

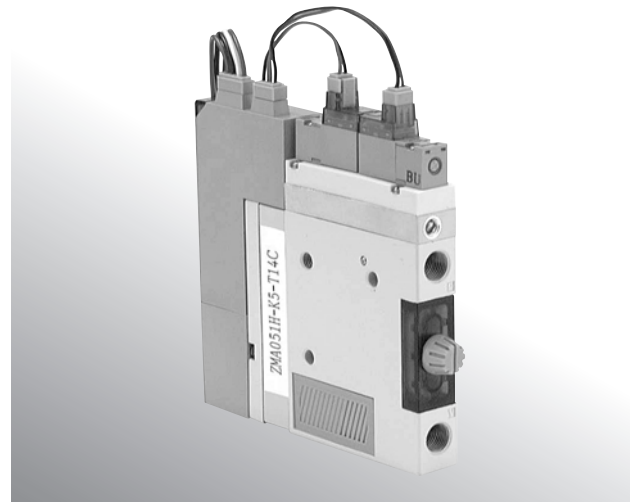
INFORMATION *New!*

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 | |
| 1.5 | 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 |
|---|-------|

• Valve

| | |
|---|---------------------------------------|
| K | Air supply valve/Vacuum release valve |
|---|---------------------------------------|

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) |

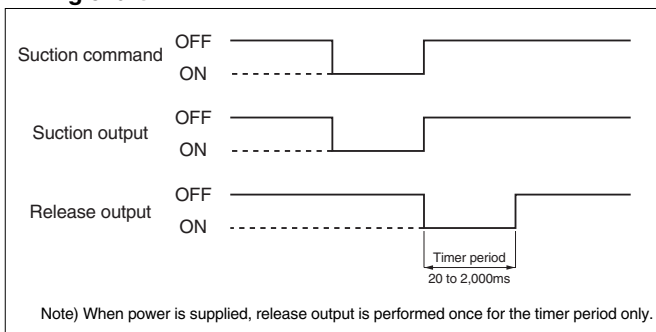
Valve specifications

| | |
|-----------------------------|------------------|
| 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 |

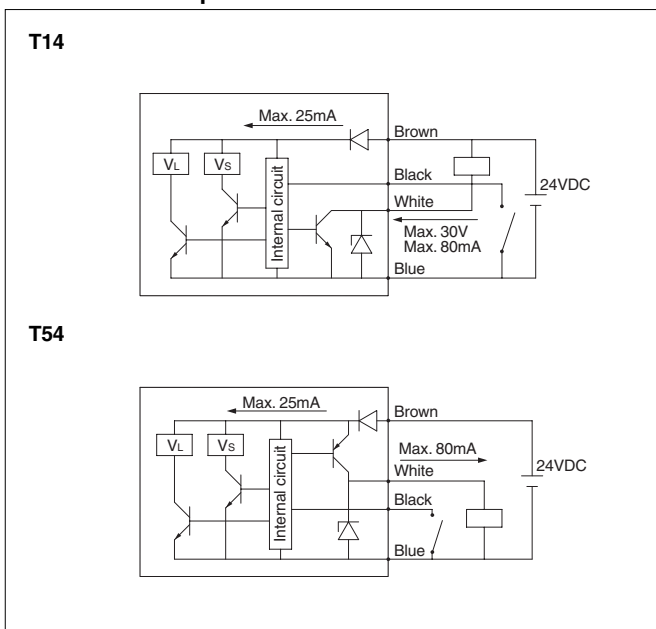
Timing chart



Wiring

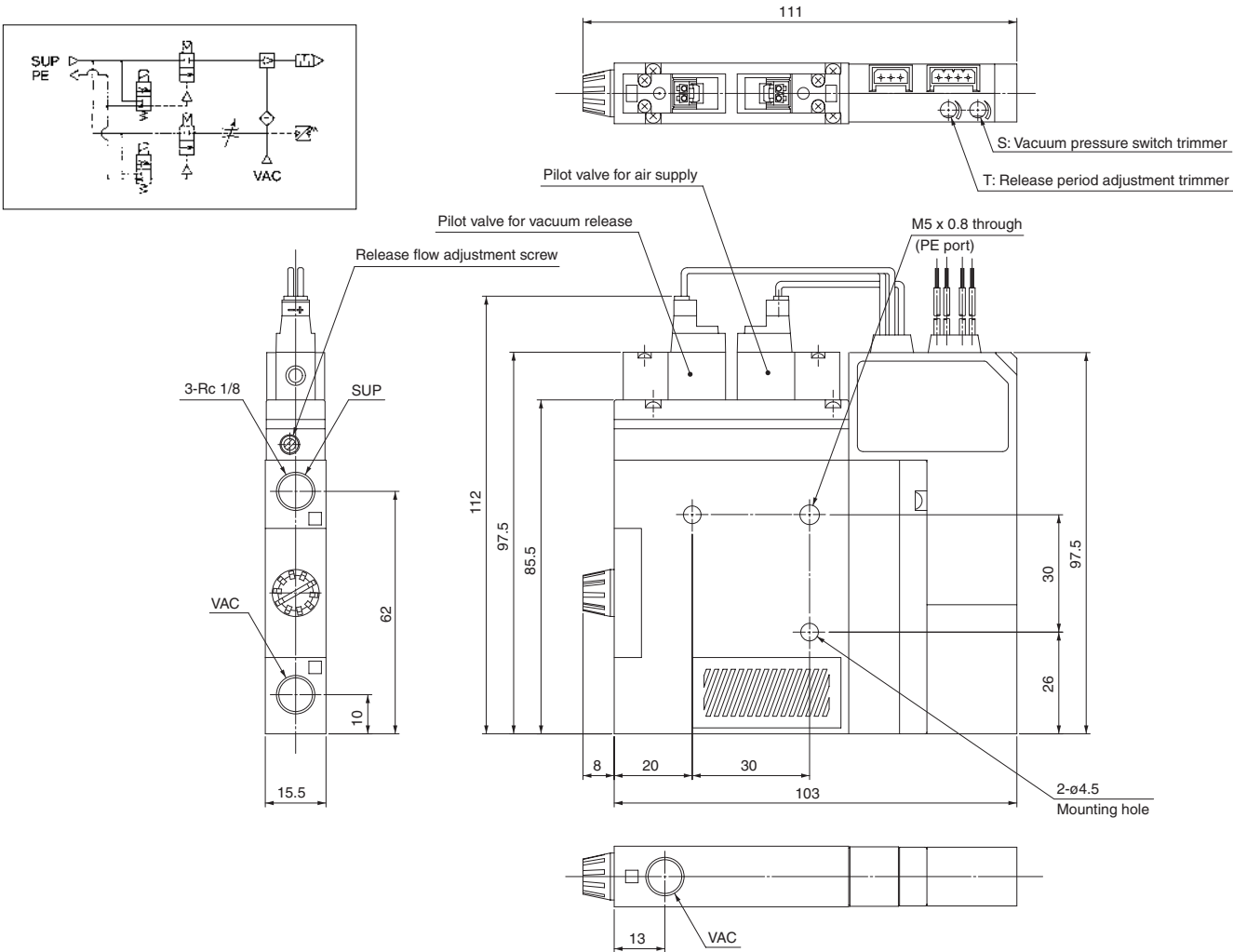
| | |
|-------|-----------------|
| Brown | DC (+) |
| Black | Suction command |
| White | Switch output |
| Blue | DC (-) |

Connection examples



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.