

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

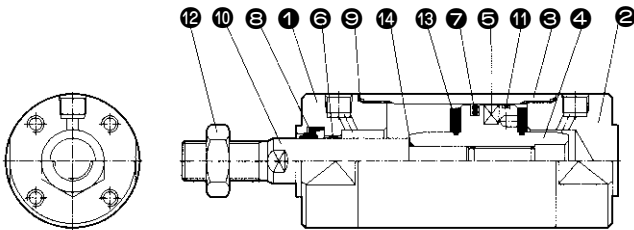
UAMR

AST

W~

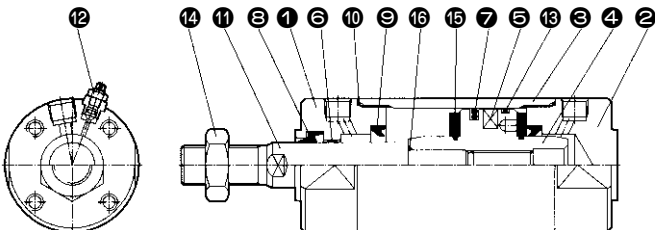
Construction/Parts List

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)



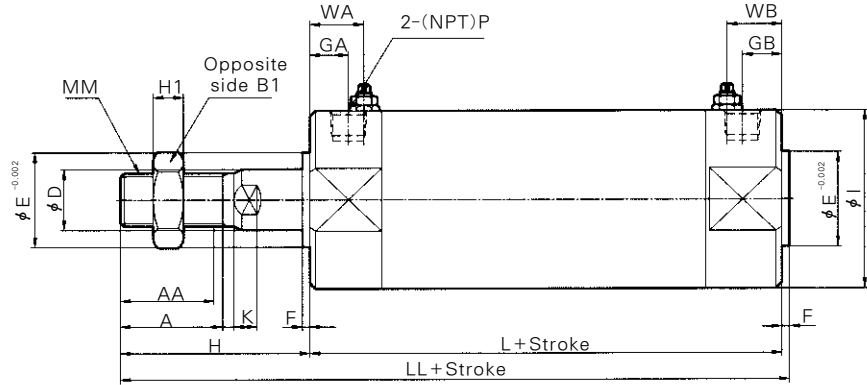
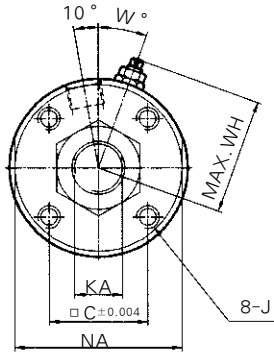
No.	Description	Material	Note
16	Piston Gasket	-	NBR
15	Bumper	Urethane	
14	Rod End Nut	Rolled Steel	
13	Wear Ring	-	
12	Cushion Valve Ass'y		
11	Piston Rod	Carbon Steel	
10	Tube Gasket	NBR	
9	Cushion Packing	NBR	
8	Rod Packing	NBR	
7	Piston Packing	NBR	
6	Rod Bushing	Lead Bronze Casting	
5	Magnet	Ba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

Series UARD

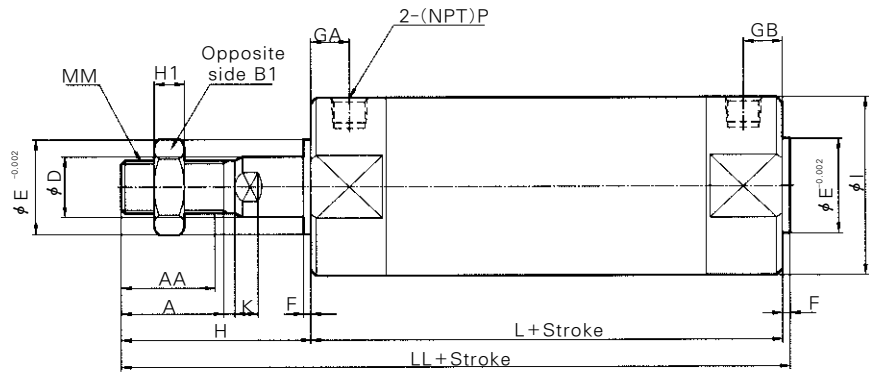
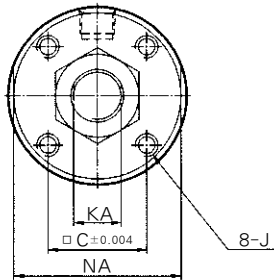
Dimensions

(inch)

Air Cushion Type

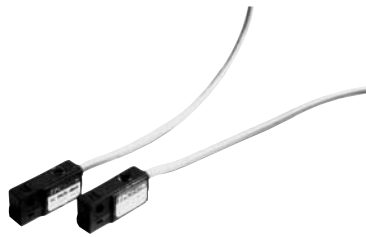


Rubber Cushion Type



(inch)

Bore size (inch)	Standard stroke Range mm (inch)	Extended stroke Range mm (inch)	AA	A	$\square C$	ϕD	ϕE	F	GA	GB	ϕI	J	K	KA	MM	NA	P	L	H	LL	WA	WB	WH	W	H1	B1
$\phi 32(1\frac{1}{4})$	~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	$\frac{7}{16}$ -20UNF	1.42	1/8	3.23	1.57	4.88	0.48	0.48	1.12	0.98	0.24	0.67
$\phi 40(1\frac{1}{2})$	~300(12)	301~800(32)	1.06	1.18	1.02	0.63	0.98	0.08	0.51	0.51	1.85	$\frac{1}{4}$ -28UNF	0.24	0.24	$\frac{7}{16}$ -20UNF	1.73	1/8	3.43	1.97	5.47	0.60	0.60	1.30	0.79	0.31	0.87
$\phi 50(2)$	~300(12)	301~1200(48)	1.26	1.38	1.26	0.79	1.18	0.08	0.55	0.55	2.28	$\frac{5}{16}$ -24UNF	0.28	0.71	$\frac{1}{2}$ -20UNF	2.17	1/4	4.02	2.28	6.38	0.63	0.63	1.52	0.79	0.43	1.06
$\phi 63(2\frac{1}{2})$	~300(12)	301~1200(48)	1.26	1.38	1.50	0.79	1.26	0.08	0.55	0.55	2.83	$\frac{3}{8}$ -24UNF	0.28	0.71	$\frac{1}{2}$ -20UNF	2.72	1/4	4.13	2.28	6.50	0.63	0.63	1.79	0.79	0.43	1.06

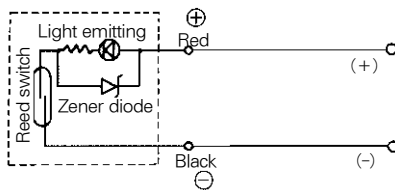


Auto Switch Specifications

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	

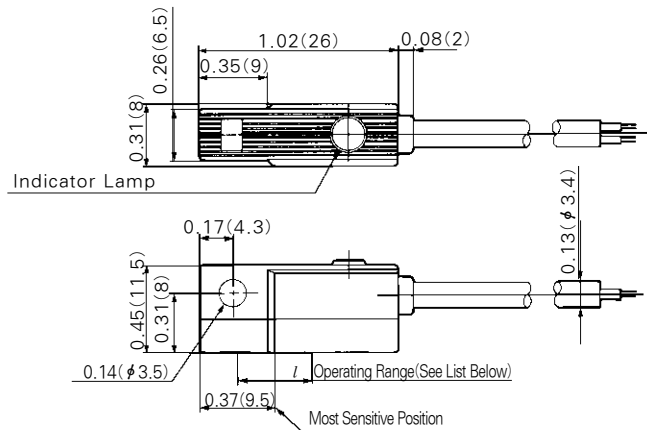
- Leakage current - None
 - Response time - 1.2 ms
 - Lead Wire - Oil proof vinyl. ϕ 3.4, 0.2mm², 2 wire(red, black), 0.5 m(0.02inch)
 - Impact Resistance - 30G
 - Insulation Resistance - 50M Ω or more under the test voltage 500VDC (Between case and cable)
 - Withstand Voltage - 1500VAC 1min(between 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

Auto Switch/Internal Circuit



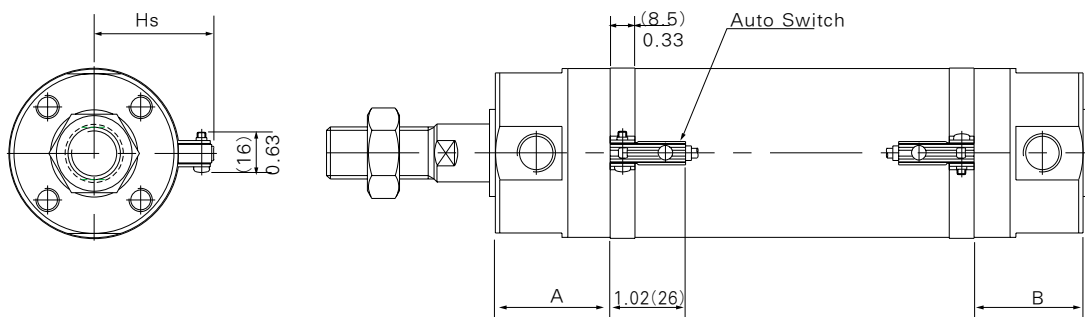
Auto Switch Dimensions

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

ACP

UACP

AX

AS

AM

AL
ALX

UARD

UAQ

AJ

AG

UAG

ADM

ADR

AMR

UAMR

AST

W~