

INFORMATION *New!*

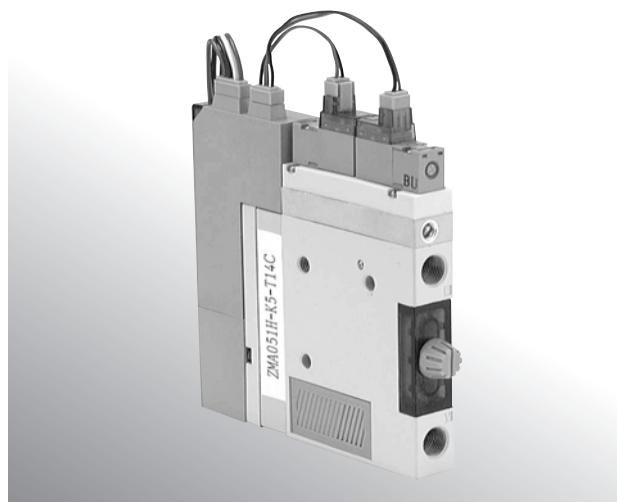
SMC Pneumatics, Inc. 3011 N. Franklin Road Indianapolis, Indiana 46226
1-800-SMC-SMC1 (762-7621) www.smcusa.com US98-E458 12/99

Vacuum Ejector with Solid State Timer Series ZMA

**Incorporates solid state timer
function for release valve
control (timer setting with PLC
is unnecessary)**

**Allows sharing of switch/valve
power supply, and single line for
suction signal (valve wiring is
unnecessary)**

**Timer can be easily adjusted
without programming**



Models

Nozzle diameter (mm)	Model	Standard supply pressure			Max. suction flow rate ℓ/min (ANR)	Air consumption ℓ/min (ANR)	Diffuser construction
		H	M	S			
0.5	ZMA05□H	0.5MPa	—	—	18	12	2 stage diffuser
0.7	ZMA07□H				24	23	
1.0	ZMA10□H				36	46	
1.3	ZMA13□H				40	95	
0.7	ZMA07□M	—	0.35MPa	—	20	16	
1.0	ZMA10□M				26	32	
1.3	ZMA13□M				36	70	
1.3	ZMA13□S	—	—	0.45MPa	38	75	1 stage diffuser
1.5	ZMA15□S				45	90	

How to Order

ZMA 07 1 H — K 5 — T14 C

Nozzle diameter

05	0.5mm
07	0.7mm
10	1.0mm
13	1.3mm
15	1.5mm

Body type

1	For single type
3	Common SUP for manifold
5	Individual SUP for manifold

Standard supply pressure

H	0.5MPa
M	0.35MPa
S	0.45MPa

Thread type

Nil	Rc
T	NPTF
F	G

Switch lead wires (connector type)

C	Lead wire length 0.6m
CL	Lead wire length 3m
CN	Without lead wires

Switch type

T14	Without 1 point setting/analog output 3 rotations, NPN output
T54	Without 1 point setting/analog output 3 rotations, PNP output

Rated voltage

5	24VDC
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Valve

K	Air supply valve/Vacuum release valve
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How to Order Ejector Manifolds

ZZMA 06 — 06 R

Ejector stations

01	1 station
⋮	⋮
10	10 stations (Max.)

Port & silencer position

R	Right side
L	Left side
S	Both sides

Note) Left and right as viewed with the VAC port in front

Thread type

Nil	Rc
T	NPTF
F	G

Common exhaust port size

04	1/2
06	3/4
S	ZZMA dedicated silencer (ZZM-SA)

Mixed mounting is possible with vacuum ejector series ZM.

* When placing an order, include the single type ejector models to be manifolded together with the manifold part number.

Example) Manifold model: ZZMA04-SR (1 pc.)

Ejector model: * ZMA073H-K5-T14C (3 pcs.)

* ZH073H-J5LZ (1 pc.)

Specifications

Vacuum ejector specifications

Fluid	Air
Maximum operating pressure	0.7MPa
Maximum vacuum pressure	-84kPa
Supply pressure range	0.25 to 0.55MPa
Operating temperature range	5 to 50°C
Suction filter	Polyethylene sintered body (30μm)

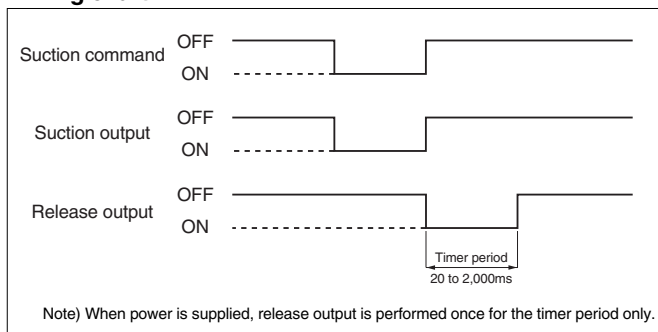
Valve specifications

Type of actuation	Pilot type
Main valve	Poppet
Effective area	3mm ²
Operating pressure	0.25 to 0.6MPa
Cv factor	0.17
Electrical entry	Plug connector
Maximum operating frequency	5Hz
Voltage	24VDC

Vacuum switch with timer function specifications (for solenoid valve control)

Power supply	Voltage	24VDC ±10%
	Current consumption per unit	1.1W (with switch output OFF)
Sensor switch output	Output points	1
	Output type	NPN/PNP open collector
	Setting trimmer rotation angle	3 rotations
	Operation indicator light	Red LED lights up
	Temperature characteristics	±3% FS or less
Timer unit	Hysteresis	3% FS or less (fixed)
	Timer period	20 to 2,000ms
	Setting trimmer rotation angle	3 rotations
	Temperature characteristics	±3% FS or less

Timing chart

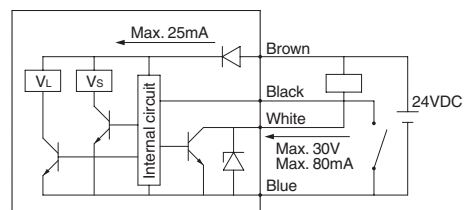


Wiring

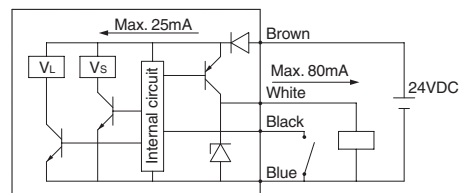
Brown	DC (+)
Black	Suction command
White	Switch output
Blue	DC (-)

Connection examples

T14

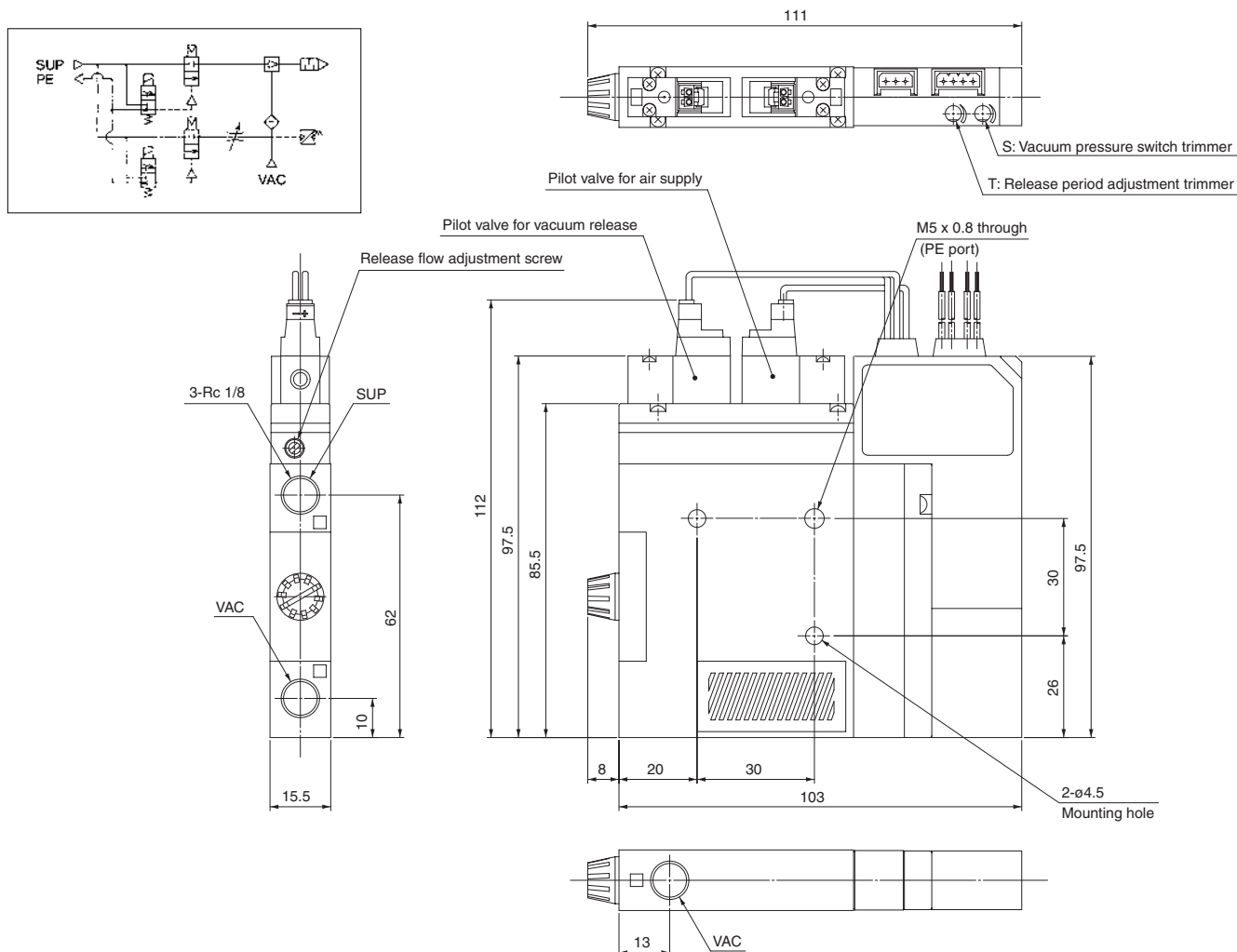


T54



V_L: Pilot valve for vacuum release
V_s: Pilot valve for air supply

Dimensions



⚠ Specific Product Precautions

Be sure to read before handling. Contact SMC when outside the specifications.

Mounting

⚠ Warning

- Do not drop or bump.
Do not drop, bump or apply excessive impact (1,000m/s²) when handling. Even if the switch body is not damaged, the switch may suffer internal damage that will lead to malfunction.
- Hold the product from the body side when handling.
The tensile strength of the power cord is 49N, and pulling it with a greater force can cause failure.
- When handling the product, never move or loosen the switch assembly or the switch assembly mounting screws.

Operating Environment

⚠ Warning

- The product cannot be used in a strong magnetic field.

Wiring

⚠ Warning

- Do not allow repeated bending or stretching forces to be applied to lead wires. Wiring arrangements in which repeated bending stress or stretching force is applied to the lead wires can cause broken wires.

Pressure Source

⚠ Warning

- Vacuum pressure switches
There will be no change in performance if a pressure of approximately 0.5MPa is applied momentarily (when releasing vacuum), but care should be taken that pressures of 0.2MPa or more are not applied on a regular basis.

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