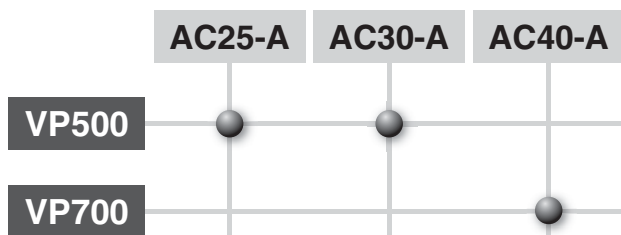


# Modular Connection Type Residual Pressure Relief 3 Port Solenoid Valve



**For connecting to  
F.R.L. units**



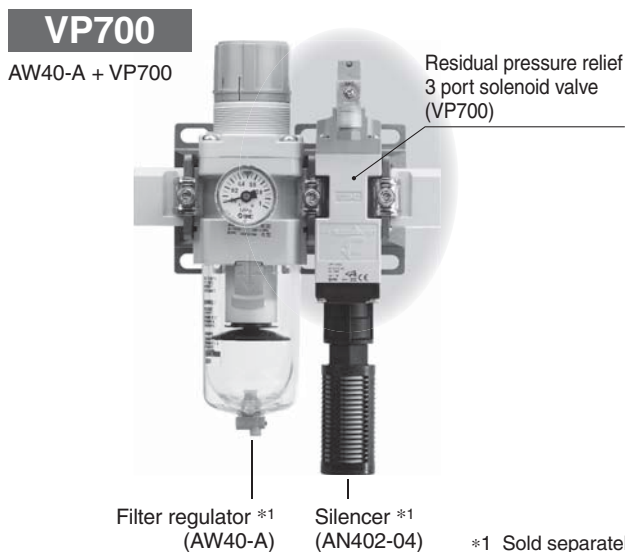
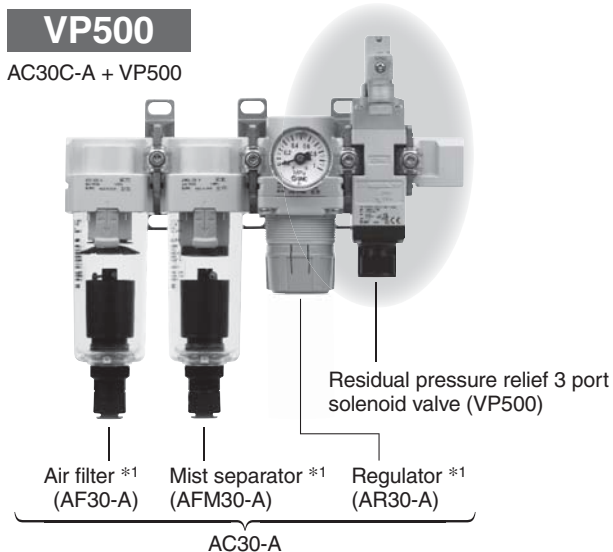
**Allows for space saving  
and reduced piping labour.**

**Power consumption:  
0.35 W (Without light)**

## Example of F.R.L. unit connections

### Simple Specials System

This system enables us to respond to your special needs (additional machining, accessory assembly, or the designing of a modular unit) and deliver your personalised products as quickly as standard products. Please contact your local sales representative for more details.



**VP500/700 Series**

# VP500/700 Series



## How to Order

### Modular connection type

VP 5 1 7 □ Y- 5 D □ □ 1 - □ □

**Series**

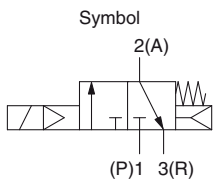
5	VP500
7	VP700

**Pressure specification**

—	Standard (0.7 MPa)
K	High-pressure type (1.0 MPa)

**Rated voltage**

DC	AC (50/60 Hz)
5 24 V DC	1 100 V AC
6 12 V DC	2 200 V AC
	3 110 V AC [115 V AC]
	4 220 V AC [230 V AC]



**Flow direction**

—	Left to right
R	Right to left

**Bracket**

—	Without bracket
B	With bracket*1

\*1 Brackets are supplied loose, not assembled, at time of shipment. Includes 2 mounting screws.

### Manual override

—: Non-locking push type	A: Non-locking push type (Manual)	E: Push-turn locking type (Manual)

### Electrical entry

DIN terminal	DIN (EN175301-803(C)) terminal
D: With connector DO: Without connector	Y: With connector YO: Without connector

\* Refer to our website [www.smc.eu](http://www.smc.eu) (VP300/500 Low wattage specification) for details of the DIN terminal.

**Light/surge voltage suppressor**

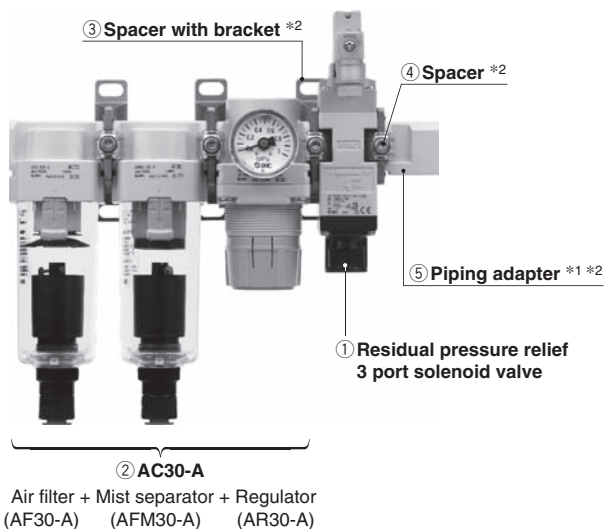
	DC	AC
—: Without light/surge voltage suppressor	○	○
S: With surge voltage suppressor	○	—*1
Z: With light/surge voltage suppressor	○	○

\*1 For AC voltage valves there is no "S" option. It is already built into the rectifier circuit.  
\* In the DIN terminal type, since a light is installed in the connector, DOZ and YOZ are not available.

### Caution

When using the surge voltage suppressor type, residual voltage will remain. For details, refer to our website [www.smc.eu](http://www.smc.eu) (VP300/500 Low wattage specification).

## Assembly Example



\*1 Connection threads are not available for the residual pressure relief 3 port solenoid valve. Order a piping adapter separately.  
\*2 Refer to page 3 for details of the spacer and piping adapter.

**Products do not come assembled. They should be ordered separately and assembled by the customer.**

\* The Simple Specials System deals with product unification. Please contact your local sales representative for more details.

### Assembly example

① Residual pressure relief 3 port solenoid valve VP517Y-5DZ1 .....	1 pc.
② Air combination AC30C-03DG .....	1 pc.
③ Spacer with bracket Y300T-A .....	1 pc.
④ Spacer Y300-A .....	1 pc.
⑤ Piping adapter E300-03-A .....	1 pc.

### Applicable Combinations/Attachment Part Nos.

Residual pressure relief 3 port solenoid valve	Applicable air combination	Spacer	Spacer with bracket	Piping adapter	Silencer
VP517	AC25, AC30	Y300-A	Y300T-A	E300-□03-A	AN30-03 AN302-03
VP717	AC40	Y400-A	Y400T-A	E400-□04-A	AN40-04 AN402-04

\* Refer to page 3 for details of the spacer.

## Specifications

Fluid	Air	
Type of actuation	N.C.	
Internal pilot	Standard	0.2 to 0.7
	High-pressure type	0.2 to 1
Operating pressure range [MPa]		
Ambient and fluid temperature [°C]	-10 to 50 (No freezing)	
Maximum operating frequency [Hz]	5	
Manual override (Manual operation)	Non-locking push type Push-turn locking type (Manual) Non-locking push type (Manual)	
Pilot exhaust method	Individual exhaust	
Lubrication	Not required	
Mounting orientation	Unrestricted	
Impact/Vibration resistance [m/s <sup>2</sup> ]*1	150/30	
Enclosure	IP65	

\*1 Impact resistance: No malfunction occurred when it was tested in the axial direction and at right angles to the main valve and armature in both energised and de-energised states. Each condition was tested once. (Default settings)

Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed in both energised and de-energised states in the axial direction and at right angles to the main valve and armature. (Default settings)

## Solenoid Specifications

Electrical entry	DIN terminal (D) DIN terminal (Y) <EN175301-803 (C)>		
	D, Y		
Coil rated voltage [V]	DC	24, 12	
	AC (50/60 Hz)	100, 110, 200, 220	
Allowable voltage fluctuation	±10 % of rated voltage*2		
Power consumption [W]	DC	0.35 (With light: 0.45)	
	Standard	0.78 (With light: 0.87)	
Apparent power [VA]*1	AC	100 V	0.86 (With light: 0.97) [0.94 (With light: 1.07)]
		110 V [115 V]	1.15 (With light: 1.30)
		200 V	1.27 (With light: 1.46) [1.39 (With light: 1.60)]
		220 V [230 V]	
Surge voltage suppressor	Varistor (DC)		
Indicator light	LED (DC), Neon bulb (AC)		

\*1 The 110 V AC and 115 V AC are interchangeable. The 220 V AC and 230 V AC are interchangeable as well.

\*2 The allowable voltage fluctuation is -15 % to +5 % of the rated voltage for the 115 V AC or 230 V AC.

## Response Time/Weight

Model	Pressure specifications	Response time [ms](at 0.5 MPa)			Weight [g]
		Without light/surge voltage suppressor	With light/surge voltage suppressor	AC	
VP517Y	Standard (0.2 to 0.7 MPa)	27	32	44	222 (With bracket: 257)
	High-pressure type (0.2 to 1.0 MPa)	41	48	44	
VP717Y	Standard (0.2 to 0.7 MPa)	41	48	50	413 (With bracket: 468)
	High-pressure type (0.2 to 1.0 MPa)	67	76	50	

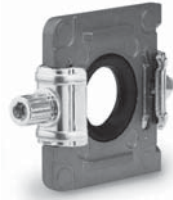
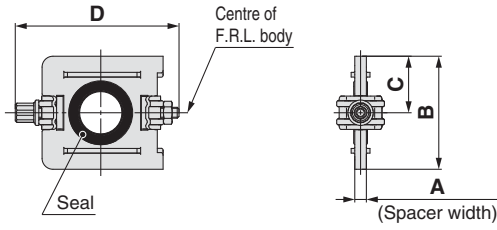
## Flow Rate Characteristics

Model	Port size EXH.	Flow rate characteristics							
		1→2 (P→A)				2→3 (A→R)			
		C [dm <sup>3</sup> /(s·bar)]	b	Cv	Q [l/min (ANR)]*1	C [dm <sup>3</sup> /(s·bar)]	b	Cv	Q [l/min (ANR)]*1
VP517Y	G 3/8	8.8	0.14	2	2040	8.2	0.15	1.8	1911
VP717Y	G 1/2	13.8	0.11	2.9	3149	12.9	0.18	2.9	3056

\*1 These values have been calculated according to ISO 6358 and indicate the flow rate under standard conditions with an inlet pressure of 0.6 MPa (relative pressure) and a pressure drop of 0.1 MPa.

# VP500/700 Series

## Spacer

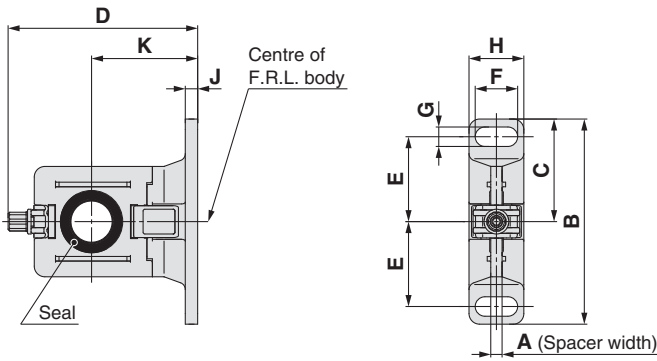


Y400-A

Model	A	B	C	D
Y300-A	4.2	43.4	21.7	57.9
Y400-A	5.2	53	26.5	68.5

[mm]

## Spacer with Bracket



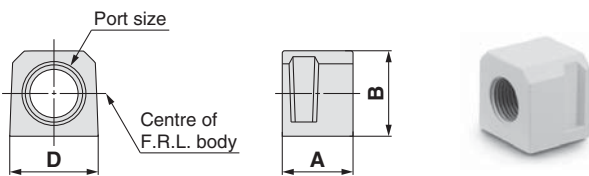
Y400T-A

Model	A	B	C	D	E	F	G	H	J	K
Y300T-A	4.2	82	41	71.5	35	14	7	19	4	41
Y400T-A	5.2	96	48	86.1	40	18	9	26	5	50

[mm]

## Piping Adapter: 3/8, 1/2

A piping adapter allows installation/removal of the component without removing the piping and thus makes maintenance easier.

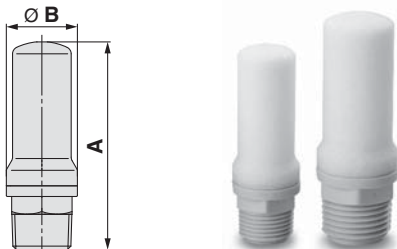


Model *1	Port size	A	B	D
E300-□03-A	3/8	31.8	30	30
E400-□04-A	1/2	31.8	36	36

\*1 □ in model numbers indicates a pipe thread type. No indication is necessary for Rc; however, indicate N for NPT, and F for G.  
\* Separate spacers are required for modular units.

## Silencer

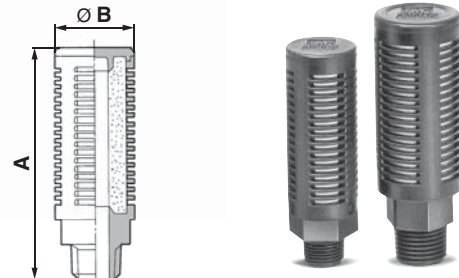
### Compact resin type



Model	Port size R	A	B
AN30-03	3/8	58.5	20
AN40-04	1/2	68	24

[mm]

### High noise reduction type

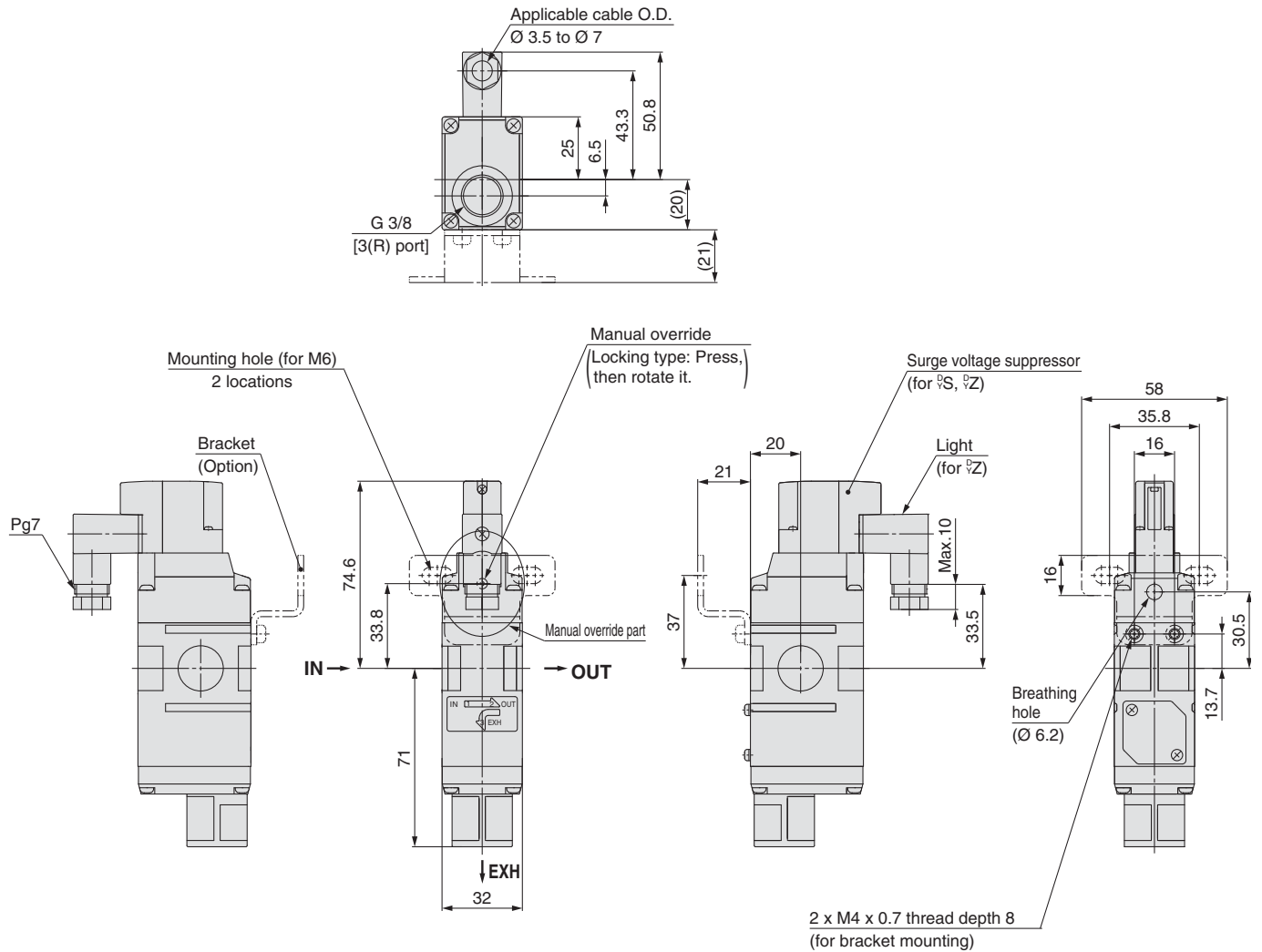


Model	Port size R	Dimensions [mm]	
		A	B
AN302-03	3/8	84	28
AN402-04	1/2	95	34

# Modular Connection Type Residual Pressure Relief 3 Port Solenoid Valve **VP500/700 Series**

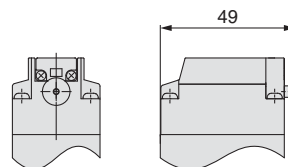
## Dimensions

### VP517

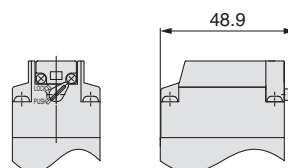


### Details of manual override part (for manual operation)

#### Type A



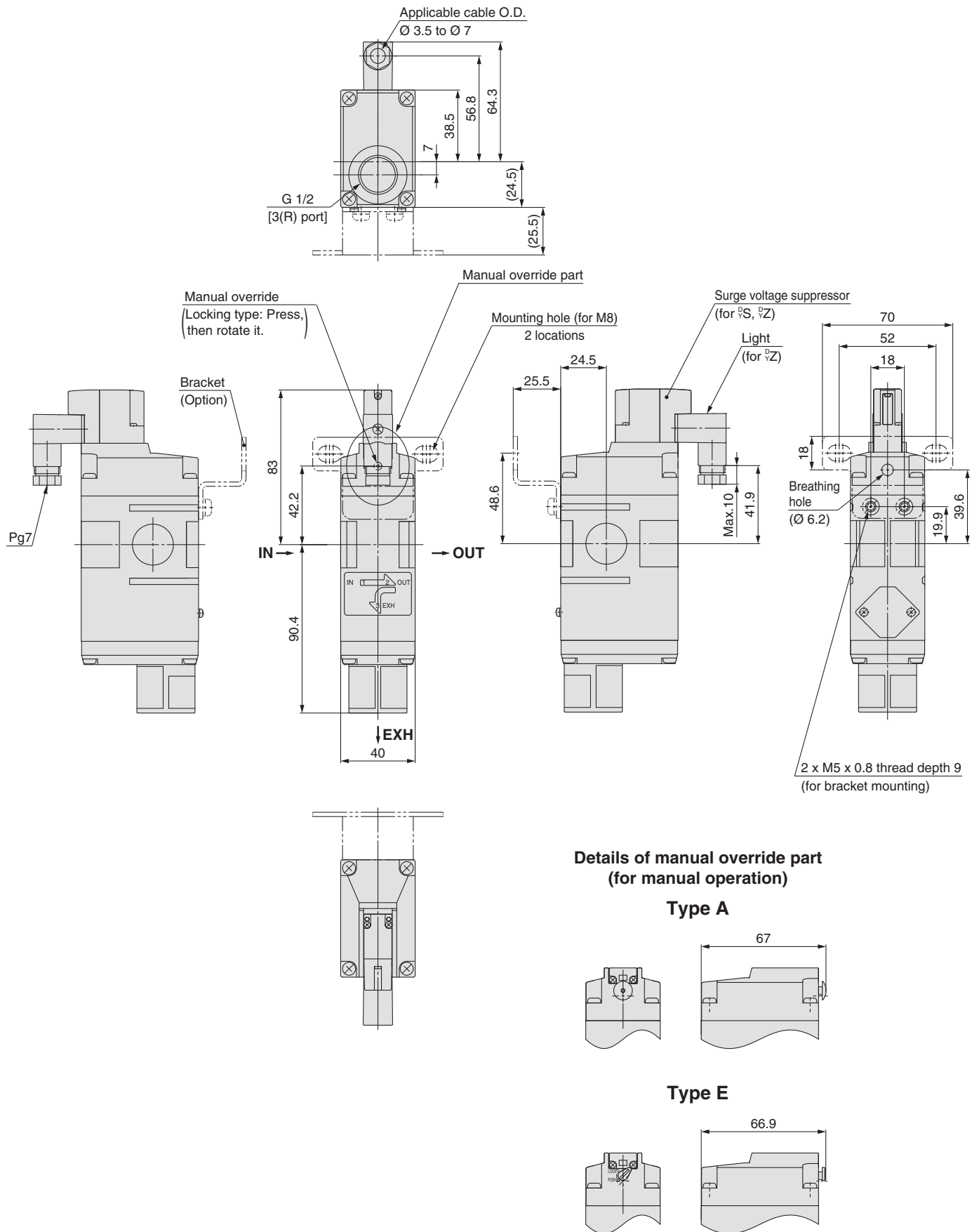
#### Type E



# VP500/700 Series

## Dimensions

### VP717







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