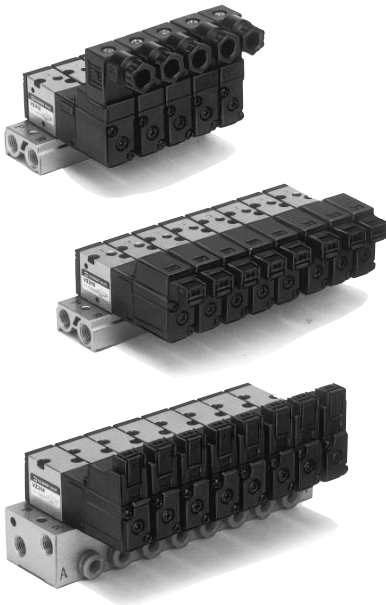



Series VZ300

Manifold Specifications



Manifold Specifications

Model	For internal pilot	20-□1	40-□2	40-□1
	For external pilot	21R-□1	40R-□2	40R-□1
Manifold type	Single base/B mount			
P(SUP)/R(EXH)	Common SUP/Common EXH			
Valve stations	2 to 20 stations			
A port porting specifications	Location	Valve		Base
	Direction	Top	Bottom	Side
Port size	1(P), 3(R) port	Rc 1/8	Rc 1/8	Rc 1/8
	2(A) port	M5 x 0.8	M5 x 0.8 1/8	M5 x 0.8, Rc 1/8, C4 (One-touch fitting for ø4), C6 (One-touch fitting for ø6)
	X port ^{Note)}	M5 x 0.8	M5 x 0.8	M5 x 0.8

 Note) Only for external pilot

Flow Characteristics

Manifold			Port size		Flow characteristics					
					1 → 2 (P → A)			2 → 3 (A → R)		
			1(P), 3(R) port	2(A) port	C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv
Body ported For internal pilot	VV3Z3-20-□1	VZ3□2	1/8	M5 x 0.8	0.47	0.43	0.13	0.74	0.32	0.19
			1/8	M5 x 0.8	0.71	0.52	0.21	0.81	0.28	0.20
Base mounted For internal pilot	VV3Z3-40-□2	VZ3□4	1/8	M5 x 0.8	0.98	0.36	0.25	0.92	0.24	0.22
			1/8	M5 x 0.8	0.71	0.49	0.2	0.80	0.23	0.19
	1/8		1/8	1.00	0.37	0.26	0.96	0.25	0.24	
	1/8		C4	0.68	0.35	0.17	1.00	0.25	0.24	
	1/8		C6	1.00	0.27	0.25	1.00	0.30	0.26	
	1/8		C6	1.00	0.27	0.25	1.00	0.30	0.26	
Body ported For external pilot	VV3Z3-21R-□1	VZ3□2R	1/8	M5 x 0.8	0.47	0.43	0.13	0.74	0.32	0.19
			1/8	M5 x 0.8	0.71	0.52	0.21	0.81	0.28	0.20
Base mounted For external pilot	VV3Z3-40R-□2	VZ3□4R	1/8	M5 x 0.8	0.98	0.36	0.25	0.92	0.24	0.22
			1/8	M5 x 0.8	0.71	0.49	0.2	0.80	0.23	0.19
	1/8		1/8	1.00	0.37	0.26	0.96	0.25	0.24	
	1/8		C4	0.68	0.35	0.17	1.00	0.25	0.24	
	1/8		C6	1.00	0.27	0.25	1.00	0.30	0.26	
	1/8		C6	1.00	0.27	0.25	1.00	0.30	0.26	

How to Order Manifold

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.

(Example)

VV3Z3-20-031.....1 pc. (Manifold base)

VV3Z3-40R-031-C6.....1 pc. (Manifold base)

*VZ312-5LZ-M5...2 pcs. (Valve)

*VZ314R-5G.....2 pcs. (Valve)

*DXT200-8-6A.....1 pc. (Blanking plate assembly)

*DXT200-8-3A.....1 pc. (Blanking plate assembly)

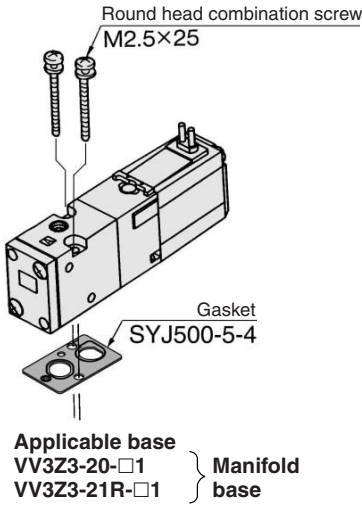
↳ The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ300**

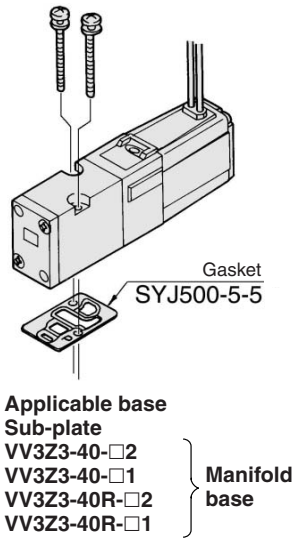
Option

Combinations of Solenoid Valve, Manifold Gasket and Manifold

Body ported (VZ3□2)

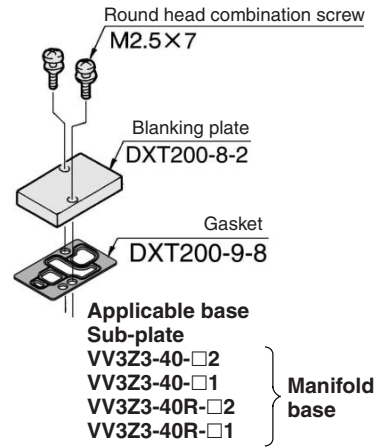


Base mounted (VZ3□4)

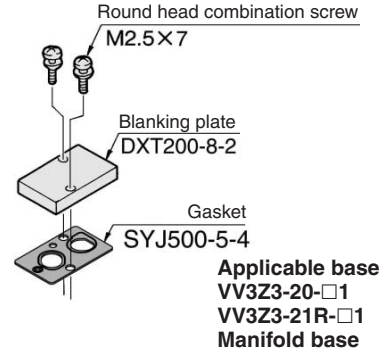


Blanking Plate Assembly

Part no.: DXT-200-8-3A



Part no.: DXT200-8-6A



⚠ Caution

Mounting Screw Tightening Torques

M2.5: 0.45 N·m

⚠ Warning

When mounting a solenoid valve on the manifold base or sub-plate, etc., the mounting direction is determined. If mounted in the wrong direction, the equipment to be wired might result in malfunction. Refer to dimensions of this catalog and use caution to the mounting direction.

V100

SY

SYJ

VK

VZ

VT

VP

VG

VP

S070

VQ

VKF

VQZ

VZ

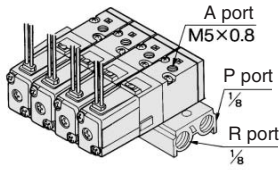
VS

VFN

Series VZ300

Manifold for Internal Pilot

20-□1



How to Order

VV3Z3-20-05 1 □ □

Stations	
02	2 stations
⋮	⋮
20	20 stations

P/R port Thread type	
Nil	Rc
00F	G
00N	NPT
00T	NPTF

Option	
F	Foot bracket

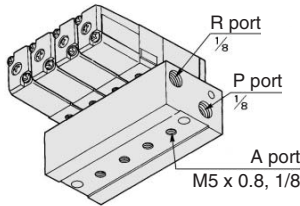
* Bracket is not mounted.

Applicable solenoid valve
 VZ312-□□□□-M5
 VZ312M-□□□□-M5
 VZ322-□□□□-M5
 VZ322M-□□□□-M5
Applicable blanking plate assembly
 DXT200-8-6A



Note) For more than 6 stations, supply air to both sides of P port and exhaust air from both sides of R port.

40-□2



How to Order

VV3Z3-40-05 2-M5 □ □

Stations	
02	2 stations
⋮	⋮
20	20 stations

A port side	
M5	M5 x 0.8
01	1/8

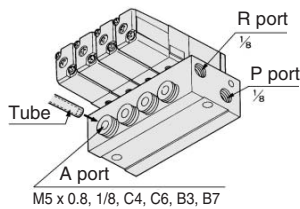
P/R port Thread type	
Nil	Rc
F	G
N	NPT
Z	NPTF

Applicable solenoid valve
 VZ314-□□□□
 VZ314M-□□□□
 VZ324-□□□□
 VZ324M-□□□□
Applicable blanking plate assembly
 DXT200-8-3A



Note) For more than 9 stations, supply air to both sides of P port and exhaust air from both sides of R port.

40-□1



How to Order

VV3Z3-40-05 1-C6 □ □

Stations	
02	2 stations
⋮	⋮
20	20 stations

A port side	
M5	M5 x 0.8
01	1/8
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
B3	One-touch fitting for ø5/32"
B7	One-touch fitting for ø1/4

P/R port Thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

Applicable solenoid valve
 VZ314-□□□□
 VZ314M-□□□□
 VZ324-□□□□
 VZ324M-□□□□
Applicable blanking plate assembly
 DXT200-8-3A

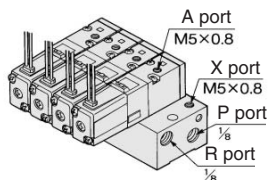


Note) For more than 9 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Manifold for External Pilot

Pilot valve pressure is supplied separately from the main valve pressure through the use of a separate supply port. It can be used in the vacuum (up to -100 kPa) or low pressure line with 0.15 MPa or less.

21R-□1



How to Order

VV3Z3-21R-05 1 □ □

Stations	
02	2 stations
⋮	⋮
20	20 stations

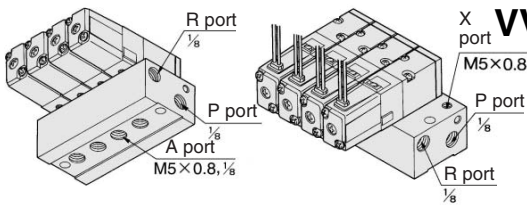
P/R port Thread type	
Nil	Rc
00F	G
00N	NPT
00T	NPTF

Applicable solenoid valve
 VZ312R-□□□□-M5
 VZ322R-□□□□-M5
Applicable blanking plate assembly
 DXT200-8-6A



Note) For more than 9 stations, supply air to both sides of P port and exhaust air from both sides of R port.

40R-□2



How to Order

VV3Z3-40R-05 2-01 □ □

Stations	
02	2 stations
⋮	⋮
20	20 stations

A port side	
M5	M5 x 0.8
01	1/8

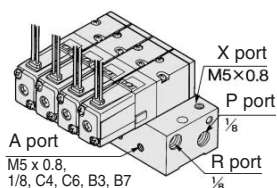
P/R port Thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

Applicable solenoid valve
 VZ314R-□□□□
 VZ324R-□□□□
Applicable blanking plate assembly
 DXT200-8-3A



Note) For more than 9 stations, supply air to both sides of P port and exhaust air from both sides of R port.

40R-□1



How to Order

VV3Z3-40R-05 1-M5 □ □

Stations	
02	2 stations
⋮	⋮
20	20 stations

A port side	
M5	M5 x 0.8
01	1/8
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
B3	One-touch fitting for ø5/32"
B7	One-touch fitting for ø1/4

P/R port Thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

Applicable solenoid valve
 VZ314R-□□□□
 VZ324R-□□□□
Applicable blanking plate assembly
 DXT200-8-3A

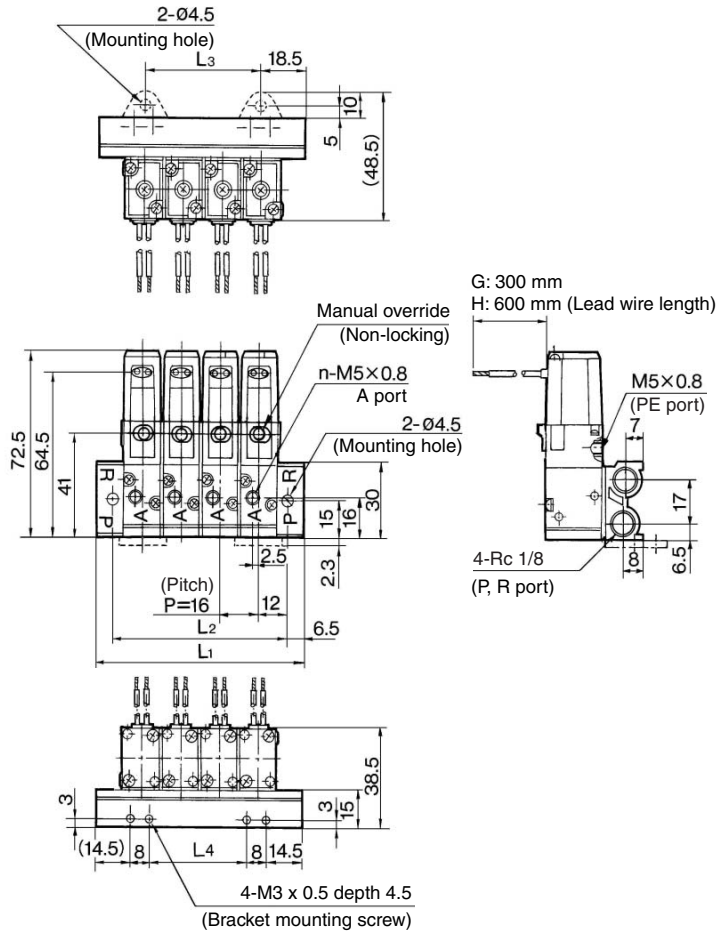


Note) For more than 9 stations, supply air to both sides of P port and exhaust air from both sides of R port.

3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ300**

**For Internal Pilot
Type 20 Manifold: Top Ported**

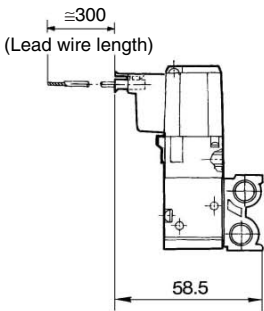
**VV3Z3-20- Stations 1(-F)
Grommet (G), (H)**



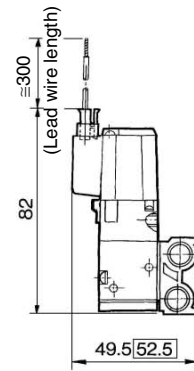
- V100
- SY
- SYJ
- VK
- VZ**
- VT
- VP
- VG
- VP
- S070
- VQ
- VKF
- VQZ
- VZ
- VS
- VFN

Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	53	69	85	101	117	133	149	165	181	197	213	229	245	261	277	293	309	325	341
L2	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328
L3	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240	256	272	288	304
L4	8	24	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296

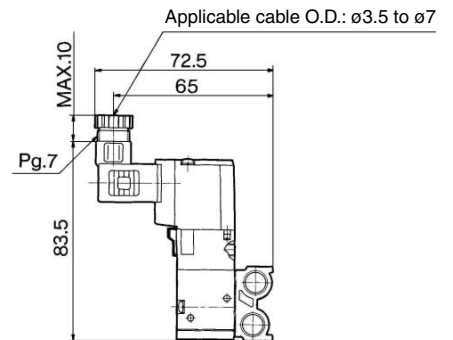
L plug connector (L)



M plug connector (M)



DIN terminal (D)

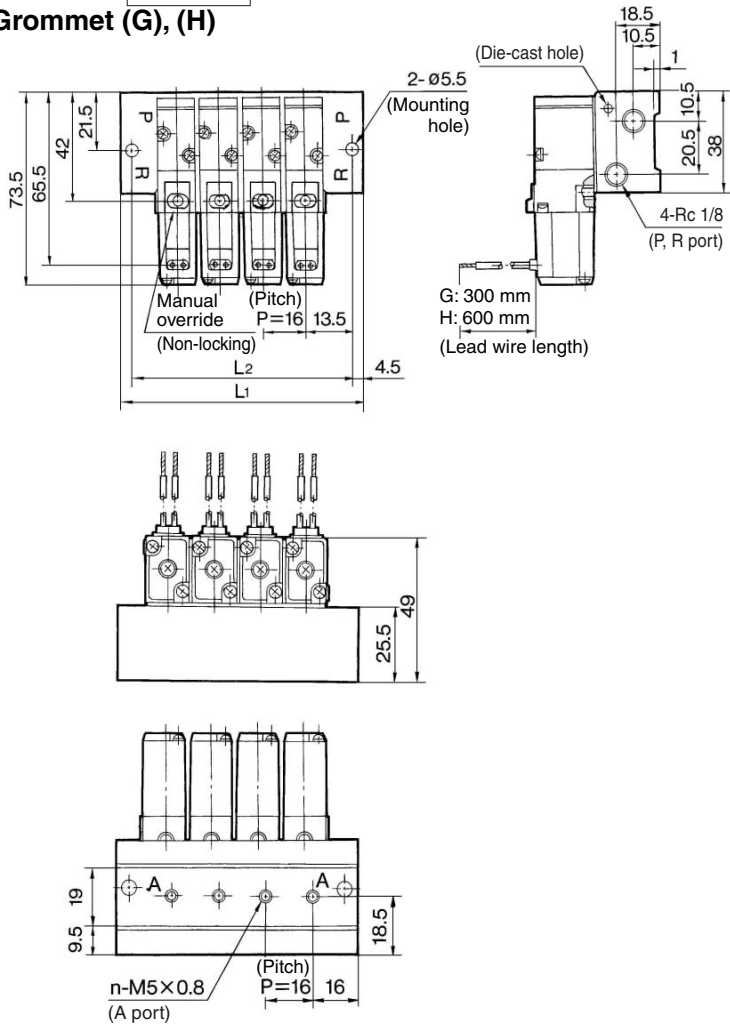


: With light/surge voltage suppressor

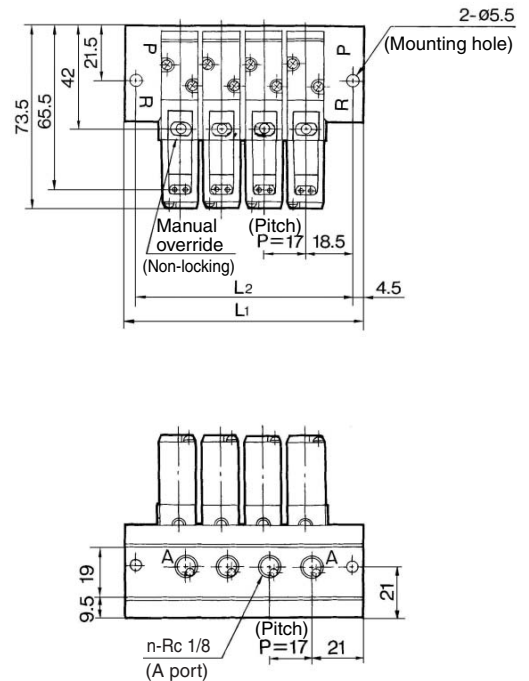
Series VZ300

Type 40 Manifold: Bottom Ported

VVZ3-40- Stations 2-M5/01
Grommet (G), (H)

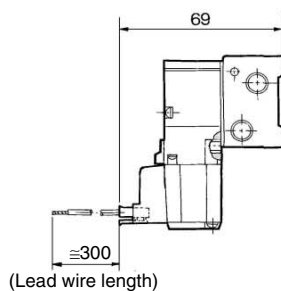


Rc 1/8

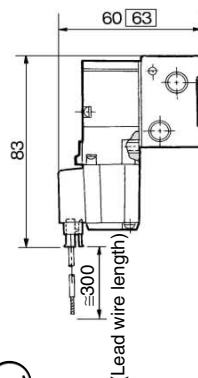


Port size	Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
M5	L1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340
	L2	43	59	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331
Rc 1/8	L1	63	80	97	114	131	148	165	182	199	216	233	250	267	284	301	318	335	352	369
	L2	54	71	88	105	122	139	156	173	190	207	224	241	258	275	292	309	326	343	360

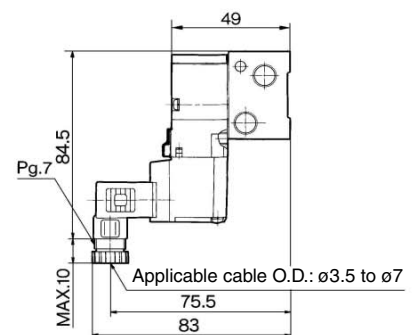
L plug connector (L)



M plug connector (M)



DIN terminal (D)



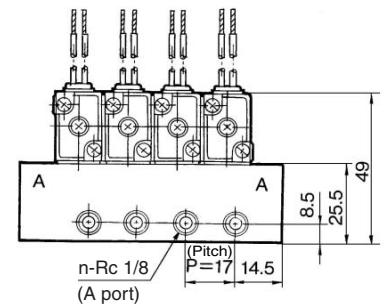
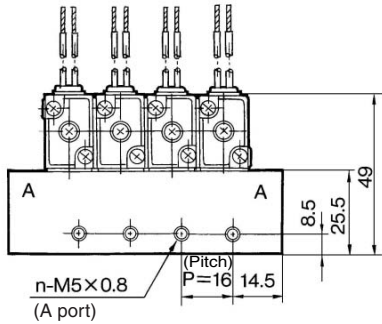
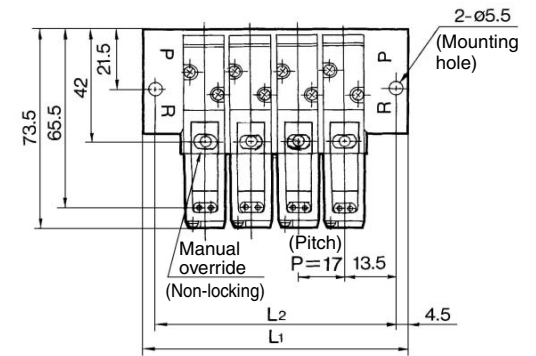
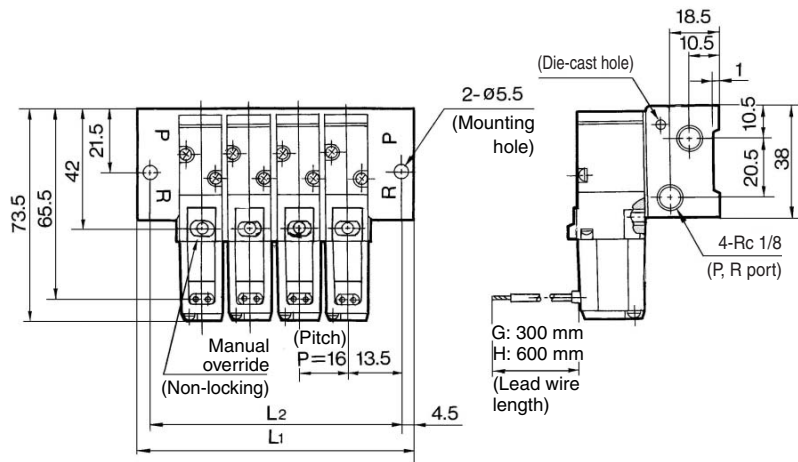
□: With light/surge voltage suppressor

3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ300**

**For Internal Pilot
Type 40 Manifold: Side Ported**

**VV3Z3-40- Stations 1-M5/01
Grommet (G), (H)**

Rc 1/8

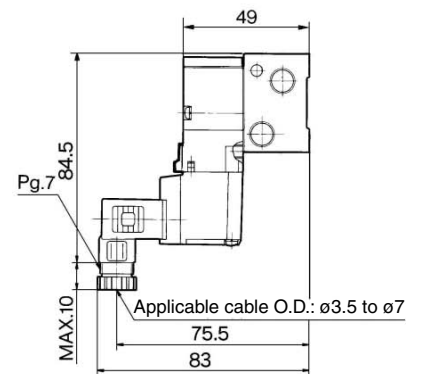
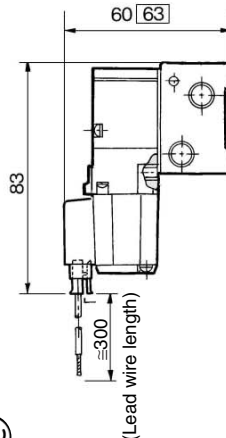
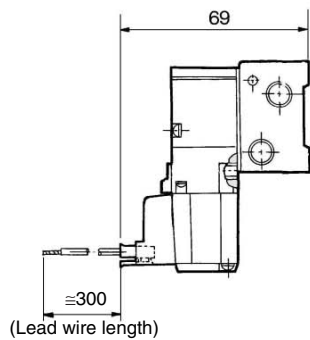


Port size	Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	M5	L1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324
	L2	43	59	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331
Rc 1/8	L1	53	70	87	104	121	138	155	172	189	206	223	240	257	274	291	308	325	342	359
	L2	44	61	78	95	112	129	146	163	180	197	214	231	248	265	282	299	316	333	350

L plug connector (L)

M plug connector (M)

DIN terminal (D)



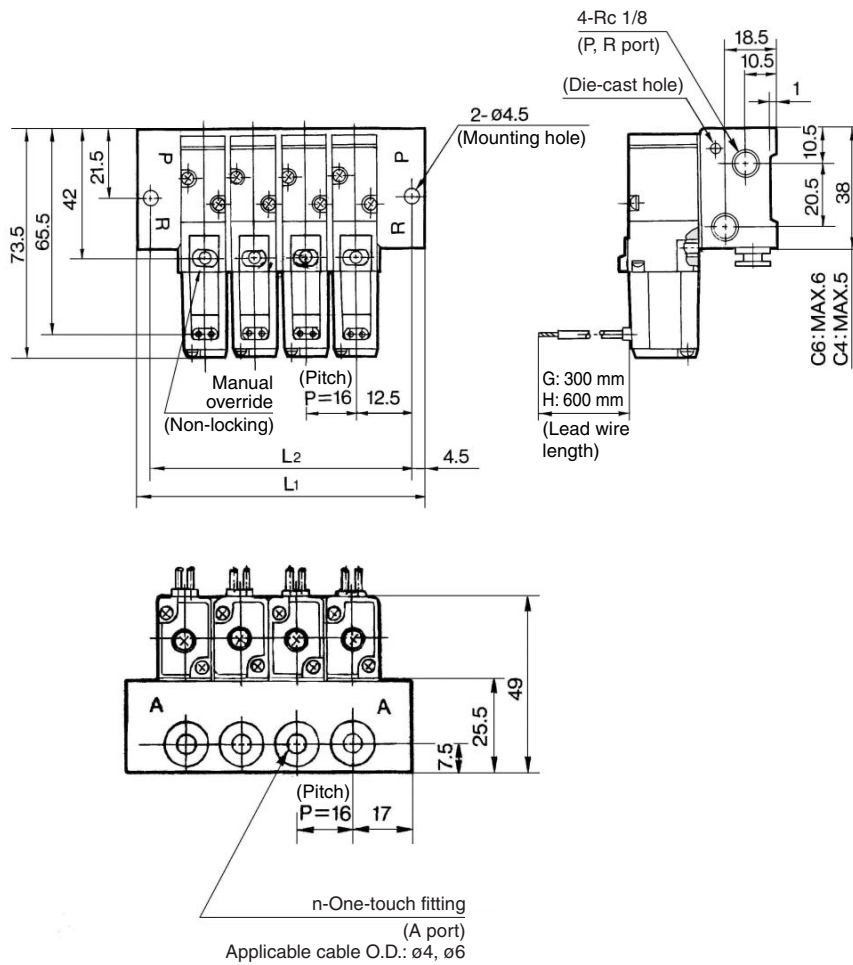
□: With light/surge voltage suppressor

- V100
- SY
- SYJ
- VK
- VZ**
- VT
- VP
- VG
- VP
- S070
- VQ
- VKF
- VQZ
- VZ
- VS
- VFN

Series VZ300

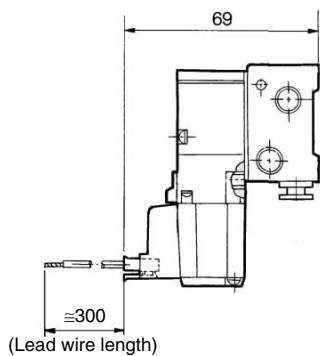
For Internal Pilot
Type 40 Manifold: Side Ported

VV3Z3-40- Stations 1-C4/C6
Grommet (G), (H)

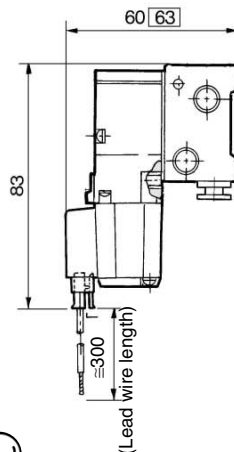


Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	50	66	82	98	114	130	146	162	178	194	210	226	242	258	274	290	306	322	338
L2	41	57	73	89	105	121	137	153	169	185	201	217	233	249	265	281	297	313	329

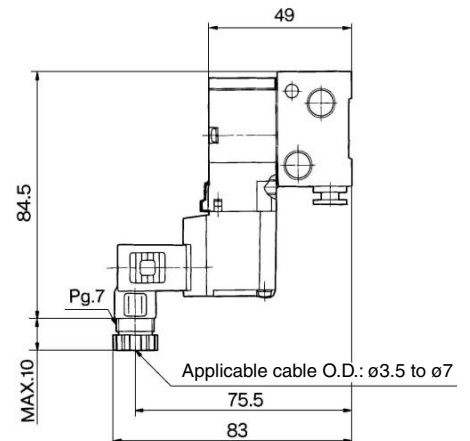
L plug connector (L)



M plug connector (M)



DIN terminal (D)

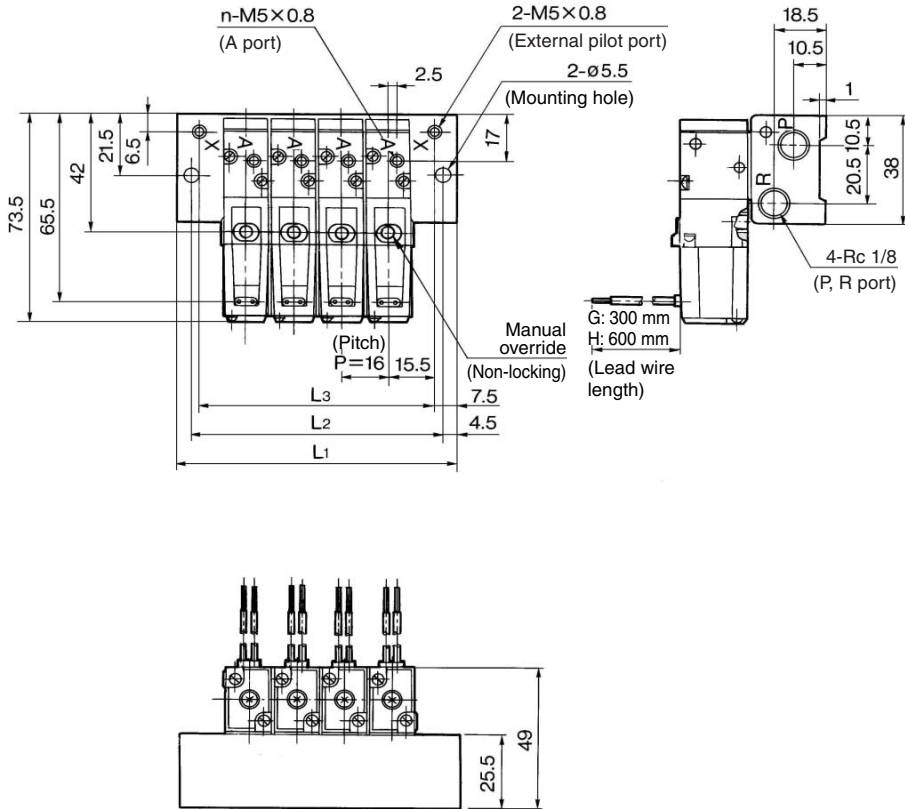


□: With light/surge voltage suppressor

3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ300**

For External Pilot
Type 21R Manifold: Top Ported

VV3Z3-21R- Stations 1
Grommet (G), (H)



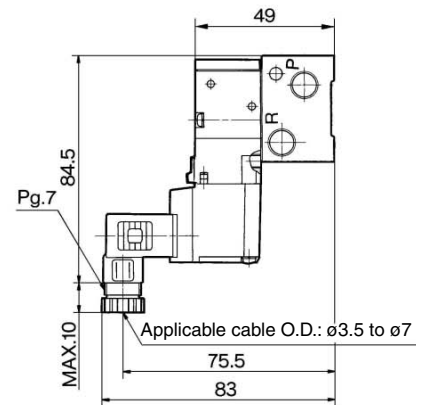
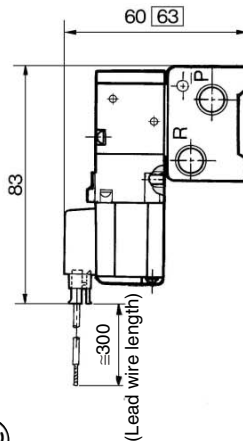
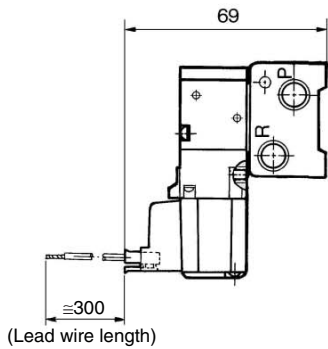
- V100
- SY
- SYJ
- VK
- VZ**
- VT
- VP
- VG
- VP
- S070
- VQ
- VKF
- VQZ
- VZ
- VS
- VFN

Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	62	78	94	110	126	142	158	174	190	206	222	238	254	270	286	302	318	334	350
L2	53	69	85	101	117	133	149	165	181	197	213	229	245	261	277	293	309	325	341
L3	47	63	79	95	111	127	143	159	175	191	207	223	239	255	271	287	303	319	335

L plug connector (L)

M plug connector (M)

DIN terminal (D)

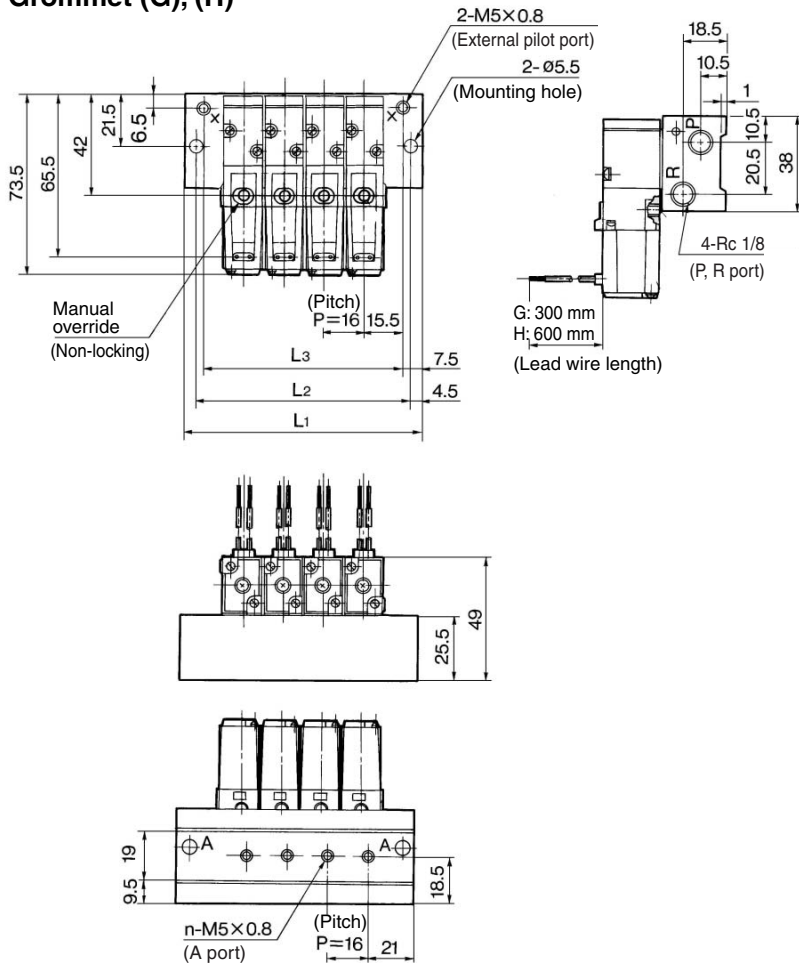


☐: With light/surge voltage suppressor

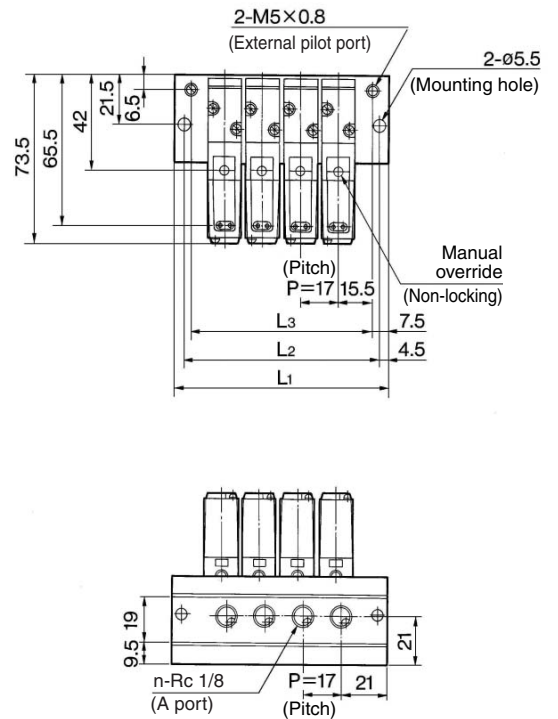
Series VZ300

For External Pilot Type 40R Manifold: Bottom Ported

VV3Z3-40R- Stations 2-M5/01
Grommet (G), (H)



Rc 1/8

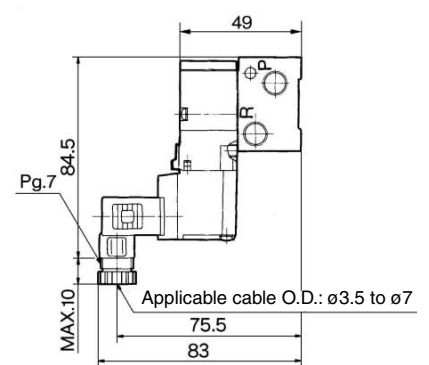
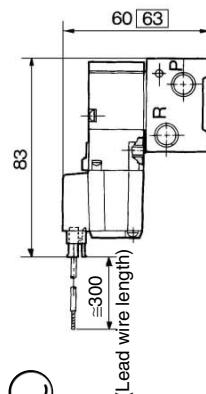
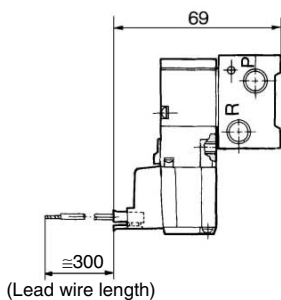


Port size	Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
M5	L1	62	78	94	110	126	142	158	174	190	206	222	238	254	270	286	302	318	334	350
	L2	53	69	85	101	117	133	149	165	181	197	213	229	245	261	277	293	309	325	341
	L3	47	63	79	95	111	127	143	159	175	191	207	223	239	255	271	287	303	319	335
Rc 1/8	L1	63	80	97	114	131	148	165	182	199	216	233	250	267	284	301	318	335	352	369
	L2	54	71	88	105	122	139	156	173	190	207	224	241	258	275	292	309	326	343	360
	L3	48	65	82	99	116	133	150	167	184	201	218	235	252	269	286	303	320	337	354

L plug connector (L)

M plug connector (M)

DIN terminal (D)



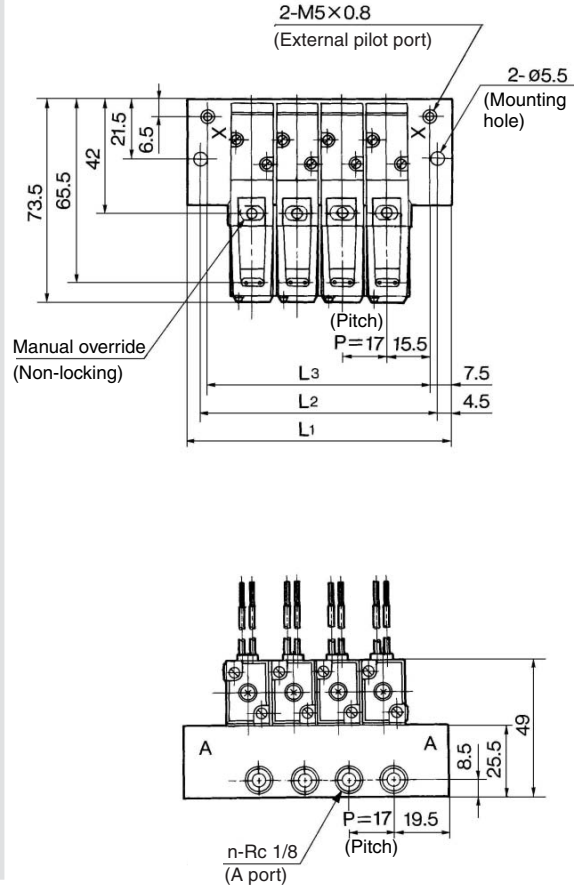
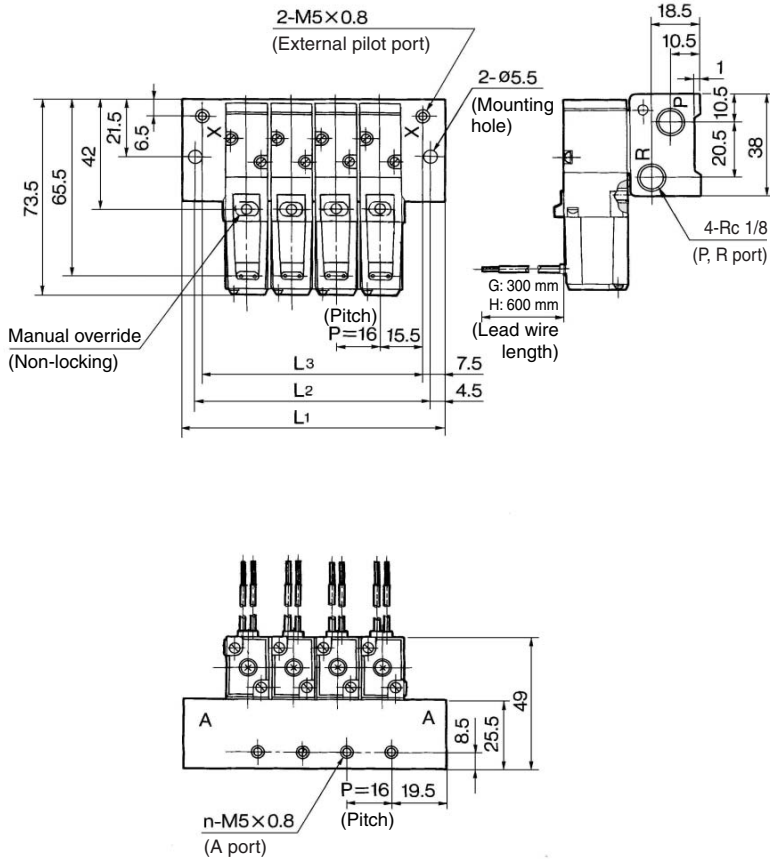
□: With light/surge voltage suppressor

3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ300**

For External Pilot
Type 40R Manifold: Bottom Ported

VV3Z3-40R- Stations 1-M5/01
Grommet (G), (H)

Rc 1/8

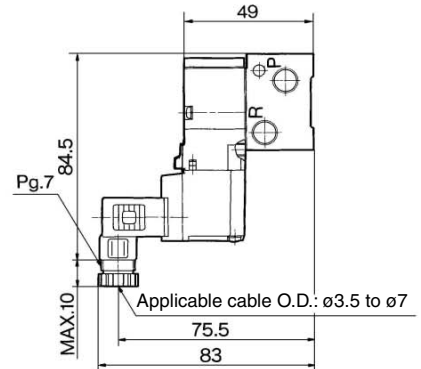
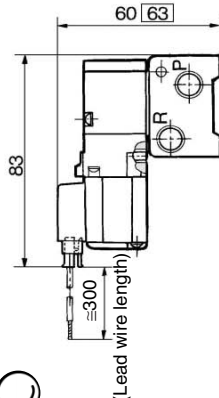
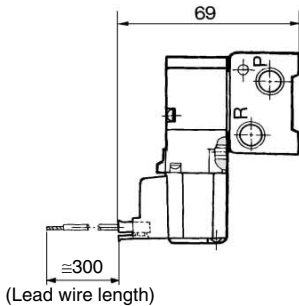


Port size	Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
M5	L1	62	78	94	110	126	142	158	174	190	206	222	238	254	270	286	302	318	334	350
	L2	53	69	85	101	117	133	149	165	181	197	213	229	245	261	277	293	309	325	341
	L3	47	63	79	95	111	127	143	159	175	191	207	223	239	255	271	287	303	319	335
Rc 1/8	L1	63	80	97	114	131	148	165	182	199	216	233	250	267	284	301	318	335	352	369
	L2	54	71	88	105	122	139	156	173	190	207	224	241	258	275	292	309	326	343	360
	L3	48	65	82	99	116	133	150	167	184	201	218	235	252	269	286	303	320	337	354

L plug connector (L)

M plug connector (M)

DIN terminal (D)



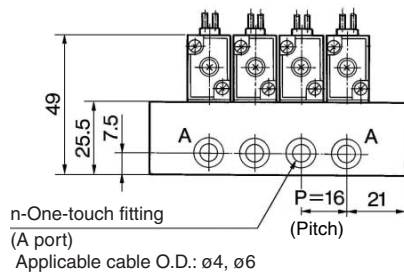
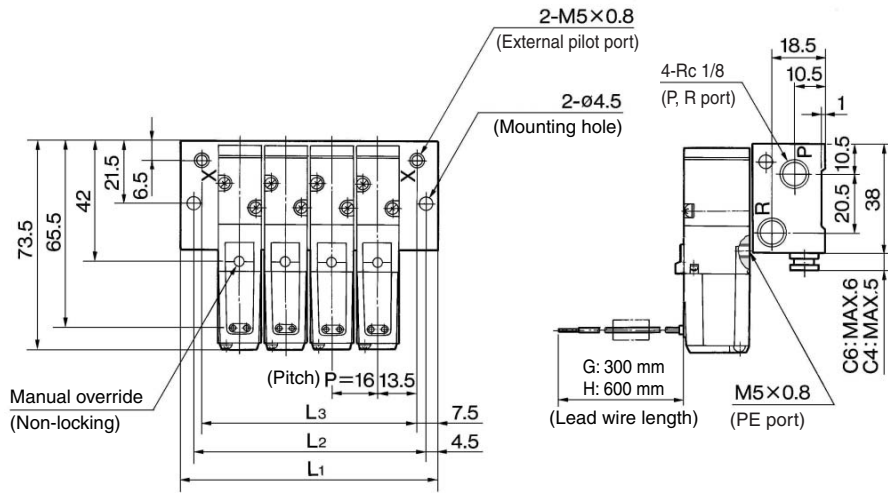
□: With light/surge voltage suppressor

- V100
- SY
- SYJ
- VK
- VZ**
- VT
- VP
- VG
- VP
- S070
- VQ
- VKF
- VQZ
- VZ
- VS
- VFN

Series VZ300

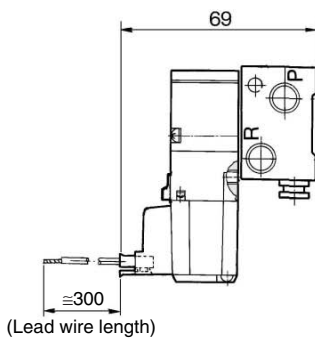
For External Pilot
Type 40R Manifold: Side Ported

VV3Z3-40R- Stations 1-C4/C6
Grommet (G), (H)

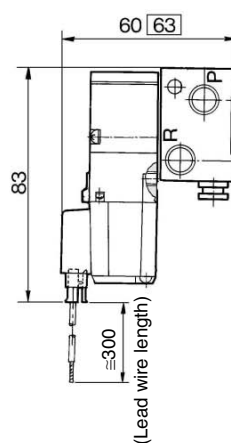


Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330	346
L2	49	65	81	97	113	129	145	161	177	193	209	225	241	257	273	289	305	321	337
L3	43	59	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331

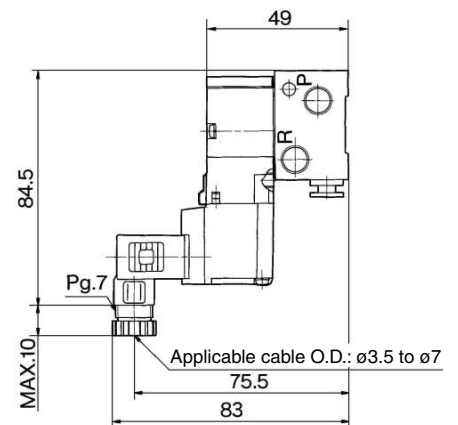
L plug connector (L)



M plug connector (M)



DIN terminal (D)



With light/surge voltage suppressor

Series VZ

Made to Order Specifications:

1. Solenoid Valve: Opposite Mounting of Solenoid Assembly

Applicable solenoid valve series

VZ100/300/500

Model no.

VZ1 0 - (-) - X1

VZ₅³ - (-) - X1

• Entry is the same as standard products.

2. Solenoid Valve: External Pilot Specifications

● Applicable for individual use of body ported external pilot type

Applicable solenoid valve series

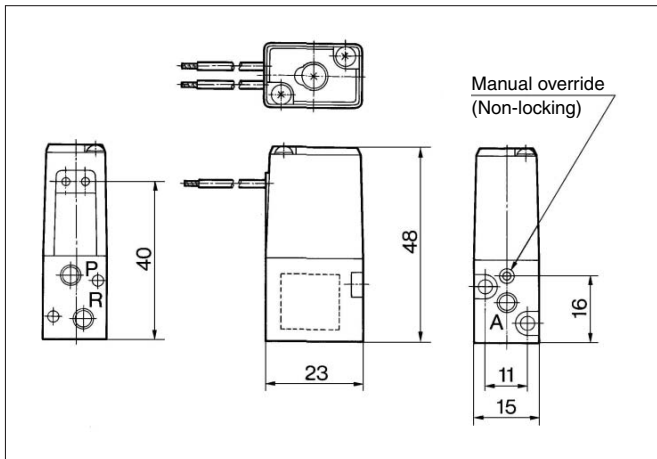
VZ300/500

Model no.

VZ₅³ 2R - (-) - X20

• Entry is the same as standard products.

Dimensions: VZ110-□G-M5-X1



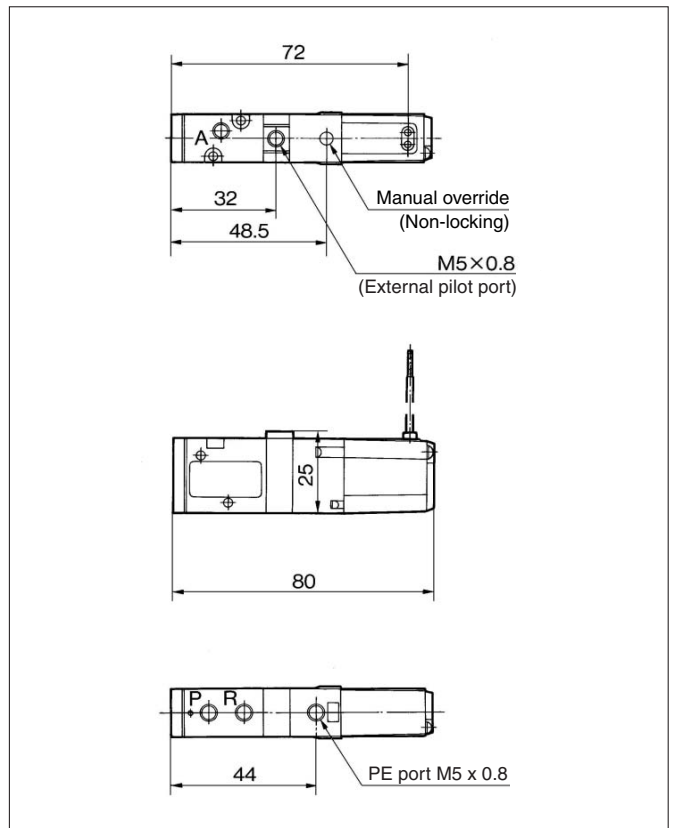
Specifications

Operating pressure range (MPa)	Main pressure	-100 kPa to 0.7
	External pilot pressure	0.15 to 0.7
Pilot exhaust method	Pilot valve individual exhaust	

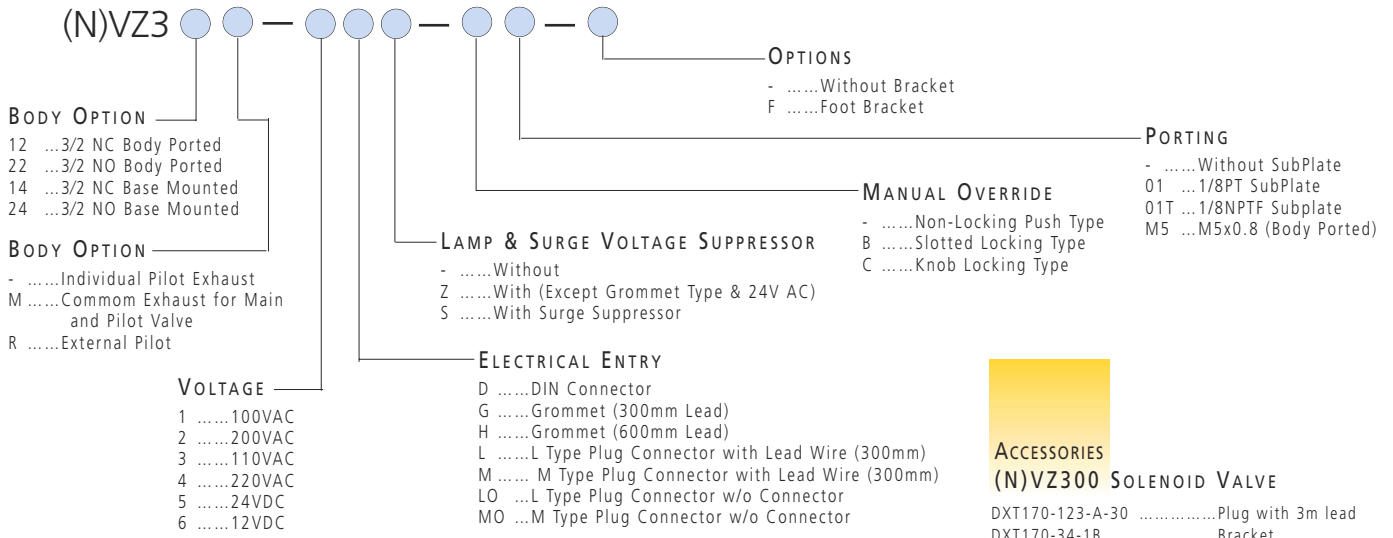
Dimensions

VZ300: 8 mm longer in total length
VZ500: 8 mm longer in total length

Dimensions: VZ312R-□G-M5-X20



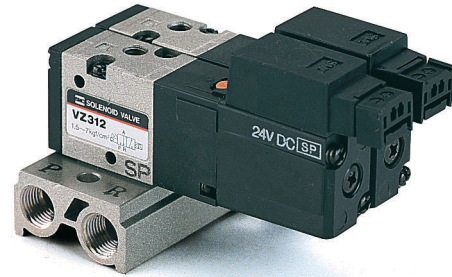
HOW TO ORDER (N)VZ300 SOLENOID VALVE



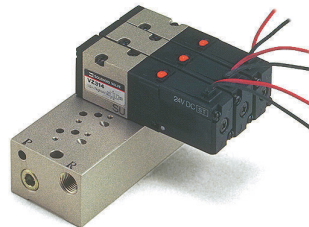
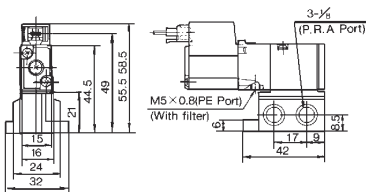
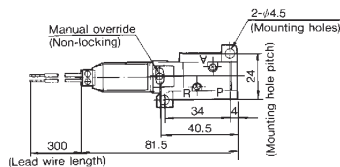
SERIES (N)VZ300 MANIFOLDS

A Single Sub-base and 3 different Manifold Designs.

- (i) Side Entry Single Sub-base for use with the Base Mounted Valve (Type 40).
- (ii) 2-10 Station Type 20 Mmanifold for use with the Body Ported Valve (Type 20).
- (iii) 2-10 Station Type 40 Side Entry Manifold for use with the Base Mounted Valve (Type 40).
- (iv) 2 - 10 Station Type 40 Bottom Entry Manifold for use with the Base Mounted Valve (Type 40).



DIMENSIONS SINGLE SUB-BASE SIDE PORTED M TYPE PLUG CONNECTOR



SEE INSIDE FRONT COVER FOR
DETAILS OF YOUR LOCAL SALES OFFICE



FOR FURTHER TECHNICAL
DETAILS ON THIS
PRODUCT, REQUEST
CATALOG REFERENCE
E120

HOW TO ORDER

MANIFOLD TYPE 20 TOP PORTED

(N)VV3Z3 — 20 1

NUMBER OF STATIONS

02 ...2 stations
to
20 ...20 stations

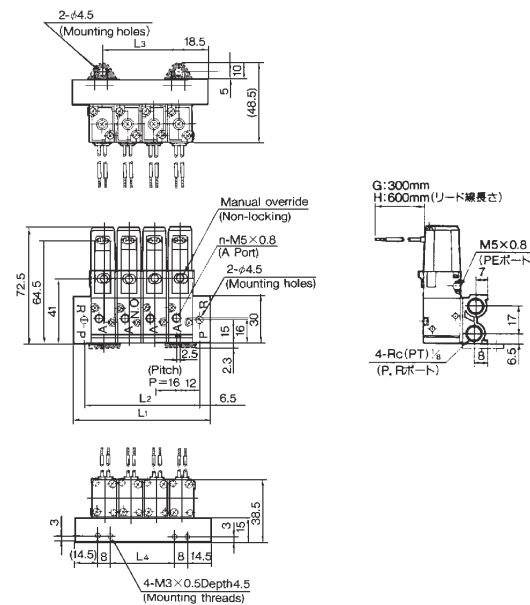
THREAD TYPE

-PT
00T ...NPTF

FOR FURTHER TECHNICAL INFORMATION ON THIS SERIES, REQUEST CAT:E120

DIMENSIONS

MANIFOLD TYPE 20 TOP PORTED



Stations (n)	2	3	4	5	6	7	8	9	10
L1	53	69	85	101	117	133	149	165	181
L2	40	56	72	88	104	120	136	152	168
L3	16	32	48	64	80	96	112	128	144
L4	8	24	40	56	72	88	104	120	136

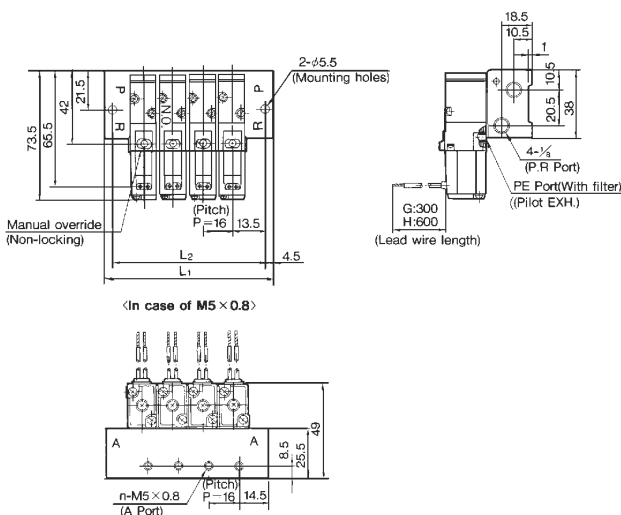
ACCESSORIES

DXT170-25-1ABlanking Plate Kit
DXT170-34-1AFoot Mount Kit

FOR FURTHER TECHNICAL INFORMATION ON THIS SERIES, REQUEST CAT:E120

DIMENSIONS

MANIFOLD TYPE 40 SIDE PORTED



Stations (n)	2	3	4	5	6	7	8	9	10	
M5x0.8	L1	52	68	84	100	116	132	148	164	180
	L2	43	59	75	91	107	123	139	155	171

HOW TO ORDER

MANIFOLD TYPE 40 SIDE PORTED

(N)VV3Z3 — 40 — 1

NUMBER OF STATIONS

02 ...2 Stations
to
20 ...20 Stations

SIZE OF A, B PORT

M5 ...10-32Nom (P, R Port PT)
M5T ...10-32Nom (P, R Port NPTF)
B3T ...One Touch Fitting 5/32"
B7T ...One Touch Fitting 1/4"

ACCESSORIES

MANIFOLD TYPE 40 SIDE PORTED TYPE G

DXT200-8-1ABlanking Plate Kit

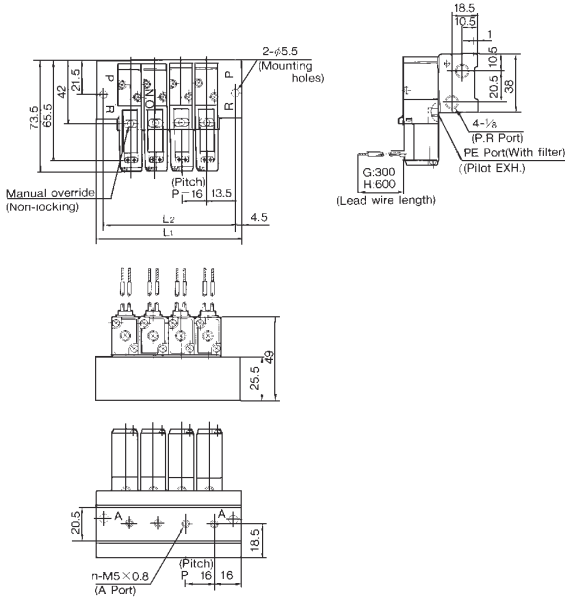
FOR FURTHER TECHNICAL INFORMATION ON THIS SERIES, REQUEST CAT:E120



FOR FURTHER TECHNICAL DETAILS ON THIS PRODUCT, REQUEST CATALOG REFERENCE E120

DIMENSIONS

MANIFOLD TYPE 40 BOTTOM PORTED



Stations (n)	2	3	4	5	6	7	8	9	10	
M5x0.8	L1	52	68	84	100	116	132	148	164	180
	L2	43	59	75	91	107	123	139	155	171

HOW TO ORDER

MANIFOLD TYPE 40 BOTTOM PORTED

(N)VZ300 — 40 — ● 2 — ●

NUMBER OF STATIONS
02 ...2 stations
to
20 ...20 stations

SIZE OF A, B PORT
M5 ...10-32Nom (P, R Port PT)
M5T...10-32Nom (P, R Port NPTF)
01T ...1/8" NPTF

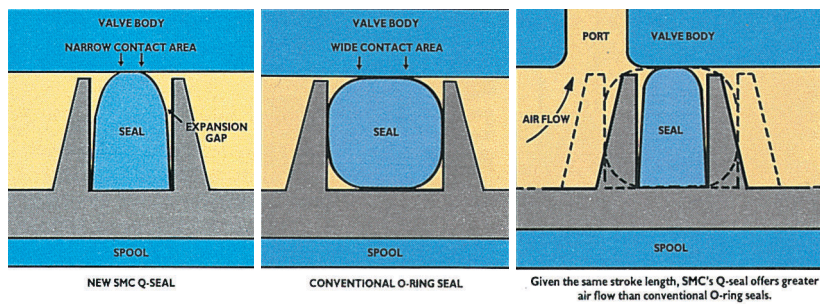
ACCESSORIES

MANIFOLD TYPE 40 SIDE PORTED

DXT200-8-1A Blanking Plate Kit

FOR FURTHER TECHNICAL INFORMATION
ON THIS SERIES, REQUEST CAT:E120

THE Q SEAL



AS PART OF A LONG TERM DEVELOPMENT PROGRAM TO IMPROVE THE PERFORMANCE AND DURABILITY OF PNEUMATIC VALVE SEALS, SMC HAS DEVELOPED A NEW TYPE OF SEAL WHICH OVERCOMES THE PROBLEMS INHERENT WITH TRADITIONAL O-RINGS AND BONDED SEALS - CALLED Q SEAL, IT FEATURES A SPECIAL PROFILE WHICH REDUCES SLIDING RESISTANCE TO A MINIMUM, ENHANCES BOTH LONG TERM RELIABILITY AND AIR FLOW CHARACTERISTICS AND PROVIDES BI-DIRECTIONAL PORT ACCESS.

SEE INSIDE FRONT COVER FOR
DETAILS OF YOUR LOCAL SALES OFFICE



FOR FURTHER TECHNICAL
DETAILS ON THIS
PRODUCT, REQUEST
CATALOG REFERENCE
E120