

Round Cylinder

Series *UARD*

Bore size mm(inch) : $\phi 32(1\frac{1}{4})$, $\phi 40(1\frac{1}{2})$, $\phi 50(2)$, $\phi 63(2\frac{1}{2})$



- COMPACT DESIGN
- HIGH SPEED ACTUATOR
- STANDARD RUBBER BUMPER
(AIR CUSHION OPTIONAL)
- LIGHTWEIGHT
- BUILT-IN MAGNET FOR AUTO SWITCH

How To Order

UARD **B** **A** **40** — **0400** — **W5**

1
 2
 3
 4
 5
 6
 7

1 Round Cylinder
* (Built-in Magnet, Bumper, Non-lube standard)

2 Mounting
B : Basic type

3 Cushion
Blank : Rubber Cushion
A : Air Cushion

4 Bore Size(inch)
32 : 32mm (1 $\frac{1}{4}$)
40 : 40mm (1 $\frac{1}{2}$)
50 : 50mm (2)
63 : 63mm (2 $\frac{1}{2}$)

5 Stroke(inch×100)
Example $\left[\begin{array}{l} 0400 : 4'' \\ 0250 : 2\frac{1}{2}'' \end{array} \right.$

6 Applicable Reed Switch Auto Switch

Blank : Without Auto Switch
(Cylinder with built-in Magnet)

Reed Switch
W5(2wire DC24V, AC 100V)
Band mounted type
※ Standard Lead 1m
(upto 3m optional)

7 Number of Switches

Blank : 2 pcs.
S : 1 pc.
n : n pcs.

Standard Stroke

Bore size(inch)	Part No.
$\phi 32(1\frac{1}{4})$	1, 2, 3, 4, 5, 6
$\phi 40(1\frac{1}{2})$	1, 2, 3, 4, 5, 6, 8
$\phi 50(2)$	1, 2, 3, 4, 5, 6, 8, 10, 12
$\phi 63(2\frac{1}{2})$	1, 2, 3, 4, 5, 6, 8, 10, 12

Part No. for Auto Switch Mounting Band

Bore size	Part No.
$\phi 32(1\frac{1}{4})$	BM-032
$\phi 40(1\frac{1}{2})$	BM-040
$\phi 50(2)$	BM-050
$\phi 63(2\frac{1}{2})$	BM-063

Specifications

Fluid	Air	
Proof Pressure	220PSI (15kgf/cm ²)	
Max. Operation Pressure	150PSI (9.9 kgf/cm ²)	
Min. Operation Pressure	8PSI (0.5 kgf/cm ²)	
Ambient and Fluid Temperature	14~140°F (5~ 60℃)	
Lubrication	None(Non-Lube)	
Piston Speed	1.9~40inch/sec (50~1000 mm/sec)	
Stroke Tolerance (inch)	~40st: $^{+0.058}_0$ ~47st: $^{+0.071}_0$	
Thread Tolerance	KS 2 Class	
Cushion	Rubber Cushion	Air Cushion

ACP

UACP

AX

AS

AM

AL
ALX

UARD

UAQ

AJ

AG

UAG

ADM

ADR

AMR

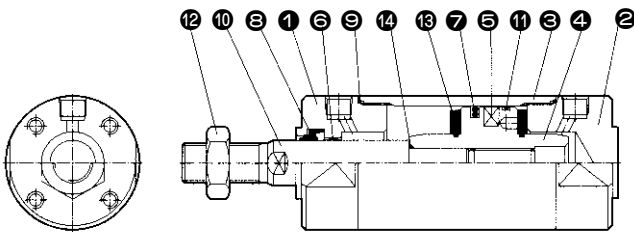
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AST

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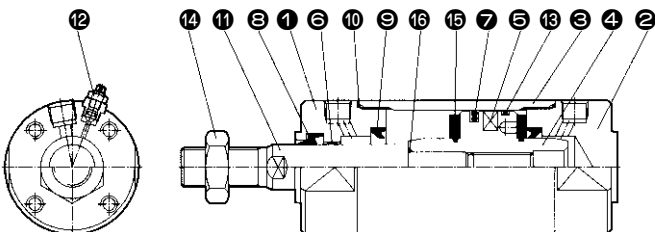
Construction/Parts List

UARD $\phi 32 \sim \phi 63$ (Rubber Cushion Type)



No.	Description	Material	Note
14	Piston Gasket	NBR	
13	Bumper	Urethane	
12	Rod End Nut	Rolled Steel	
11	Wear Ring	-	
10	Piston Rod	Carbon Steel	
9	Tube Gasket	NBR	
8	Rod Packing	NBR	
7	Piston Packing	NBR	
6	Rod Bushing	Lead Bronze Casting	
5	Magnet	Ba Ferrite + NBR	
4	Piston	Al	
3	Cylinder Tube	Al	
2	Head Cover	Al	
1	Rod Cover	Al	

UARDA $\phi 32 \sim \phi 63$ (Air Cushion Type)



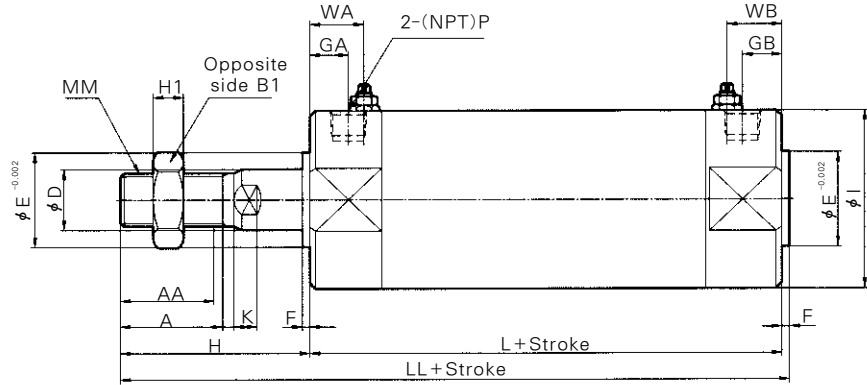
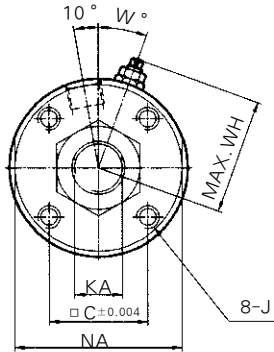
No.	Description	Material	Note
16	Piston Gasket	-	NBR
15	Bumper	Urethane	
14	Rod End Nut	Rolled Steel	
13	Wear Ring	-	
12	Cushion Valve Ass'y		
11	Piston Rod	Carbon Steel	
10	Tube Gasket	NBR	
9	Cushion Packing	NBR	
8	Rod Packing	NBR	
7	Piston Packing	NBR	
6	Rod Bushing	Lead Bronze Casting	
5	Magnet	Ba Ferrite + NBR	
4	Piston	Al	
3	Cylinder Tube	Al	
2	Head Cover	Al	
1	Rod Cover	Al	

Series UARD

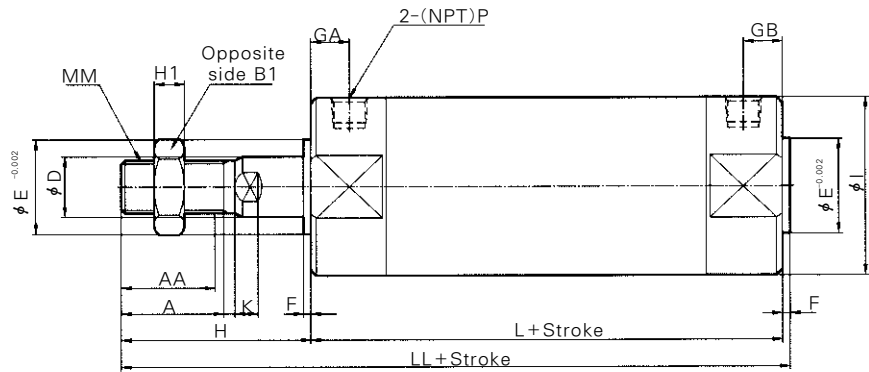
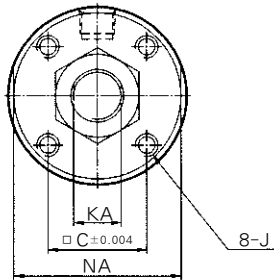
Dimensions

(inch)

Air Cushion Type

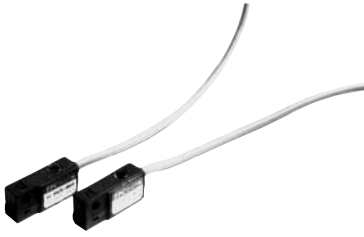


Rubber Cushion Type



(inch)

Bore size (inch)	Standard stroke Range mm (inch)	Extended stroke Range mm (inch)	AA	A	□C	φD	φE	F	GA	GB	φI	J	K	KA	MM	NA	P	L	H	LL	WA	WB	WH	W	H1	B1
φ32(1¼)	~300(12)	301~450(18)	0.77	0.87	0.79	0.48	0.71	0.08	0.48	0.48	0.67	10-32UNF	0.22	0.40	7/16-20UNF	1.42	1/8	3.23	1.57	4.88	0.48	0.48	1.12	0.98	0.24	0.67
φ40(1½)	~300(12)	301~800(32)	1.06	1.18	1.02	0.63	0.98	0.08	0.51	0.51	1.85	¼-28UNF	0.24	0.24	7/16-20UNF	1.73	1/8	3.43	1.97	5.47	0.60	0.60	1.30	0.79	0.31	0.87
φ50(2)	~300(12)	301~1200(48)	1.26	1.38	1.26	0.79	1.18	0.08	0.55	0.55	2.28	5/16-24UNF	0.28	0.71	½-20UNF	2.17	¼	4.02	2.28	6.38	0.63	0.63	1.52	0.79	0.43	1.06
φ63(2½)	~300(12)	301~1200(48)	1.26	1.38	1.50	0.79	1.26	0.08	0.55	0.55	2.83	3/8-24UNF	0.28	0.71	½-20UNF	2.72	¼	4.13	2.28	6.50	0.63	0.63	1.79	0.79	0.43	1.06



Auto Switch Specifications

Auto Switch Model	W5	
Application	Relay, Sequence Control	
Voltage	DC24V	AC110V
Range of Load Current	5~40mA	5~20mA
Protection Circuit for Contact Breaker Point	None	
Internal Voltage Drop	2.4V or less	
Indicator Lamp	ON:Red light emitting diode	

- Leakage current - None
 - Response time - 1.2 ms
 - Lead Wire - Oil proof vinyl. ϕ 3.4, 0.2mm², 2 wire(red, black), 0.5 m(0.02inch)
 - Impact Resistance - 30G
 - Insulation Resistance - 50M Ω or more under the test voltage 500VDC (Between case and cable)
 - Withstand Voltage - 1500VAC 1min(between case and cable)
 - Ambient Temperature - 40~140°F (5~60°C)
 - Protection Structure - IEC spec IP67, Water-proof(JISCO920), oil-proof.
- ※ If 3m(118 in) lead wire is required, L is put at end of model numbers.
(Example) UW5L

ACP

UACP

AX

AS

AM

AL
ALX

UARD

UAQ

AJ

AG

UAG

ADM

ADR

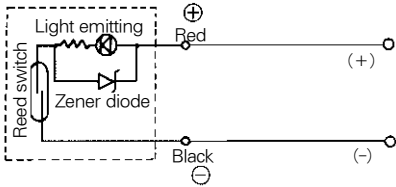
AMR

UAMR

AST

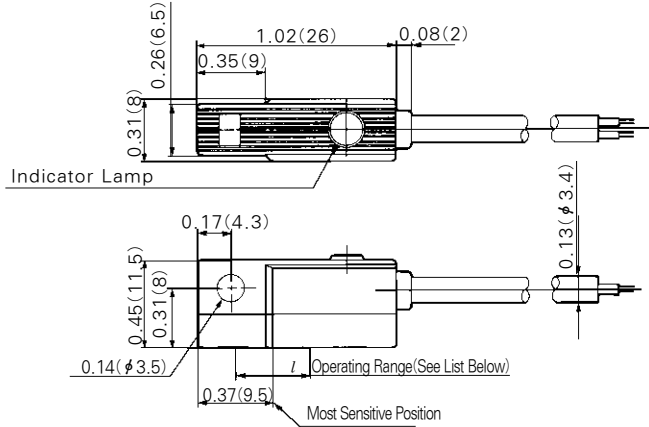
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Auto Switch/Internal Circuit



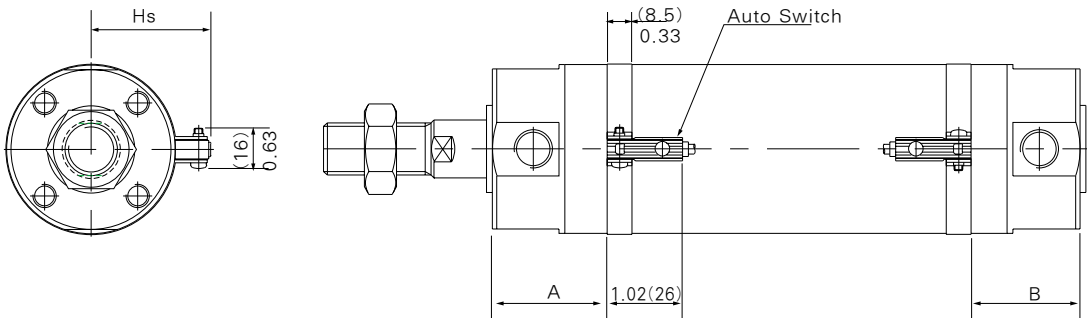
Auto Switch Dimensions

inch(mm)



Auto Switch Setting Position

inch(mm)



Auto Switch Mounting Position

(inch)

Bore size mm(inch)	W5		
	A	B	Hs
ϕ 32(1.26)	0.91	1.30	1.20
ϕ 40(1.57)	1.26	1.14	1.38
ϕ 50(1.97)	1.56	1.48	1.59
ϕ 63(2.48)	1.61	1.50	1.87

Minimum Auto Switch Mountable Stroke

(inch)

Type of Auto Switch	Number of Switch		
	With 2pcs.		With 1pc.
	Different Orientation	Same Orientation	
UW5	0.59	1.97	0.39