

# Electric actuator

## Contents

Model code

Performance Specification ISO5211&stem

Dimension

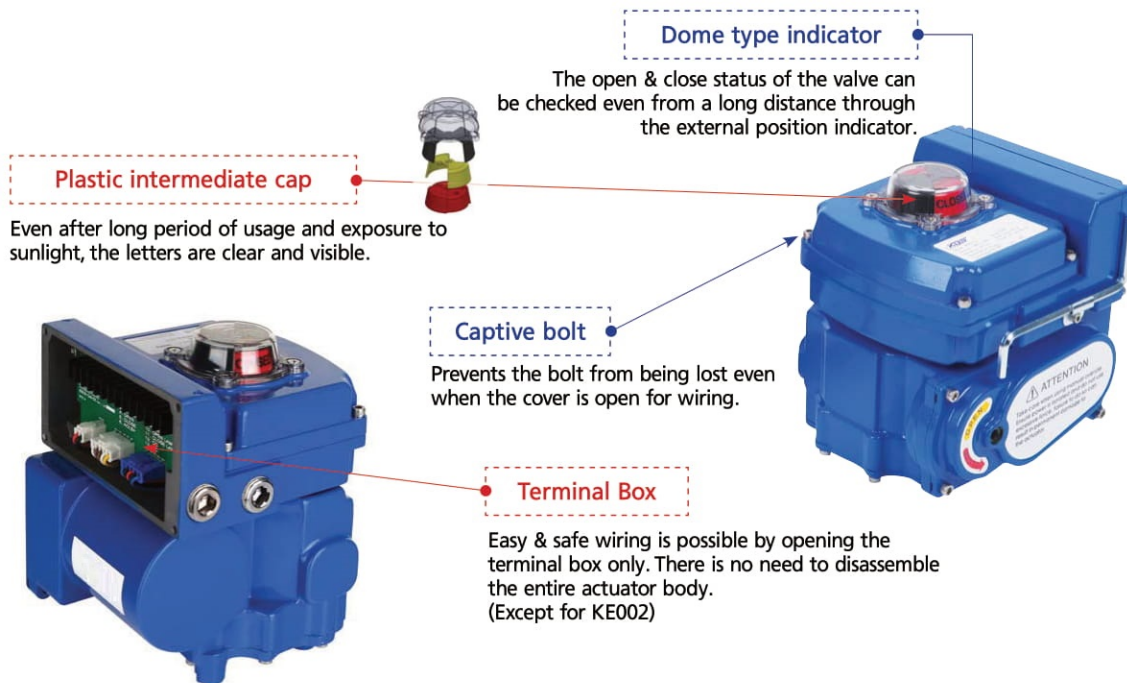
Wiring

Option table Modulating Control

DC control board 2 wire/3 wire

Local control

Explosion proof



## ► Selection guide

Valve Size		Ball Valve (2way/10K/#150)	Butterfly Valve (2way/10K/#150)
1/2"	15A	KBE002	
3/4"	20A	KBE004	
1"	25A		
1-1/4"	32A	KBE005	
1-1/2"	40A	KBE006	KBE002
2"	50A	KBE008	
2-1/2"	65A	KBE010	KBE004
3"	80A	KBE016	
4"	100A	KBE028	KBE005/KBE006
5"	125A	KBE040	KBE008/KBE010
6"	150A	KBE050/KBE080	KBE016
8"	200A	KBE080/KBE120	KBE028
10"	250A		KBE040/KBE050
12"	300A		KBE080
14"	350A		KBE080/KBE120
16"	400A		KBE120

- Data contained in the Catalog may be subject to change without advance notice for improvement of performance & safety of product.  
 - Contact us for the most recent product and technical information. Visit our website for more details : <http://www.kbvalve.com>

# ▶ Model code

## Q5N20-2AL357C14-OP

### Contents

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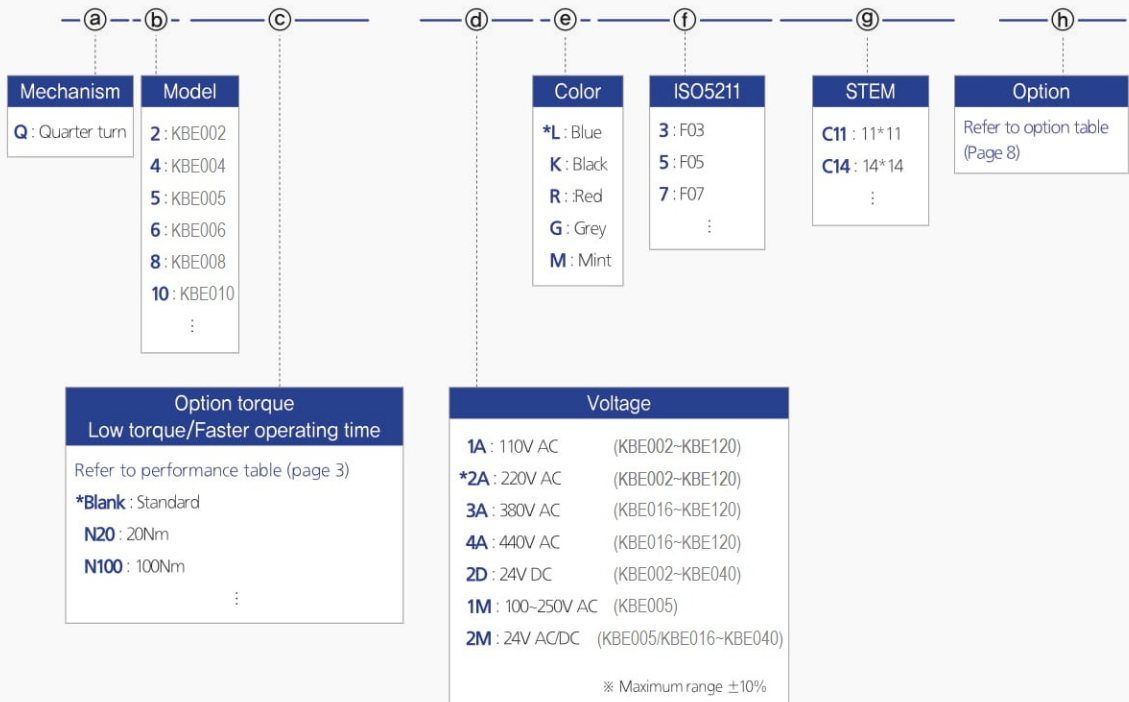
Wiring

Option table Modulating Control

DC control board 2 wire/3 wire

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Explosion proof



\*Standard



## ► Performance

MODEL	MAX TORQUE (Nm)	OP. TIME 50/60Hz(sec)	RATED CURRENT(A)			MOTOR INSULATION /OUTPUT(AC · DC)	MANUAL TURNS
			AC(1PH) 50/60Hz		DC		
			110V	220V			
KBE002	20	17.5/14.5	0.29/0.25	0.12/0.1	1.5	E · B/10W · 10W	3
#KBE002-10N	10	7/6	0.29/0.25	0.12/0.1	1.5	E · B/10W · 10W	3
KBE004	40	12/10	0.67/0.6	0.23/0.2	2	E · B/10W · 10W	3
#KBE004-15N	15	8.5/7	0.67/0.6	0.23/0.2	2	E · B/10W · 10W	3
KBE005	50	13	(100~250V AC) 0.1~0.25		2	B · B/10W · 10W	18
#KBE005-20N	20	6	(100~250V AC) 0.1~0.25		2	B · B/10W · 10W	18
KBE006	60	18/15	0.67/0.6	0.23/0.2	2	E · B/10W · 10W	3
#KBE006-25N	25	8/6.5	0.67/0.6	0.23/0.2	2	E · B/10W · 10W	3
KBE008	80	17/14	0.53/0.50	0.33/0.29	2.5	F · B/10W · 10W	20
#KBE008-40N	40	8/6	0.53/0.50	0.33/0.29	2.5	F · B/10W · 10W	20

MODEL	MAX TORQUE (Nm)			OP. TIME 50/60Hz (sec)	RATED CURRENT (A)					MOTOR INSULATION /OUTPUT(AC · DC)	MANUAL TURNS
	0°	45°	90°		AC(1PHASE)		AC(3PHASE)		DC		
					110V	220V	380V	440V			
KBE010	100	65	100	22/18	0.82/0.75	0.42/0.40	N/A	N/A	2.5	F · B/10W · 15W	15
#KBE010-80N	80	50	80	18/14	0.82/0.75	0.42/0.40	N/A	N/A	2.5	F · B/10W · 15W	11
#KBE010-60N	60	40	60	11/14	0.82/0.75	0.42/0.40	N/A	N/A	2.5	F · B/10W · 15W	9
KBE016	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
#KBE016-130N	130	85	130	22/18	0.94/0.85	0.50/0.46	0.47/0.37	0.62/0.49	4	F · B/15W · 15W	16
#KBE016-100N	100	65	100	18/14	0.94/0.85	0.50/0.46	0.47/0.37	0.62/0.49	4	F · B/15W · 15W	13
KBE028	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
#KBE028-240N	240	160	240	30/25	0.94/0.85	0.50/0.46	0.47/0.37	0.62/0.49	4	F · B/15W · 15W	19
#KBE028-190N	190	125	190	24/20	0.94/0.85	0.50/0.46	0.47/0.37	0.62/0.49	4	F · B/15W · 15W	15
KBE040	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
#KBE040-350N	350	240	350	30/25	1.09/1.23	0.54/0.58	0.16/0.15	0.18/0.16	5.5	F · B/25W · 40W	19
#KBE040-300N	300	220	300	24/20	1.09/1.23	0.54/0.58	0.16/0.15	0.18/0.16	5.5	F · B/25W · 40W	15
KBE050	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
#KBE050-450N	450	310	450	30/25	1.55/1.75	0.72/0.90	0.30/0.28	0.40/0.30	N/A	F/40W	19
#KBE050-400N	400	280	400	24/20	1.55/1.75	0.72/0.90	0.30/0.28	0.40/0.30	N/A	F/40W	15
KBE080	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
KBE120	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. #Option

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Performance Specification ISO5211&stem

Dimension

Wiring

Option table Modulating Control

DC control board 2 wire/3 wire

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Explosion proof

## ► ISO5211 & stem

	Standard	Option	Wt (Kg)
KBE002	F03/05, 11*11		0.9
KBE004	F03/05/07, 11*11	14*14	1.5
KBE005	F03/05/07, 14*14	11*11	1.3
KBE006	F03/05/07, 14*14		1.9
KBE008	F03/05/07, 14*14	F05/07, 17*17	2.6
KBE010	F05/07, 14*14	17*17	3.0
KBE016	F05/07/10, 17*17		6.2
KBE028	F07/10, 22*22	F07/10/12, 27*27	8.9
KBE040	F07/10, 22*22	F07/10/12, 27*27	9.4
KBE050	F07/10, 22*22	F07/10/12, 27*27	9.4
KBE080	F10/12, 36*36	F10/14, 36*36	26.0
KBE120	F10/12, 36*36	F10/14, 36*36	26.0

## ► Standard specification

AMBIENT TEMPERATURE	-20℃~+60℃	
MOTOR CONDITION	Duty 40%	
INDICATOR	Dome type mechanical indicator	
AUX. LIMIT SWITCHES	KBE002	N/A (in option)
	KBE004-KBE120	2 each for Open and Close 250VAC/5A
MANUAL OPERATION	KBE002, KBE004, KBE006	By Spanner 5mm
	KBE005, KBE008	By Wrench 5mm
	KBE010, KBE016	By Wrench 6mm (Hand wheel in option)
	KBE028, KBE040, KBE050	By Wrench 8mm (Hand wheel in option)
	KBE080, KBE120	By clutchless Hand Wheel
TRAVEL ANGLE	90° ± 5°	
INTERNAL HEATER (Only AC)	(KBE002, KBE004, KBE006, KBE008) N/A (KBE005, KBE008-KBE120) 1PH 220/110V AC	
CABLE ENTRY	(KBE002) Cable wire (1000mm, 6000mm in option) (KBE004/KBE006) Terminal box (1-PF 1/2) (KBE005/KBE008-KBE120) Terminal box (2-PF 1/2)	



# Dimension

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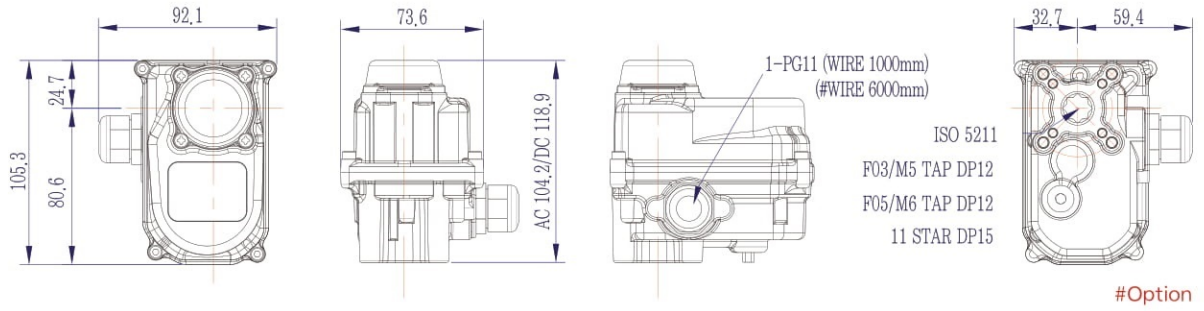
Option table  
Modulating Control

DC control board  
2 wire/3 wire

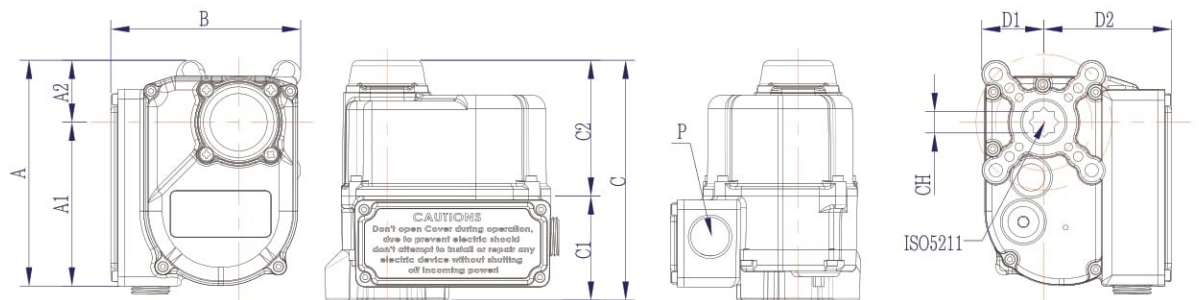
Local control

Explosion proof

### KBE002



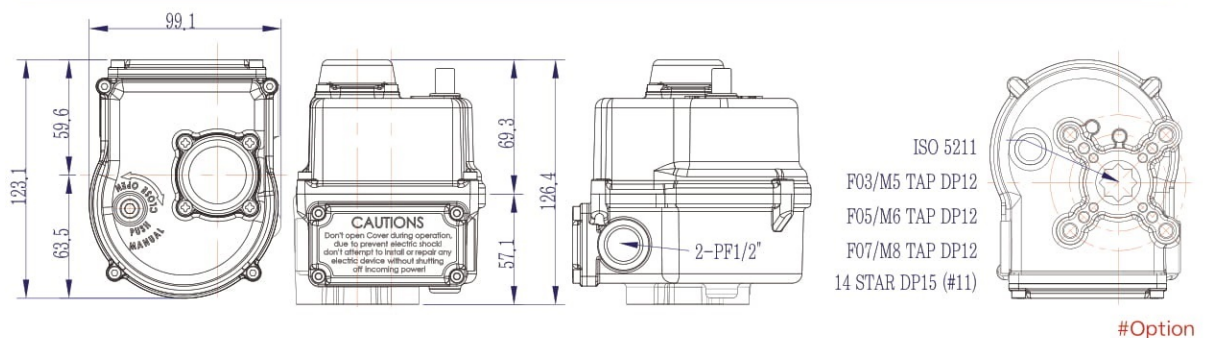
### KBE004 / KBE006 / KBE008



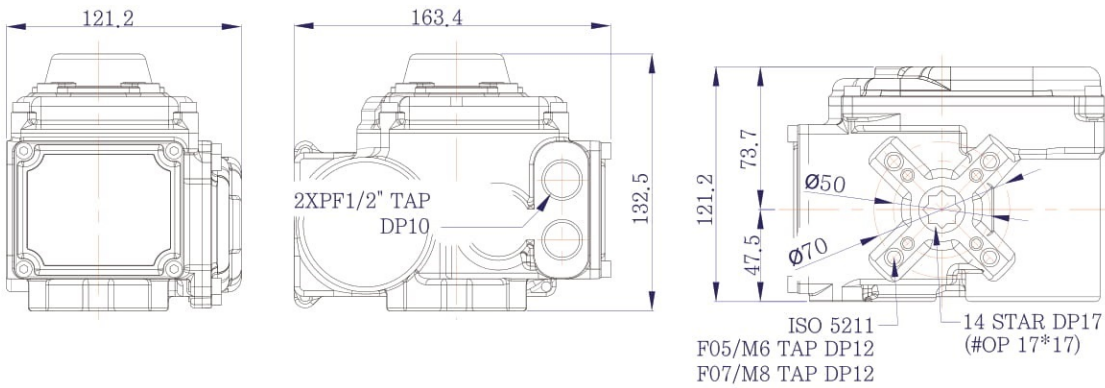
MODEL	A	A1	A2	B	C	C1	C2	D1	D2	ISO5211	P.C.D	N-M	CH	DTH	P
KBE004	116.5	32	84.5	98.1	123.8	53.8	70	32	66	F03/F05/F07	36/50/70	4-M5/M6/M8	11*11	15	1-PF1/2
													#14*14	16	
KBE006	122	34.2	97.9	111.3	134.5	59	75.5	39	72.3	F03/F05/F07	36/50/70	4-M5/M6/M8	14*14	16	1-PF1/2
KBE008	125.3	33.7	91.6	122.3	155.5	81.5	74	42.3	80	F03/F05/F07	36/50/70	4-M5/M6/M8	14*14	16	2-PF1/2
										#F05/07	50/70	4-M6/M8	17*17	19	

1)You can choose only F03/F05/F07 with 14\*14 or F05/F07 with 17\*17. #Option

### KBE005



## KBE010



## Contents

Model code

Performance Specification ISO5211&stem

Dimension

Wiring

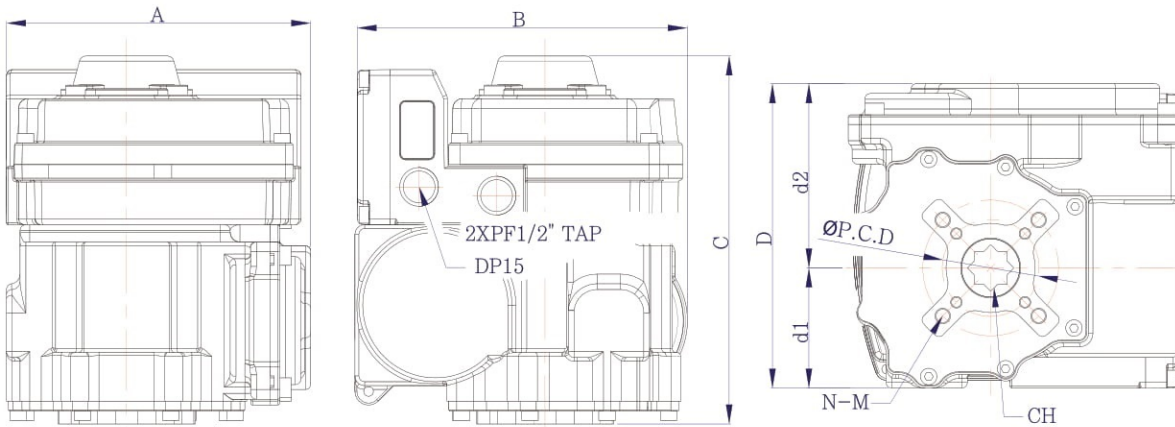
Option table Modulating Control

DC control board 2 wire/3 wire

Local control

Explosion proof

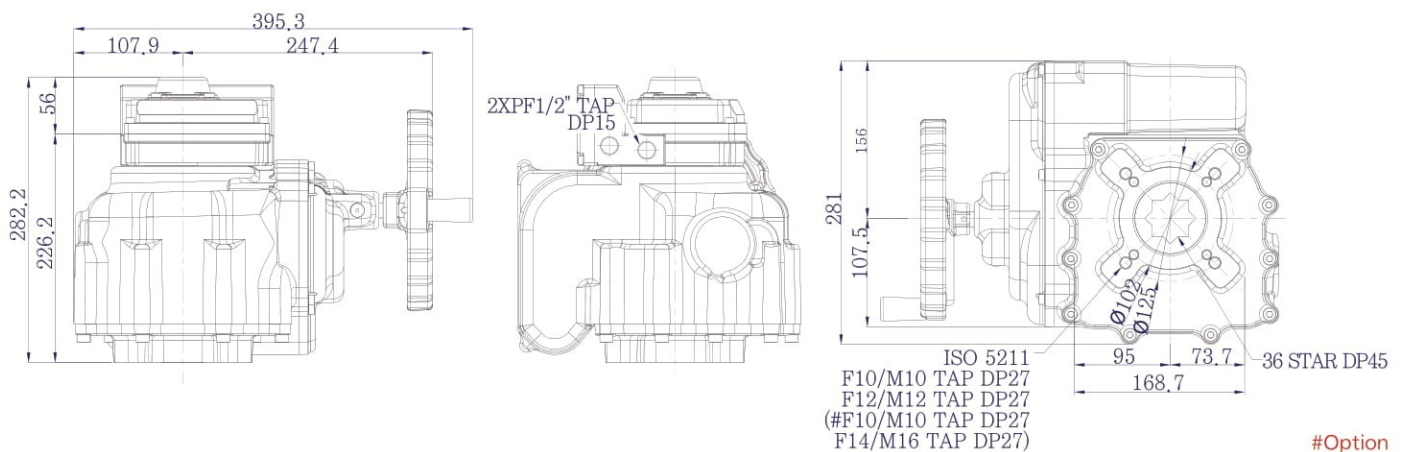
## KBE016 / KBE028 / KBE040 / KBE050



MODEL	A	B	C	D	d1	d2	ISO	P.C.D	N-M	CH	DTH
KBE016	157.0	170.5	189.8	157	62	95	F05/F07/F10	50/70/102	4-M6/M8/M10	17x17	19
KBE028							<sup>1)</sup> F07/F10	70/102	4-M8/M10	22x22	24
KBE040	181.9	208.9	209.0	181.9	73.7	108.2	<sup>1)</sup> #F07/F10/F12	#70/102/125	4-M8/M10/M12	#27x27	29
KBE050											

You can choose only F07/F10 with 22\*22 or F07/F10/F12 with 27\*27. #Option

## KBE080 / KBE120



#Option

# Wiring

- 1) If two or more electric actuators are operated, there must be individual relays for each actuator.
- 2) Each actuator should have two relays (a relay for OPEN and a relay for CLOSE) respectively.

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Dimension

Wiring

Option table Modulating Control

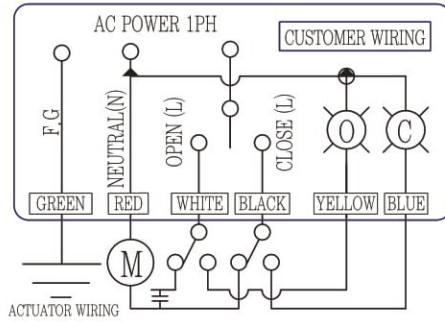
DC control board 2 wire/3 wire

Local control

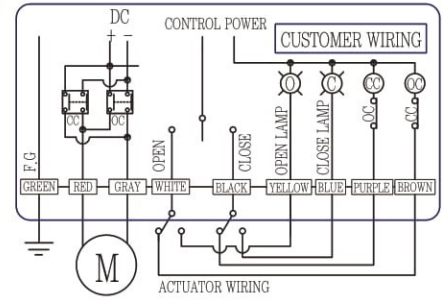
Explosion proof

### KBE002

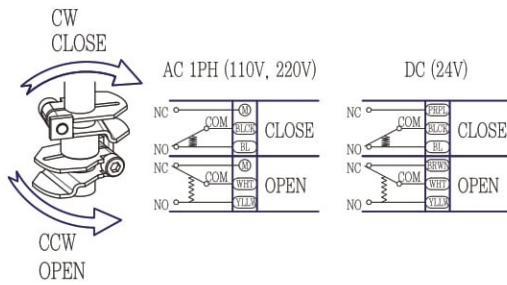
#### AC 1PH



#### DC 24V



#### SWITCH WIRING (POSITION : FULL CLOSE)

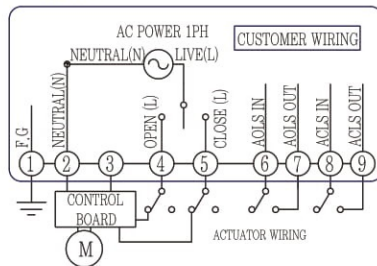


#### LIMIT SWITCH OPERATION

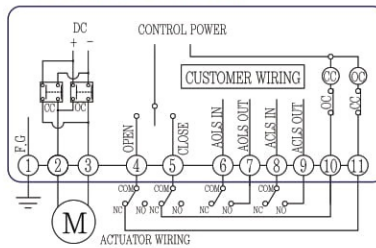
SWITCH	CLOSE	← INTERMEDIATE →	OPEN
CLS COM-NC		█	█
CLS COM-NO	█		
OLS COM-NC	█		
OLS COM-NO			█

### KBE004 / KBE005 / KBE006

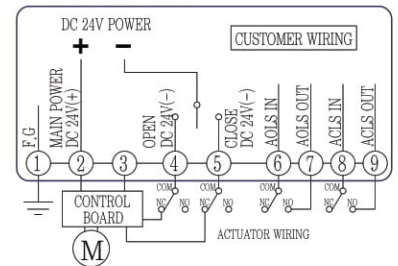
#### AC 1PH



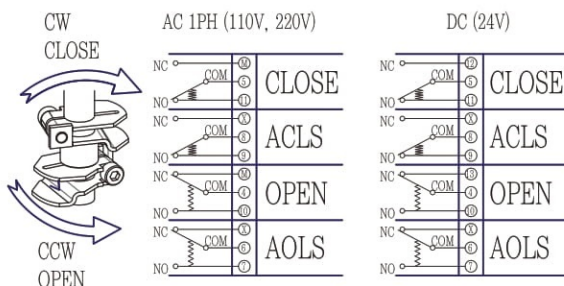
#### DC 24V (KBE004/KBE006)



#### DC 24V (KBE005)



#### SWITCH WIRING (POSITION : FULL CLOSE)



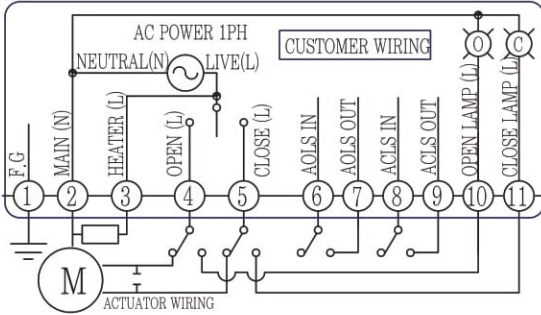
#### LIMIT SWITCH OPERATION

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			█

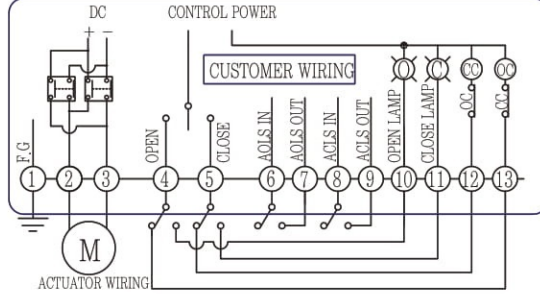


## KBE008~KBE120

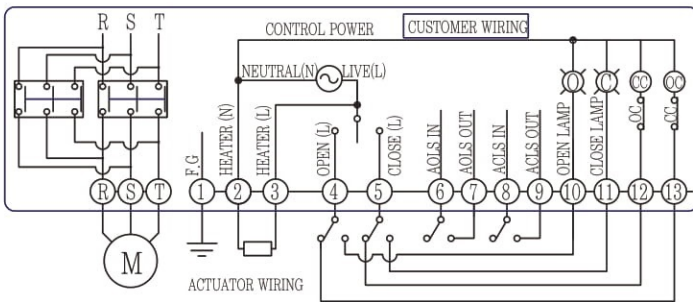
### ▶ AC 1PH



### ▶ DC 24V (KBE008-KBE040)



### ▶ AC 3PH (KBE016-KBE120)

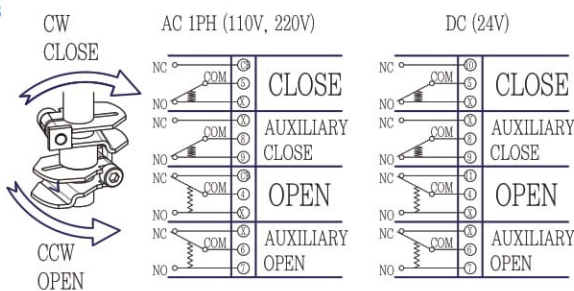


### ▶ LIMIT SWITCH OPERATION

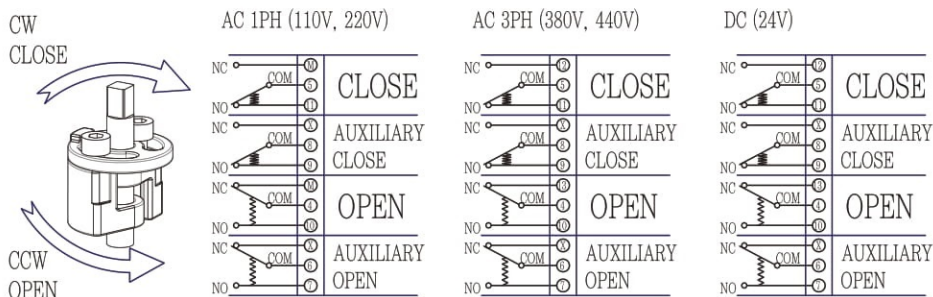
SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS COM-NC			
CLS COM-NO			
ACLS COM-NC			
ACLS COM-NO			
OLS COM-NC			
OLS COM-NO			
AOLS COM-NC			
AOLS COM-NO			

### ▶ SWITCH WIRING (POSITION : FULL CLOSE)

#### ▶ KBE008



#### ▶ KBE010~KBE120



## Contents

Model code

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Dimension

Wiring

Option table Modulating Control

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# Option table

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Dimension

Wiring

Option table Modulating Control

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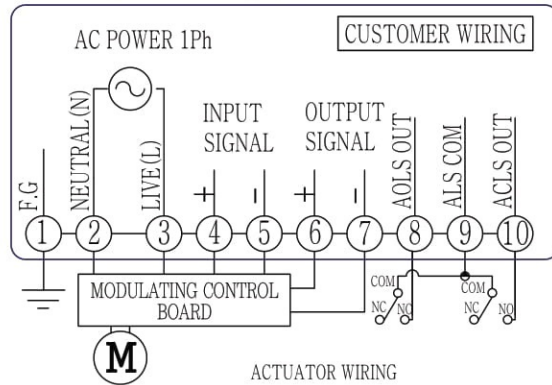
Option	Description		Model											
			KBE002	KBE004	KBE005	KBE006	KBE008	KBE010	KBE016	KBE028	KBE040	KBE050	KBE080	KBE120
WT	Watertight (IP68 5m 120hr)		○	○	○	○	○	○	○	○	○	○	○	○
TS	Electric Torque switches									○	○	○	○	○
MC	Modulating Control (4~20mA)	1ph	○	○	○	○	○	○	○	○	○	○	○	○
SM	Modulating control (4~20mA,0~1V,2~10V,0~5V,1~5V)	1ph	○	○	○	○				○	○	○	○	○
		24v dc	○	○	○	○	○	○	○	○	○			
LC	Local Control (Electric torque switch included)	1ph								○	○	○	○	○
		3ph								○	○	○	○	○
LM	Local and Modulating control (Electric torque switch included)	1ph								○	○	○	○	○
		3ph								○	○	○	○	○
C2	24V DC Control board (2 Wire)		○	○		○								
C3	24V DC Control board (3 Wire)		○	○	Standard Included	○								
TP	Thermal Protection												(Only AC) Standard Included	
HT	Heater				(Only AC) Standard Included								(Only AC) Standard Included	
TH	Thermal Protection and Heater		○	○		○								

# Wiring

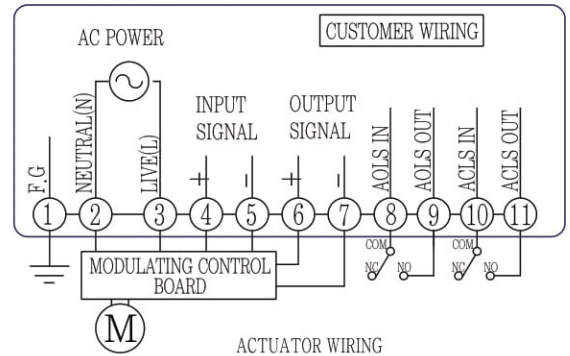
## MC&SM (Modulating Control)

\*Wiring for MC and SM are the same.

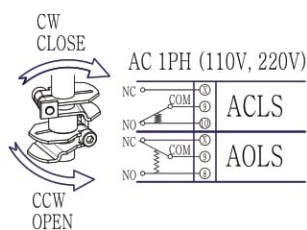
### AC 1PH (KBE002~KBE006)



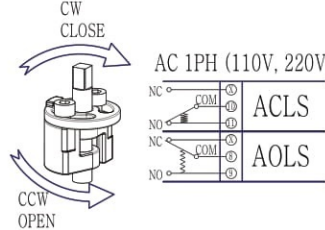
### AC 1PH (KBE008~KBE120)



### KBE008



### KBE010~KBE120



### LIMIT SWITCH OPERATION

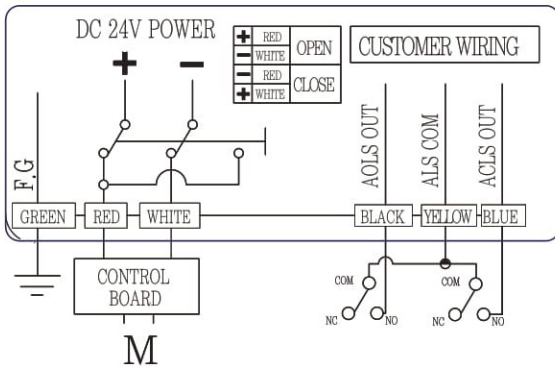
SWITCH	CLOSE	← INTERMEDIATE →	OPEN
CLS COM-NC		█	
CLS COM-NO			█
ACLS COM-NC		█	
ACLS COM-NO			█
OLS COM-NC	█		
OLS COM-NO			█
AOLS COM-NC	█		
AOLS COM-NO			█

\* Dimensions for models with MC option are different from standard.

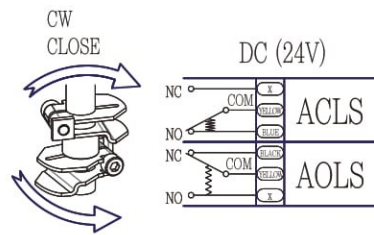


## C2 (24V DC Control board 2 Wire)

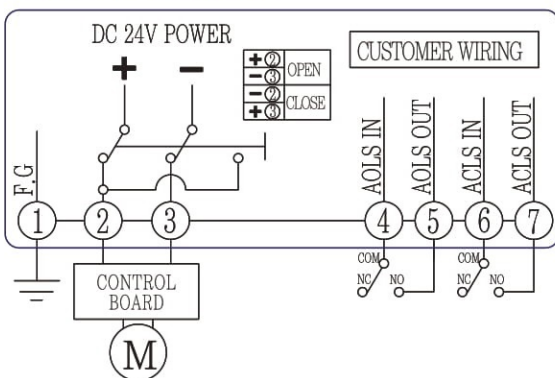
### ► KBE002



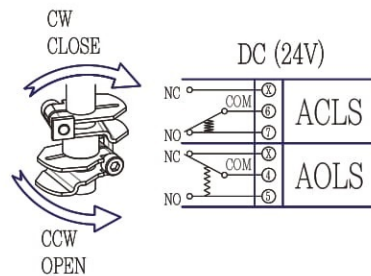
### ► SWITCH WIRING (POSITION : FULL CLOSE)



### ► KBE004/KBE006/KBE008

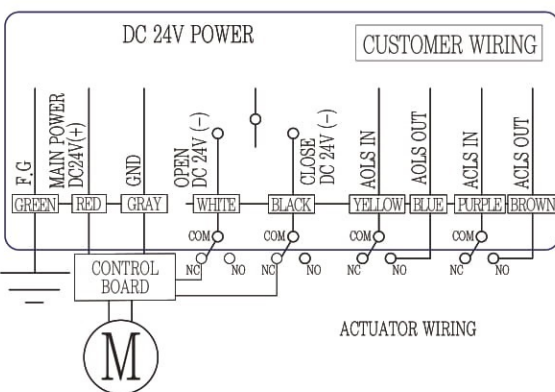


### ► SWITCH WIRING (POSITION : FULL CLOSE)

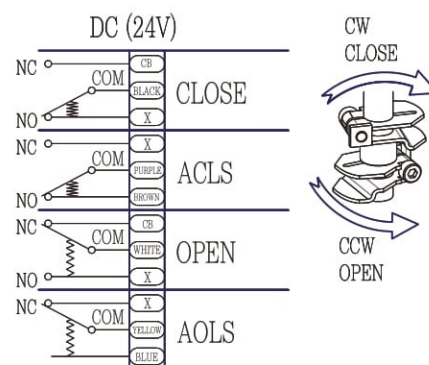


## C3 (24V DC Control board 3 Wire)

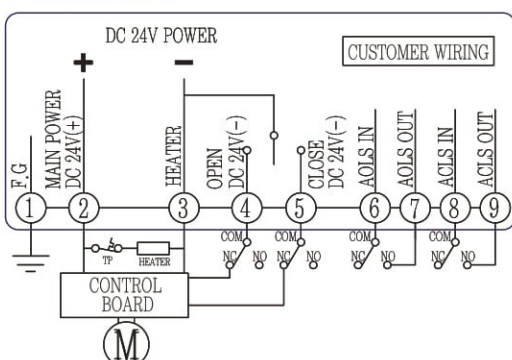
### ► KBE002



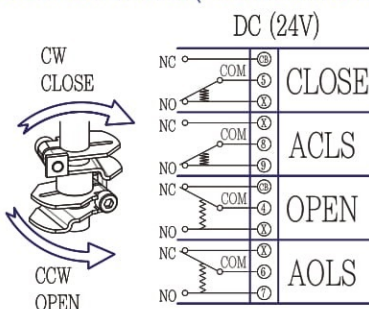
### ► SWITCH WIRING (POSITION : FULL CLOSE)



### ► KBE004/KBE006



### ► SWITCH WIRING (POSITION : FULL CLOSE)



## Contents

Model code

Performance Specification ISO5211&stem

Dimension

Wiring

Option table Modulating Control

DC control board 2 wire/3 wire

Local control

Explosion proof

## LC (Local Control)

### Contents

Model code

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Dimension

Wiring

Option table Modulating Control

DC control board 2 wire/3 wire

Local control

Explosion proof

MODEL RANGE	<ul style="list-style-type: none"> <li>·1ph Local control</li> <li>·3ph Local control</li> <li>·1ph Local control with Modulating control (Torque switch is included)</li> <li>·3ph Local control with Modulating control (Torque switch is included)</li> </ul>	
AMBIENT TEMPERATURE INDICATOR	-20°C~+60°C	
LIMIT SWITCHES	2 Each for Open and Close 250VAC/5A	
MANUAL OPERATION	KBE016	By Wrench 6mm
	KBE028, KBE040, KBE050	By Wrench 8mm
	KBE080, KBE120	BY Hand wheel
TRAVEL ANGLE	90°+5	
CABLE ENTRY	3-PF1/2	

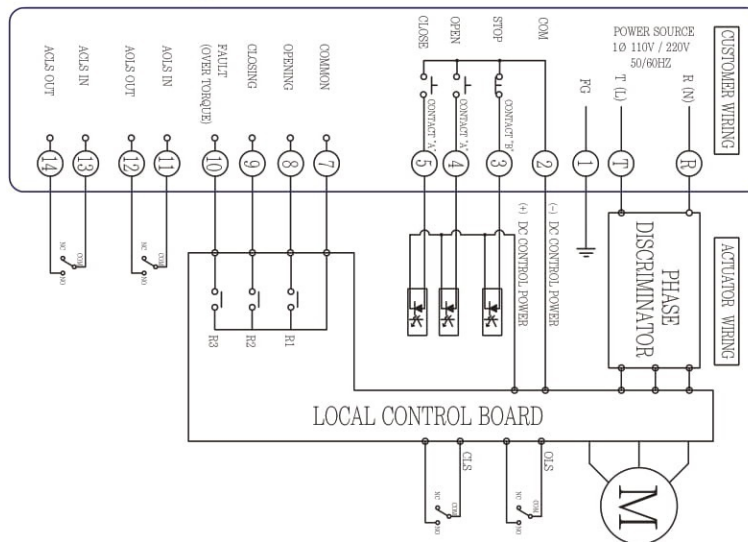


## ► Performance

MODEL	MAX TORQUE (Nm)			OP. TIME 50/60Hz (sec)	RATED CURRENT (A)				MOTOR INSULATION /OUTPUT(AC · DC)	MANUAL TURNS	
	0°	45°	90°		AC(1PHASE)		AC(3PHASE)				DC 24V
					110V	220V	380V	440V			
KBE010	100	65	100	22/18	0.82/0.75	0.42/0.40	N/A	N/A	2.5	F · B/10W · 15W	15
#KBE010-80N	80	50	80	18/14	0.82/0.75	0.42/0.40	N/A	N/A	2.5	F · B/10W · 15W	11
#KBE010-60N	60	40	60	11/14	0.82/0.75	0.42/0.40	N/A	N/A	2.5	F · B/10W · 15W	9
KBE016	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
#KBE016-130N	130	85	130	22/18	0.94/0.85	0.50/0.46	0.47/0.37	0.62/0.49	4	F · B/15W · 15W	16
#KBE016-100N	100	65	100	18/14	0.94/0.85	0.50/0.46	0.47/0.37	0.62/0.49	4	F · B/15W · 15W	13
KBE028	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
#KBE028-240N	240	160	240	30/25	0.94/0.85	0.50/0.46	0.47/0.37	0.62/0.49	4	F · B/15W · 15W	19
#KBE028-190N	190	125	190	24/20	0.94/0.85	0.50/0.46	0.47/0.37	0.62/0.49	4	F · B/15W · 15W	15
KBE040	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
#KBE040-350N	350	240	350	30/25	1.09/1.23	0.54/0.58	0.16/0.15	0.18/0.16	5.5	F · B/25W · 40W	19
#KBE040-300N	300	220	300	24/20	1.09/1.23	0.54/0.58	0.16/0.15	0.18/0.16	5.5	F · B/25W · 40W	15
KBE050	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
#KBE050-450N	450	310	450	30/25	1.55/1.75	0.72/0.90	0.30/0.28	0.40/0.30	N/A	F/40W	19
#KBE050-400N	400	280	400	24/20	1.55/1.75	0.72/0.90	0.30/0.28	0.40/0.30	N/A	F/40W	15
KBE080	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
KBE120	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. #Option

## ► Wiring • 1PH LC (KBE016, KBE028, KBE040, KBE050, KBE080, KBE120)



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

Explosion proof

## ► Standard specification

ENCLOSURE	Ex d IIB T4 IP67
AMBIENT TEMPERATURE	-20°C~+70°C
INDICATOR	Flat type mechanical indicator (Dome type in option)
LIMIT SWITCHES	2 Each for Open and Close 250VAC/5A
MANUAL OPERATION	By Spanner 5mm
TRAVEL ANGLE	90° +5°
CABLE ENTRY	2-PF1/2



## Contents

Model code

Performance Specification ISO5211&stem

Dimension

Wiring

Option table Modulating Control

DC control board 2 wire/3 wire

Local control

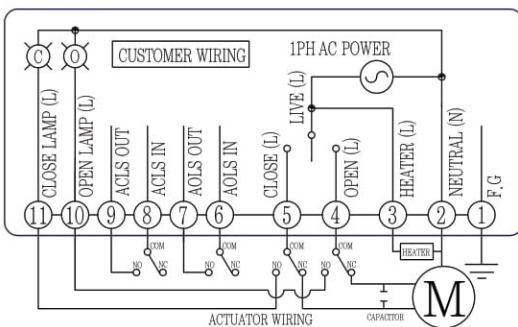
Explosion proof

## ► Performance

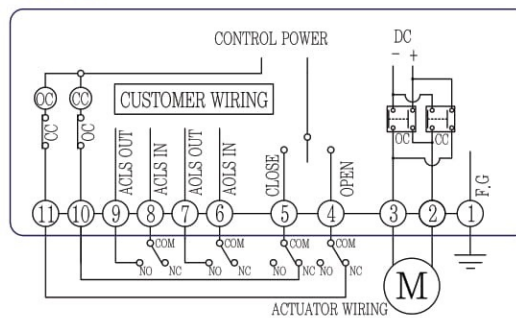
MODEL	MAX TORQUE (Nm)	OPERATING TIME 50Hz/60Hz(sec)	RATED CURRENT (A)			MOTOR CLASS/OUTPUT (AC·DC)	MANUAL TURNS
			AC (1PH) 50/60Hz		DC 24V		
			110V	220V			
KB010-5G	25	8 / 6.5	0.67/0.6	0.23/0.2	2	E·B/10W·10W	6
KB010-6G	60	18 / 15	0.67/0.6	0.23/0.2	2	E·B/10W·10W	6
KB010-7G	80	34 / 28	0.67/0.6	0.23/0.2	2	E·B/10W·10W	6
KB010-8G	100	42 / 35	0.67/0.6	0.23/0.2	2	E·B/10W·10W	6

## ► Drawing

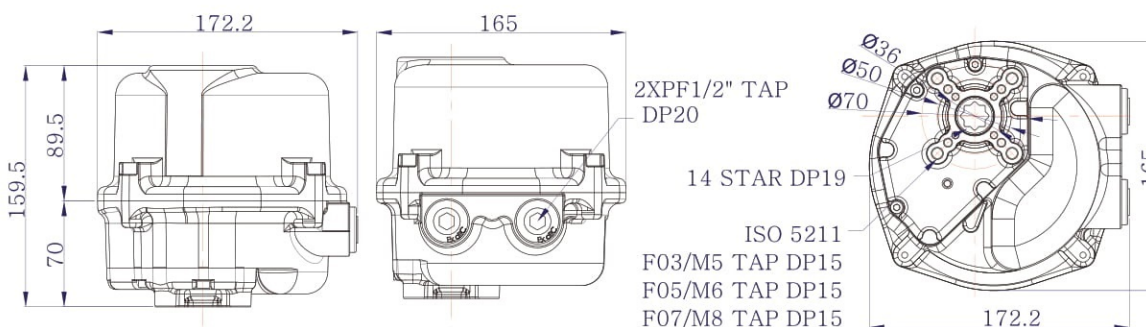
► AC 1PH



► DC 24V



## ► Dimension table





## ► ISO5211 & stem

	Standard	Option	Wt (Kg)
KBE002	F03/05, 11*11		0.9
KBE004	F03/05/07, 11*11	14*14	1.5
KBE005	F03/05/07, 14*14	11*11	1.3
KBE006	F03/05/07, 14*14		1.9
KBE008	F03/05/07, 14*14	F05/07, 17*17	2.6
KBE010	F05/07, 14*14	17*17	3.0
KBE016	F05/07/10, 17*17		6.2
KBE028	F07/10, 22*22	F07/10/12, 27*27	8.9
KBE040	F07/10, 22*22	F07/10/12, 27*27	9.4
KBE050	F07/10, 22*22	F07/10/12, 27*27	9.4
KBE080	F10/12, 36*36	F10/14, 36*36	26.0
KBE120	F10/12, 36*36	F10/14, 36*36	26.0
KB010	F03/05/07, 14*14		6.3

## ► Option table

Option	Description	Model											
		KBE002	KBE004	KBE005	KBE006	KBE008	KBE010	KBE016	KBE028	KBE040	KBE050	KBE080	KBE120
WT	Watertight (IP68 5m 120hr)	○	○	○	○	○	○	○	○	○	○	○	○
TS	Electric Torque switches							○	○	○	○	○	○
MC	Modulating Control (4~20mA)	1ph	○	○	○	○	○	○	○	○	○	○	○
SM	Modulating control (4~20mA,0~1V,2~10V,0~5V,1~5V)	1ph	○	○	○	○			○	○	○	○	○
		24v dc	○	○	○	○	○	○	○	○			
LC	Local Control (Electric torque switch included)	1ph							○	○	○	○	○
		3ph							○	○	○	○	○
LM	Local and Modulating control (Electric torque switch included)	1ph							○	○	○	○	○
		3ph							○	○	○	○	○
C2	24V DC Control board (2 Wire)	○	○		○								
C3	24V DC Control board (3 Wire)	○	○	Standard Included	○								
TP	Thermal Protection												(Only AC) Standard Included
HT	Heater			(Only AC) Standard Included									(Only AC) Standard Included
TH	Thermal Protection and Heater	○	○		○								



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