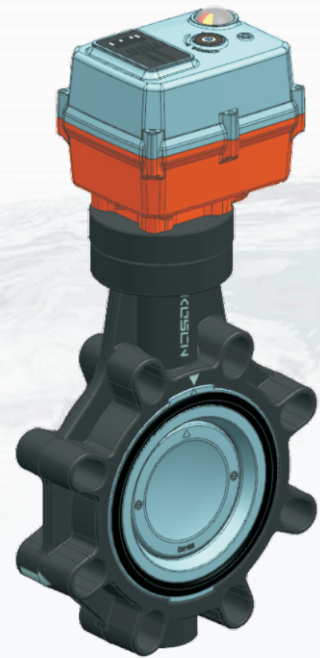


Chemical upgrading

**Manual Butterfly valve
KV400-Pro**

**Electric Butterfly valve
KV401-Pro**

**Pneumatic Butterfly valve
KV402-Pro**



KOSCN Control Valves KV400-Pro upgraded plastic butterfly valve is a product for standard applications, with an upgraded double eccentric design, with the characteristics of small torque, long life and high safety. The basic valve can be extended to electric and pneumatic control to realise intelligent applications. And it has the functions of switching, adjustment, signal feedback, automatic reset, fault signalling and so on.

Easy installation and maintenance

- * The valve body carries out ISO and GB installation standards, universal through hole for easy installation
- * The handle has direction indication of switch
- * Using ISO5211 standard design, simple maintenance
- * Manual and automatic modules are replaceable for easy upgrade
- * Compact design of all plastic or aluminum actuators ensures mounting space

High safety performance

- * Valve shaft of stainless steel, corrosion resistant and variant
- * Seat double seal design, low torque, no leakage
- * Material and seal options are available for general applications other than pure chemical systems
- * Intelligent actuator through torque design, to ensure the safety of the application

High Flexibility

- * Valve body has PVC-U, CPVC, PP-H, PVDF
- * Connection type: DIN, ANSI, JIS
- * Pneumatic control: NC, NO, DA
- * Electric intelligent: switch, regulation, bus communication
- * Function options: signal feedback, power-off reset, fault alarm

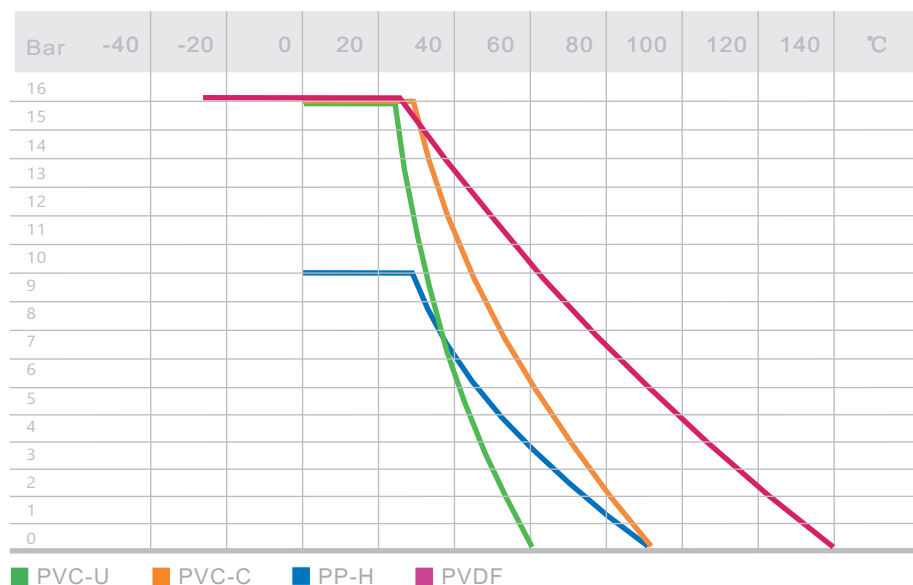


+ Technical characteristics

Pressure temperature curve

All data based on water for consider -ring 25 years safe life time

Other liquids request to reduce the temperature and pressure accordingly



Flow capacity

All data are for 20°C water with 1 bar pressure difference

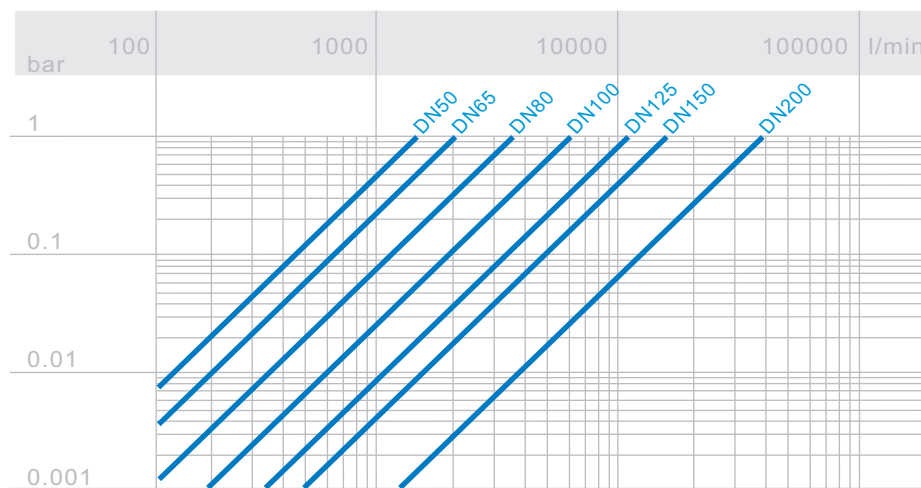
$$C_v = k_v \times 0,07$$

$$F_v = k_v \times 0,0585$$

$$K_v \text{ (l/min)}$$

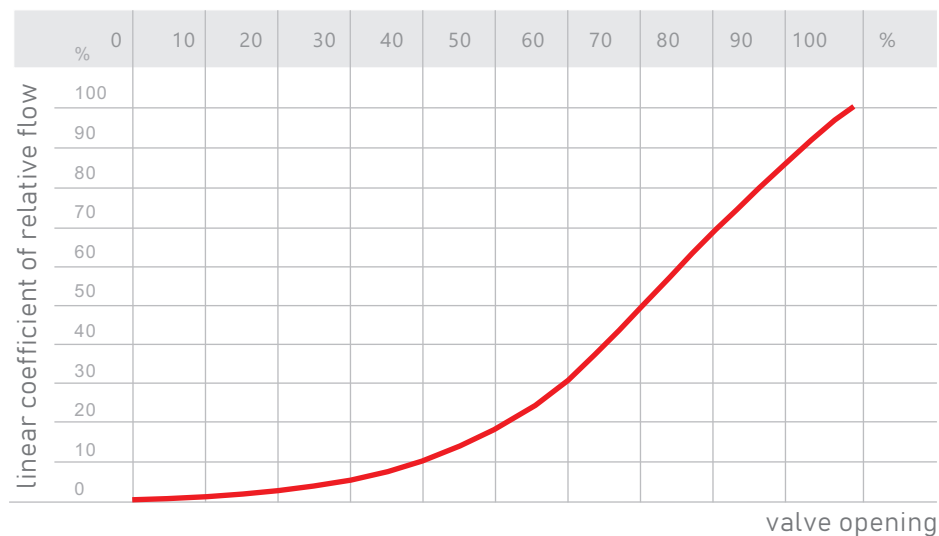
$$C_v \text{ (gal/min) US}$$

$$F_v \text{ (gal/min) GB}$$

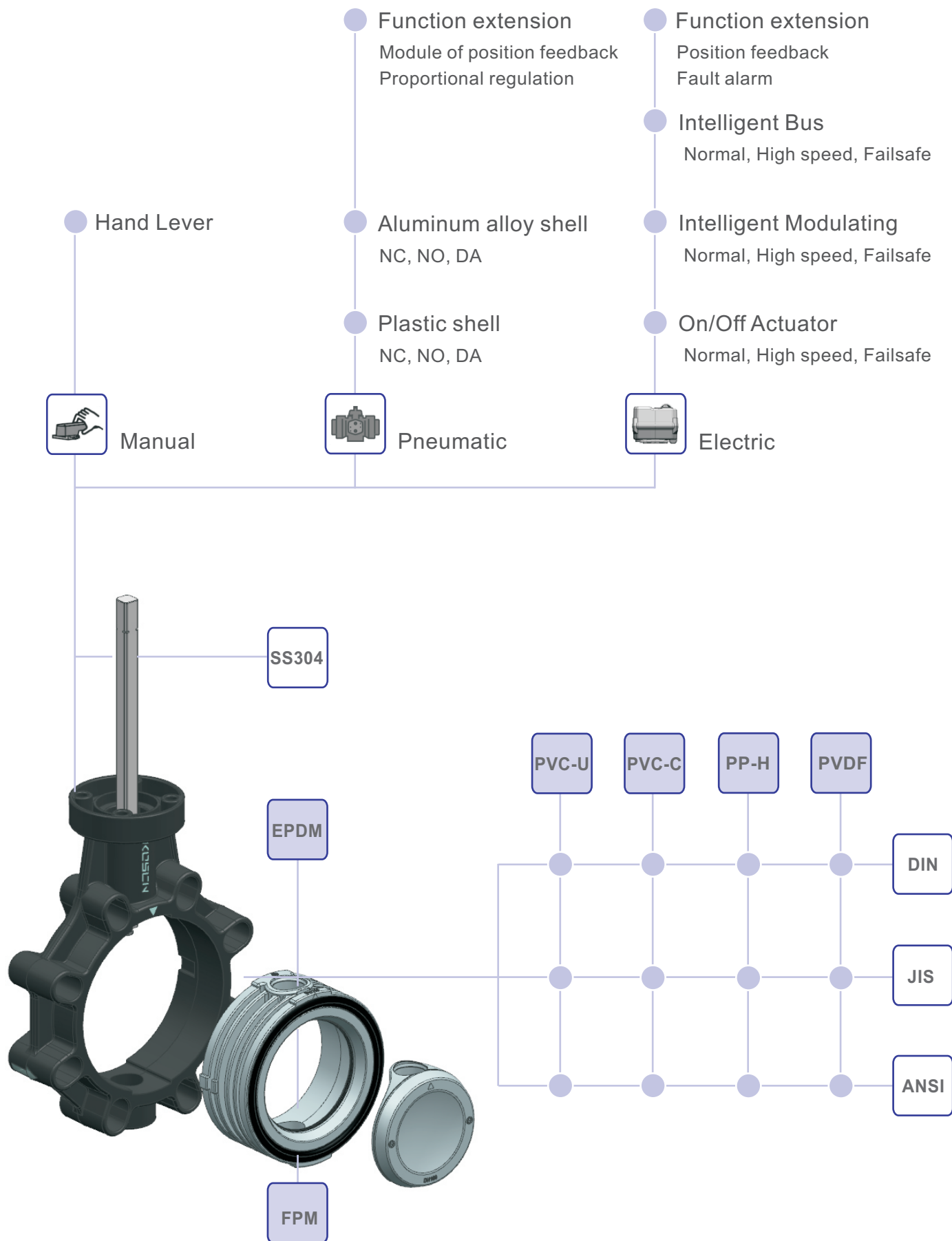


Line chart for relative flow rate

The linear coefficient of relative flow refers to the flow change as a function of valve opening stroke



+ Configuration Pictogram





PVC-U Manual butterfly valve

Wafer type flange

DIN/JIS/ANSI

<i>d</i> (mm)	<i>DN</i> (mm)	<i>PN</i> (bar)	<i>Stem</i>	<i>EPDM</i>	<i>FPM</i>
*63	50	10	SS304	410.010.7063	410.030.7063
*75	65	10	SS304	410.010.7075	410.030.7075
110	100	10	SS304	410.010.7011	410.030.7011
*140	125	10	SS304	410.010.7014	410.030.7014
*160	150	10	SS304	410.010.7016	410.030.7016
*225	200	10	SS304	410.010.7022	410.030.7022

DIN/JIS

<i>d</i> (mm)	<i>DN</i> (mm)	<i>PN</i> (bar)	<i>Stem</i>	<i>EPDM</i>	<i>FPM</i>
90	80	10	SS304	410.010.7090	410.030.7090

ANSI

<i>d</i> (mm)	<i>DN</i> (mm)	<i>PN</i> (bar)	<i>Stem</i>	<i>EPDM</i>	<i>FPM</i>
3	80	10	SS304	410.010.7490	410.030.7490

With * is a product to be listed



PVC-C Manual butterfly valve

Wafer type flange

DIN/JIS/ANSI

<i>d</i> (mm)	<i>DN</i> (mm)	<i>PN</i> (bar)	<i>Stem</i>	<i>EPDM</i>	<i>FPM</i>
*63	50	10	SS304	410.210.7063	410.230.7063
*75	65	10	SS304	410.210.7075	410.230.7075
110	100	10	SS304	410.210.7011	410.230.7011
*140	125	10	SS304	410.210.7014	410.230.7014
*160	150	10	SS304	410.210.7016	410.230.7016
*225	200	10	SS304	410.210.7022	410.230.7022

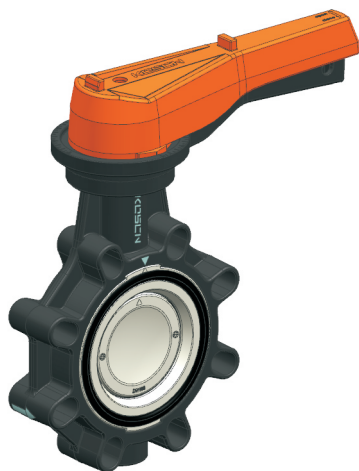
DIN/JIS

<i>d</i> (mm)	<i>DN</i> (mm)	<i>PN</i> (bar)	<i>Stem</i>	<i>EPDM</i>	<i>FPM</i>
90	80	10	SS304	410.210.7090	410.230.7090

ANSI

<i>d</i> (mm)	<i>DN</i> (mm)	<i>PN</i> (bar)	<i>Stem</i>	<i>EPDM</i>	<i>FPM</i>
3	80	10	SS304	410.210.7490	410.230.7490

With * is a product to be listed



PP-H Manual butterfly valve

Wafer type flange

DIN/JIS/ANSI

<i>d</i> (mm)	<i>DN</i> (mm)	<i>PN</i> (bar)	<i>Stem</i>	<i>EPDM</i>	<i>FPM</i>
*63	50	10	SS304	410.410.7063	410.430.7063
*75	65	10	SS304	410.410.7075	410.430.7075
110	100	10	SS304	410.410.7011	410.430.7011
*140	125	10	SS304	410.410.7014	410.430.7014
*160	150	10	SS304	410.410.7016	410.430.7016
*225	200	10	SS304	410.410.1022	410.430.1022

DIN/JIS

<i>d</i> (mm)	<i>DN</i> (mm)	<i>PN</i> (bar)	<i>Stem</i>	<i>EPDM</i>	<i>FPM</i>
90	80	10	SS304	410.410.7090	410.430.7090

ANSI

<i>d</i> (mm)	<i>DN</i> (mm)	<i>PN</i> (bar)	<i>Stem</i>	<i>EPDM</i>	<i>FPM</i>
3	80	10	SS304	410.410.7490	410.430.7490

With * is a product to be listed



PVDF Manual butterfly valve

Wafer type flange

DIN/JIS/ANSI

<i>d</i> (mm)	<i>DN</i> (mm)	<i>PN</i> (bar)	<i>Stem</i>	<i>FPM</i>
*63	50	10	SS304	410.630.7063
*75	65	10	SS304	410.630.7075
110	100	10	SS304	410.630.7011
*140	125	10	SS304	410.630.7014
*160	150	10	SS304	410.630.7016
*225	200	10	SS304	410.630.7022

DIN/JIS

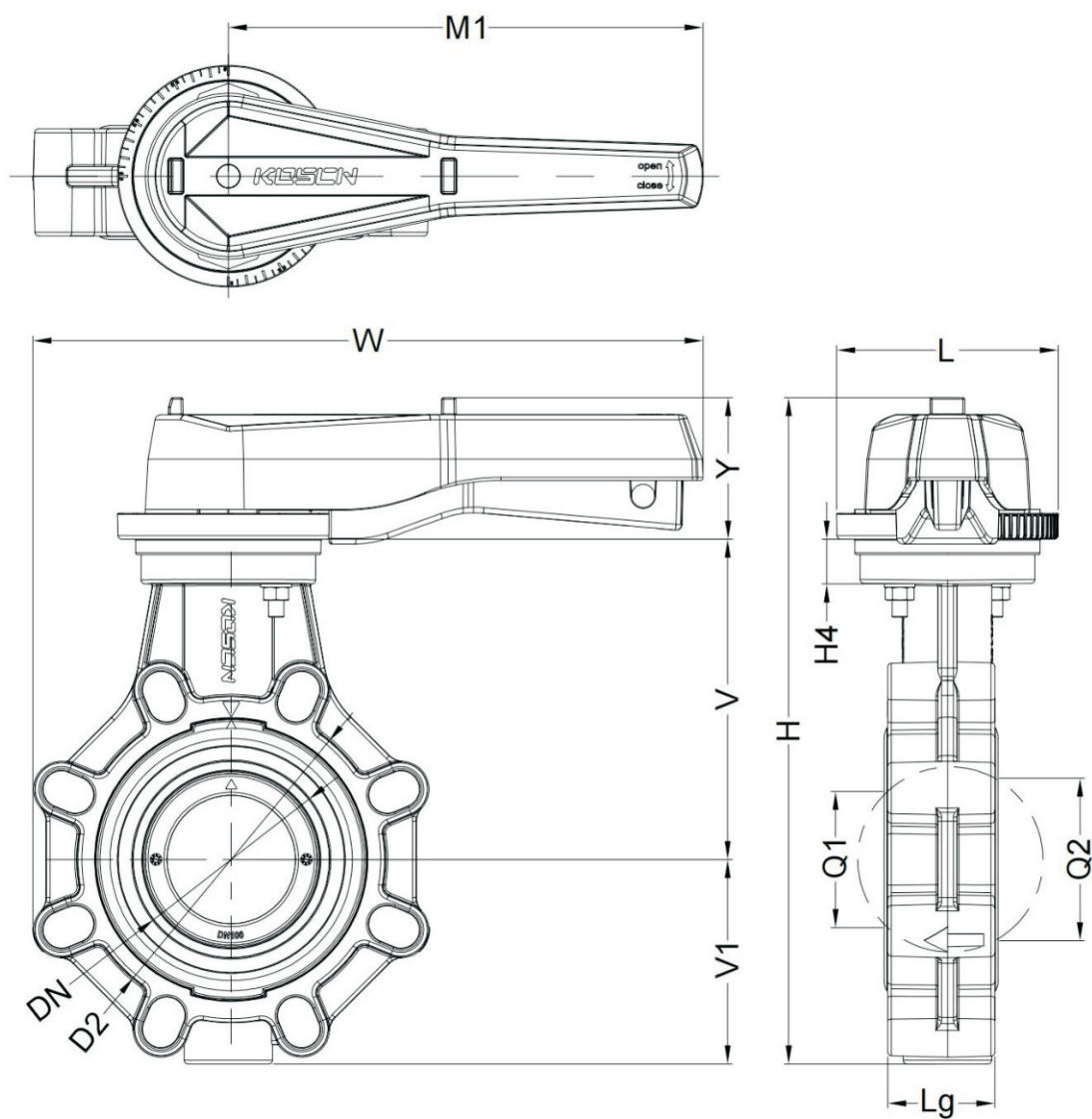
<i>d</i> (mm)	<i>DN</i> (mm)	<i>PN</i> (bar)	<i>Stem</i>	<i>FPM</i>
90	80	10	SS304	410.630.7090

ANSI

<i>d</i> (mm)	<i>DN</i> (mm)	<i>PN</i> (bar)	<i>Stem</i>	<i>FPM</i>
3	80	10	SS304	410.630.7490

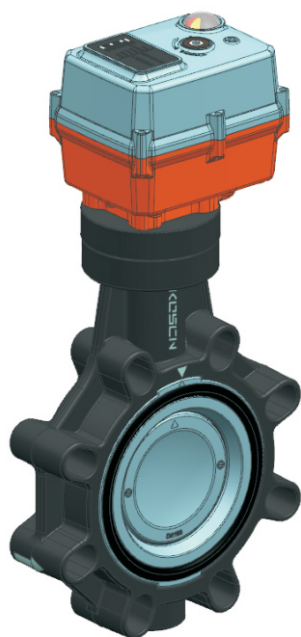
With * is a product to be listed

Size data



Unit : mm

<i>d</i>		<i>DN</i>	<i>H</i>	<i>L</i>	<i>W</i>	<i>D2</i>	<i>H4</i>	<i>V1</i>	<i>V</i>	<i>Y</i>	<i>Lg</i>	<i>Q1</i>	<i>Q2</i>	<i>M1</i>
63	2"	DN50												
75	2-1/2"	DN65												
90	3"	DN80	310	115	293	130	23	91	146	73	48	47	64	206
110	4"	DN100	345	115	347	159	23	106	166	73	55	71	85	246
140	5"	DN125												
160	6"	DN150												
225	8"	DN200												



KV401-Pro electric butterfly valve

Valve Body material of KV401-Pro and the all basis data are basically the same as KV400-Por manual valve

Electric valves are coded extensions based on manual valves

Example: 410.010.1011 411.010.1011.XXX

Standard

KOSCN-xxN Normal On/Off Actuator

KOSCN-xxT Intelligent Modulating Actuator

KOSCN-xxB Intelligent Bus Actuator

Optional

KOSCN-xxC Intelligent On/Off Actuator

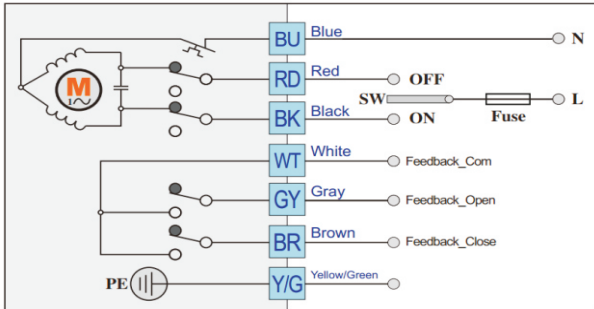
KOSCN-xxR Intelligent Wireless Actuator

KOSCN-xxD Intelligent Timer Actuator

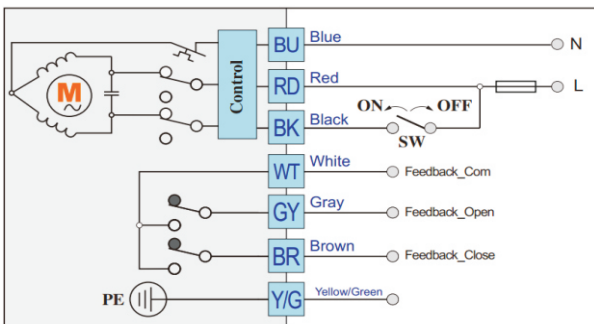
Please consult KOSCN or agency for non-standard functions and parameters

TYPE	FUNCTION	V	d63	d75	d90	d110	d140	d160	d225
On/Off	Normal	DC 24V	...010	...010	...010	...010	...010	...010	...010
		AC 230V	...011	...011	...011	...011	...011	...011	...011
	High speed	DC 24V	...020	...020	...020	...020	...020	...020	...020
	Failsafe	DC 24V	...030	...030	...030	...030	...030	...030	...030
		AC 230V	...031	...031	...031	...031	...031	...031	...031
Intelligent Modulating	Normal	DC 24V	...110	...110	...110	...110	...110	...110	...110
		AC 95-265V	...111	...111	...111	...111	...111	...111	...111
	High speed	DC 24V	...120	...120	...120	...120	...120	...120	...120
	Failsafe	DC 24V	...130	...130	...130	...130	...130	...130	...130
		AC 95-265V	...131	...131	...131	...131	...131	...131	...131
Intelligent Bus	Normal	DC 24V	...210	...210	...210	...210	...210	...210	...210
		AC 95-265V	...211	...211	...211	...211	...211	...211	...211
	High speed	DC24V	...220	...220	...220	...220	...220	...220	...220
	Failsafe	DC 24V	...230	...230	...230	...230	...230	...230	...230
		AC 95-265V	...231	...231	...231	...231	...231	...231	...231

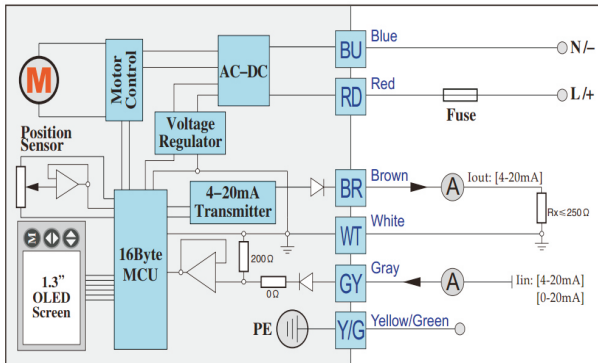
Normal on/off model-wiring diagrams
B3S



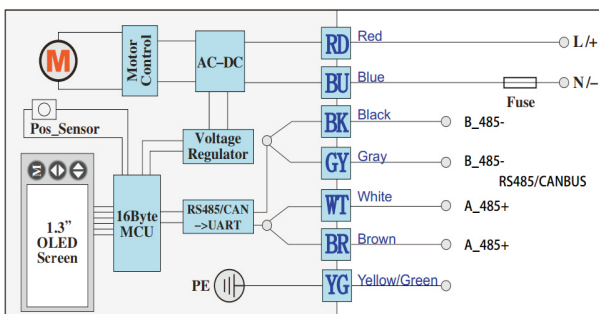
Normal on/off model-wiring diagrams
BD3S



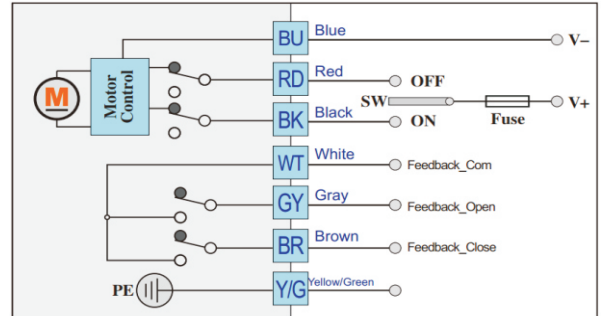
Intelligent modulating model-wiring diagrams
4-20mA / 0-20mA



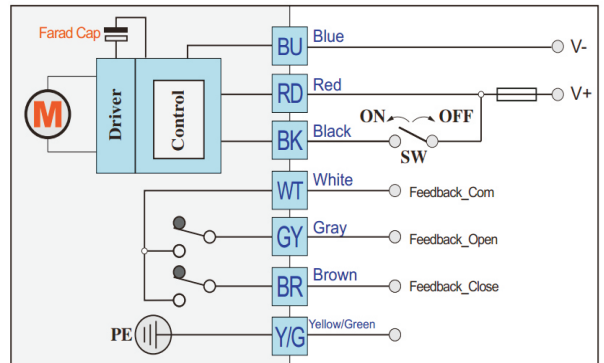
Intelligent Bus model -Wiring Diagram
RS485 / CANBUS (02B-KT)



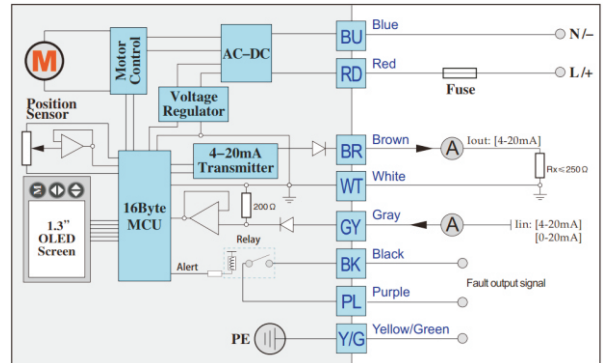
Normal on/off model-wiring diagrams
B3S- (DC series)



Normal on/off model-wiring diagrams
KT32S/BD3S (DC series)



Intelligent modulating model-wiring diagrams
4-20mA-A / 0-20mA-A (Alarm)



Interface

- Intelligent modulating model
- Intelligent Bus model interface



Overview of optional functions of electric actuator

KOSCN-xxN Normal On/Off Actuator

- * Matched valves: 2-way,3-way ball valve and butterfly valve
- * Rated voltage: DC12V,DC24V,AC24V/110V/230V
- * Control feedback mode: B3S,B3P,B3R,BD3S
- * High performance brushless motor,overheat/overload protection
- * For AC series,it is forbidden to use two or more actuators in parallel

KOSCN-xxC Intelligent On/Off Actuator

- * Matched valves: 2-way, 3-way ball valve and butterfly valve
- * Rated voltage: AC/DC95V-265V, AC/DC24V
- * Control feedback mode: BD3J,B3J,B33J,B43J(feedback synchronous with arrival)
- * Alarm output: A(Relay contact feedback)
- * Achievable mode: 2 way /3 way
- * High performance brushless motor,overload or overheated protection of internal motor
- * Two or more actuators can be used in parallel

KOSCN-xxR Intelligent Wireless Actuator

- * Matched valves: 2-way,3-way ball valve and butterfly valve
- * Rated voltage: AC/DC95V-265V, AC/DC24V
- * Communication Mode: RF433/868/915MHZ,FSK,LORA,RF Ocean (single control)
- * Communication protocol: Compatible Modbus
- * Wireless Module: SX1278/SX1276/A7108
- * Communication distance: The maximum is 3Km
- * Achievable mode: 2 way/3 way
- * High performance brushless motor,overload or overheated protection of internal motor

KOSCN-xxT Intelligent Modulating Actuator

- * Matched valves: 2-way,3-way ball valve and butterfly valve
- * Rated voltage: AC/DC95V-265V, AC/DC24V
- * Control signal: 4-20mA,0-20mA,0-10V,0-5V,1-5V,2-10V
- * Position feedback: 4-20mA
- * Position accuracy: 1%
- * Alarm output: A(Relay contact feedback)
- * High performance brushless motor,overload or overheated protection of internal motor

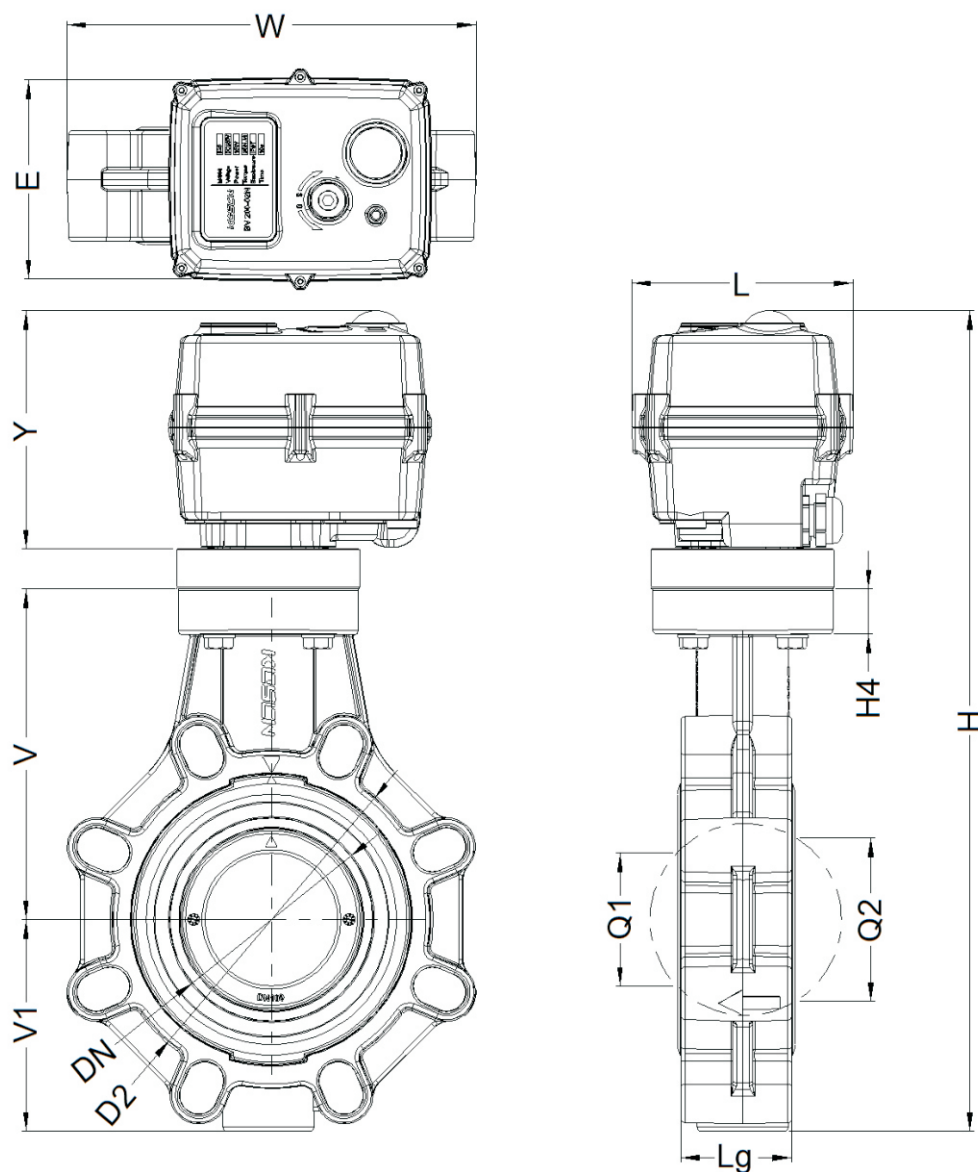
KOSCN-xxD Intelligent Timer Actuator

- * Matched valves: 2-way,3-way ball valve and butterfly valve
- * Rated voltage: AC/DC95V-265V, AC/DC24V
- * Timer mode: pulse mode , time mode
- * Loop mode : loop by days , loop by weeks
- * Adopted high-performance brushless motor, Overload protection of internal motor

KOSCN-xxB Intelligent Bus Actuator

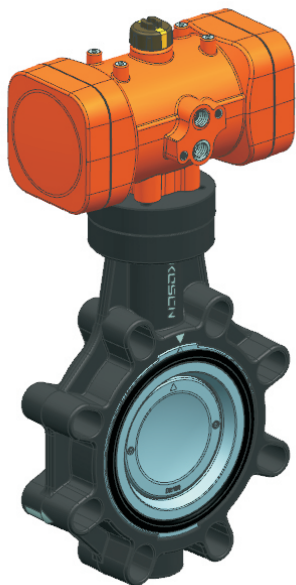
- * Matched valves: 2-way,3-way ball valve and butterfly valve
- * Rated voltage:AC/DC95V-265V, AC/DC24V
- * Control feedback mode: RS485(Modbus), CANBus 2.0B/Mbus(customized)
- * Achievable mode: 2 way /3 way
- * High performance brushless motor,overload or overheated protection of internal motor
- * Tow or more actuators can be used in parallel (RS485 could parallel maximum 32/64/256 actuators, while CANBus parallels 110 actuators)

Size data



Unit : mm

d		DN	H	L	W	$D2$	$H4$	$V1$	V	Y	Lg	$Q1$	$Q2$	E
63	2"	DN50												
75	2-1/2"	DN65												
90	3"	DN80	377	128	206	139	25	91	146	120	48	47	64	100
110	4"	DN100	412	111	206	159	25	106	166	120	55	71	85	100
140	5"	DN125												
160	6"	DN150												
225	8"	DN200												



Kv402-Pro Pneumatic butterfly valve

Valve Body material of KV400-Pro and the all basis data are basically the same as KV400 manual valve

Pneumatic valves are coded extensions based on manual valves

Example: 410.010.1011 412.010.1011.XXX

Working pressure:

Input pressure of full plastic actuator: Pmax = 7 bar

Input pressure of aluminum body actuator: Pmax = 8 bar

Mechanical limit:

Full plastic actuator is standard, Aluminum body actuators are optional, please contact with KOSCN or agency for selection and ordering

Position feedback:

All actuators can be extended with position feedback modules,

Feedback signal voltage : AC/DC 12-265V

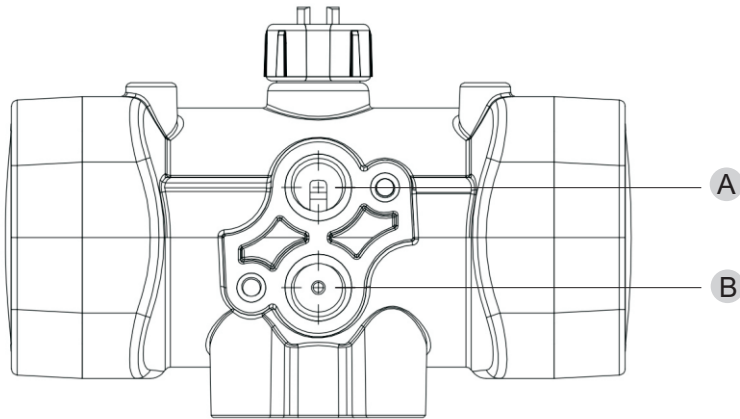
Mounting brackets:

Cover plate aluminum alloy mounting connecting rod

ISO 5211 connection standard

Material	Control	Type	d63	d75	d90	d110	d140	d160	d225
Full plastic	NC	Standard	...010	...010	...010	...010	...010	...010	...010
		Micro switch	.....	.....	.....	.....	.....	.....	.....
	NO	Standard	...020	...020	...020	...020	...020	...020	...020
		Micro switch	.....	.....	.....	.....	.....	.....	.....
	DA	Standard	...030	...030	...030	...030	...030	...030	...030
		Micro switch	.....	.....	.....	.....	.....	.....	.....
Aluminum	NC	Standard	...110	...110	...110	...110	...110	...110	...110
		Micro switch	.....	.....	.....	.....	.....	.....	.....
	NO	Standard	...120	...120	...120	...120	...120	...120	...120
		Micro switch	.....	.....	.....	.....	.....	.....	.....
	DA	Standard	...130	...130	...130	...130	...130	...130	...130
		Micro switch	.....	.....	.....	.....	.....	.....	.....

Driving work instructions



Air source interface size: A air inlet G1/4 or 1/8 threaded
B air inlet G1/4 or 1/8 threaded

NC: control pressure connects air inlet B, valves open

NO: control pressure connects air inlet B, valves close

DA: control pressure connects air inlet A, valves close; control pressure connects air inlet B, valves open

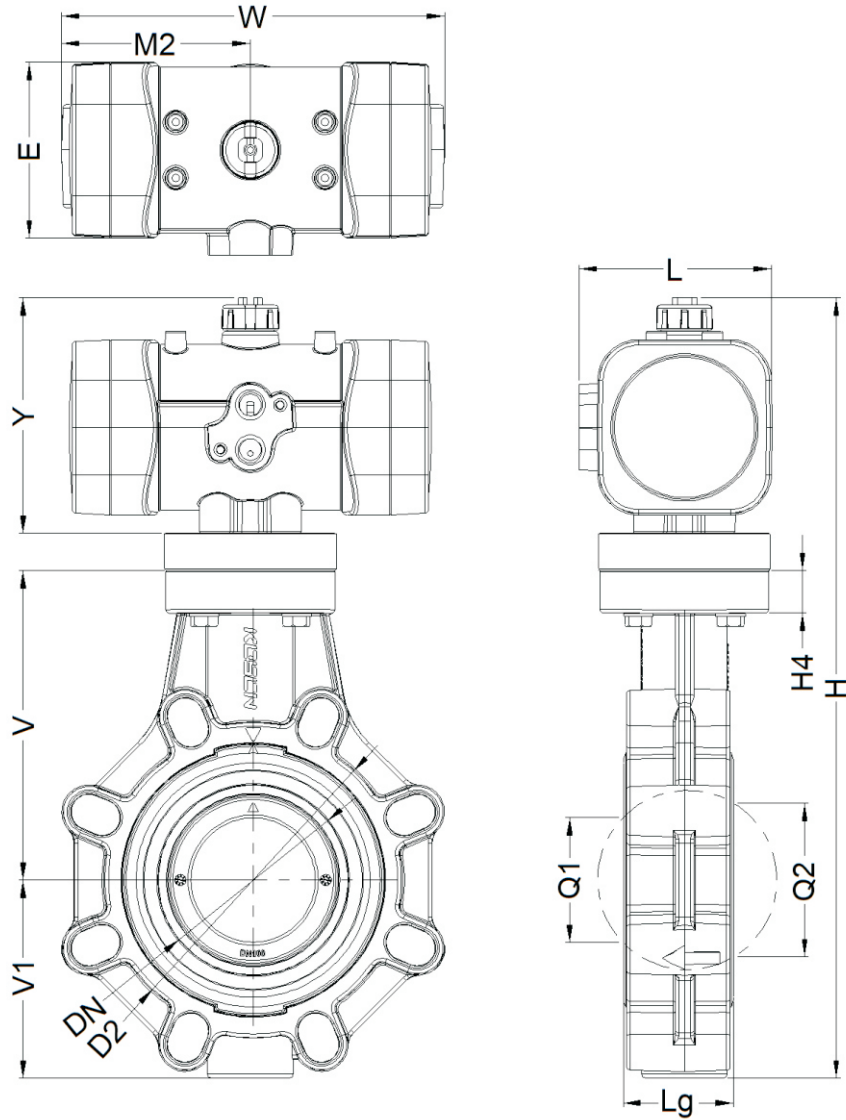
NC/NO pilot-operated valve: with 3/2 solenoid valve

DA pilot-operated valve: with 5/2 solenoid valve

Note:

The driving pressure of all actuators cannot be higher than the upper limit to ensure safe use and achieve optimal functions. If the control pressure exceeds the limits, a malfunction may occur. In this case, a new actuator configuration is required.

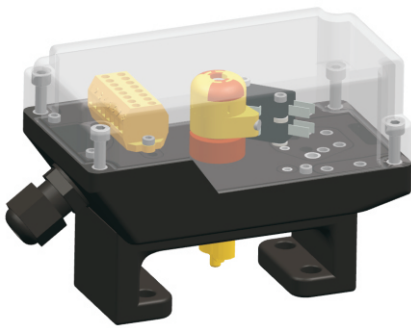
Size data



Unit : mm

d		DN	H	L	W	$D2$	$H4$	$V1$	V	Y	Lg	$Q1$	$Q2$	$M2$	E
63	2"	DN50													
75	2-1/2"	DN65													
90	3"	DN80	384	104	203	139	25	91	146	127	48	47	64	101	94
110	4"	DN100	419	104	203	139	25	106	166	127	48	71	85	101	94
140	5"	DN125													
160	6"	DN150													
225	8"	DN200													

Plastic limit switch MA620



- Easy installation and maintenance, cylinder top base directly installed.
- Unlimited caliber.
- 0~90° or 0~180° stroke, adjustable.
- Using imported mechanical micro switch, long life, high reliability.
- Standard configuration of silver alloy contacts, other silver and gold materials can be selected.
- Optional reply and proximity switches. Optional PNP or NPN mode.
- It has explosion-proof configuration

Power voltage	24V/DC , Single loop current 2.5A*2 230V/DC , Single loop current 2.5A*2
Power consumption	24V/DC , 10W*2 230V/DC , 15W*2
Electrical connections	M12 Waterproof Conn
The input signal	Switch quantity
Protection grade	IP 65
Shell material	PA6 , PC
Environment temperature	-20℃ ~ +80℃

Optional: metal limit switch MA620 , please consult KOSCN or local agent for details.

