



JV-E
Electric 1/4 Turn
Johnson Valves Actuator
20Nm - 1200Nm



The JV-E electric actuator is designed for quarter turn applications on ball and butterfly valves with bases to ISO 5211 & DIN 3337 standard. Small, lightweight and compact in design but still offering high output torques.

Simple Installation

All connections are located in a separate terminal box, minimising the amount of disassembly required.

High Visibility Position Indicator

Making visual checks easy even from a distance.

Watertight Unit

IP68 Watertight (IP68 5m 120hr)

Efficient Design

High torques are achieved with relatively low power consumption.

Captive Bolts

Bolts will not be lost even when the cover is open.

Self Locking

The risk of overheating due to repeated operations is avoided with this feature.



Standard Specifications

Enclosure	IP68 Watertight (IP68 5m 120hr)	Travel Angle	90° ± 5°
Power Supply	110V & 250V (1PH) / 24VDC / 380V & 440V (3PH) ***	Casing Material	Aluminium Alloy, Dry Power Polyester Coated
Indicator	Dome Type Mechanical	Terminal Block	Push Button
Limit Switches	2 x Open / 2 x Close, SPDT, 250V AC *	Ambient Temp	-20 to +60°C
Inside Heater	(AC Only) 1PH 110/220V AC **	Mechanism	Scotch-Yoke (JV-E05 - Spur Gear Type)

* not available on JV-E02 ** not available on JV-E02, 04 & 05 ***Only available for JV-E16, 28, 40, 50, 80 & 120

Model No.	Maximum Torque Output			Op. Time 50 / 60Hz 90° (sec.)	Rated Current (A)					Motor Insulation / output (AC . DC)	Manual Handle Turns
	0°	45°	90°		AC (1PH)		AC (3PH)		DC 24V		
					110V	220V	380V	440V			
JV-E02	20	20	20	17.5/14.5	0.29/0.25	0.12/0.1	N/A	N/A	1.5	E . B/10W . 10W	3
JVE-04	40	40	40	12/10	0.67/0.6	0.23/0.2	N/A	N/A	2	E . B/10W . 10W	3
JV-E05	50	50	50	13	(100-250V AC) 0.1-0.25		N/A	N/A	2	B . B/10W . 10W	18
JV-E10	100	65	100	22/18	0.82/0.75	0.42/0.40	N/A	N/A	2.5	F . B/10W . 15W	15
JV-E16	160	107	160	28/23	0.94/0.85	0.50/0.46	0.47/0.37	0.62/0.49	4	F . B/15W . 15W	19
JV-E28	280	190	280	40/33	0.94/0.85	0.50/0.46	0.47/0.37	0.62/0.49	4	F . B/15W . 15W	23
JV-E40	400	270	400	40/33	1.09/1.23	0.54/0.58	0.16/0.15	0.18/0.16	5.5	F . B/25W . 40W	23
JV-E50	500	350	500	40/33	1.55/1.75	0.72/0.90	0.30/0.28	0.40/0.30	N/A	F/40W	23
JV-E80	800	540	800	51/42	1.97/2.83	1.09/1.46	0.50/0.54	0.57/0.55	N/A	F/60W	77
JV-E120	1200	800	120	51/42	1.97/2.83	1.09/1.46	0.50/0.54	0.57/0.55	N/A	F/90W	77

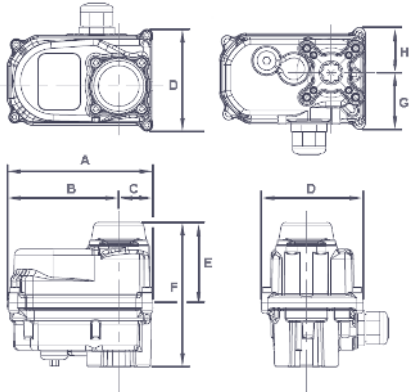
(s) spanner operated



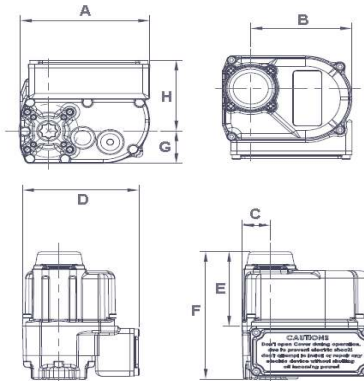
JV-E
Electric 1/4 Turn
Johnson Valves Actuator
20Nm - 1200Nm



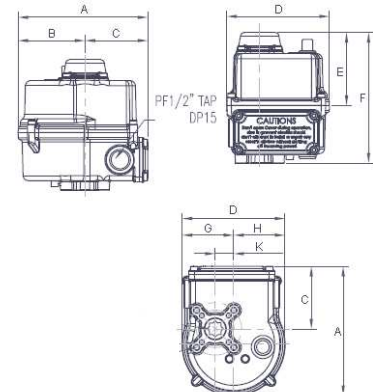
JV-E02



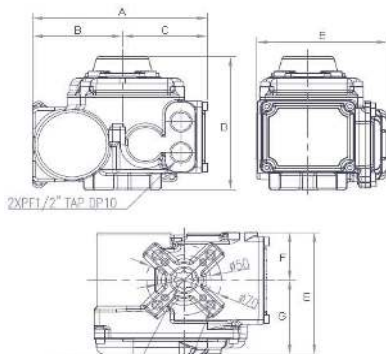
JV-E04



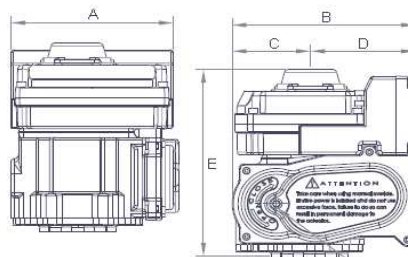
JV-E05



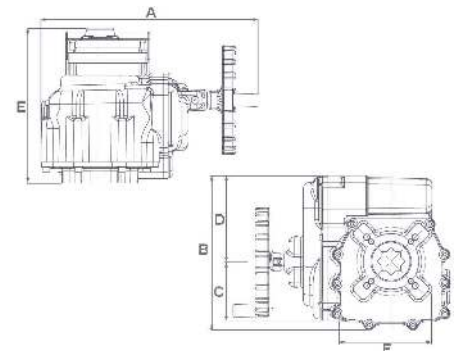
JV-E10



JV-E16 - JV-E50



JV-E80 - JV-E120



Model	A	B	C	D	E	F	G	H	K	Manual	Stem	ISO 5211						Cable	Weight (Kg)
										Operation	(mm)	F03	F05	F07	F10	F12	F14	Entry	
JV-E02	105	81	25	74	52	104	41	33	-	5mm Spanner	11	✓	✓	×	×	×	×	Cable	0.9
JV-E04	108	84	24	97	70	120	31	67	-	5mm Spanner	14	✓	✓	✓	×	×	×	1-PF1/2	1.5
JV-E05	124	64	60	98	70	125	49	49	18	5mm Hex Key	14	✓	✓	✓	×	×	×	2-PF1/2	1.3
JV-E10	164	84	80	133	122	48	74	-	-	6mm Hex Key	17	×	✓	✓	×	×	×	2-PF1/2	3.0
JV-E16	157	172	74	99	190	-	-	-	-	6mm Hex Key	17	×	✓	✓	✓	×	×	2-PF1/2	6.2
JV-E28	182	209	87	122	209	-	-	-	-	8mm Hex Key	27	×	×	✓	✓	✓	×	2-PF1/2	9.4
JV-E40	182	209	87	122	209	-	-	-	-	8mm Hex Key	27	×	×	✓	✓	✓	×	2-PF1/2	9.4
JV-E50	182	209	87	122	209	-	-	-	-	8mm Hex Key	27	×	×	✓	✓	✓	×	2-PF1/2	9.4
JV-E80	395.3	281	107.5	156	282	168.7	-	-	-	Handwheel	36	×	×	×	✓	✓	✓	2-PF1/2	26.0
JV-E120	395.3	281	107.5	156	282	168.7	-	-	-	Handwheel	36	×	×	×	✓	✓	✓	2-PF1/2	26.0

OPTIONS

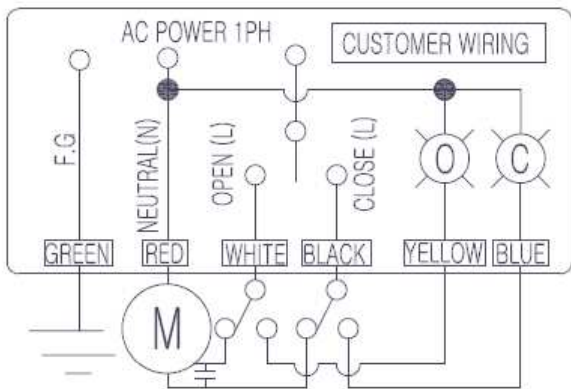
LC	Local Control (Only available for in 110VAC & 220VAC for JV-E16, JV-E28, JV-E40 & JV-E50)
MC	Modulating Input/Output 4-20mA (Only available for 110 & 220VAC)
SM	Super Modulating Input/Output 4-20mA, 0-1V, 2-10V, 0-5V & 1-5V all in one unit (Available for 24VDC, 110VAC & 220VAC)



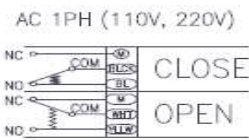
JV-E
Electric 1/4 Turn
Johnson Valves Actuator
20Nm - 1200Nm



Wiring Diagrams JV-E02 (AC)



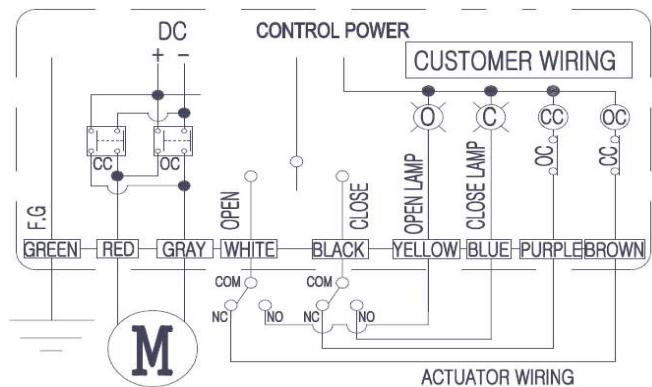
SWITCH WIRING



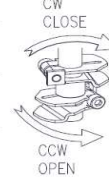
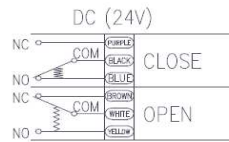
LIMIT SWITCH OPERATION

SWITCH	CLOSE	INTERMEDIATE	OPEN
CLS COM-NC	█	█	█
CLS COM-NO	█	█	█
OLS COM-NC	█	█	█
OLS COM-NO	█	█	█

Wiring Diagrams JV-E02 (DC)



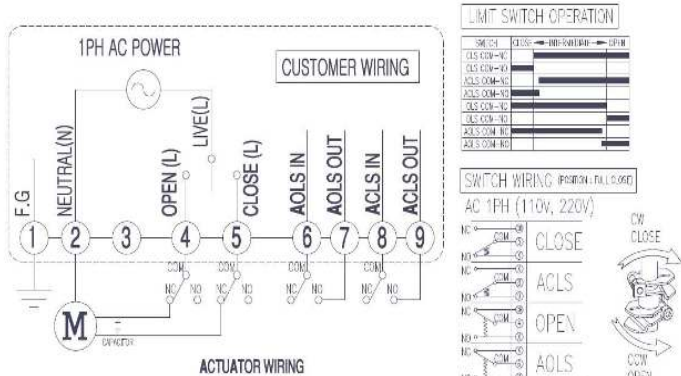
SWITCH WIRING (POSITION : FULL CLOSE)



LIMIT SWITCH OPERATION

SWITCH	CLOSE	INTERMEDIATE	OPEN
CLS COM-NC	█	█	█
CLS COM-NO	█	█	█
OLS COM-NC	█	█	█
OLS COM-NO	█	█	█

Wiring Diagrams JV-E04 (AC)

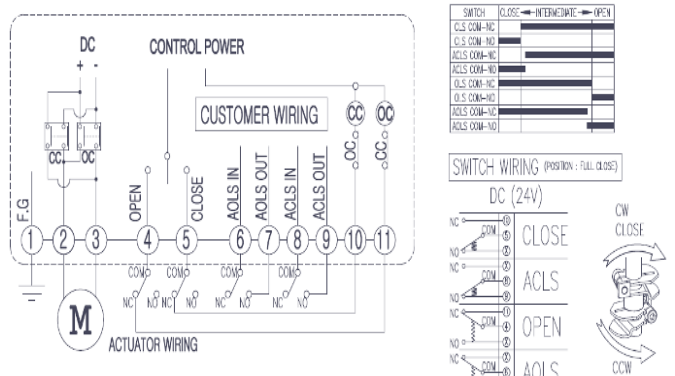


LIMIT SWITCH OPERATION

SWITCH	CLOSE	INTERMEDIATE	OPEN
CLS COM-NC	█	█	█
CLS COM-NO	█	█	█
AOLS COM-NC	█	█	█
AOLS COM-NO	█	█	█
CLS COM-NC	█	█	█
CLS COM-NO	█	█	█
AOLS COM-NC	█	█	█
AOLS COM-NO	█	█	█



Wiring Diagrams JV-E04 (DC)



LIMIT SWITCH OPERATION

SWITCH	CLOSE	INTERMEDIATE	OPEN
CLS COM-NC	█	█	█
CLS COM-NO	█	█	█
AOLS COM-NC	█	█	█
AOLS COM-NO	█	█	█
CLS COM-NC	█	█	█
CLS COM-NO	█	█	█
AOLS COM-NC	█	█	█
AOLS COM-NO	█	█	█



CLS = CLOSE LIMIT SWITCH (250VAC, 30VDC 5A)
 OLS = OPEN LIMIT SWITCH (250VAC, 30VDC 5A)
 AOLS = AUX. CLOSE LIMIT SWITCH (250VAC, 30VDC 5A)
 AOLS = AUX. OPEN LIMIT SWITCH (250VAC, 30VDC 5A)

CLS = CLOSE LIMIT SWITCH (250VAC, 30VDC 5A)
 OLS = OPEN LIMIT SWITCH (250VAC, 30VDC 5A)
 ACLS = AUX. CLOSE LIMIT SWITCH (250VAC, 30VDC 5A)
 AOLS = AUX. OPEN LIMIT SWITCH (250VAC, 30VDC 5A)

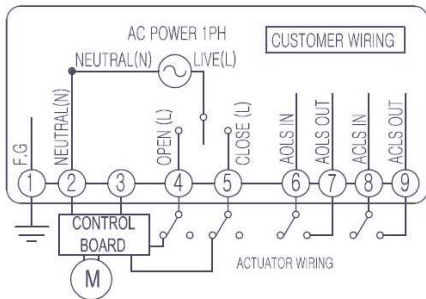


JV-E
Electric 1/4 Turn
Johnson Valves Actuator
20Nm - 1200Nm

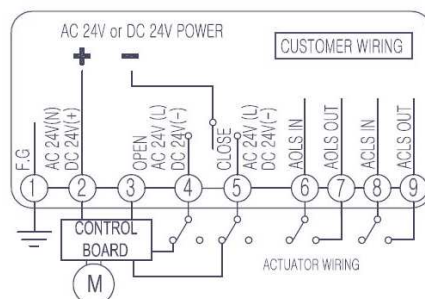


Wiring Diagrams JV-E05

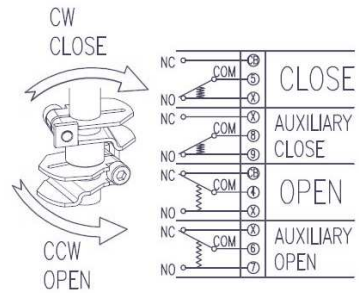
AC 1PH (110V, 220V) / 3 WIRE



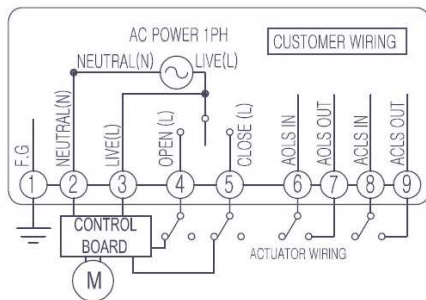
24V AC/DC / 3 WIRE



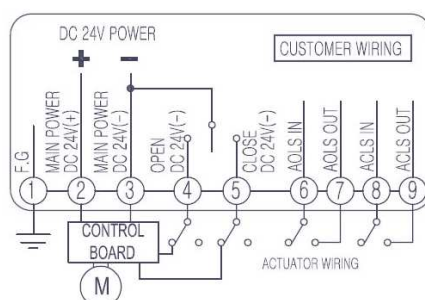
SWITCH WIRING



AC 1PH (110V, 220V) / 4 WIRE



24V DC / 4 WIRE

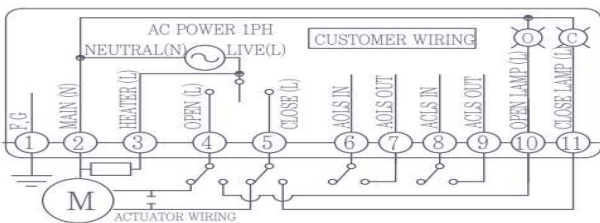


LIMIT SWITCH OPERATION

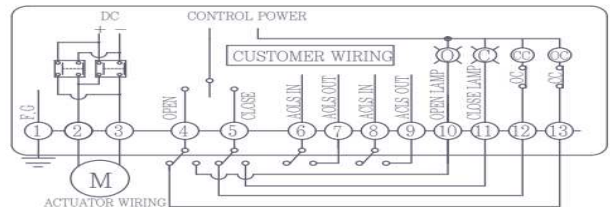
SWITCH	CLOSE	← INTERMEDIATE →	OPEN
CLS COM-NC	█		
CLS COM-NO		█	
ACLS COM-NC			█
ACLS COM-NO	█		
OLS COM-NC			█
OLS COM-NO	█		
AOLS COM-NC			█
AOLS COM-NO	█		

Wiring Diagrams JV-E10 - JV-E120

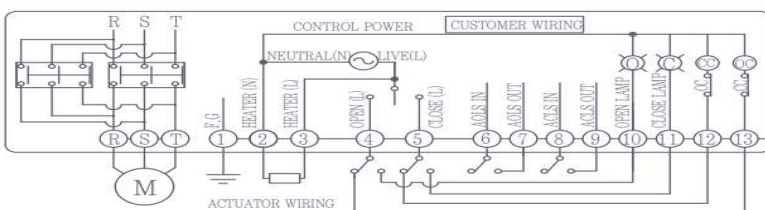
▶ AC 1PH



▶ DC 24V



▶ AC 3PH



▶ LIMIT SWITCH OPERATION

SWITCH	CLOSE	← INTERMEDIATE →	OPEN
CLS COM-NC	█		
CLS COM-NO		█	
ACLS COM-NC			█
ACLS COM-NO	█		
OLS COM-NC			█
OLS COM-NO	█		
AOLS COM-NC			█
AOLS COM-NO	█		



JV-E
EXPLOSION PROOF
Electric 1/4 Turn
Johnson Valves Actuator
25Nm - 100Nm

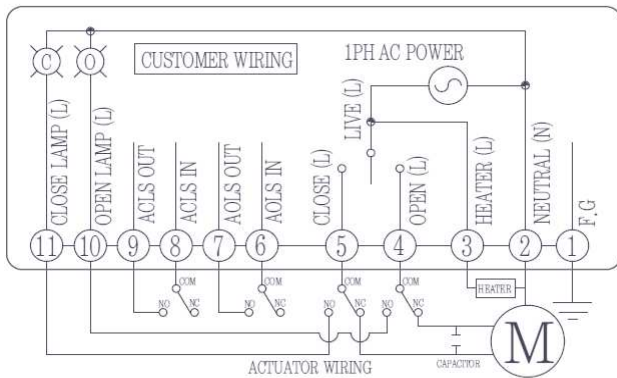


Standard Specifications

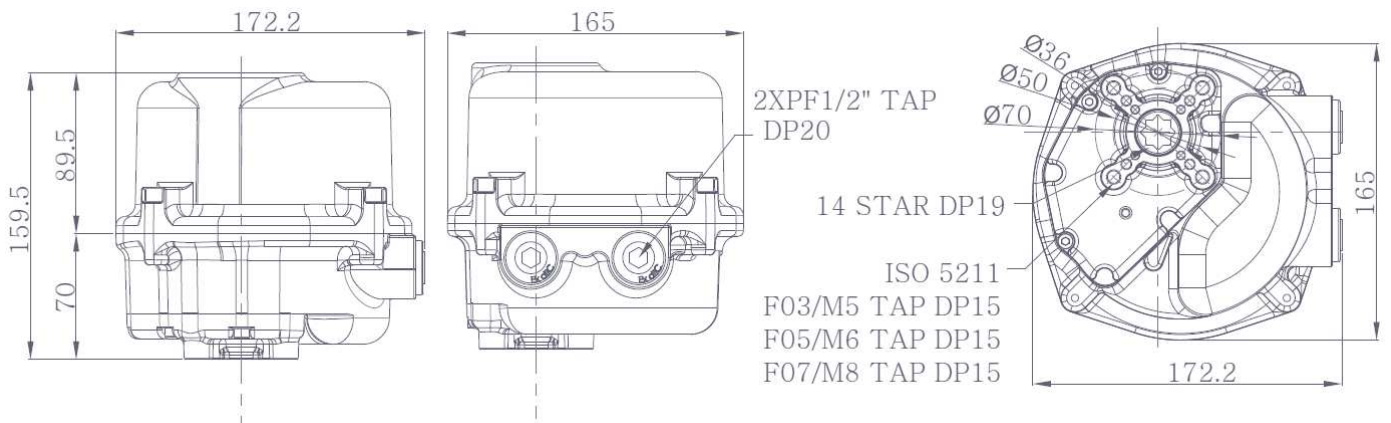
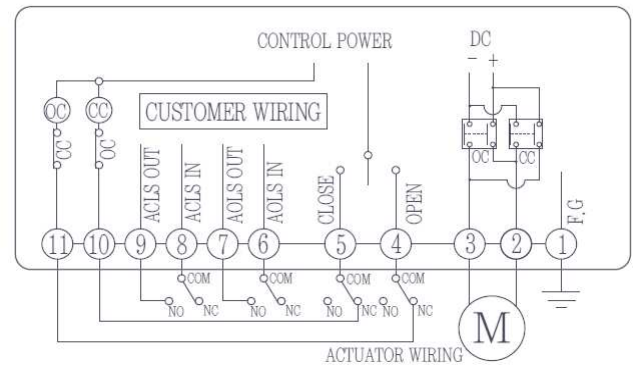
Enclosure	Ex d IIB T4 IP67	Travel Angle	90° ± 5°
Power Supply	110V & 220V (1PH) / 24VDC	Manual Operation	By Spanner 5mm
Indicator	Flat type mechanical indicator (Dome type as option)	Cable Entries	2-PF1/2
Limit Switches	2 x Open / 2 x Close 250VAC/5A	Ambient Temp	-20 to +70°C

Model No.	Maximum Torque Output			Op. Time 50 / 60Hz 90° (sec.)	Rated Current (A)				Motor Insulation / output (AC . DC)	Manual Handle Turns	
	0°	45°	90°		AC (1PH)		DC 24V	AC (3PH)			
					110V	220V					380V
JV-E25EXD	25	25	25	8/6.5	0.67/0.6	0.23/0.2	N/A	N/A	2	E . B/10W . 10W	6
JV-E60EXD	60	60	60	18/15	0.67/0.6	0.23/0.2	N/A	N/A	2	E . B/10W . 10W	6
JV-E80EXD	80	80	80	34/28	0.67/0.6	0.23/0.2	N/A	N/A	2	E . B/10W . 10W	6
JV-E100EXD	100	100	100	42/35	0.67/0.6	0.23/0.2	N/A	N/A	2	E . B/10W . 10W	6

▶ AC 1PH



▶ DC 24V





JV-E

**Electric 1/4 Turn
Johnson Valves Actuator
c/w Local Control
160Nm - 1200Nm**



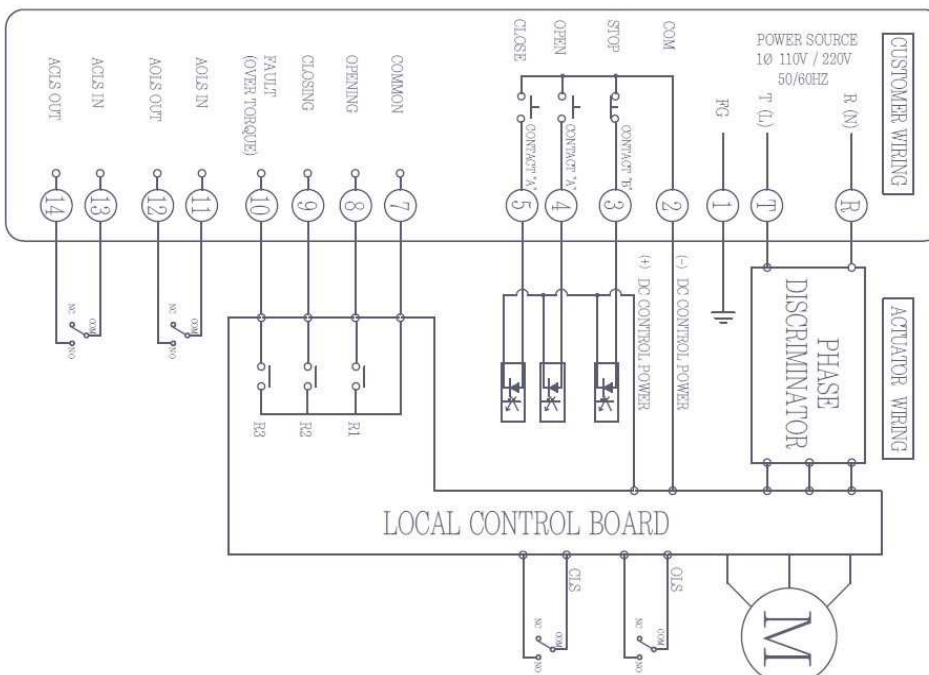
Standard Specifications

Model Range	1PH & 3PH Local control 1PH & 3PH Local & Modulating control (with torque switch)	Travel Angle	90° ± 5°
Power Supply	110V & 220V (1PH) / 24VDC / 380V & 440V (3PH)	Manual Operation	JV-E16 By Spanner 5mm JV-E28, JV-E40 & JV-E50 By Spanner 8mm JV-E80 & JV-E120 By Handwheel
Indicator	Dome type mechanical indicator	Cable Entries	3-PF1/2
Limit Switches	2 x Open / 2 x Close 250VAC/5A	Ambient Temp	-20 to +60°C

Model No.	Maximum Torque Output			Op. Time 50 / 60Hz 90° (sec.)	Rated Current (A)				DC 24V	Motor Insulation / output (AC / DC)	Manual Handle Turns
	0°	45°	90°		AC (1PH)		AC (3PH)				
					110V	220V	380V	440V			
JV-E16	160	107	160	28/23	0.94/0.85	0.50/0.46	0.47/0.37	0.62/0.49	4	F . B/15W . 15W	19
JV-E28	280	190	280	40/33	0.94.0.85	0.50/0.46	0.47/0.37	0.62/0.49	4	F . B/15W . 15W	23
JV-E40	400	270	400	40/33	1.09/1.23	0.54/0.58	0.16/0.15	0.18/0.16	5.5	F . B/25W . 40W	23
JV-E50	500	350	500	40/33	1.55/1.75	0.72/0.90	0.30/0.28	0.40/0.30	N/A	F/40W	23
JV-E80	800	540	800	51/42	1.97/2.83	1.09/1.46	0.5/0.54	0.57/0.55	N/A	F/60W	77
JV-E120	1200	800	1200	51/42	1.97/2.83	1.09/1.46	0.5/0.54	0.57/0.55	N/A	F/90W	77

*Maximum current can be +30% from rated current.

Wiring for 1PH Local Control (JV-E16, JV-E28, JV-E40, JV-E50, JV-E80 & JV-E120)



STOP : REMOTE MODE ACTUATOR STOP
 OPEN : REMOTE MODE OPEN RUNNING
 CLOSE : REMOTE MODE CLOSE RUNNING
 R1 : OPENING MONITOR RELAY
 R2 : CLOSING MONITOR RELAY
 R3 : FAULT RELAY
 OLS : OPEN LIMIT SWITCH
 CLS : CLOSE LIMIT SWITCH