leakage current	90 μA max @ 28V	0.01mA max.	
Indicator	Red LED		
Max. exchange frequency	1000Hz		
Temperature range	-10 - 70°C		
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-29

HX-31

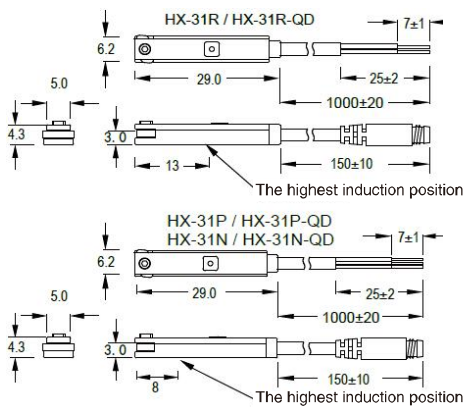
Magnet Switch



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 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

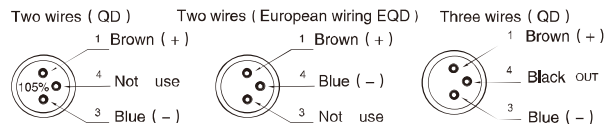


Groove Dimension



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

M8/M12 male wiring diagram



Connect 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 μA 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 μA 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	2,9φ,2C,White color,oil resistance PVC	2,9φ,3C,Black color,oil resistance PVC		2,9φ,2C,Gray color,oil resistance PVC
Switch sensitive		40-750G		40G

HX-65

Magnet Switch



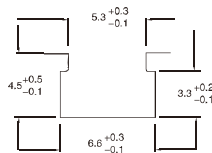
How to Order?

HX	-	65	D	-	2M
Product code		Series NO.	Switch Type R: Two wire reed switch		Wire length 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

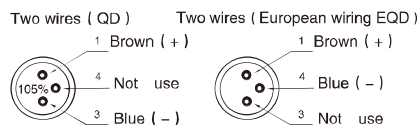
Dimension

Groove Dimension



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

M8/M12 male wiring diagram



Type	HX-65R
Connect Diagram	
Parameter	
Wiring method	2-Wire Type
Switching logic	SPST Normally Open
Sensor type	Reed switch
Operating voltage	5-240V DC/AC
Max. switching current	100mA max.
Contact rating	10W max.
Current consumption	None
Voltage drop	2.5 V max.
Leakage current	None
Indicator	Red LED
Max. exchange frequency	200Hz
Temperature range	-10 ~ 70°C
Shock	30G
Vibration	9G
Enclosure classification	IEC 529 IP67 (NEMA 6)
Protection circuit	1
Cable	2.6 Φ, 2C, Black color, oil resistance PVC
Switch sensitive	70G