

V9BF Series Butterfly Valves and NOM..E Series Actuators

Overview

Honeywell V9BF series butterfly valves and NOM-E electric actuators, with modulating control or two-position control, can be applied to water supply and HVAC systems of commercial buildings, public buildings and city pipework. The modulating actuators work with a variety of control signals, i.e. 4–20 mA, 0–10 V or 2–10 V (on-site set-up available).



FEATURES

- Simple structure for easy operation and installation
- Soft valve seat for high performance sealing, high reliability and long service life
- Two-position control or analog control
- Manual operations available
- Position self-locking function and 3D position indicator
- Heaters to prevent condensation
- IP67 protection rating
- On-site on/off/stop control available

SPECIFICATIONS

Valve Body

- | | |
|----------------------|--|
| • Size | DN50-DN600 |
| • Nominal pressure | PN16 |
| • Medium | Cold/hot water |
| • Medium temperature | -10°C to 120°C |
| • Valve body | GGG40 |
| • Valve disc | Nylon coating GGG40 or stainless steel |
| • Valve stem | Stainless steel |
| • Valve seat | EPDM |
| • Pipe connection | ISO7005-2 |
| • Sealing pressure | 1.76 MPa |

ACTUATOR

Power	220 Vac+/-10%, 50/60 Hz
Run time	See the actuator information tables
Angle of rotation	90°±5°
Control (modulating control)	4–20 mA, DC 0–10 V or 2–10 V
Feedback (modulating control)	4–20 mA, DC 0–10 V or 2–10 V
Protection rating	IP67
Heater	See the actuator information tables
Overload protection	Built-in thermal protection (the actuator stops at 135±5°C and resets at 95±15°C)

Honeywell

V9BF Series Butterfly Valve

Features

Connection Design

Complies with requirement of international standard ISO 5211 for easy coupling with third party actuators.

Sealing Ring

Automatically adjusts the seal based on pressure changes to prevent leakage.

Valve Disc

Reinforced strip on disc for increased strength. Nylon coating over disc to withstand corrosion, abrasion and high temperatures.

Valve Seat

Soft valve seat to eliminate leakage points. The valve seat is fitted into a groove on the valve body to prevent separation. The groove also prevents deformation due to frictional torque.

Bearings

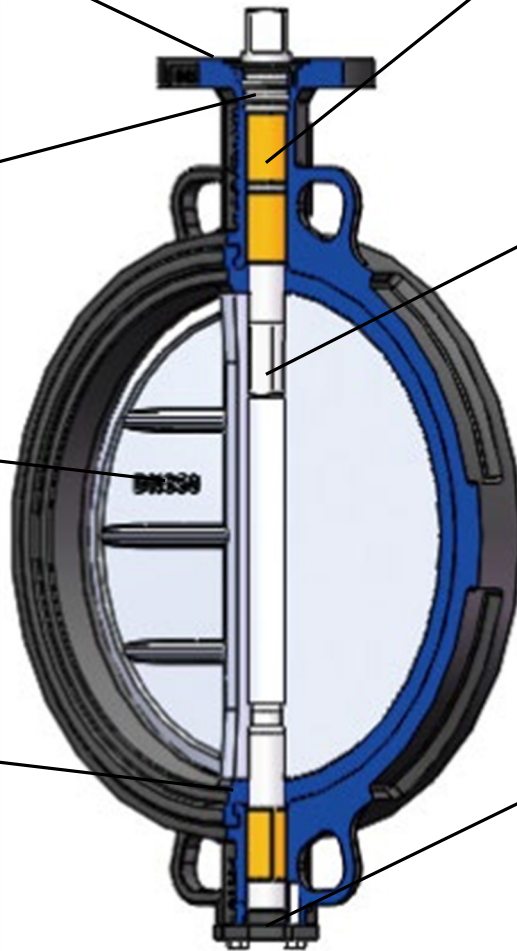
Self-lubricating bearings are installed at the top and bottom of the stem to prevent deadlock and reduce the torque.

Valve Stem

Pinless connection of valve stem and disc to prevent leakage through the pin hole. DN50-DN250 is connected by a single shaft spline while DN350-DN600 is connected by dual-shaft splines. The valve stem and disc are tightly meshed to ensure the sealing of the valve, minimize drive delay and improve control accuracy.

Thrust Bushing

The thrust bushing reduces friction caused by the weight of the valve disc and decreases the overall frictional torque on the valve. It also eliminates the risk of deadlock between the stem and the lower end of the valve body.



V9BF Series Butterfly Valves and Actuators

Model Designation

Butterfly Valve

V9	The new series		
	BF	Butterfly Valve	
		W	Connection: W – Wafer; F – Flanged
			16
			Rated pressure: PN16
			-050
			Valve size: DN50
			-2
			Valve disc material: Blank - Nylon coating ductile iron -2 - Stainless Steel

E.g.:

V9	BF	W	16	-	050	Next-generation PN16 DN50 wafer type butterfly valve with nylon coating ductile iron disc
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Actuator

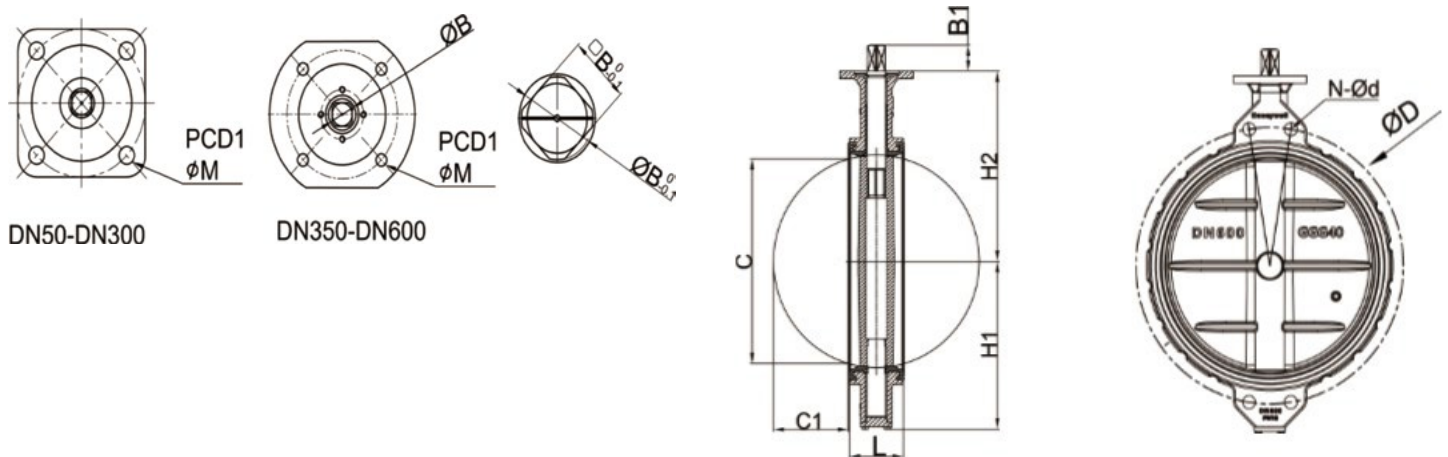
N	The new series		
	OM	Actuator for butterfly valve	
		-P	-(blank): Two-position -P: Modulating control
			4
			Actuator torque: 1 – 35 Nm, 2 – 50 Nm, 3 – 80 Nm, 4 – 200 Nm, 5 – 400 Nm, 6 – 800 Nm, 7 – 1000 Nm, 8 – 1700 Nm, 9 – 3500 Nm, 10 – 5000 Nm
			A
			A/B mounting flange, see the actuator size table for details
			-E
			-E: reserved

E.g.:

N	OM	-	4	A	-E 200-Nm two-position actuator for butterfly valve
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V9BF Series Butterfly Valves and Actuators

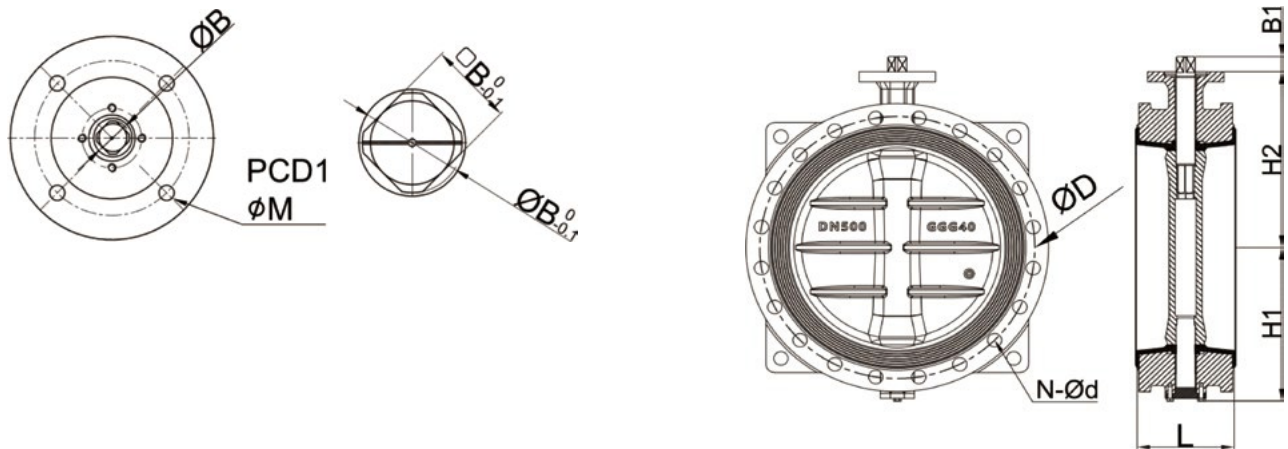
V9BFW wafer type



Model	Size	L	H1	H2	N-Ø d	Ø D	C	C1	Ø B	B1	□ B	Mountingflange (ISO 5211)		Weight (kg)	
												Type	PCD1 ØM		
V9BFW16-050(-2)	DN50	43	62	136	4-19	125	33	6	14	19	11	F07	70	10	3
V9BFW16-065(-2)	DN65	46	84	145	4-19	145	55	13	14	19	11	F07	70	10	3.5
V9BFW16-080(-2)	DN80	46	89	151	4-19	160	73	20	14	19	11	F07	70	10	4.5
V9BFW16-100(-2)	DN100	52	106	175	4-19	180	87	25	14	19	11	F07	70	10	6
V9BFW16-125(-2)	DN125	56	120	190	4-19	210	113	35	18	19	14	F07	70	10	7.2
V9BFW16-150(2)	DN150	56	131	203	4-23	240	141	48	18	19	14	F07	70	10	9.2
V9BFW16-200(-2)	DN200	60	164	246	4-23	295	192	71	24	24	17	F10	102	12	15
V9BFW16-250(-2)	DN250	68	200	271	4-28	355	242	91	30	24	22	F10	102	12	24
V9BFW16-300(-2)	DN300	78	235	296	4-28	410	291	112	30	24	22	F10	102	12	35
V9BFW16-350(-2)	DN350	78	280	368	4-28	470	294	112.2	35	29	27	F12	125	14	51
V9BFW16-400(-2)	DN400	102	315	400	4-31	525	326	128	38	29	27	F12	125	14	65
V9BFW16-450(-2)	DN450	114	345	422	4-31	585	380	144	45	38	36	F14	140	18	82
V9BFW16-500(-2)	DN500	127	373	480	4-34	650	429	162	45	38	36	F14	140	18	126
V9BFW16-600(-2)	DN600	154	450	562	4-37	770	481	182.4	55	48	36	F16	165	22	205

V9BF Series Butterfly Valves and Actuators

V9BFF flanged butterfly valve



Model	Size	L	H1	H2	Ø D	N-ØD	Ø B	B1	□ B	Mountingflange (ISO 5211)			Weight (kg)
										Type	PCD1	ØM	
V9BFF16-050(-2)	DN50	108	80	110	125	4-19	14	19	11	F07	70	10	7.8
V9BFF16-065(-2)	DN65	112	89	134	145	4-19	14	19	11	F07	70	10	9.7
V9BFF16-080(-2)	DN80	114	100	131	160	8-19	14	19	11	F07	70	10	10.6
V9BFF16-100(-2)	DN100	127	114	150	180	8-19	14	19	11	F07	70	10	13.8
V9BFF16-125(-2)	DN125	140	127	170	210	8-19	18	19	14	F07	70	10	18.2
V9BFF16-150(-2)	DN150	140	143	180	240	8-23	18	19	14	F07	70	10	21.7
V9BFF16-200(-2)	DN200	152	175	210	295	12-23	24	24	17	F10	102	12	31.8
V9BFF16-250(-2)	DN250	165	203	245	355	12-28	30	24	22	F10	102	12	44.7
V9BFF16-300(-2)	DN300	178	242	276	410	12-28	30	24	22	F10	102	12	57.9
V9BFF16-350(-2)	DN350	190	269	328	470	16-28	35	29	27	F12	125	14	81.6
V9BFF16-400(-2)	DN400	216	310	376	525	16-31	38	29	27	F12	125	14	116
V9BFF16-450(-2)	DN450	222	335	407	585	20-31	45	38	36	F14	140	18	157
V9BFF16-500(-2)	DN500	229	362	433	650	20-34	45	38	36	F14	140	18	175
V9BFF16-600(-2)	DN600	267	449	508	770	20-37	55	48	36	F16	165	22	245

V9BFW Series Butterfly Valves and Actuators (Shut-Off Pressure: 1.6 Mpa) Order Information

Size	Valve model	Actuator model (two-position)	Actuator model (modulating control)	Actuator torque	Run time @50 Hz	Function (VA)	Anti-condensation heater (W)	Manual operation (manual lever is to be ordered separately)
DN50	V9BFW16-050(-2)	NOM-1A-E	NOM-P1A-E	35	11	40	8	Manual lever
DN65	V9BFW16-065(-2)							
DN80	V9BFW16-080(-2)							
DN100	V9BFW16-100(-2)	NOM-2A-E	NOM-P2A-E	50	15	40	8	Manual lever
DN125	V9BFW16-125(-2)	NOM-3A-E	NOM-P3A-E	80	22	40	8	Hand wheel gear actuator
DN150	V9BFW16-150(-2)	NOM-4A-E	NOM-P4A-E	200	39	110	10	Hand wheel gear actuator
DN200	V9BFW16-200(-2)	NOM-4B-E	NOM-P4B-E	200	39	110	10	Hand wheel gear actuator
DN250	V9BFW16-250(-2)	NOM-5B-E	NOM-P5B-E	400	29	170	15	Hand wheel gear actuator
DN300	V9BFW16-300(-2)	NOM-5B-E	NOM-P5B-E	400	29	170	15	Hand wheel gear actuator
DN350	V9BFW16-350(-2)	NOM-6A-E	NOM-P6A-E	800	47	180	15	Hand wheel gear actuator
DN400	V9BFW16-400(-2)	NOM-7A-E	NOM-P7A-E	1000	47	230	15	Hand wheel gear actuator
DN450	V9BFW16-450(-2)	NOM-8A-E	NOM-P8A-E	1700	34	440	15	Hand wheel gear actuator
DN500	V9BFW16-500(-2)	NOM-8A-E	NOM-P8A-E	1700	34	440	15	Hand wheel gear actuator
DN600	V9BFW16-600(-2)	NOM-8B-E	NOM-P8B-E	1700	34	440	15	Hand wheel gear actuator

V9BFF Series Flanged Butterfly Valves and Actuators (Shut-Off Pressure: 1.0 Mpa) Order Information

Size	Valve model	Actuator model (two-position)	Actuator model (modulating control)	Actuator torque	Run time @50 Hz	Function (VA)	Anti-condensation heater (W)	Manual operation (manual lever is to be ordered separately)
DN50	V9BFF16-050(-2)	NOM-1A-E	NOM-P1A-E	35	11	40	8	Manual lever
DN65	V9BFF16-065(-2)							
DN80	V9BFF16-080(-2)							
DN100	V9BFF16-100(-2)	NOM-2A-E	NOM-P2A-E	50	15	40	8	Manual lever
DN125	V9BFF16-125(-2)	NOM-3A-E	NOM-P3A-E	80	22	40	8	Hand wheel gear actuator
DN150	V9BFF16-150(-2)	NOM-4A-E	NOM-P4A-E	200	39	110	10	Hand wheel gear actuator
DN200	V9BFF16-200(-2)	NOM-4B-E	NOM-P4B-E	200	39	110	10	Hand wheel gear actuator
DN250	V9BFF16-250(-2)	NOM-5B-E	NOM-P5B-E	400	29	170	15	Hand wheel gear actuator
DN300	V9BFF16-300(-2)	NOM-5B-E	NOM-P5B-E	400	29	170	15	Hand wheel gear actuator
DN350	V9BFF16-350(-2)	NOM-6A-E	NOM-P6A-E	800	47	180	15	Hand wheel gear actuator
DN400	V9BFF16-400(-2)	NOM-7A-E	NOM-P7A-E	1000	47	230	15	Hand wheel gear actuator
DN450	V9BFF16-450(-2)	NOM-8A-E	NOM-P8A-E	1700	34	440	15	Hand wheel gear actuator
DN500	V9BFF16-500(-2)	NOM-8A-E	NOM-P8A-E	1700	34	440	15	Hand wheel gear actuator
DN600	V9BFF16-600(-2)	NOM-8B-E	NOM-P8B-E	1700	34	440	15	Hand wheel gear actuator

Kv Values for V9BF Series Butterfly Valves

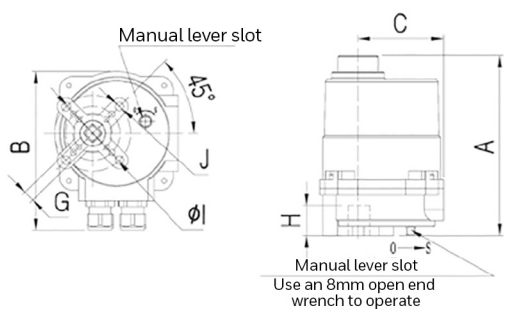
Size	Kv values for different openings								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
DN50	1.12	3.8	10.2	22.0	38.0	60.0	100.0	132.0	175.0
DN65	2.0	7.5	18.2	35.0	61.0	95.0	187.0	240.0	306.0
DN80	2.5	9.8	26.0	48.0	83.0	126.0	214.0	338.0	420.0
DN100	3.8	14.6	39.0	72.0	119.0	221.0	361.0	606.0	723.0
DN125	6.5	24.0	62.0	118.0	217.0	394.0	599.0	1038.0	1240.5
DN150	10.0	41.0	95.0	175.0	326.0	542.0	873.0	1260.0	1848.0
DN200	19.0	64.0	165.0	306.0	573.0	995.0	1567.0	2310.0	3117.0
DN250	28.0	101.0	245.0	450.0	836.0	1462.0	2253.0	3256.0	4540.0
DN300	34.0	129.0	312.0	615.0	1137.0	2125.0	3238.0	4991.0	6846.0
DN350	47.0	163.0	390.0	795.0	1498.0	2573.0	3980.0	6749.0	8520.0
DN400	62.0	231.0	508.0	1077.0	1973.0	3381.0	5385.0	8099.0	11458.0
DN450	65.0	256.0	621.0	1208.0	2315.0	3925.0	6331.0	9474.0	13542.0
DN500	133.0	346.0	1059.0	2693.0	4086.0	6348.0	9513.0	13109.0	18678.0
DN600	239.0	694.0	1153.0	2789.0	4966.0	7961.0	12985.0	19648.0	28017.0

V9BF+NOM Series Butterfly Valves and Actuators

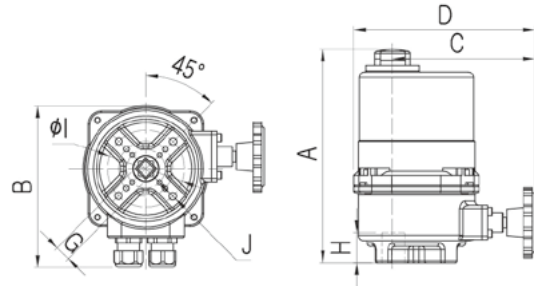
Actuator dimensions

Note:

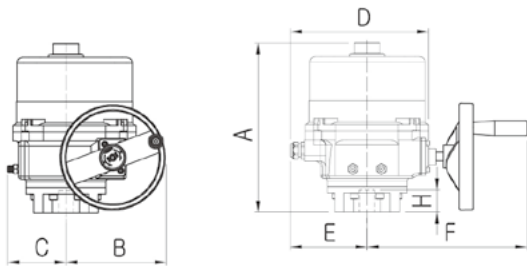
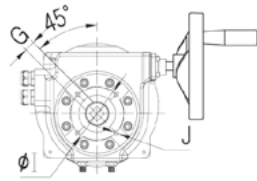
For NOM-1A-E, NOM-2A-E, NOM-P1A-E and NOM-P2A-E, manual operations can be accessed on the undersides of the actuators.



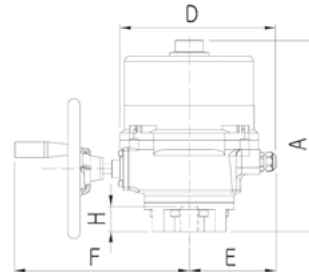
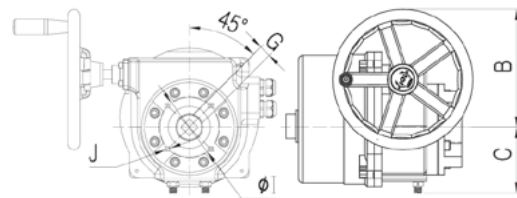
NOM-1...2A-E/NOM-P1...2A-E



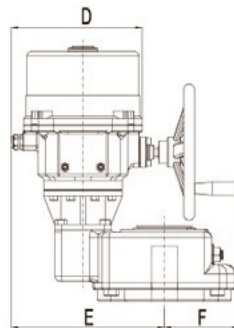
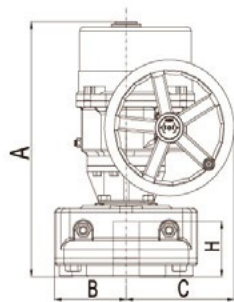
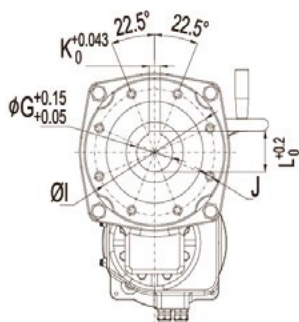
NOM-3A E/NOM-P3A-E



NOM-4...7A(B)-E/NOM-P4...7A(B)-E



NOM-8A-E/NOM-P8A-E



NOM-9...10A-E/NOM-P9...10A-E

OS#	A	B	C	D	E	F	G	H	φ I	J	Flange	Weight (kg)
NOM-1A-E	162	145	79	NA	NA	NA	11X11	20	70	4-M8	F07	3
NOM-P1A-E	192											5
NOM-2A-E	162	145	79	NA	NA	NA	11X11	20	70	4-M8	F07	3
NOM-P2A-E	192											5
NOM-3A-E	188	145	108	165	NA	NA	14X14	20	70	4-M8	F07	3.6
NOM-P3A-E	218											
NOM-..4A-E	265	123	79	216	120	240	14X14	35	70	4-M8	F07	11
NOM-..4B-E							17X17		102	4M-10	F10	
NOM-..5A-E	321	187	103	262	150	297	19X19	55	102	4M-10	F10	22
NOM-..5B-E							22X22					
NOM-..6A/..7A-E	321	187	103	262	150	297	27X27	55	125	4M-12	F12	
NOM-..8A-E	378	241	119	293	161	331	36X36	65	140	4M-16	F14	36
NOM-..8B-E									165	4M-20	F16	
NOM-9A-E	532	118	242	293	308	186	74.7	130	165	4M-20	F16	76
NOM-P9A-E												
NOM-10A-E	545	160	242	293	343	168	79.5	145	254	4M-20	F16	76
NOM-P10A-E												

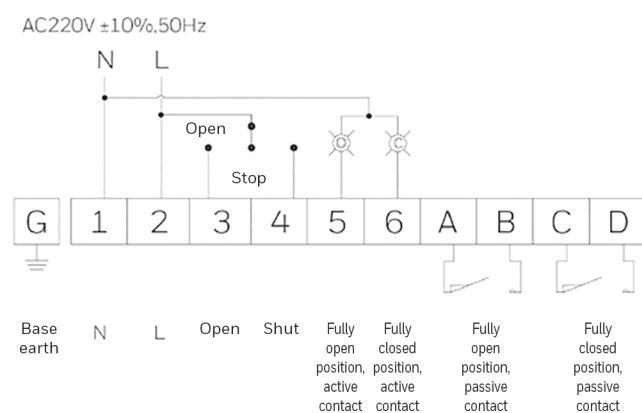
V9BF+NOM Series Butterfly Valves and Actuators

Wiring

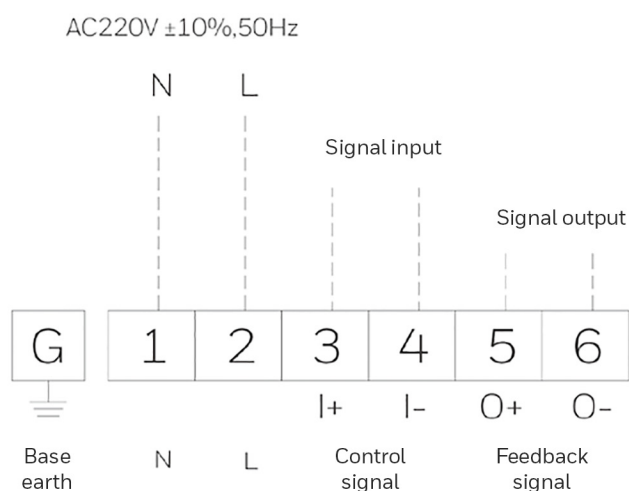
Cable Specifications:

NOM-(P)1-3 -E: 6-12 mm; NOM-(P)4-10 -E: 10-14 mm

Two-Position Actuator



Modulating Control Actuator



*Note:

For best results, distance should be maintained between the power cable and the signal cable and a shielded signal cable should be used. For the modulating control actuators with a length of no more than 30 meters, the default input and output signals are both 4-20 mA.

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