

VN3 SERIES ELECTRIC CONTROL VALVES

FOR USE WITH FAN COIL UNITS

PRODUCT INFORMATION

APPLICATION

VN3 series electric ball valves can be used in residential and commercial buildings to control the flow of hot or cold fluids. Each set includes an electric actuator and a valve body.

The actuator will receive a 0–10V analog signal that controls the valve opening and a 0–10V feedback signal indicates the opening of the valve. The 0–10V control signal adopts incremental control, so when the control signal increases, the valve opening increases accordingly. The valve is fully closed at 0V and fully open at 10V. The **VN3** series offer a wide range of screw thread connection standards for different regions, with two-way and three-way valve bodies to cover most building control applications.



TECHNICAL PARAMETERS

ACTUATOR

Operating power supply:	24VAC \pm 10%, 50/60Hz
Control mode:	Modulating Non-spring return
Control signal:	0–10V DC (Input resistance 200K Ω)
Feedback signal:	0–10V DC (Max. 1mA)
Working temperature:	0–65°C
Working relative humidity:	10%–90%RH Non-condensing
Power rating:	\leq 5W
Actuation time:	Open \leq 40s, Closed \leq 40s
Protection rating:	IP42

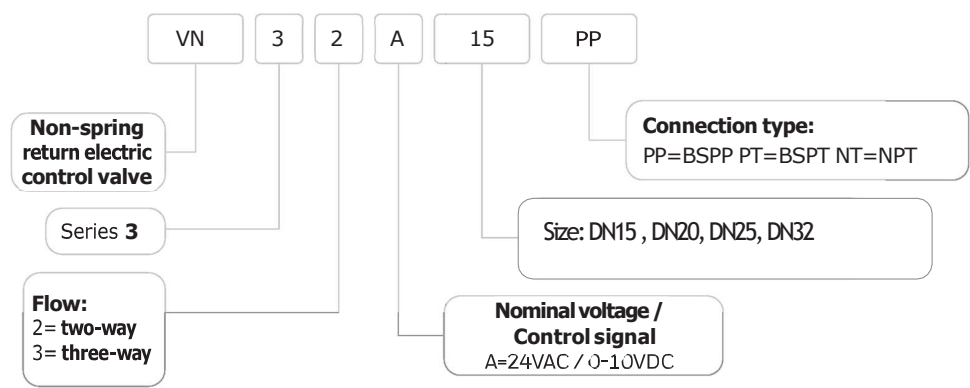
VALVE BODY

Applicable medium:	Cold or hot water or 50% glycol solution
Medium temperature range:	0–94°C
Working temperature:	0–65°C
Working relative humidity:	10%–90% RH
Transportation and storage temperature:	–40–65°C, 10%–90% RH Non-condensing
Nominal pressure:	PN20
Leakage rate:	0.05% Kvs
Materials:	Valve body and ball – forged brass (HPb59 -1) Valve stem – stainless steel (0Cr18ni9) Valve seat – polytetrafluoroethylene (PTFE) Sealing O-ring – Ethylene Propylene Diene Monomer (EPDM)

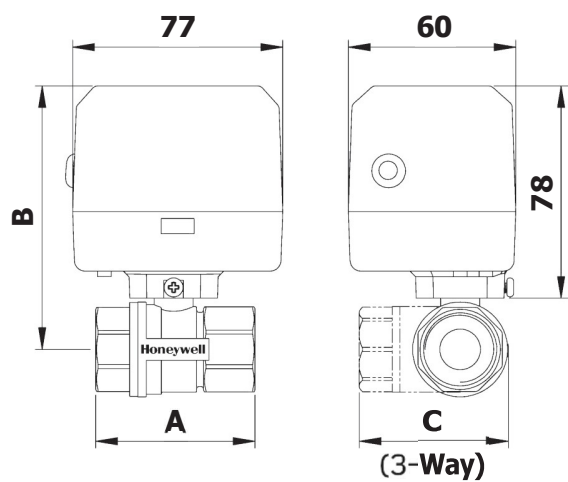
ORDERING PART NUMBERS

PART NUMBER	VOLTAGE	FLOW	SIZE	CONNECTION TYPE	NOMINAL FLOW RATING (Kvs)	CLOSE-OFF DIFFERENTIAL PRESSURE	
						(PSI)	(MPa)
VN32A15PP	24Vac±10%	2-way	DN15, 1/2"	BSPP	2.0±10%	87	0.6
VN32A15PT	24Vac±10%	2-way	DN15, 1/2"	BSPT	2.0±10%	87	0.6
VN32A15NT	24Vac±10%	2-way	DN15, 1/2"	NPT	2.0±10%	87	0.6
VN32A20PP	24Vac±10%	2-way	DN20, 3/4"	BSPP	3.2±10%	87	0.6
VN32A20PT	24Vac±10%	2-way	DN20, 3/4"	BSPT	3.2±10%	87	0.6
VN32A20NT	24Vac±10%	2-way	DN20, 3/4"	NPT	3.2±10%	87	0.6
VN32A25PP	24Vac±10%	2-way	DN25, 1"	BSPP	5.7±10%	87	0.6
VN32A25PT	24Vac±10%	2-way	DN25, 1"	BSPT	5.7±10%	87	0.6
VN32A25NT	24Vac±10%	2-way	DN25, 1"	NPT	5.7±10%	87	0.6
VN32A32PP	24Vac±10%	2-way	DN32, 1 1/4"	BSPP	10.0±10%	87	0.6
VN32A32PT	24Vac±10%	2-way	DN32, 1 1/4"	BSPT	10.0±10%	87	0.6
VN32A32NT	24Vac±10%	2-way	DN32, 1 1/4"	NPT	10.0±10%	87	0.6
VN33A15PP	24Vac±10%	3-way	DN15, 1/2"	BSPP	3.2±10%	87	0.6
VN33A15PT	24Vac±10%	3-way	DN15, 1/2"	BSPT	3.2±10%	87	0.6
VN33A15NT	24Vac±10%	3-way	DN15, 1/2"	NPT	3.2±10%	87	0.6
VN33A20PP	24Vac±10%	3-way	DN20, 3/4"	BSPP	4.6±10%	87	0.6
VN33A20PT	24Vac±10%	3-way	DN20, 3/4"	BSPT	4.6±10%	87	0.6
VN33A20NT	24Vac±10%	3-way	DN20, 3/4"	NPT	4.6±10%	87	0.6
VN33A25PP	24Vac±10%	3-way	DN25, 1"	BSPP	6.7±10%	87	0.6
VN33A25PT	24Vac±10%	3-way	DN25, 1"	BSPT	6.7±10%	87	0.6
VN33A25NT	24Vac±10%	3-way	DN25, 1"	NPT	6.7±10%	87	0.6
VN33A32PP	24Vac±10%	3-way	DN32, 1 1/4"	BSPP	14.0±10%	87	0.6
VN33A32PT	24Vac±10%	3-way	DN32, 1 1/4"	BSPT	14.0±10%	87	0.6
VN33A32NT	24Vac±10%	3-way	DN32, 1 1/4"	NPT	14.0±10%	87	0.6

PRODUCT IDENTIFICATION SYSTEM

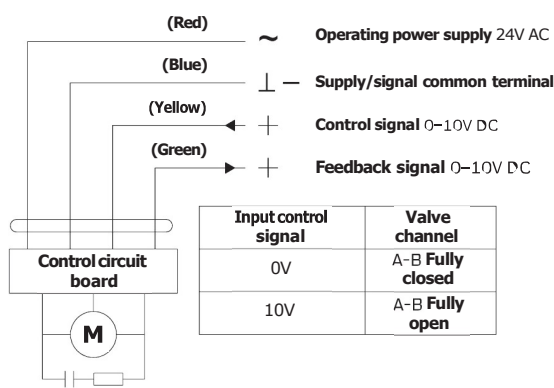


DIMENSIONS (mm)



PART NUMBERS	DIMENSIONS (mm)		
	A	B	C
VN32A15XX	51.5	100	—
VN33A15XX	56	100	42
VN32A20XX	60	100	—
VN33A20XX	67	100	53
VN32A25XX	66	105	—
VN33A25XX	83	105	62
VN32A32XX	77.5	105	—
VN33A32XX	87	105	72

WIRING DIAGRAM



VN8 SERIES ELECTRIC CONTROL VALVES FOR FAN COIL UNITS

PRODUCT INFORMATION

SCOPE OF APPLICATION

VN8 series electric control valves can be used at home and in commercial buildings to control the flow of hot or cold liquid. Each set includes electric actuator and valve body.

The **VN8** series offer a wide range of options in voltages and thread standards according to the usage of different regions and provides two-way and three-way valve bodies to meet most of the requirements in buildings control.



TECHNICAL PARAMETERS

ACTUATOR

Operating power supply:	220VAC \pm 10%, 110VAC \pm 10% 24VAC \pm 10%, 50/60Hz
Control mode:	Electric 3-wire on-off Non-spring return
Working temperature:	0-65°C
Working condition relative humidity:	10%-90%RH without condensate water
Power consumption:	\leq 6W (50Hz); \leq 7.5W (60Hz)
Actuation time:	Switch on \leq 15s, switch off \leq 15s
Protection rating:	IP42

VALVE BODY

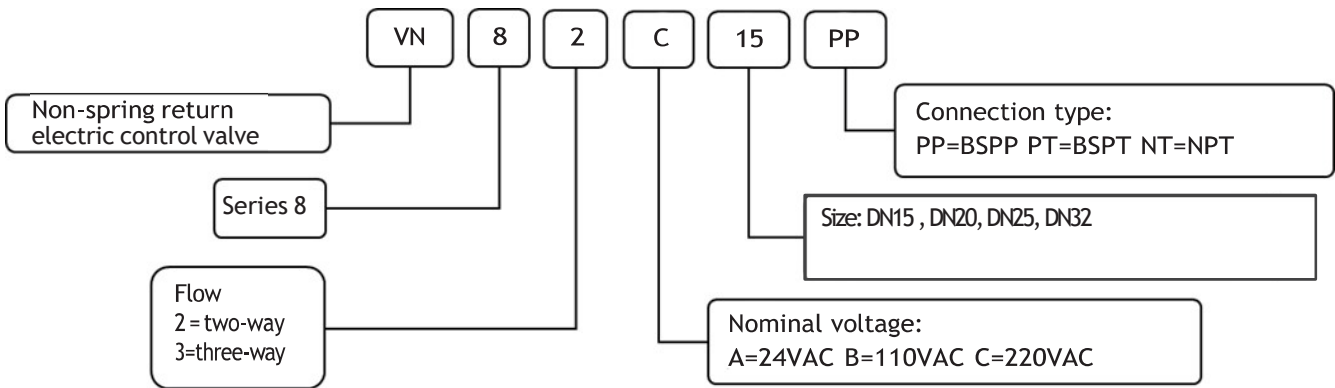
Applicable medium:	Cold, hot water or 50% glycol solution
Fluid temperature range:	0-94°C
Working temperature:	0-65°C
Working condition relative humidity:	10%-90%RH
Nominal pressure:	PN20
Leak-rate:	0.05%Kvs
Materials:	Valve body and ball – forging brass (HPb59-1) Valve rod – stainless steel (0Cr18Ni9) Valve seat – polytetrafluoroethylene (PTFE) O-sealing ring – Ethylene-Propylene-Diene Monomer (EPDM)

ORDERING PART NUMBERS (220Vac only shown as example)

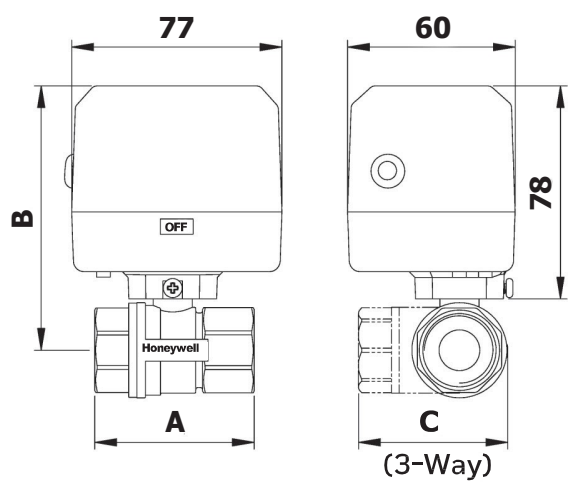
PART NUMBERS	VOLTAGE	FLOW	SIZE (diameter)	CONNECTION TYPE	NOMINAL FLOW RATING (Kvs)	CLOSE-OFF DIFFERENTIAL PRESSURE (PSI)	(MPa)
VN82C15PP	220Vac±10%	2-way	DN15, 1/2"	BSPP	4.0±10%	87	0.6
VN82C15PT	220Vac±10%	2-way	DN15, 1/2"	BSPT	4.0±10%	87	0.6
VN82C15NT	220Vac±10%	2-way	DN15, 1/2"	NPT	4.0±10%	87	0.6
VN82C20PP	220Vac±10%	2-way	DN20, 3/4"	BSPP	7.0±10%	87	0.6
VN82C20PT	220Vac±10%	2-way	DN20, 3/4"	BSPT	7.0±10%	87	0.6
VN82C20NT	220Vac±10%	2-way	DN20, 3/4"	NPT	7.0±10%	87	0.6
VN82C25PP	220Vac±10%	2-way	DN25, 1"	BSPP	8.0±10%	87	0.6
VN82C25PT	220Vac±10%	2-way	DN25, 1"	BSPT	8.0±10%	87	0.6
VN82C25NT	220Vac±10%	2-way	DN25, 1"	NPT	8.0±10%	87	0.6
VN82C32PP	220Vac±10%	2-way	DN32, 1 1/4"	BSPP	10.0±10%	87	0.6
VN82C32PT	220Vac±10%	2-way	DN32, 1 1/4"	BSPT	10.0±10%	87	0.6
VN82C32NT	220Vac±10%	2-way	DN32, 1 1/4"	NPT	10.0±10%	87	0.6
VN83C15PP	220Vac±10%	3-way	DN15, 1/2"	BSPP	4.2±10%	87	0.6
VN83C15PT	220Vac±10%	3-way	DN15, 1/2"	BSPT	4.2±10%	87	0.6
VN83C15NT	220Vac±10%	3-way	DN15, 1/2"	NPT	4.2±10%	87	0.6
VN83C20PP	220Vac±10%	3-way	DN20, 3/4"	BSPP	8.0±10%	87	0.6
VN83C20PT	220Vac±10%	3-way	DN20, 3/4"	BSPT	8.0±10%	87	0.6
VN83C20NT	220Vac±10%	3-way	DN20, 3/4"	NPT	8.0±10%	87	0.6
VN83C25PP	220Vac±10%	3-way	DN25, 1"	BSPP	14.0±10%	87	0.6
VN83C25PT	220Vac±10%	3-way	DN25, 1"	BSPT	14.0±10%	87	0.6
VN83C25NT	220Vac±10%	3-way	DN25, 1"	NPT	14.0±10%	87	0.6
VN83C32PP	220Vac±10%	3-way	DN32, 1 1/4"	BSPP	14.0±10%	87	0.6
VN83C32PT	220Vac±10%	3-way	DN32, 1 1/4"	BSPT	14.0±10%	87	0.6
VN83C32NT	220Vac±10%	3-way	DN32, 1 1/4"	NPT	14.0±10%	87	0.6

Note: For other models, please consult our product department

PRODUCT IDENTIFICATION SYSTEM

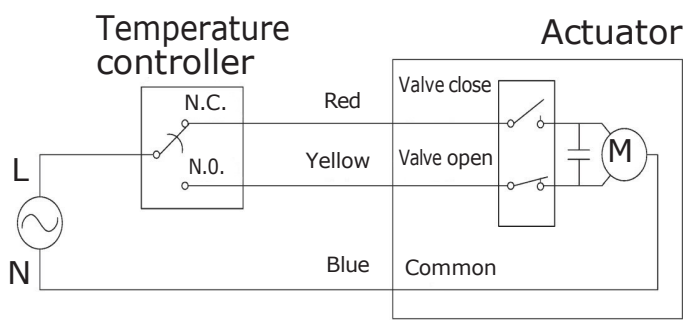


DIMENSION (mm)



PART NUMBERS	DIMENSION (mm)		
	A	B	C
VN82X15XX	51.5	100	—
VN83X15XX	56	100	42
VN82X20XX	60	100	—
VN83X20XX	67	100	53
VN82X25XX	66	105	—
VN83X25XX	83	105	62
VN82X32XX	77.5	105	—
VN83X32XX	87	105	72

WIRING DIAGRAM



VS9 Series

2-way/3-way FCU Control Valve

VS9 series FCU control valves can be used in residential and office buildings to control the continuity of cold and hot fluids. The FCU control valve is made up of two parts: electric actuator and valve body.

VS9 series FCU control valve offers a wide range of voltages and screw thread connection standards for different regions. There are two-way and three-way valves to cover most of the building control applications.



Technical Specification

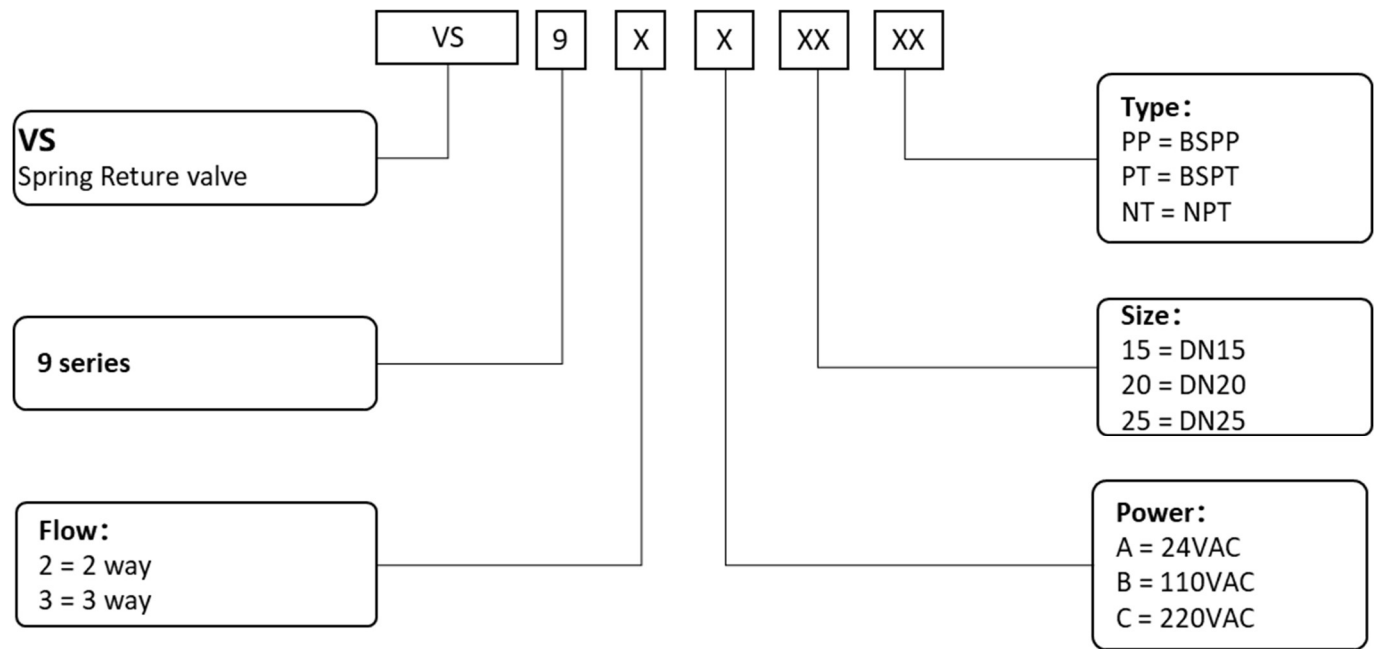
ACTUATOR	
Operation power supply	220 Vac $\pm 10\%$, 110Vac $\pm 10\%$ 24Vac $\pm 10\%$ 50/60Hz
Control mode	Spring Return, ON/OFF type
Working temperature	0-50°C
Working relative humidity	10%-90%RH, non-condensating
Power rating	≤ 8 VA
Actuation time	Open: ≤ 20 s Shut: ≤ 15 s
Protection rating	IP20
VALVE	
Applicable medium	cold or hot water or 50% glycol solution
Fluid temperature:	0~94°C
Operating temperature:	0-50°C
Working relative humidity	10%-90%RH, non-condensating
Nominal pressure	PN20
Leakage rate	0.05%kvs
Materials	Valve body: HPb59-2 Valve rod: HPb59-2 Valve flap: EPDM

Ordering Part Numbers (220Vac only)

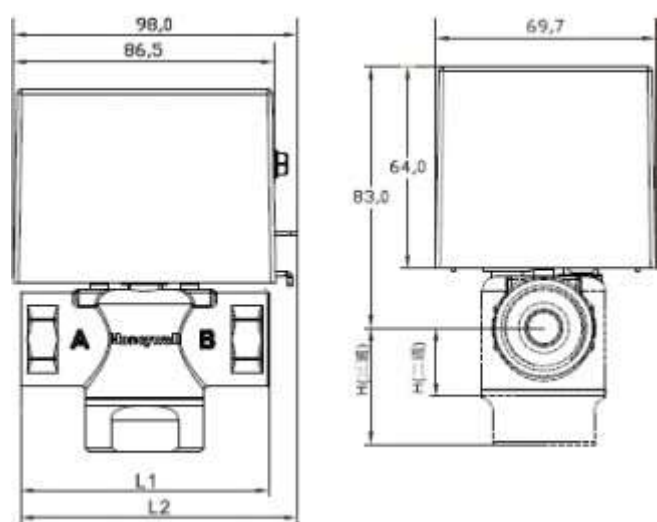
PN	Power	Flow	Size	Type	Kvs	PSI	MPa
VS92C15PP	220Vac ± 10 %	2	DN15,1/2"	BSPP	2.0 ± 1 0%	43	0.3
VS92C15PT	220Vac ± 10 %	2	DN15,1/2"	BSPT	2.0 ± 1 0%	43	0.3
VS92C15NT	220Vac ± 10 %	2	DN15,1/2"	NPT	2.0 ± 1 0%	43	0.3
VS92C20PP	220Vac ± 10 %	2	DN20,3/4"	BSPP	2.4 ± 1 0%	36	0.25
VS92C20PT	220Vac ± 10 %	2	DN20,3/4"	BSPT	2.4 ± 1 0%	36	0.25
VS92C20NT	220Vac ± 10 %	2	DN20,3/4"	NPT	2.4 ± 1 0%	36	0.25
VS92C25PP	220Vac ± 10 %	2	DN25,1"	BSPP	4.2 ± 1 0%	30	0.2
VS92C25PT	220Vac ± 10 %	2	DN25,1"	BSPT	4.2 ± 1 0%	30	0.2
VS92C25NT	220Vac ± 10 %	2	DN25,1"	NPT	4.2 ± 1 0%	30	0.2
VS93C15PP	220Vac ± 10 %	3	DN15,1/2"	BSPP	2.0 ± 1 0%	43	0.3
VS93C15PT	220Vac ± 10 %	3	DN15,1/2"	BSPT	2.0 ± 1 0%	43	0.3
VS93C15NT	220Vac ± 10 %	3	DN15,1/2"	NPT	2.0 ± 1 0%	43	0.3
VS93C20PP	220Vac ± 10 %	3	DN20,3/4"	BSPP	2.4 ± 1 0%	36	0.25
VS93C20PT	220Vac ± 10 %	3	DN20,3/4"	BSPT	2.4 ± 1 0%	36	0.25
VS93C20NT	220Vac ± 10 %	3	DN20,3/4"	NPT	2.4 ± 1 0%	36	0.25
VS93C25PP	220Vac ± 10 %	3	DN25,1"	BSPP	4.2 ± 1 0%	30	0.2
VS93C25PT	220Vac ± 10 %	3	DN25,1"	BSPT	4.2 ± 1 0%	30	0.2
VS93C25NT	220Vac ± 10 %	3	DN25,1"	NPT	4.2 ± 1 0%	30	0.2

Note: Please contact local sales for more SKUs.

Product Identification System



Dimensions



PN	Dimensions (mm)		
	L1	L2	H
VS92X15XX	78	89	19
VS92X20XX	82	91	21.5
VS92X25XX	88	94	24.5
VS93X15XX	78	89	34
VS93X20XX	82	91	37
VS93X25XX	88	94	45

Wiring

