
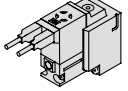
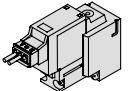

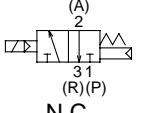
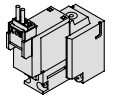

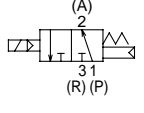
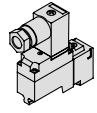


# 3 Port Solenoid Valve Metal Seal/Rubber Seal Body Ported

# VQZ100/200/300

## Variations

		Cv Metal/Rubber	Configuration	Voltage	Electrical entry	Light and surge voltage suppressor	Manual override
<b>Body Ported</b>	<b>3 Port</b>	<b>VQZ100</b> 	— (Poppet) 0.2		Grommet (G)  L plug connector (L) 	Indicator light and surge voltage suppressor	Non-locking push style (Flush)
	<b>VQZ200</b> 	0.45 0.6	 N.C.	(Standard) 12V DC 24V DC  (Option) 100V AC 200V AC 110V AC 220V AC	M plug connector (M) 	L plug connector (L)  M plug connector (M)	
	<b>VQZ300</b> 	0.8 0.9	 N.O. (Except for VQZ100)		DIN connector (Y)  (Except for VQZ100)	DIN connector (Y)  (Except for VQZ100)	Locking style (Slotted)

- SY
- SYJ
- VK
- VZ
- VT
- VT
- VP
- VG
- VP
- VQ
- VQZ**
- VZ
- VS

## ⚠ Precautions

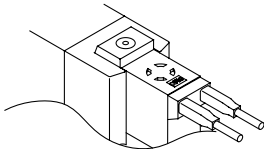
Be sure to read before handling. Refer to p.0-33 to 0-36 for Safety Instructions and common precautions.

### ⚠ Warning

#### Manual Override

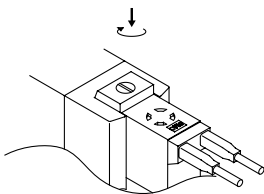
Without an electric signal for the solenoid valve the manual override is used for switching the main valve.

#### Non-locking push style (Flush)

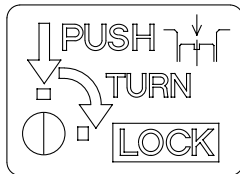


Push down on the manual override button with a small screwdriver until it stops. Release the screwdriver and the manual override will return.

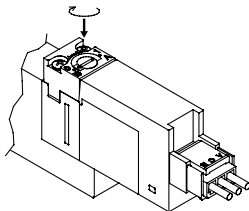
#### Locking style (Slotted) VQZ200/300



Push down on the manual override button with a small screwdriver until it stops. While down, turn clockwise by 90° to lock it. Turn it counterclockwise to release it.



#### Locking style (Slotted) VQZ100



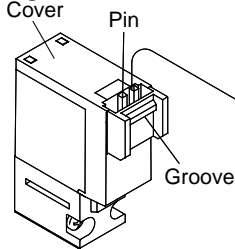
Turn the manual override clockwise by 180° to set the ▶ mark to "1" and press it in the direction indicated by arrow, then it will be locked in the ON state. Turn the manual override counterclockwise by 180° to set the ▶ mark to "0", then it will be reset.

### ⚠ Caution

#### How to Use L and M Plug Connector

##### Connection/Disconnection of connector

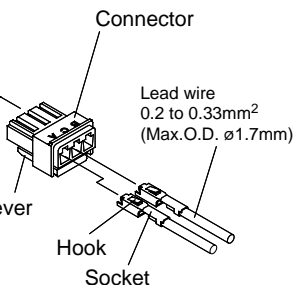
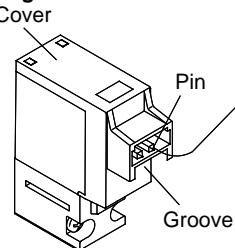
##### M plug connector



**Connection :**  
Push the connector straight onto the pins of solenoid, making sure the lip of the lever securely "locks" into the groove of the solenoid cover.

**Disconnection :**  
Press the lever against the connector housing and pull it outward from the solenoid.

##### L plug connector

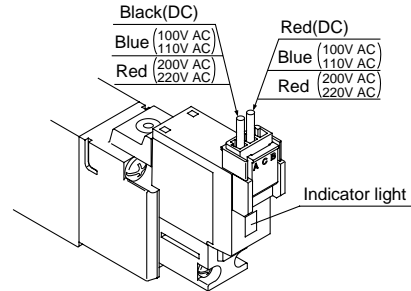


Lead wire  
0.2 to 0.33mm<sup>2</sup>  
(Max.O.D. ø1.7mm)

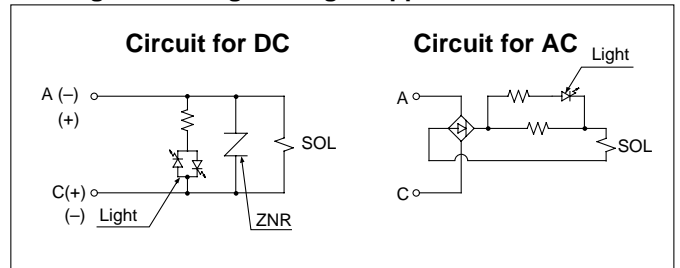
Refer to p.2.10-19 for part No. of plug connector assembly.

#### Connection and Electrical Circuit

The VQZ series features non-polar solenoids.



#### With light and surge voltage suppressor

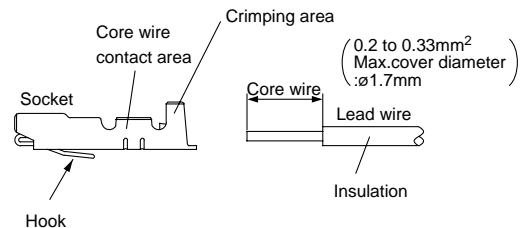


Due to the use of non-polar light, the VQZ series has no polarity. Refer to p.1.12-26 for the latching style.

#### Connection of Lead Wire (Not necessary if ordering pre-connected model.)

##### Crimping connection of lead wire and socket

Strip 3.2 to 3.7mm of the lead wire ends, insert each stripped wire into a socket and crimp it using the special crimping tool. Be careful that the outer insulation of the lead wires does not interfere with the socket contact part.



Tool for crimping: Model No. DXT170-75-1

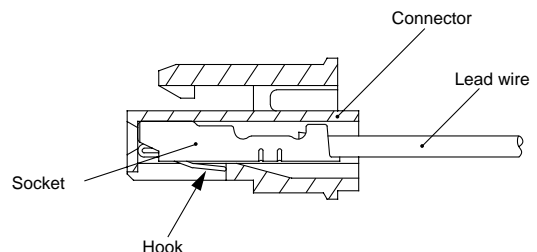
##### Connection/Disconnection of socket with lead wire

###### Connection

Insert lead wire and crimped socket into square holes (indicated as A,B, COM) of connector. Press the socket in fully until the hook of the socket locks into the groove of the connector housing. Confirm the locked position by lightly pulling on the lead wire.

###### Disconnection

To remove the socket from the connector, pull out lead wire while depressing the hook of the socket with a fine screwdriver. If the socket is to be re-used, reposition the hook again.



## How to Wire the DIN Connector

### Conforming to ISO/DIN 43650 C (8mm between pins)

Cut the power and air supply before mounting/removing the connector

- ① Loosen the top screw and remove the connector housing from the terminal spades on the solenoid.
- ② Remove the housing screw and insert a screwdriver into the slot area on the underside of the DIN cap and carefully separate block and housing.
- ③ Loosen the terminal screws of the block and insert stripped lead wires in accordance with the wiring diagram. Secure each wire by retightening the terminal screw.
- ④ Tighten the housing grommet nut to secure the cable wire.

### Change of electrical entry (orientation)

Once the housing is separated from the terminal block, rotate it in any direction to change the orientation of the electrical entry.

\*In the case of the indicator light option, avoid damaging the light with the lead wire connections.

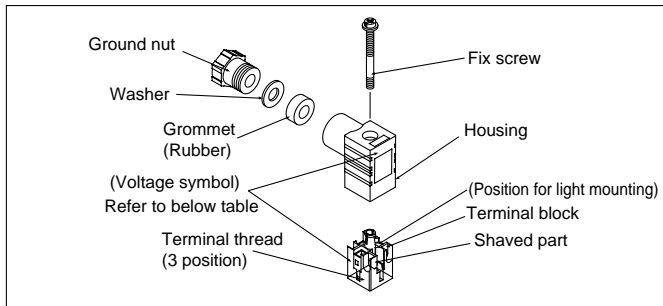
### Precaution

Pull connector out vertically, never at an angle.

### Applicable cable

Cord O.D.:  $\phi 3.5$  to  $\phi 7$

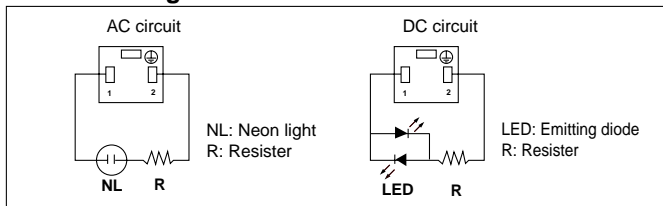
(Reference) 0.5mm<sup>2</sup> 2-core and 3-core wires equivalent to JISC3306.



### Part No. for DIN connector (Based on DIN)

Without light		AXT100-20-1
<b>With light</b>		
Rated voltage	Voltage symbol	Part No.
24V DC	24V	AXT100-20-2-05
12V DC	12V	AXT100-20-2-06
100V AC	100V	AXT100-20-2-01
200V AC	200V	AXT100-20-2-02
110V AC	110V	AXT100-20-2-03
220V AC	220V	AXT100-20-2-04

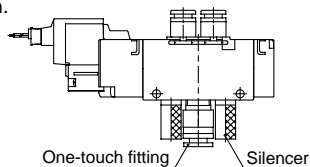
### Circuit with light



## Fitting and Silencer Part Number for P,R Ports When Using Valve as an Individual Unit

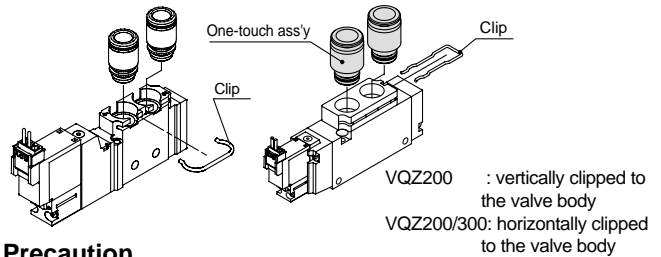
Series	One-touch fitting for 1(P) port	Silencer for 3(R2,R), 5(R1)	
		Silencer	One-touch fitting
VQZ100	KQH06-M5	AN120-M5	KJSO4-M5
VQZ200	KQH06-01S	INA-25-46	IN-457-32(for $\phi 6$ )
VQZ300	KQH08-02S	AN101-01	KQH08-01S

The diameter of the above fitting and silencer is the maximum diameter for proper installation.



## Changing One-touch Fittings

The built-in fittings on the manifold can be changed easily. Simply remove the corresponding valve and take out the fitting clip underneath. Then remove the affected fitting and replace it with a new one. Finally, replace the fitting clip and remount the valve.



### Precaution

When pulling the fitting ass'y away from the manifold base, remove the clip, then connect a tube or plug (KQP-□□) with the One-touch fitting and pull it out while holding the tube or plug. Do not hold the release bushing to avoid damage.

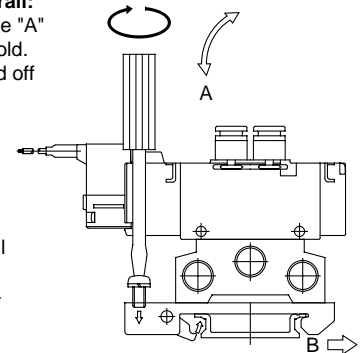
## DIN Rail Removal/Mounting

### To remove manifold from DIN rail:

- 1) Loosen the clamp screw on the "A" side of both ends of the manifold.
- 2) Lift the "A" side of the manifold off the DIN rail and slide it in the direction of the "B" side.

### Mounting manifold to DIN rail:

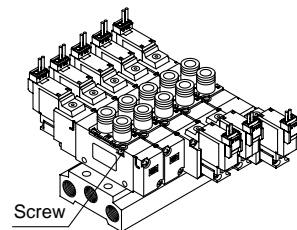
- 1) Catch the hook of the DIN rail bracket on the "B" side on the DIN rail.
- 2) Push side "A" onto the DIN rail and tighten the clamp screw. (Tightening torque of 0.3 to 0.4 Nm)



## Valve Mounting

After confirming the gasket is correctly placed under the valve, tighten the mounting screws with the appropriate torque listed below.

Model	Suitable tightening torque
VQZ100	0.13 to 0.19Nm
VQZ200	0.25 to 0.35Nm
VQZ300	0.5 to 0.7Nm



- SY
- SYJ
- VK
- VZ
- VT
- VT
- VP
- VG
- VP
- VQ
- VQZ
- VZ
- VS

# VQZ100/200/300 Valve Single Unit

## How to Order Valve VQZ100

**VQZ 1 1 5** — **5 M** — **C6** — **PR**

**Series**

1	VQZ100 Body width 10mm
---	------------------------

**Configuration**

**Body style**

**Function**

Symbol	Specification	DC	AC
—	Standard	(1.0W) ○	(3) ○
<b>K</b> <sup>(1)</sup>	High pressure	(1.0W) ○	—
<b>Y</b>	Low wattage	(0.5W) ○	—
<b>R</b> <sup>(2)</sup>	External pilot	○	○

Note 1) Option  
 Note 2) Refer to p.2.10-18 for details about external pilot specification.  
 Note 3) Refer to p.2.10-6 for power consumption of AC type.  
 Note 4) When specifying more than one option, indicate them alphabetically.

**Bracket**

—	None
<b>F</b>	With bracket

**Port size {2(A) port}**

<b>C3</b>	One-touch fitting for ø3.2
<b>C4</b>	One-touch fitting for ø4
<b>C6</b>	One-touch fitting for ø6
<b>M5</b>	M5 thread

Note) Refer to p.2.10-18 for inch-size One-touch fitting.

**Manual override**

—: Non-locking push style (Flush)      **B**: Locking style (Slotted)

**Electrical entry**

G: Grommet (DC specification)	L: L plug connector with lead wire	LO: L plug terminal without connector	M: M plug connector with lead wire	MO: M plug terminal without connector

Note) Standard lead wire length: 300mm  
 \*With light and surge voltage suppressor.

**Coil voltage**

<b>1</b> *	100V AC (50/60Hz)
<b>2</b> *	200V AC (50/60Hz)
<b>3</b> *	110V AC (50/60Hz)
<b>4</b> *	220V AC (50/60Hz)
<b>5</b>	24V DC
<b>6</b>	12V DC
<b>9</b> *	Others

\*When requiring AC specification of grommet or special voltage, consult SMC.

## How to Order Valve VQZ200/300

**VQZ** 2 1 2   — 5 M   — C6 —

**Series**

2	VQZ200 Body width15mm
3	VQZ300 Body width18mm

**Bracket**

—	None
F	With bracket

**Configuration**

Configuration	Symbol	Port size	VQZ200	VQZ300
1	N.C. (A) 2 3 1 (R) (P)	One-touch fitting for ø4	○	—
2	N.O. (A) 2 3 1 (R) (P)	One-touch fitting for ø6	○	○
3	N.C. (A) 2 3 1 (R) (P)	One-touch fitting for ø8	—	○
4	N.O. (A) 2 3 1 (R) (P)	One-touch fitting for ø10	○	○

Note 1) Refer to p.2.10-18 for inch size One-touch fittings.

**Manual override**

<p>—: Non-locking push style (Flush)</p>	<p>B: Locking style (Slotted)</p>
--	-----------------------------------

**Body style**

2	Body ported
---	-------------

**Electrical entry**

G: Grommet (DC Specification)	L: L plug connector with lead wire	LO: L plug terminal without connector	M: M plug connector with lead wire	MO: M plug terminal without connector
<b>Y: DIN terminal</b>	<b>YO: DIN terminal without connector</b>	<b>YZ: DIN terminal</b>	<b>YOS: DIN terminal without connector</b>	

\*With light and surge voltage suppressor.

**Function**

Symbol	Specification	DC	AC
—	Standard	(1.0W) ○	(3) ○
K <sup>(1)</sup>	High pressure (Metal seal only)	(1.0W) ○	—
Y	Low wattage	(0.5W) ○	—
R <sup>(2)</sup>	External pilot	○	○

Note 1) Option  
 Note 2) Refer to p.2.10-18 for details about external pilot specification.  
 Note 3) Refer to p.2.10-6 for power consumption of AC type.  
 Note 4) When specifying more than one option, indicate them alphabetically.

**Coil voltage**

1 *	100V AC (50/60Hz)
2 *	200V AC (50/60Hz)
3 *	110V AC (50/60Hz)
4 *	220V AC (50/60Hz)
5	24V DC
6	12V DC
9 *	Others

\* When requiring AC specification of grommet or special voltage, consult SMC.

SY

SYJ

VK

VZ

VT

VT

VP

VG

VP

VQ

VQZ

VZ

VS

# VQZ100/200/300 Body Ported

## Standard Specifications



Valve	Seal	Metal seal	Rubber seal
	Fluid	Air, Inert gas	
	Max.operating pressure	0.7MPa (High pressure style: 1.0MPa)	0.7MPa
	Min.operating pressure	0.1MPa	0.15MPa
	Ambient and fluid temp.	-10 to 50°C <sup>(1)</sup>	-10 to 50°C <sup>(1)</sup>
	Max.operating frequency	20Hz	5Hz
	Pilot valve EXH	Individual EXH	
	Lubrication	Not required	
	Manual override	Non-locking push style/Locking slotted style	
	Shock/Vibration resistance <sup>(2)</sup>	150/30 m/s <sup>2</sup>	
	Enclosure	Dust proof	
	Coil rated voltage	12V, 24V DC and 100V, 110V, 200V, 220V AC	
	Allowable voltage	±10% of rated voltage	
	Coil insurance	Class B or equivalent	
Solenoid	Power consumption (Current value)	24V DC	1W DC (42mA), 0.5W DC (21mA)
		12V DC	1W DC (83mA), 0.5W DC (42mA)
		100V AC	Inrush 0.5VA (5mA), Holding 0.5VA (5mA)
		110V AC	Inrush 0.55VA (5mA), Holding 0.55VA (5mA)
		200V AC	Inrush 1.0VA (5mA), Holding 1.0VA (5mA)
		220V AC	Inrush 1.1VA (5mA), Holding 1.1VA (5mA)



Note 1) Use dry air to prevent condensation when operating at low temperatures.

Note 2) Shock resistance : No malfunctions resulted from the impact test using a drop impact tester. The tests were performed on the axis and right angle direction of the main valve and armature, for both energized and de-energized states. (Value in the initial stage.)

Vibration resistance: No malfunctions occurred in a one-sweep test between 8.3 and 2,000 Hz. Tests were performed at both energized and de-energized states on the axis and right angle direction of the main valve and armature. (Value in the initial stage.)

## Model

Series	Valve configuration	Model		Effective area (mm <sup>2</sup> )(Cv) <sup>(1)</sup>	Response time (ms) <sup>(2)</sup>		Weight(g) <sup>(3)</sup>
					Standard: 1W	High pressure: 1W Low wattage and AC	
VQZ100	N.C.	Poppett	VQZ115	3.6 (0.2)	10 or less	13 or less	25
VQZ200	N.C.	Metal seal	VQZ212	8.1 (0.45)	14 or less	18 or less	58
		Rubber seal	VQZ232	10.8 (0.6)	15 or less	20 or less	
	N.O.	Metal seal	VQZ222	7.2 (0.4)	14 or less	18 or less	
		Rubber seal	VQZ242	10.8 (0.6)	15 or less	20 or less	
VQZ300	N.C.	Metal seal	VQZ312	14.4 (0.8)	17 or less	22 or less	92
		Rubber seal	VQZ332	16.2 (0.9)	25 or less	33 or less	
	N.O.	Metal seal	VQZ322	13.5 (0.75)	17 or less	22 or less	
		Rubber seal	VQZ342	16.2 (0.9)	25 or less	33 or less	



Note 1) Value for sub-plate and maximum diameter

Note 2) As per JISB8375-1981 (Supply pressure; 0.5MPa; with indicator light and surge voltage suppressor; clean air)

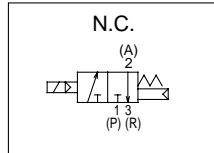
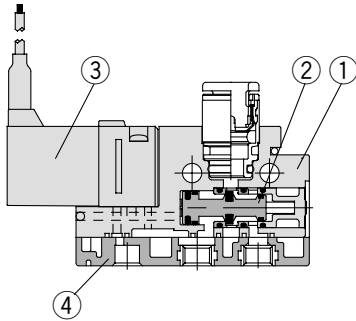
The response time is subject to the pressure and the air quality. The values at the time of ON are given for the double styles.

Note 3) Weight without sub-plate

## Construction

### VQZ100

Poppet

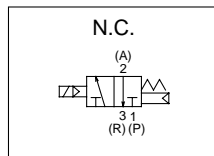
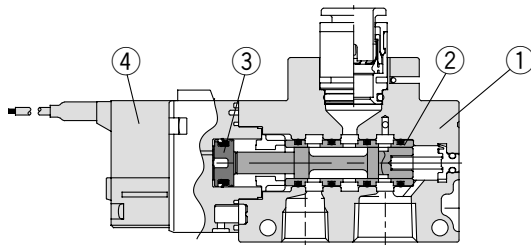


#### Component Parts

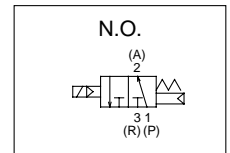
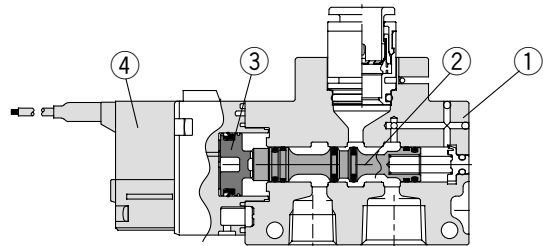
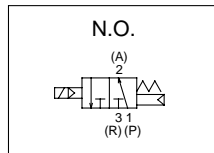
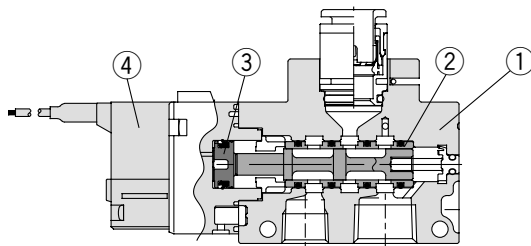
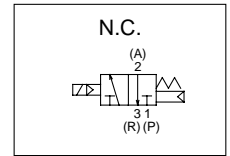
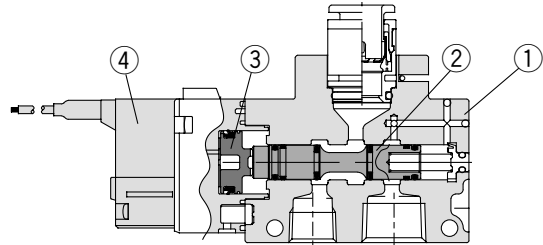
No.	Description	Material	Notes
①	Body	Resin	
②	Spool valve	Aluminum/NBR	
③	Pilot valve	—	
④	P, R plate	Resin/Aluminum	VQZ100-12A

### VQZ200/300

Metal seal



Rubber seal



#### Component Parts

No.	Description	Material	Notes
①	Body	Aluminum die cast	
②	Spool/Sleeve	Stainless steel	Metal seal
	Spool valve	Aluminum/NBR	Rubber seal
③	Piston	Resin	
④	Pilot valve	—	

SY

SYJ

VK

VZ

VT

VT

VP

VG

VP

VQ

VQZ

VZ

VS

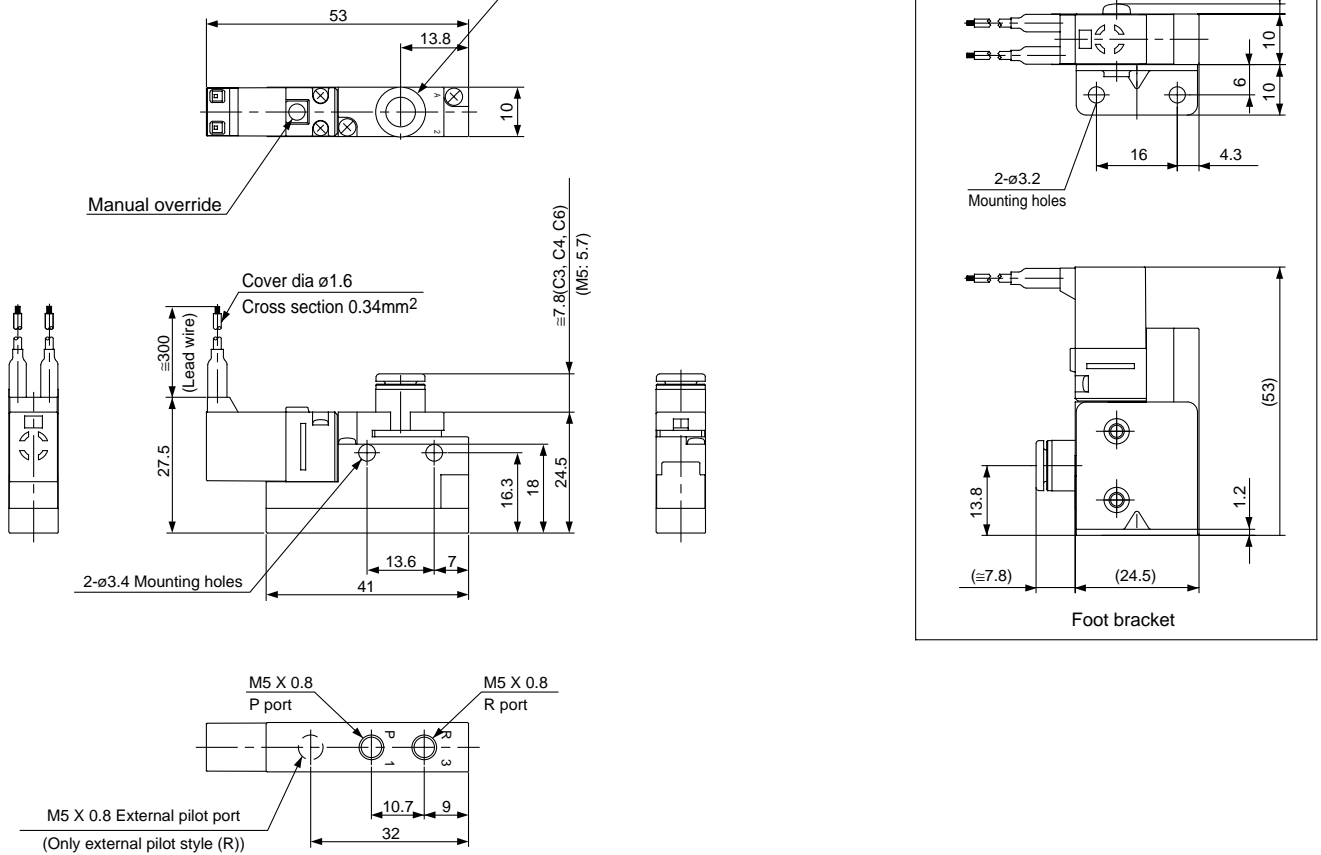
# VQZ100/200/300 Body Ported

## Dimensions: VQZ100

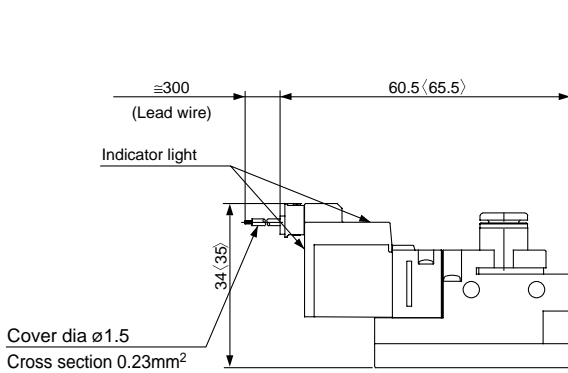
### Valve single unit

Grommet (G): VQZ115-□G□-C3, C4, C6, M5-PR

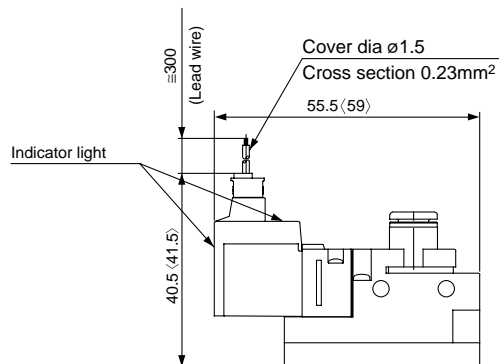
- 2-C3, C4, C6, M5
- C3: One-touch fittings for  $\phi 3.2$
- C4: One-touch fittings for  $\phi 4$
- C6: One-touch fittings for  $\phi 6$
- M5: M5 thread



L plug connector (L): VQZ115-□L□-C3, C4, C6, M5-PR



M plug connector (M): VQZ115-□M□-C3, C4, C6, M5-PR

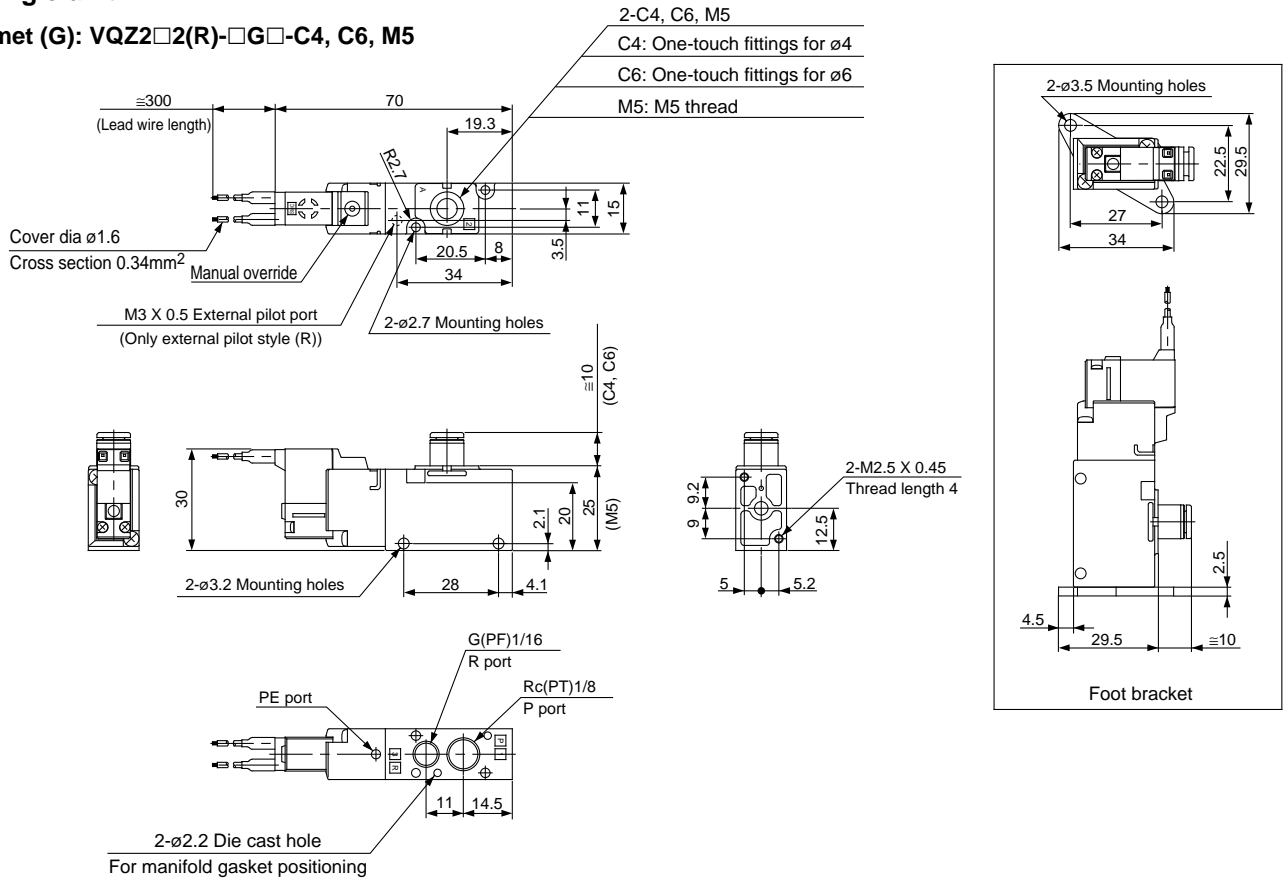




## VQZ200

### Valve single unit

**Grommet (G): VQZ2□2(R)-□G□-C4, C6, M5**



SY

SYJ

VK

VZ

VT

VT

VP

VG

VP

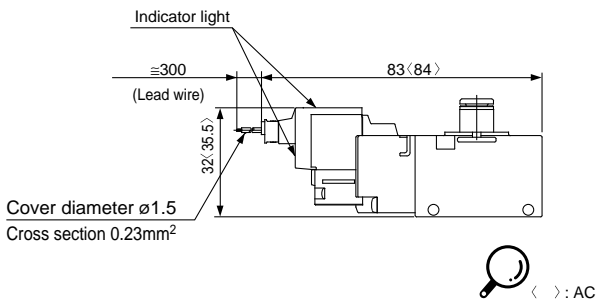
VQ

**VQZ**

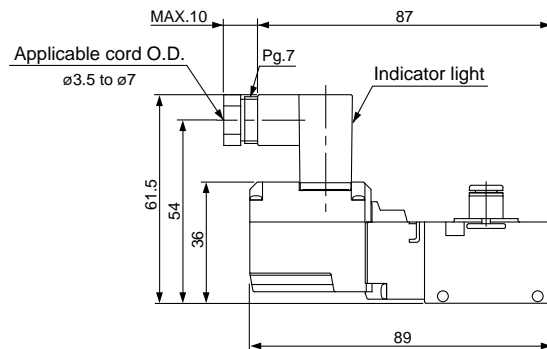
VZ

VS

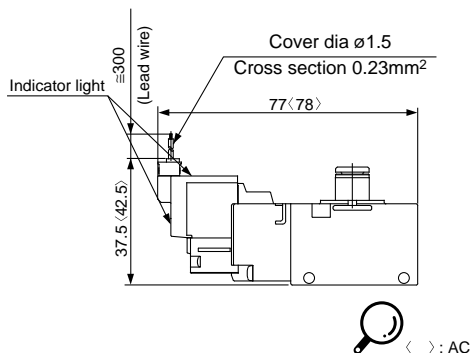
**L plug connector (L): VQZ2□2(R)-□L□-C4, C6, M5**



**DIN terminal (Y): VQZ2□2(R)-□Y□-C4, C6, M5**



**M plug connector (M): VQZ2□2(R)-□M□-C4, C6, M5**

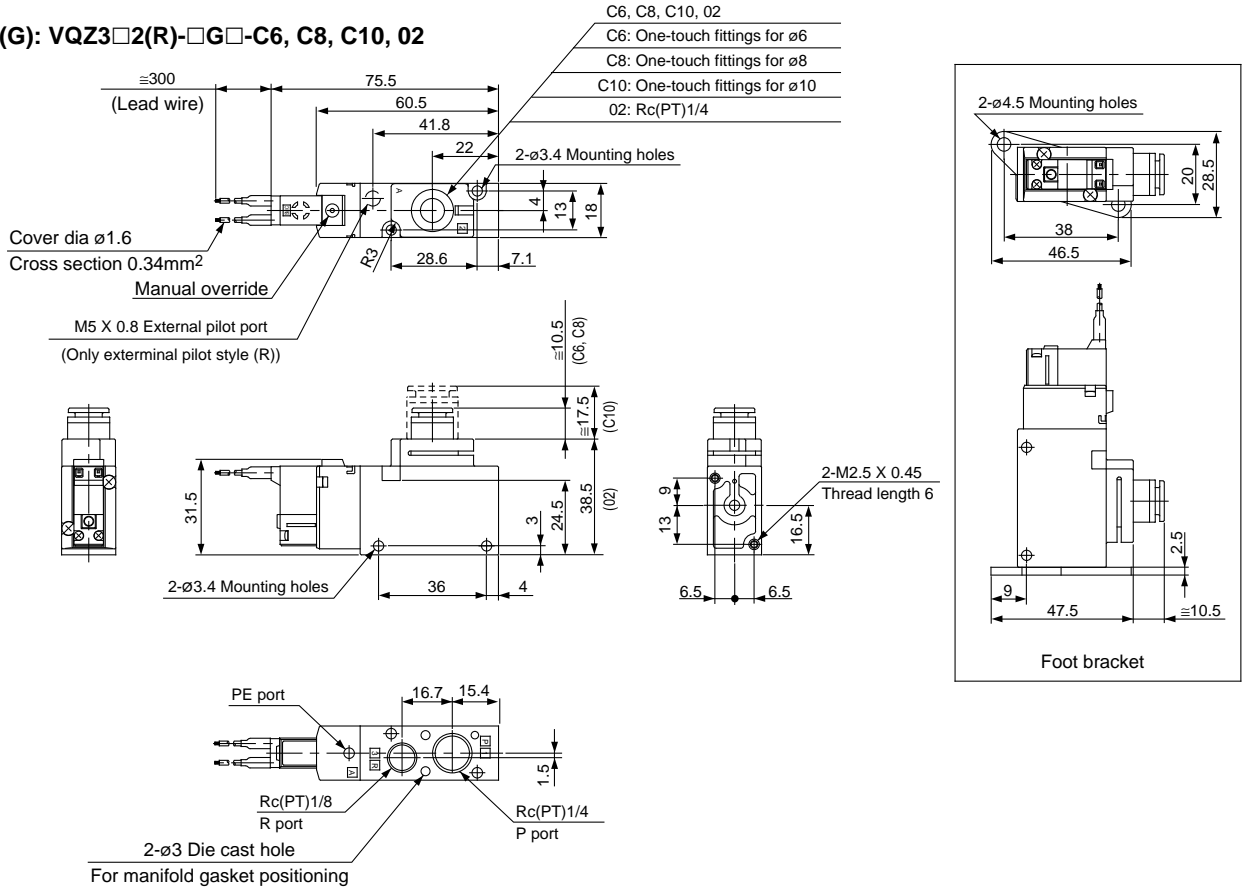


# VQZ100/200/300 Body Ported

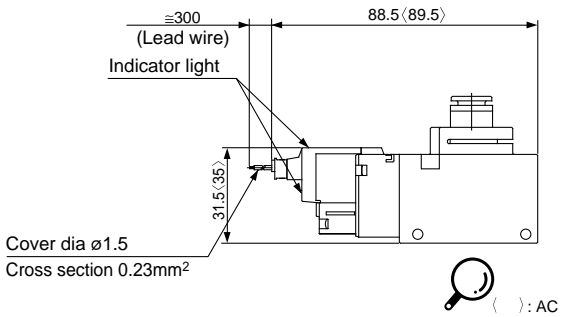
## Dimensions: VQZ300

### Valve single unit

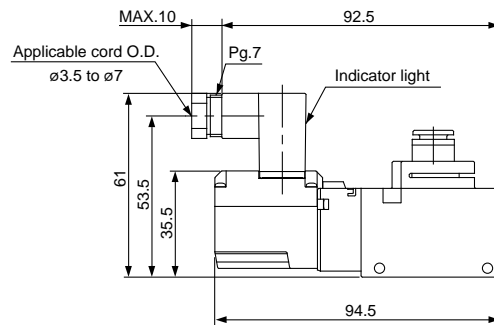
#### Grommet (G): VQZ3□2(R)-□G□-C6, C8, C10, 02



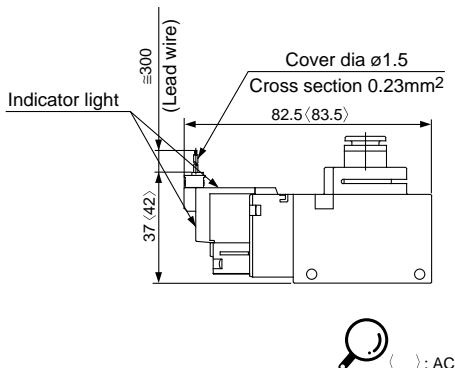
#### L plug connector (L): VQZ3□2(R)-□L□-C6, C8, C10, 02



#### DIN terminal (Y): VQZ3□2(R)-□Y□-C6, C8, C10, 02



#### M plug connector (M): VQZ3□2(R)-□M□-C6, C8, C10, 02



Body Ported

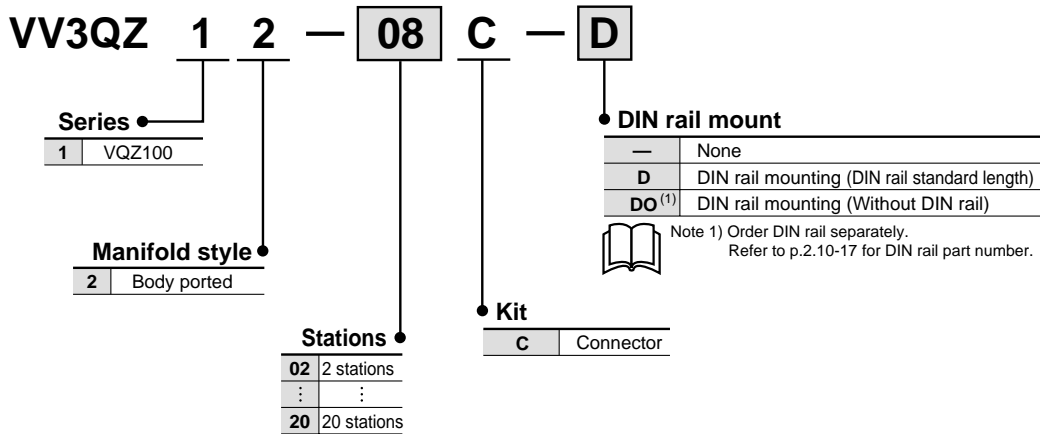
Plug Lead Unit

### 3 Port Solenoid Valve

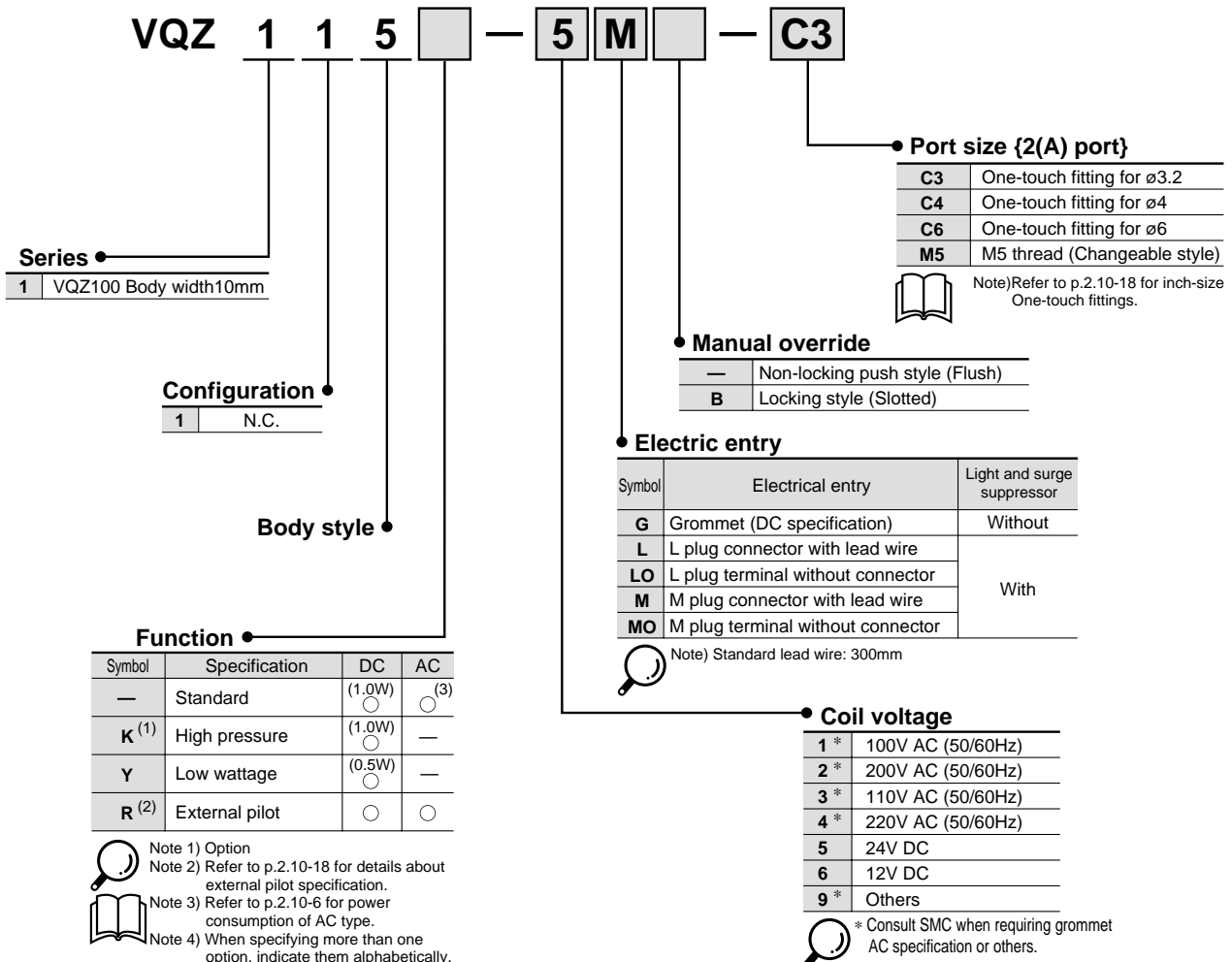
# VQZ100/200/300

## Manifold Connector kit

### How to Order Manifold VQZ100



### How to Order Valve VQZ100



SY

SYJ

VK

VZ

VT

VT

VP

VG

VP

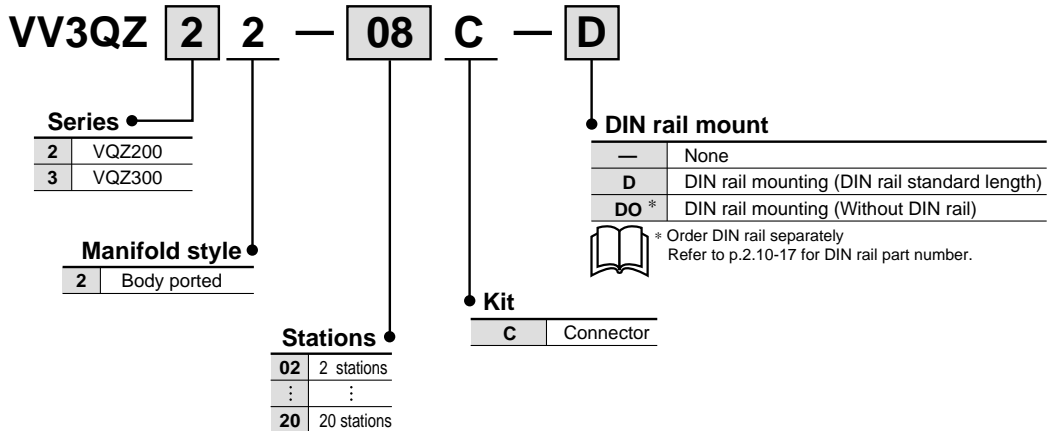
VQ

VQZ

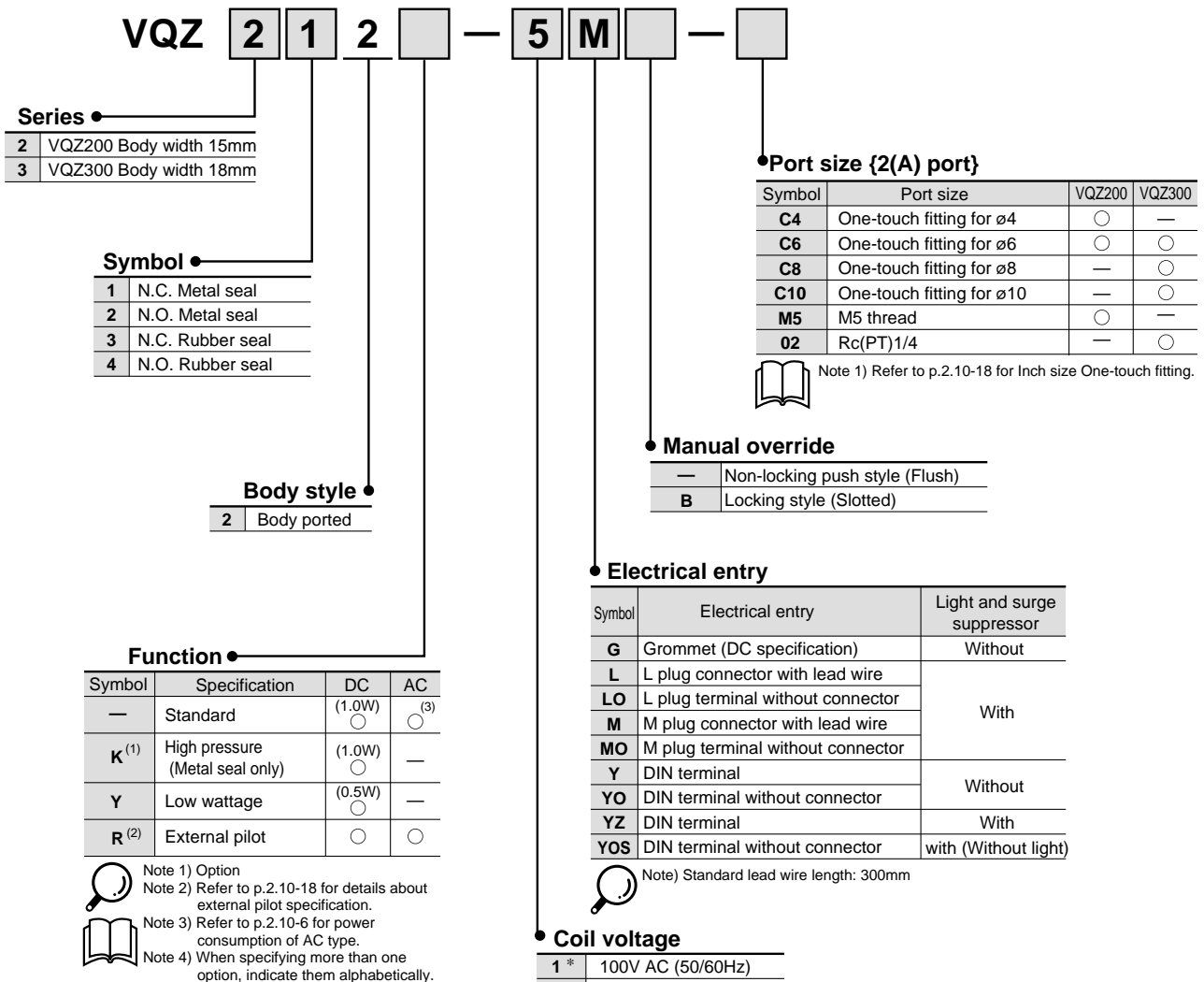
VZ

VS

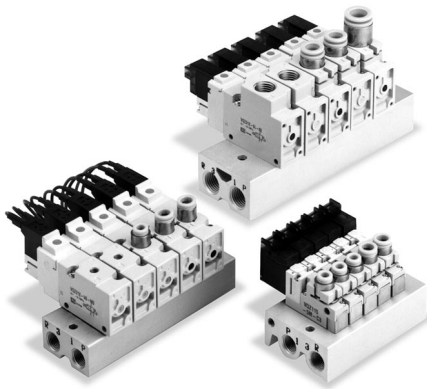
## How to Order Manifold VQZ200/300



## How to Order Valve VQZ200/300



## Manifold Specifications



Series	Base model	Piping specification		Applicable valve	Applicable stations	Manifold base weight (g)	
		Piping	Port size				
			1(P), 3(R)	2(A)			
VQZ100	VV3QZ12-□□□	Top	Rc(PT) 1/8	C3 (for ø3.2) C4 (for ø4) C6 (for ø6) M5 (M5 thread)	VQZ115	2 to 20	2 stations: 83 Additional station: 19
VQZ200	VV3QZ22-□□□	Top	Rc(PT) 1/8	C4 (for ø4) C6 (for ø6) M5 (M5 thread)	VQZ2□2	2 to 20	2 stations: 68 Additional station: 20
VQZ300	VV3QZ32-□□□	Top	Rc(PT) 1/4	C6 (for ø6) C8 (for ø8) C10 (for ø10) Rc(PT) 1/4	VQZ3□2	2 to 20	2 stations: 114 Additional station: 37

## How to Order Manifold Assembly (Example)

**VV3QZ22-05C** ..... 1 set (C kit 5 stations manifold base)

- \* **VVQZ200-10A-2** ... 1 set (Blank plate assembly)
- \* **VQZ212-5M-C6** ... 4 sets (N.C. style)

→ Prefix "\*" mark to valves etc. to be assembled on the manifold.

→ Write sequentially from station 1 on the D side.

Add the suffix valve and option part numbers to the manifold base number.  
Part numbers written collectively can be complicated, thus specify by using a manifold specification form.

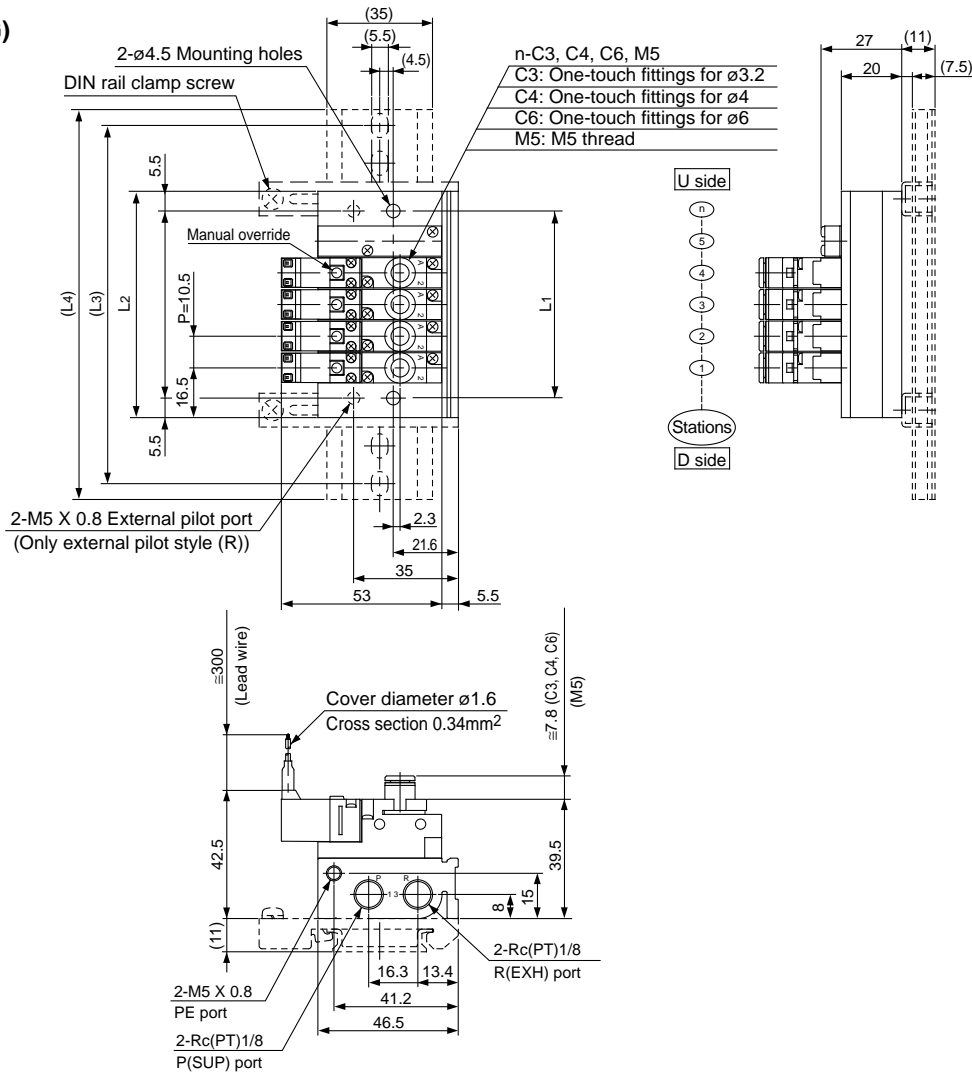
- SY
- SYJ
- VK
- VZ
- VT
- VT
- VP
- VG
- VP
- VQ
- VQZ
- VZ
- VS

# VQZ100/200/300 Body Ported

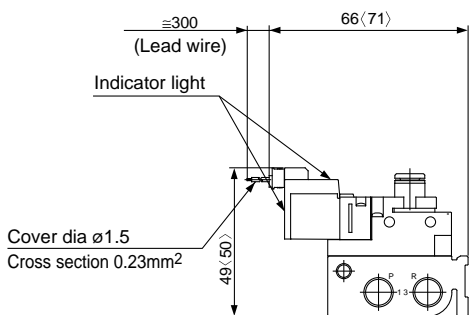
## Dimensions: VQZ100

### VV3QZ12-Station C

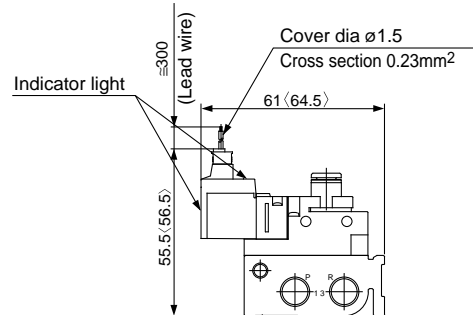
#### Grommet (G)



#### L plug connector (L)



#### M plug connector (M)



**Dimensions** Equation  $L1=10.5n+9.5$   $L2=10.5n+22.5$

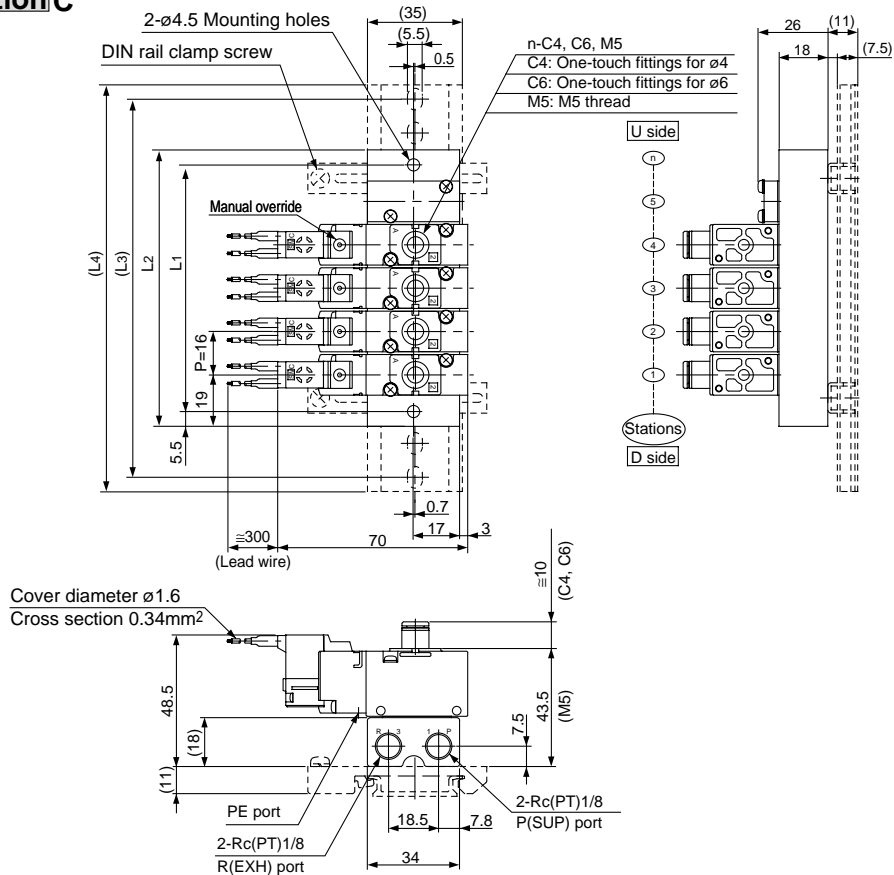
n: Station (Max. 20)

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5
L2	43.5	54	64.5	75	85.5	96	106.5	117	127.5	138	148.5	159	169.5	180	190.5	201	211.5	222	232.5
L3	75	75	87.5	100	112.5	125	137.5	137.5	150	162.5	175	187.5	200	200	212.5	225	237.5	250	262.5
L4	85.5	85.5	98	110.5	123	135.5	148	148	160.5	173	185.5	198	210.5	210.5	223	235.5	248	260.5	273

## Dimensions: VQZ200

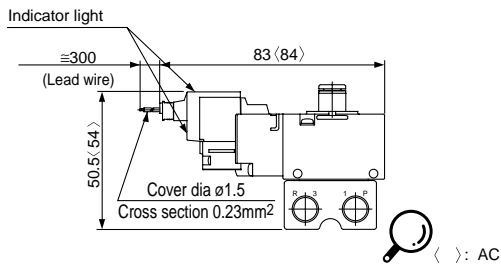
### VV3QZ22-Station C

#### Grommet (G)

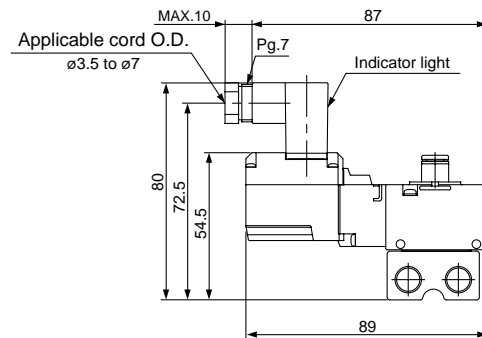


- SY
- SYJ
- VK
- VZ
- VT
- VT
- VP
- VG
- VP
- VQ
- VQZ
- VZ
- VS

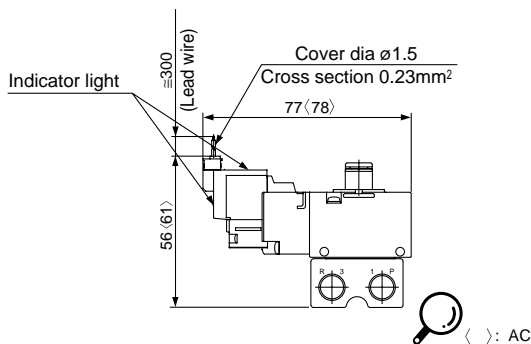
#### L plug connector (L)



#### DIN terminal (Y)



#### M plug connector (M)



#### Dimensions

Equation  $L1=16n+11$   $L2=16n+22$

n: Station (Max. 20)

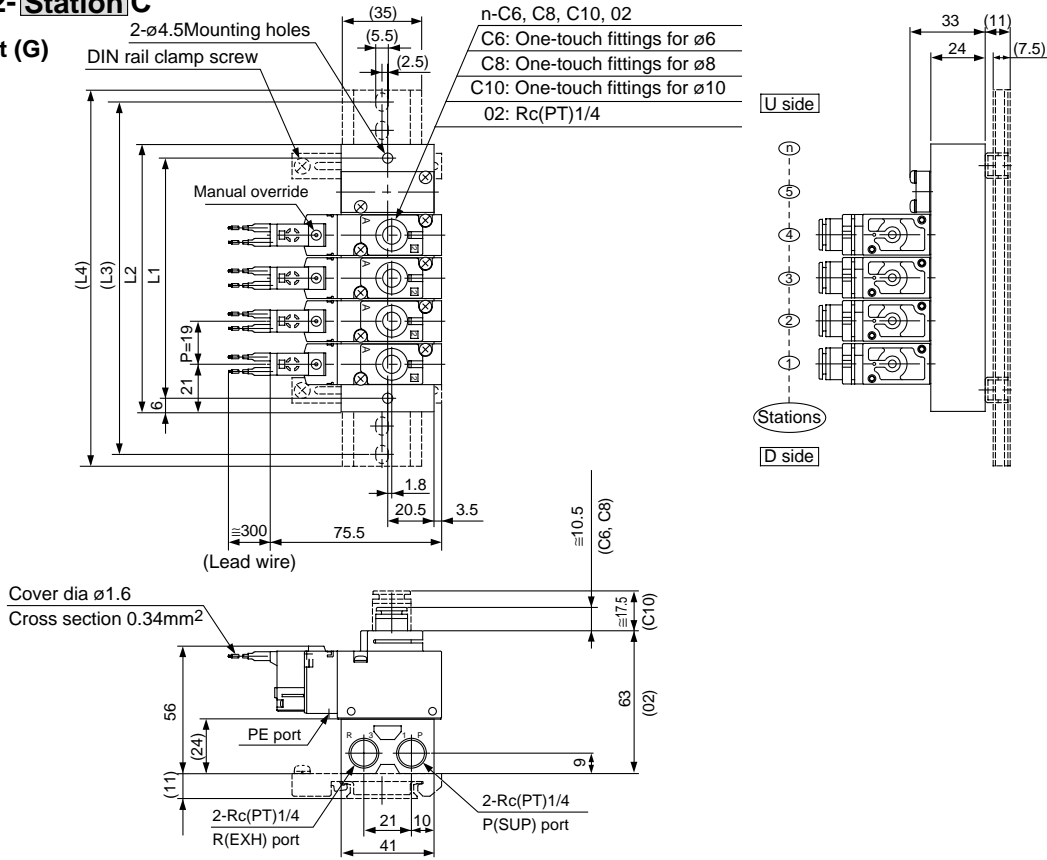
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	43	59	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331
L2	54	70	86	102	118	134	150	166	182	198	214	230	246	262	278	294	310	326	342
L3	75	100	112.5	125	137.5	162.5	175	187.5	212.5	225	237.5	250	275	287.5	300	325	337.5	350	362.5
L4	85.5	110.5	123	135.5	148	173	185.5	198	223	235.5	248	260.5	285.5	298	310.5	335.5	348	360.5	373

# VQZ100/200/300 Body Ported

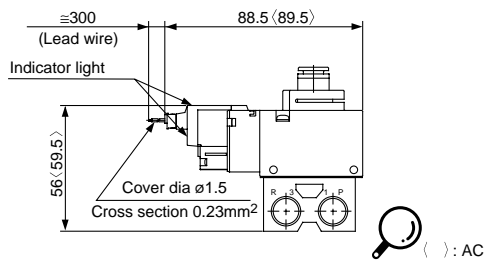
## VQZ300

### VV3QZ32-Station C

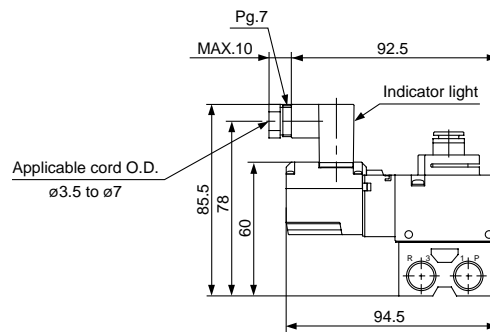
#### Grommet (G)



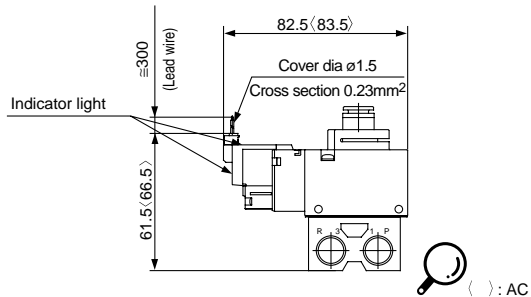
#### L plug connector (L)



#### DIN terminal (Y)



#### M plug connector (M)



**Dimensions** Equation L1=19n+11 L2=19n+23

n: Station (Max. 20)

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391
L2	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L3	87.5	100	125	137.5	162.5	187.5	200	225	237.5	262.5	275	300	312.5	337.5	350	375	387.5	412.5	425
L4	98	110.5	135.5	148	173	198	210.5	235.5	248	273	285.5	310.5	323	348	360.5	385.5	398	423	435.5

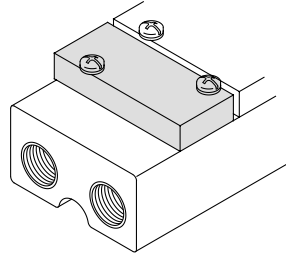


## Manifold Options

### Blank plate

- VVQZ100-10A-2
- VVQZ200-10A-2
- VVQZ300-10A-2

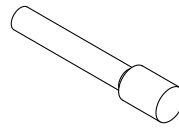
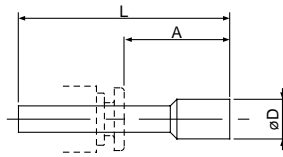
This is used when removing the valve for maintenance, or reserving a valve mounting space on the manifold for future use.



### Blank plug

- KQP-23-X19
- KQP-04-X19
- KQP-06-X19
- KQP-08-X19
- KQP-10-X19

● Color: White



#### Dimensions

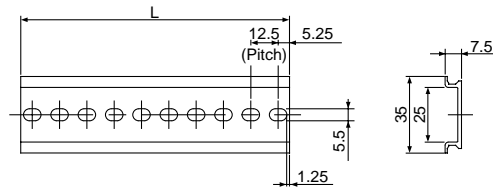
One-touch fitting ød	Part No.	A	L	D
3.2	KQP-23-X19	16	31.5	3.2
4	KQP-04-X19	16	32	6
6	KQP-06-X19	18	35	8
8	KQP-08-X19	20.5	39	10
10	KQP-10-X19	22	43	12

### DIN rail

#### AXT100-DR-□

\* Enter suffix number into □ from the table below.  
Refer to the manifold dimensions for the L dimension.

To order a manifold with DIN rail already attached, insert "D" at the end of the manifold part number.  
The DIN rail is approximately 30mm longer than the length of manifold.



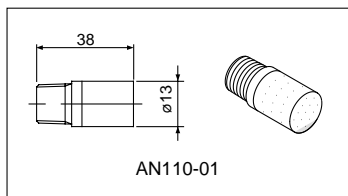
#### L dimension

$$L = 12.5n + 10.5$$

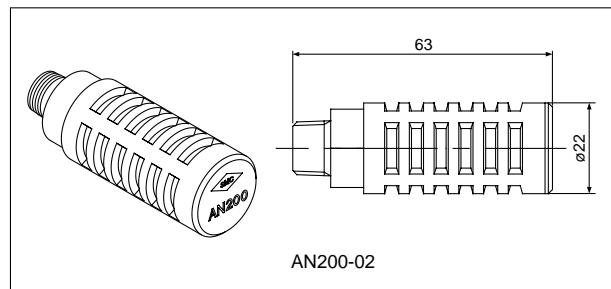
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	23	35.5	48	60.5	73	85.5	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5	223	235.5	248	260.5
No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
L	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5	398	410.5	423	435.5	448	460.5	473	485.5	498	510.5

### EXH port silencer

Silencer is installed in the EXH port.



AN110-01



AN200-02

#### Dimensions

Model	Silencer P/N
VQZ100	AN110-01
VQZ200	AN110-01
VQZ300	AN200-02

SY

SYJ

VK

VZ

VT

VT

VP

VG

VP

VQ

VQZ

VZ

VS

# Series VQZ Body Ported Option

## External Pilot Specification

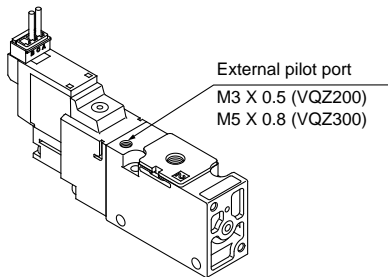
The external pilot specification is used when the operating pressure is below the minimum operating pressure 0.1 to 0.2MPa or when valve is used for a vacuum application.

For the external pilot valve, an "R" should be attached to the valve and the manifold part number.

Example/Valve

**VQZ212R — 5M — C6**

External pilot specification



## Pressure specifications

Series		VQZ100 <sup>(2)</sup>	VQZ200, VQZ300
External pilot pressure range	Metal seal	—	0.1 to 0.7MPa
	Rubber seal (1) (VQZ100: Poppet)	0.2 to 0.7MPa	0.15 to 0.7MPa
Operating press. range (1)		Vacuum to 0.7MPa	



Note 1) In case of the high pressure style, the upper limit of max. operating pressure and external pressure range is 1MPa.

Note 2) If VQZ100 is applied in vacuum, vacuum from P port. When finishing the vacuum application, supply pressure from R port. Make sure that the supply pressure is less than half of the external pilot pressure.

## Inch Size One-touch Fittings and Optional Thread

Manifolds are available with inch size one-touch fittings and NPT, NPTF or PF type threads.

How to Order Valve

**VQZ212 — 5M — N7 T**

Thread  
(Cylinder ports,  
and P/R ports)

—	Rc(PT)
N	NPT
T	NPTF
F	G(PF)

Note) R port of VQZ200 is only PF 1/16

Cylinder ports

Symbol	N1	N3	N7	N9	N11	M5	O2
Tube O.D. (Inch)	ø1/8"	ø5/32"	ø1/4"	ø5/16"	ø3/8"	M5	1/4
A, B port	VQZ 100	●	●	—	—	●	—
	VQZ 200	—	●	●	—	●	—
	VQZ 300	—	—	●	●	—	●



Note) Millimeter size One-touch fittings (C□) are also available.

How to Order Manifold

**VV3QZ22 — 05C — 00T**

Thread  
(P/R port)

—	Rc(PT)
00N	NPT
00T	NPTF
00F	G(PF)

## Dust Tight/Jet Proof (IP65)

Optional IP65 model is available on valves with DIN connector electrical entry.

How to Order Valve

(Applicable to VQZ200/300 rubber seal style only)

**VQZ332 — 5YZB W — 02**

IP65 rated

—	No (standard)
W <sup>(1)</sup>	IP65 rated



Note 1) The pilot exhaust of the IP65 valves is common with main valve exhaust. (The standard valve has an individual exhaust for the pilot valve.)

# Replacement Parts

## One-touch Fitting Assembly (For cylinder port)

Fitting size	C3	C4	C6	C8	C10	M5 (VQZ100 only)
Series						
<b>VQZ100, 200</b>	VVQ1000-50A-C3	VVQ1000-50A-C4	VVQ1000-50A-C6	—	—	VVQ1000-50A-M5
<b>VQZ300</b>	—	—	VVQ1000-51A-C6	VVQ1000-51A-C8	VVQ1000-51A-C10	—

Note) Orders accepted in 10 pcs. units.

### Plug connector assembly

#### DC (+COM)

##### • Single

AXT661-14A-□

##### • Latching

AXT661-13A-□

#### DC (-COM)

##### • Latching

AXT661-13AN-□

#### 100V, 110V AC

##### • Single

AXT661-31A-□

##### • Latching

AXT661-32A-□

#### 200V, 220V AC

##### • Single

AXT661-34A-□

##### • Latching

AXT661-35A-□

Only connector and sockets (3 pcs.)

AXT661-12A

#### Lead wire length

—	300mm
6	600mm
10	1000mm
20	2000mm
30	3000mm

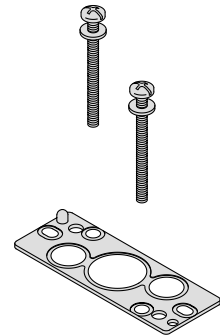
Standard wire length of valve with plug connector is 300mm.

When requiring valve with 600mm length lead wire specify the model number of valve without plug connector and the plug connector assembly.

### Gasket and screw assembly

	Part No.
<b>VQZ100</b>	VQZ100-GS-2
<b>VQZ200</b>	VQZ200-GS-2
<b>VQZ300</b>	VQZ300-GS-2

Note) Above part number consists of a 10 pcs. units with one gasket and two screws. Orders are accepted in 10 pcs. units.



### Pilot valve assembly

VQ11 1 □ — 5 G

#### Series

0	VQZ100
1	VQZ200, 300

#### Function

Symbol	Specification	DC	AC
—	Standard	(1.0W) ○	○
<b>K</b> <sup>(1)</sup>	High pressure (Metal seal only)	(1.0W) ○	—
<b>Y</b>	Low wattage	(0.5W) ○	—
<b>L</b> <sup>(3)</sup>	Latching	(1.0W) ○	○

Note 1) Option  
 Note 2) When specifying more than one option, please indicate them alphabetically.  
 Note 3) K (High pressure) and Y (Low wattage) are not available.  
 Electrical entry: L/M plug connector only.

#### Coil voltage

1*	100V AC (50/60Hz)
2*	200V AC (50/60Hz)
3*	110V AC (50/60Hz)
4*	220V AC (50/60Hz)
5	24V DC
6	12V DC
9*	Others

\* Consult SMC when requiring grommet of AC specification and others.

#### Electric entry

Symbol	Electrical entry	Light and surge voltage suppressor
<b>G</b>	Grommet (DC specification)	Without
<b>L</b>	L plug connector with lead wire	With
<b>LO</b>	L plug terminal without connector	
<b>M</b>	M plug connector with lead wire	
<b>MO</b>	M plug terminal without connector	Without
<b>Y</b> <sup>(1)</sup>	DIN terminal	
<b>YO</b> <sup>(1)</sup>	DIN terminal without connector	
<b>YZ</b> <sup>(1)</sup>	DIN terminal	With
<b>YOS</b> <sup>(1)</sup>	DIN terminal without connector	With (Without light)

Note 1) DIN is applicable to VQZ 200 and 300.  
 Note 2) Electrical entry of pilot valve for VQZ100 (L and M) is opposite side of valve body part number.

Valve style	Pilot valve style
VQZ115□-□L□	VQ110□-□M□
VQZ115□-□M□	VQ110□-□L□

SY

SYJ

VK

VZ

VT

VT

VP

VG

VP

VQ

VQZ

VZ

VS