



# SCORPION

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NFPA 1309 Series



# SCORPION

## NFPA 1309 series



### Characteristics

- Standard with Magnetic Piston
- Double Acting Cylinder
- Anodized Aluminium Tubing
- Standard with Cushions
- Optional Stainless steel head screws available
- Stainless Steel Tie Rod
- Standard delivery 2 or 3 days on average
- Production in Granby, Qc, Canada

### Specifications

Model	1309 series				
Bore	1 1/2"	2"	2 1/2"	3 1/4"	4"
Port size	NPT 3/8			NPT 1/2	
Fluid	Air				
Operating pressure range	5 to 150 PSI				
Temperature	-5 to 60 C (no freezing)				
Sensor switch (page 10)	1580 series				
Sensor switch bracket (page 11)	1309.A	1309.B	1309.C		



## How to order

Create your order number

1309. A . B . C \_ \_ \_

Choose A-B-C between these options

### A= Bore

150 (for 1-1/2")  
 200 (for 2")  
 250 (for 2-1/2")  
 325 (for 3-1/4")  
 400 (for 4")

### B= Stroke

2 First Digits = Inch  
 2 Last Digits = (Thousandth)

### C= Options

01= Standard Version / Male Thread / Magnetic  
 01X = Standard Version / Male Thread / Magnetic / Stainless Steel rod  
 01XX = Standard version / Male Thread / Magnetic / Stainless Steel rod and Head Screw  
 02= Push-Pull Version / Male Thread / Magnetic  
 02X = Push-Pull Version / Male Thread / Magnetic / Stainless Steel rod  
 02XX = Push-Pull Version / Male Thread / Magnetic / Stainless Steel rod and Head Screw  
 OR= Oversize Rod Version / Male Thread / Magnetic  
 ORX = Oversize Rod Version / Male Thread / Magnetic / Stainless Steel rod  
 ORXX = Oversize Rod Version / Male Thread / Magnetic / Stainless Steel rod and Head Screw

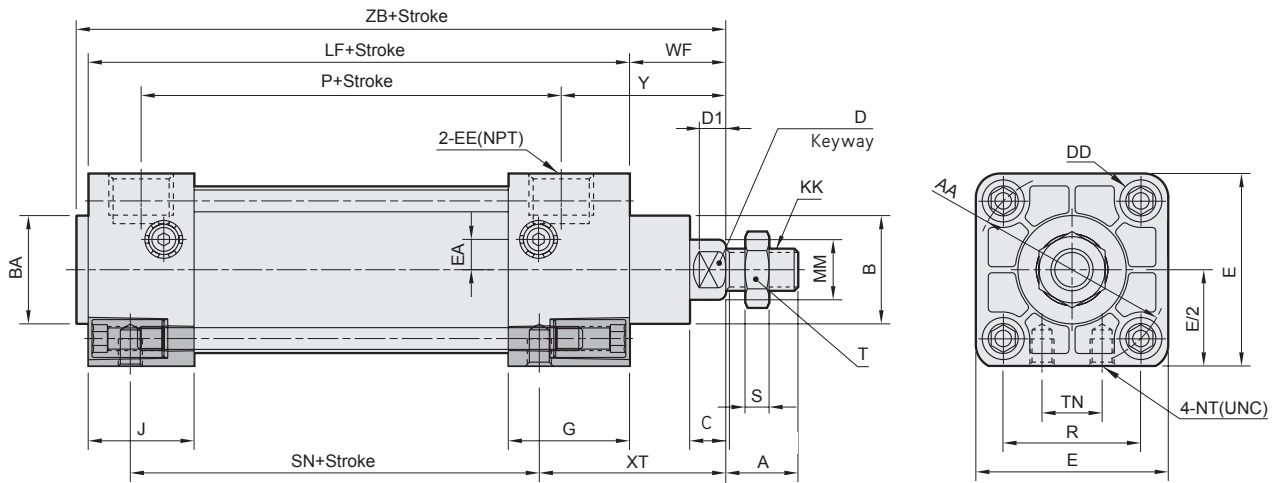
**EXAMPLE:** For a Bore 4", Stroke 2-1/2  
 Order # is 1309.400.0250.01



# SCORPION

NFPA 1309 series

STANDARD VERSION  
DIMENSIONS  $\phi 1\ 1/2'' \sim \phi 4''$



Dimensions(In) Bore(In)	A	AA	B	BA	C	D	D1	DD	E	EA	EE	G	J	KK	LF	MM	NT	P	R
1-1/2	0.75	2.02	1.125	1.125	0.375	0.56	0.3	1/4-28	2	0.32	3/8	1.26	1.10	7/16-20	3.625	0.625	1/4-20x0.28 dp	2.36	1.43
2	0.75	2.60	1.125	1.125	0.375	0.56	0.3	5/16-24	2.5	0.43	3/8	1.26	1.06	7/16-20	3.625	0.625	5/16-18x0.44 dp	2.40	1.84
2-1/2	0.75	3.10	1.125	1.125	0.375	0.56	0.3	5/16-24	3	0.47	3/8	1.30	1.06	7/16-20	3.75	0.625	3/8-16x0.59 dp	2.48	2.19
3-1/4	1.125	3.90	1.5	1.5	0.5	0.88	0.4	3/8-24	3.75	-	1/2	1.57	1.18	3/4-16	4.25	1	1/2-13x0.63 dp	2.72	2.76
4	1.125	4.70	1.5	1.5	0.5	0.88	0.4	3/8-24	4.5	-	1/2	1.57	1.18	3/4-16	4.25	1	1/2-13x0.63 dp	2.72	3.32

Dimensions (In) Bore (In)	S	SN	T	TN	WF	XT	Y	ZB
1-1/2	0.26	2.25	0.69	0.63	1	1.94	1.71	4.75
2	0.26	2.25	0.69	0.88	1	1.94	1.71	4.75
2-1/2	0.26	2.38	0.69	1.25	1	1.94	1.75	4.88
3-1/4	0.42	2.63	1.12	1.50	1.38	2.44	2.34	5.83
4	0.42	2.63	1.12	2.06	1.38	2.44	2.34	5.83

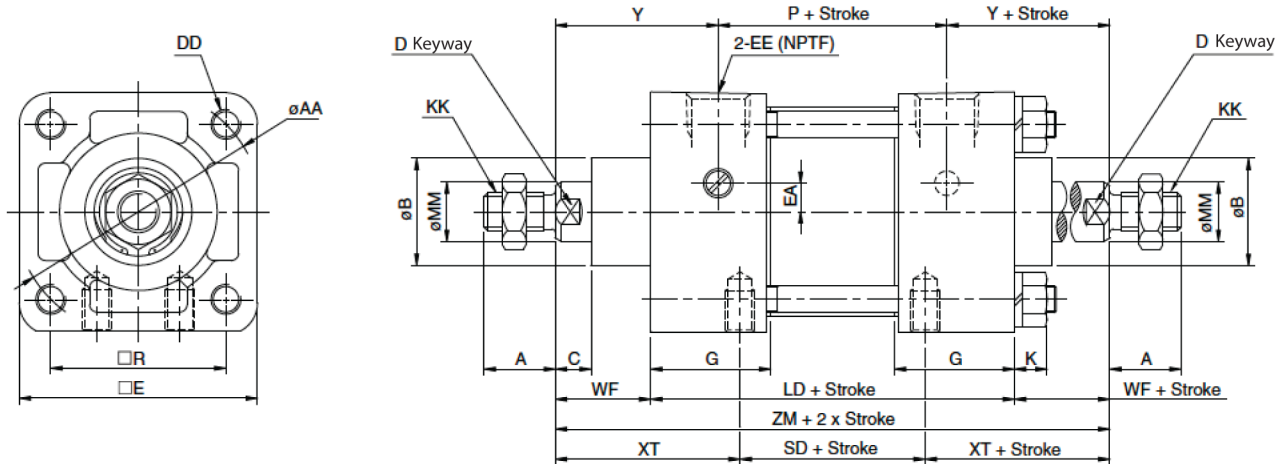
\*Larger bore sizes available upon request



# SCORPION

NFPA 1309 series

PUSH-PULL VERSION



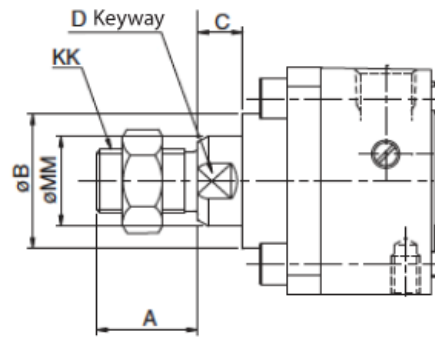
Bore (In)	MM	KK	A	AA	B	C	D	DD	E	EA	EE	G	LD	P	R	WF	Y	ZM	XT	SD
1 -1/2	0.625	7/16-20	0.75	2.02	1.125	0.375	0.56	1/4-28	2	0.32	3/8	1.26	3.78	2.36	1.43	1	1.71	5.78	1.94	1.9
2	0.625	7/16-20	0.75	2.60	1.125	0.375	0.56	5/16-24	2.5	0.43	3/8	1.26	3.82	2.40	1.84	1	1.71	5.82	1.94	1.94
2-1/2	0.625	7/16-20	0.75	3.10	1.125	0.375	0.56	5/16-25	3	0.47	3/8	1.30	3.98	2.48	2.19	1	1.75	5.98	1.94	2.1
3-1/4	1	3/4-16	1.125	3.90	1.5	0.5	0.88	3/8-24	3.75	0	1/2	1.57	4.64	2.72	2.76	1.375	2.34	7.40	2.44	2.52
4	1	3/4-16	1.125	4.70	1.5	0.5	0.88	3/8-24	4.5	0	1/2	1.57	4.64	2.72	3.32	1.375	2.34	7.40	2.44	2.52



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NFPA 1309 series

OVERSIZED ROD VERSION



Bore (In)	MM	KK	A	B	C	D
2	1	3/4-16	1.125	1.5	0.5	0.875
2-1/2	1	3/4-16	1.125	1.5	0.5	0.875
3-1/4	1.375	1-14	1.625	2	0.625	1.25
4	1.375	1-14	1.625	2	0.625	1.25

\* Special front fixing bracket for oversize rod.



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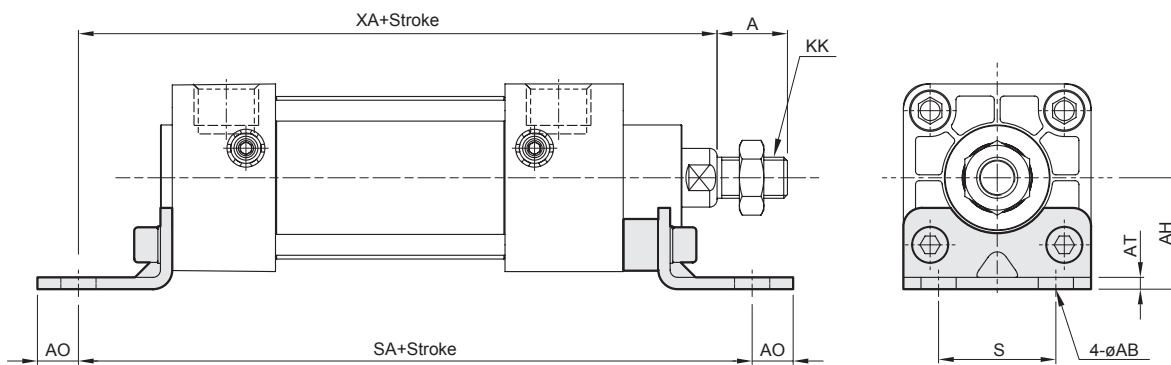
## NFPA 1309 series

## MOUNTING ACCESSORIES $\varnothing 1\ 1/2'' \sim \varnothing 4''$

### Accessories

Model	05/1F	09/1F	09F-MP1	09F	03F/04F	13F

### Foot MS1 / Ordering Code: 1309.Ø.05/1F



Dimensions (In) Bore (In)	A	AB	AH	AT	AO	KK	S	SA	XA
1-1/2	0.75	0.38	1.19	0.3	0.44	7/16-20	1.25	6	5.63
2	0.75	0.38	1.44	0.13	0.56	7/16-20	1.75	6	5.63
2-1/2	0.75	0.38	1.63	0.13	0.56	7/16-20	2.25	6.13	5.75
3-1/4	1.125	0.5	1.94	0.17	0.75	3/4-16	2.75	7.38	6.88
4	1.125	0.5	2.25	0.23	0.75	3/4-16	3.5	7.38	6.88

\* Foot bracket for oversize rod version : Not available

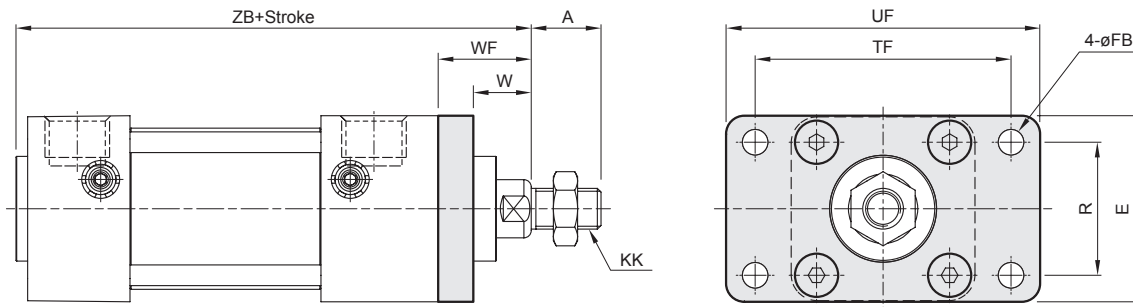


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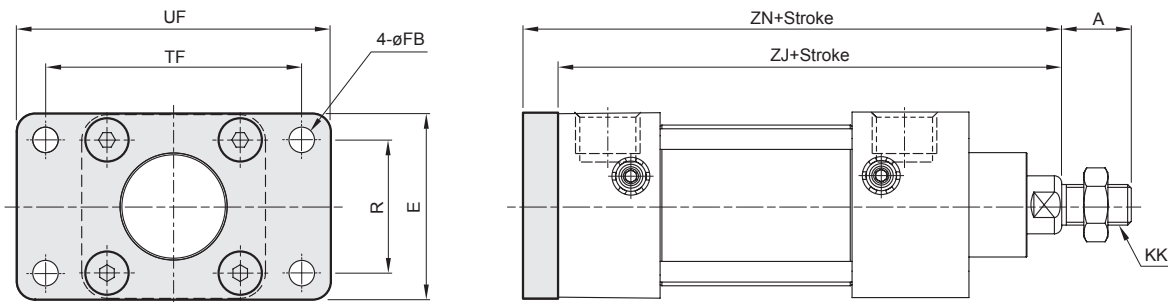
NFPA 1309 series

MOUNTING ACCESSORIES  $\varnothing 1\ 1/2'' \sim \varnothing 4''$

## Front flange MF1 / Ordering Code: 1309. Ø. 03F



## Rear flange / Ordering Code: 1309. Ø. 04F



Dimensions (In) Bore (In)	A	E	FB	KK	R	TF	UF	W	WF	ZB	ZJ	ZN
1-1/2	0.75	2	0.25	7/16-20	1.43	2.75	3.38	0.63	1	4.75	4.63	5
2	0.75	2.5	0.31	7/16-20	1.84	3.38	4.13	0.63	1	4.75	4.63	5
2-1/2	0.75	3	0.31	7/16-20	2.19	3.88	4.63	0.63	1	4.88	4.75	5.13
3-1/4	1.125	3.75	0.38	3/4-16	2.76	4.68	5.50	0.75	1.38	5.83	5.63	6.25
4	1.125	4.5	0.38	3/4-16	3.32	5.44	6.25	0.75	1.38	5.83	5.63	6.25

\* Front flange for oversize rod version : Available using ordering code 1309. Ø. 03F.OR

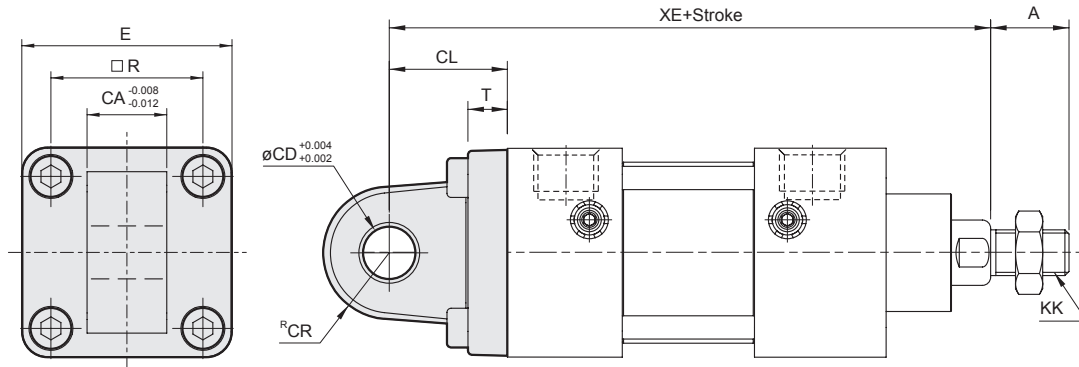


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NFPA 1309 series

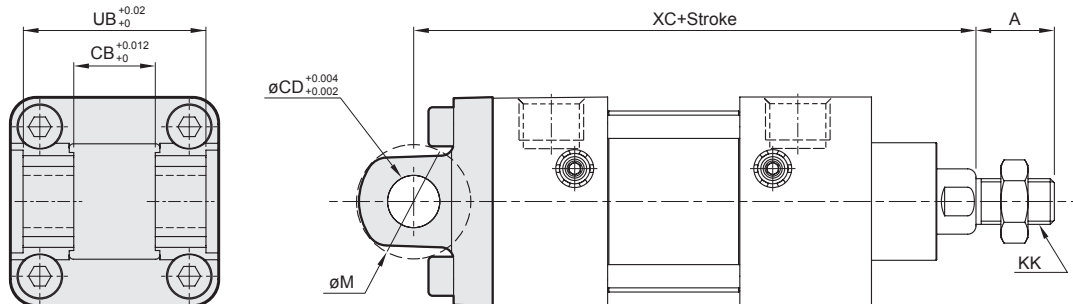
MOUNTING ACCESSORIES  $\varnothing 1\ 1/2'' \sim \varnothing 4''$

## Rear male clevis MP4/ Ordering Code: 1309. Ø. 09/1F



Dimensions (In) Bore (In)	A	CA	CD	CL	CR	E	KK	R	T	XE
1-1/2	0.75	0.75	0.5	1.125	0.63	2	7/16-20	1.43	0.375	5.75
2	0.75	0.75	0.5	1.125	0.63	2.5	7/16-20	1.84	0.375	5.75
2-1/2	0.75	0.75	0.5	1.125	0.63	3	7/16-20	2.19	0.375	5.88
3-1/4	1.125	1.25	0.75	1.875	0.87	3.75	3/4-16	2.76	0.625	7.5
4	1.125	1.25	0.75	1.875	0.87	4.5	3/4-16	3.32	0.625	7.5

## Double Rear male MP1 / Ordering Code: 1309. Ø. 09F



Dimensions (In) Bore (In)	A	CB	CD	KK	M	UB	XC
1-1/2	0.75	0.78	0.5	7/16-20	1.24	1.75	5.38
2	0.75	0.78	0.5	7/16-20	1.24	1.75	5.38
2-1/2	0.75	0.78	0.5	7/16-20	1.24	1.75	5.50
3-1/4	1.125	1.28	0.75	3/4-16	1.88	2.5	6.88
4	1.125	1.28	0.75	3/4-16	1.88	2.5	6.88



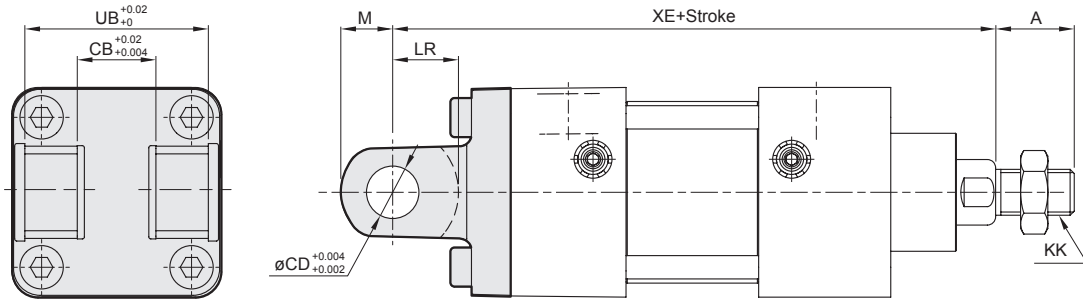


# SCORPION

NFPA 1309 series

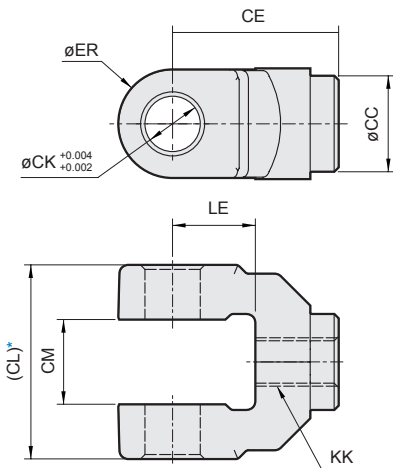
MOUNTING ACCESSORIES  $\varnothing 1\ 1/2'' \sim \varnothing 4''$

## Double Rear clevis MP2 / Ordering Code: 1309. $\varnothing$ . 09F



Dimensions (In) Bore (In)	A	CB	CD	KK	LR	M	UB	XE
1-1/2	0.75	0.75	0.5	7/16-20	0.63	0.5	1.75	5.75
2	0.75	0.75	0.5	7/16-20	0.63	0.5	1.75	5.75
2-1/2	0.75	0.75	0.5	7/16-20	0.63	0.5	1.75	5.88
3-1/4	1.125	1.25	0.75	3/4-16	1	0.75	2.5	7.5
4	1.125	1.25	0.75	3/4-16	1	0.75	2.5	7.5

## Fork / Ordering Code: 1309. $\varnothing$ . 13F



Dimensions (In) Bore (In)	CC	CE	CL	CM	CK	ER	KK	LE
1-1/2 to 2-1/2	0.87	1.5	1.75	0.765	0.5	1	7/16-20	0.75
3-1/4 to 4	1.34	2.38	2.5	1.265	0.75	1.5	3/4-16	1.25



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## Sensor Switch

### Sensor with 2.5m. cable

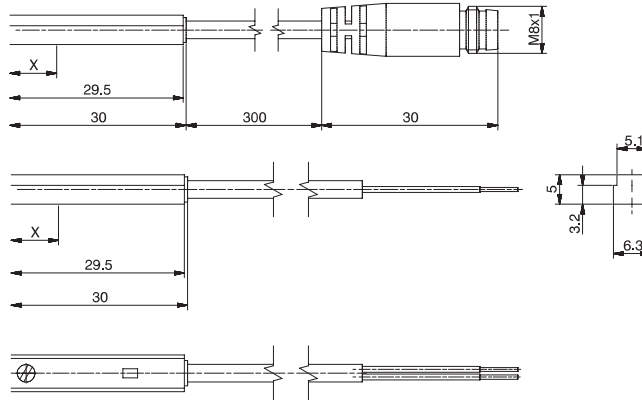


Weight g 27

### Sensor with cable and M8 connector



Weight g 15



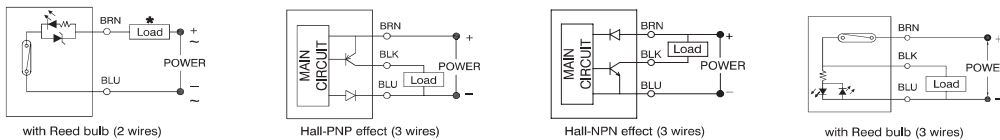
### Reed sensors, with led, Universal, N.O. (Normally open)

Ordering Code	Description	X = point of communication (mm)
1580.U	(2 wires) cable 2.5 mt.	15
MRS.U	(2 wires) cable 300 mm, M8 connector (use MC1 or MC2 connectors)	15
1580.UAP	PNP (3 wires) cable 2.5 mt.	15
MRS.UAP	PNP (3wires) cable 300 mm, M8 connector (use MCH1 or MCH2 connectors)	15

### Hall effect sensors, with led, D.C, N.O. (Normally open)

Ordering Code	Description	X = point of communication (mm)
1580.HAP	PNP (3 wires) cable 2.5 mt.	8
1580.HAN	NPN (3 wires) cable 2.5 mt.	8
MHS.P	PNP (3 wires) cable 300mm, M8 connector (use MCH1 or MCH2 connectors)	8

### Diagrams and connections



with Reed bulb (2 wires)

Hall-PNP effect (3 wires)

Hall-NPN effect (3 wires)

with Reed bulb (3 wires)

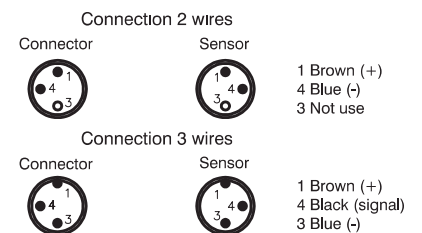
\* The load (LOAD) can be connected either to negative or positive pole

Technical characteristics	1580.U	MRS.U	1580.UAP	MRS.UAP	1580.HAP	1580.HAN	MHS.P
Type of contact	N.O.						
Output type	PNP			NPN PNP			
Maximum current	100 mA						
Maximum permanent power	14 VA - 10W		4 VA- 3W		3W		
Voltage range	5-230 V DC/AC		10-30 V DC/AC		10-30 V DC		
Working temperature	- 10 C to 70 C						
Maximum voltage drop	3.5 V		0 V **		2V		
Cable section (mm)	2 x 0.14 ø 3.3 mm PUR		3 x 0.14 ø 3.3 mm PUR		3 x 0.14 ø 3.3 mm PUR		
Degree of protection	IP 67						



- MC1 cable 2 wires l=2.5m with M8 connector
- MC2 cable 2 wires l=5m with M8 connector
- MC3 cable 2 wires l=10m with M8 connector

- MCH1 cable 3 wires l=2.5m with M8 connector
- MCH2 cable 3 wires l=5m with M8 connector
- MCH3 cable 3 wires l=10m with M8 connector

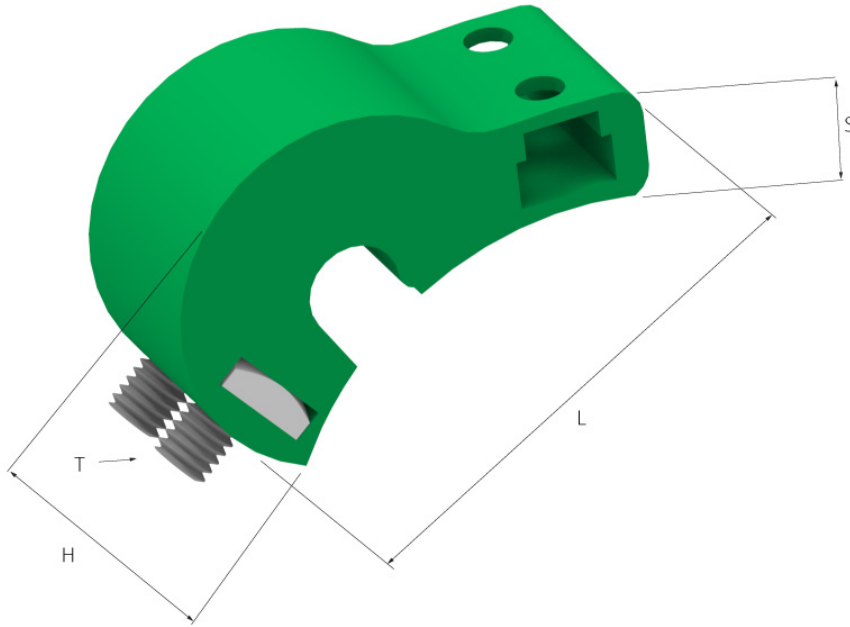




# SCORPION

NFPA 1309 series

Sensor Switch Bracket



Ordering Code	H	L	S	T
1309.A	0.772	1.27	0.295	M4
1309.B	0.872	1.33	0.488	M4
1309.C	0.872	1.33	0.400	M4