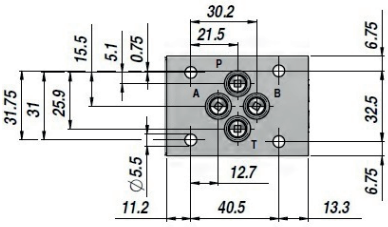
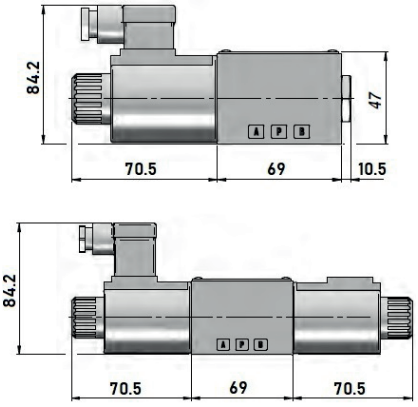
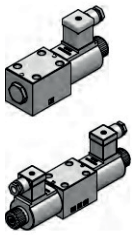
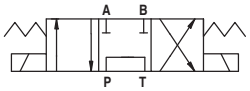
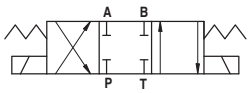
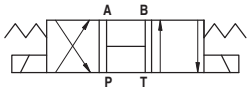
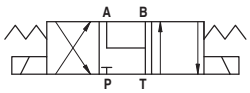
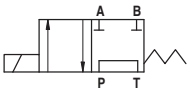
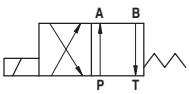
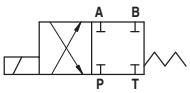
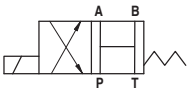
ELECTROVANNE
SOLENOID OPERATED DIRECTIONAL VALVE

CETOP 3 **ELC10**







Code *Code*	Type *Type*	Tension *Voltage*	Symbole Hydraulique *Hydraulic Symbol*	Q MAX l/min	P MAX bar	kg
ELC10A02002450	4WE6G-6X	24/50VAC	 A201 (ex A2)	60	250	2.1
ELC10A02011050	4WE6G-6X	110/50VAC				
ELC10A02022050	4WE6G-6X	220/50VAC				
ELC10A02012DC	4WE6G-6X	12VDC		80	310	
ELC10A02024DC	4WE6G-6X	24VDC				
ELC10B02002450	4WE6E-6X	24/50VAC	 B201 (ex B2)	60	250	
ELC10B02011050	4WE6E-6X	110/50VAC				
ELC10B02022050	4WE6E-6X	220/50VAC				
ELC10B02012DC	4WE6E-6X	12VDC		80	310	
ELC10B02024DC	4WE6E-6X	24VDC				
ELC10C02002450	4WE6H-6X	24/50VAC	 C201 (ex C2)	60	250	
ELC10C02011050	4WE6H-6X	110/50VAC				
ELC10C02022050	4WE6H-6X	220/50VAC				
ELC10C02012DC	4WE6H-6X	12VDC		80	310	
ELC10C02024DC	4WE6H-6X	24VDC				
ELC10E02002450	4WE6J-6X	24/50VAC	 E201 (ex E2)	60	250	
ELC10E02011050	4WE6J-6X	110/50VAC				
ELC10E02022050	4WE6J-6X	220/50VAC				
ELC10E02012DC	4WE6J-6X	12VDC		80		
ELC10E02024DC	4WE6J-6X	24VDC				
ELC10A11S02450	4WE6GA-6X	24/50VAC	 A301 (ex A11S)	60	250	1.6
ELC10A11S11050	4WE6GA-6X	110/50VAC				
ELC10A11S22050	4WE6GA-6X	220/50VAC				
ELC10A11S12DC	4WE6GA-6X	12VDC		80	310	
ELC10A11S24DC	4WE6GA-6X	24VDC				
ELC10A11C02450	4WE6D-6X	24/50VAC	 Y301 (ex A11C)	60	250	
ELC10A11C11050	4WE6D-6X	110/50VAC				
ELC10A11C22050	4WE6D-6X	220/50VAC				
ELC10A11C12DC	4WE6D-6X	12VDC		80	310	
ELC10A11C24DC	4WE6D-6X	24VDC				
ELC10B11C02450	4WE6EA-6X	24/50VAC	 B301 (ex B11C)	60	250	
ELC10B11C11050	4WE6EA-6X	110/50VAC				
ELC10B11C22050	4WE6EA-6X	220/50VAC				
ELC10B11C12DC	4WE6EA-6X	12VDC		80	310	
ELC10B11C24DC	4WE6EA-6X	24VDC				
ELC10C11A02450	4WE6HA-6X	24/50VAC	 C301 (ex C11A)	60	250	
ELC10C11A11050	4WE6HA-6X	110/50VAC				
ELC10C11A22050	4WE6HA-6X	220/50VAC				
ELC10C11A12DC	4WE6HA-6X	12VDC		80	310	
ELC10C11A24DC	4WE6HA-6X	24VDC				

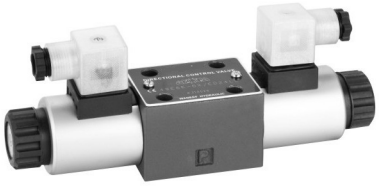
SUR DEMANDE - *ON REQUEST* : VALVES MODULAIRES POUR ELECTROVANNES CETOP 3 - *MODULAR VALVES FOR SOLENOID OPERATED DIRECTIONAL VALVES CETOP 3*

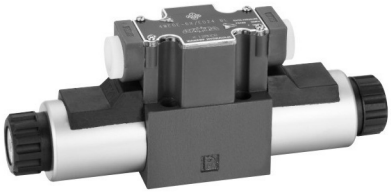
La société peut apporter toute modification au produit sans avis préalable.
The company reserves the right to modify the product at any time without prior notice.

WE6-6X series wet-type solenoid operated directional valves

[Product Features]

1.Direct-acting solenoid operational direction valve as standard type.
2.Installation area by DIN24 340 type A
3.DC or AC wet-type solenoid that can be arbitrary rotation and with detachable coil.
4.Coil can be replaced without oil.
5.Equipped with manual emergency operation push rod.





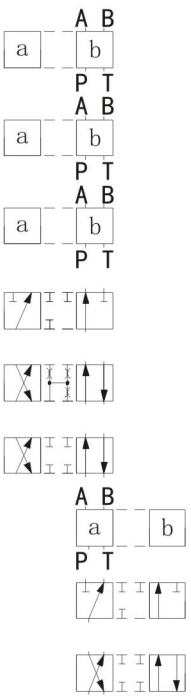
【Model Code】

4	WE	6	E	6X		E	D24	N	L			L

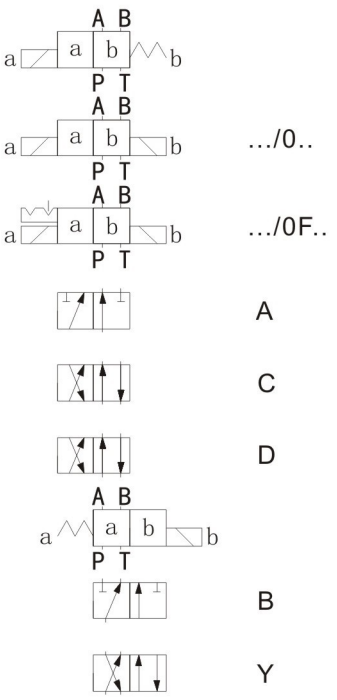
- 4: 3channel=3, 4channel=4
- WE: Solenoid Operated Directional Valves
- 6: Drift diameter : 3=3diameter
- E: Function Symbol:
- 6X: 60~69 series =6X (60~69: installation and linking size remains the same)
- (blank): O=no spring-return; OF=no spring-return, with positioning; Spring return unmarked
- E: Solenoid thread linkage: =E
- D24: D12 D24=DC12V 24V; A110 A220=RC110V/50Hz 220V/50Hz; R110 R220=RAC110V 220V
- N: With self-locking manual emergency put rod = NP
- L: H: DIN43650 plug; L: DIN43650 plug (with lamp); F: DEUTSCH, protection class IP69K/Deutsch; A: AMP plug, protection class IP66/AMP Junior-Timer; D:double lines; B :Terminal box
- (blank): No marks = no cartridge choke; B08=orifice Φ0.8mm; B12=orifice Φ1.0mm; B12=orifice Φ1.2mm
- (blank): Nitrile rubber seal = no mark; V=Fluorine rubber sealing ring
- L: The valve body coating H: black L: blue

【 SPOOL SYMBOLS 】

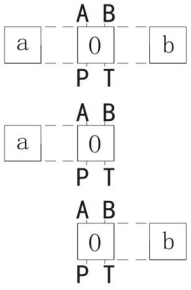
TRANSITION SPOOL



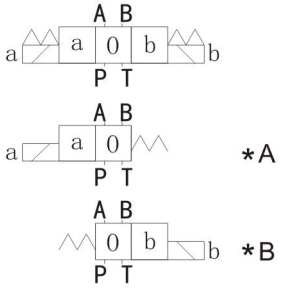
SLIDE VALVE SPOOL



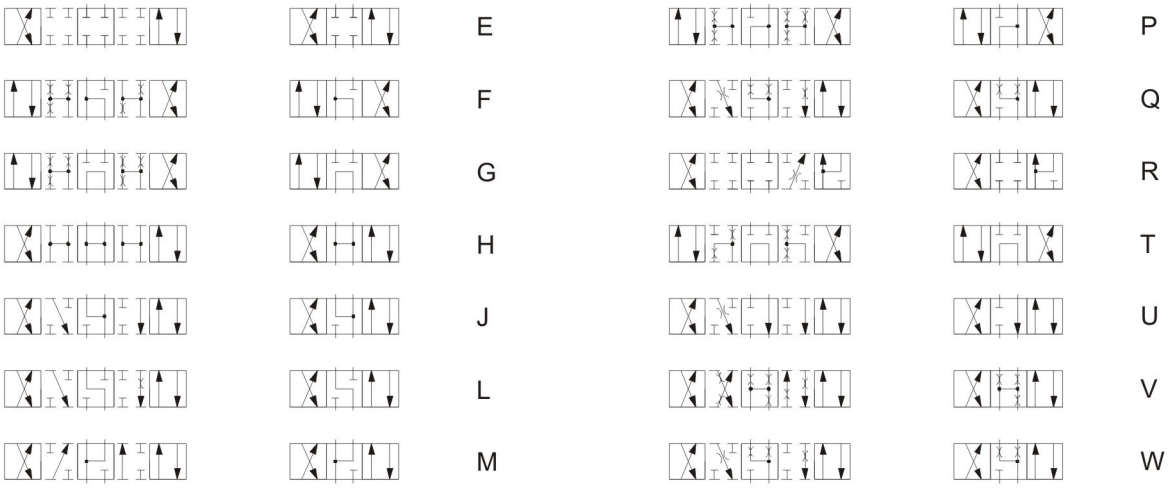
TRANSITION SPOOL



SLIDE VALVE SPOOL



☆ Spool symbol with core a or b then code should be XA or XB
For example : spool E with core position a , then code should be EA



【Technical Data】

General data

Mounting position			anywhere
Operating temperature		℃	-30~+50（nitrile rubber seal）
			-20~+50（rubber seal）
weight	Single solenoid valve	kg	1.45
	Double solenoid valve	kg	1.95

Hydraulic Data

Maximum operating voltage fluid port P、A、B		MPa	31.5
Hydraulic fluid port		MPa	21（DC）：16（AC) When working pressure exceeds the allowable pressure, valves with the sign bit A,B must use T as oil drain port
Maximum flow rate		l/min	80（DC）；60（AC）
Flux areas（when in the median）	Type Q	mm^2	About 6% of the nominal cross-sectional area
	Type W	mm^2	About 6% of the nominal cross-sectional area
Hydraulic oil 1、suitable for nitrile rubber and fluoro rubber seal 2、Fluoro seal only			Mineral oil（HL,HLP) by DIN51 524 Rapid biological solution oil by VDMA24 568 HETG 1）； HEPG 2）;HEES 3）
The oil temperature range		℃	-30~+80（nitrile rubber seal） -20~+80（rubber seal）
Viscosity range		mm^2/s	2.8–500
Oil cleanliness			The highest oil pollution level by NASI1639 Class 9 recommend minimum filter filtration precision β10≧75

Electric data

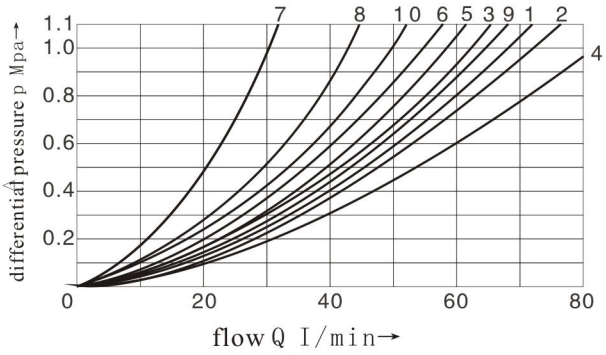
Voltage category		DC	AC(50HZ)
Supply voltage	V	12，24，48，110，220	110　220
Allowable voltage tolerance	%	+10~–15	+10~–15
Power consumption	W	30	–
Holding current	A	–	0.27(220V)
Starting current	A	–	0.72(220V)
Working system	ED%	100	100
Reversing time	ms	125~145	10~20
Resetting time	ms	100~250	15~40
Switching time	times/h	≤15000	≤7200
Protection class by DIN 40050		IP65(AMP：IP66)	(Deutsch:IP69k)
Maximum coil temperature	℃	135℃（Class B）	180℃(Class H)

NOTICE：1）Grounding according to the provision when connecting electricity to protect wires.
2) The reversing time of RAC is close to DC , but the resetting time is longer and random.

【feature curve】

（testing result on basis of that when υ =41mm/s &　t=50℃）

△P/qv—feature curve



Curve 7 : spool type“R”is in switch position A→B

Curve 8 : spool type“G”and “T” are in median position P→T

Curve 9 : spool type“H”is in median position P→T

spool symbol	flow direction			
	P–A	P–B	A–T	B–T
A,B	3	3	–	–
C	1	1	3	1
D,Y	5	5	3	3
E	3	3	1	1
F	1	3	1	1
T	10	10	9	9
H	2	4	2	2
J,Q	1	1	2	1
L	3	3	4	9
M	2	4	3	3
P	3	1	1	1
R	5	5	4	–
V	1	2	1	1
W	1	1	2	2
U	3	3	9	4
G	6	6	9	9

【switching performance limit】

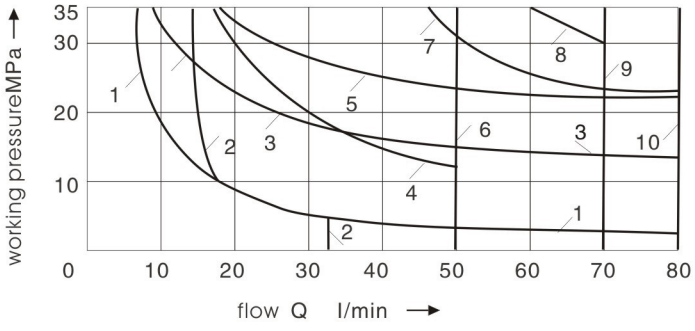
（testing result on basis of using HLP46,　t=50℃）

1.The working limit can be used for both the two flow direction (For example: Flow return from B to T, at the same time, flow from P to A)

2.Power limit tested when solenoid is at working temperature, under voltage 10%, and port T have no back pressure.

3.When unidirectional flow（if it was clogged from P to A, B port）, due to the fluid power in the valve, the allowed switching limit may drop.

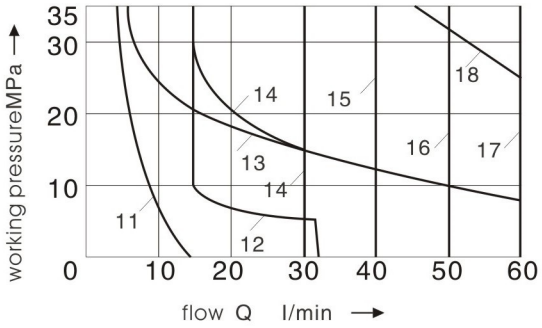
DC solenoid		AC solenoid–50Hz		AC solenoid–60Hz	
curve	symbol	curve	symbol	curve	symbol
1	A,B	11	A,B	19	A,B
2	V	12	V	20	V
3	A,B	13	A,B	21	A,B
4	F,P	14	F,P	22	F,P
5	J	15	G,T	23	G,T
6	G,H,T	16	H	24	J,L,U
7	A/O,A/OF,L,U	17	A/O,A/OF,C/O	25	A/O,A/OF,Q,W
8	C,D,Y		C/OFD/O,/D/OF,	26	C,D,Y
9	M		E,J,LM	27	H
10	E,R,C/O,C/OF		Q,R_2,U,W	28	C/O,C/OF,D/C,
	D/O,D/OF,Q,W	18	C,D,Y		D/OF,E,M,R_2



Notice：1）with emergency operation

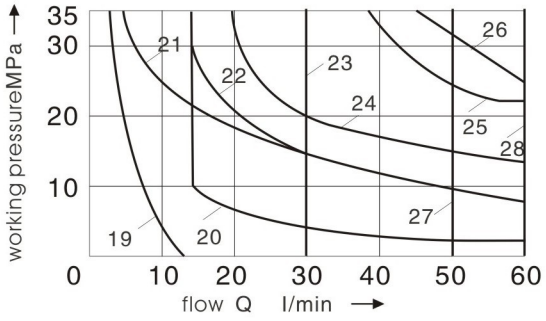
2）flow from actuator components back to tank

DC solenoid	
feature curve	solenoid voltage
1~10	12, 24, 48, 96, 110



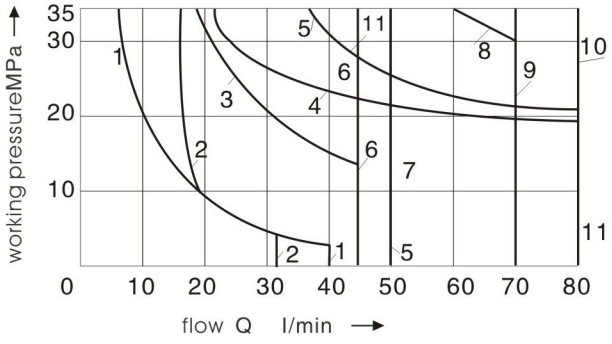
AC solenoid

feature curve	power source voltage	
11~18	AC110	110V,50Hz
	AC220	220V,50Hz



AC solenoid

feature curve	power source voltage	
19~28	AC110	110V,50Hz
	AC220	220V,50Hz



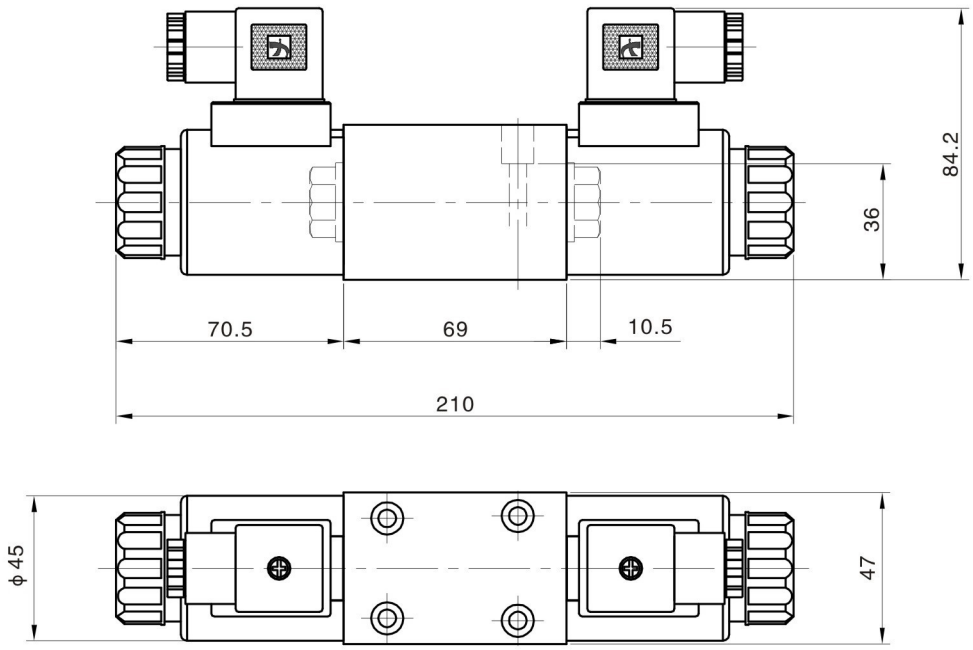
DC solenoid

feature curve	power source voltage
1~10	DC110V

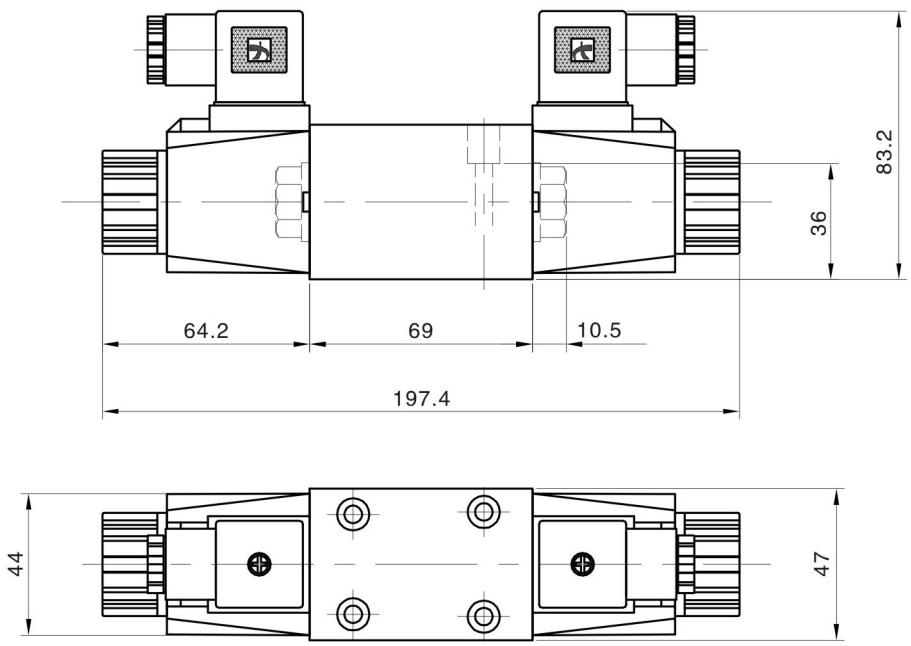
curve	symbol
1	A、B
2	V
3	F、P
4	J、L、U
5	G
6	T
7	H
8	C、D
9	M
10	E、R、C/O、C/OF、D/O、D/OF、Q、W、E1
11	A/O、A/OF
12	E

【drawing of installation dimension】

4WE6-DC-H

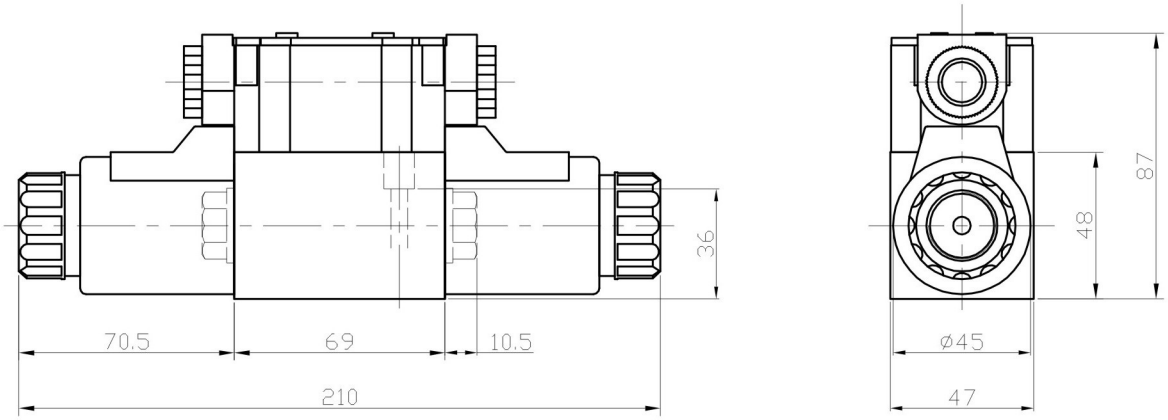


4WE6-AC-H

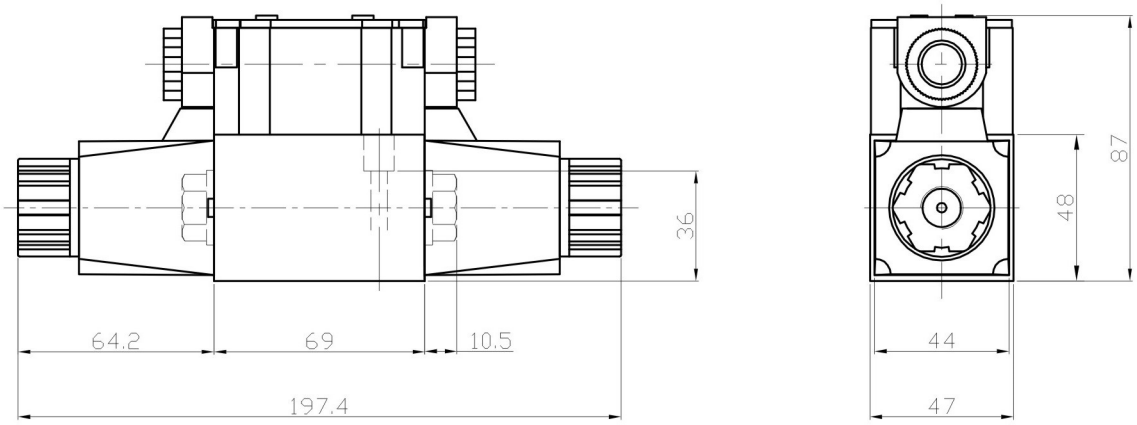


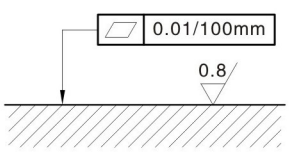
【drawing of installation dimension】

4WE6 E–D24–B

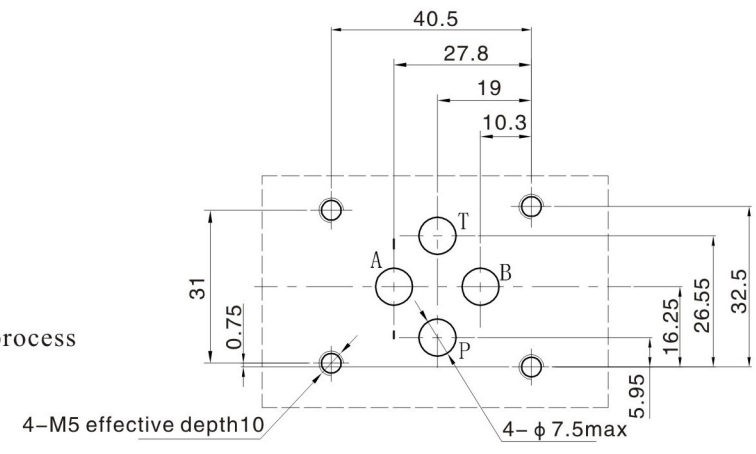


4WE6 E–A220–B



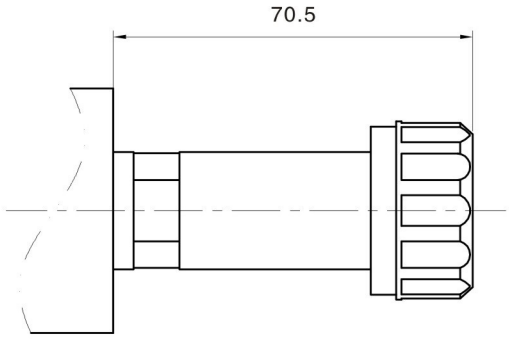


the surface of mating parts request precision process

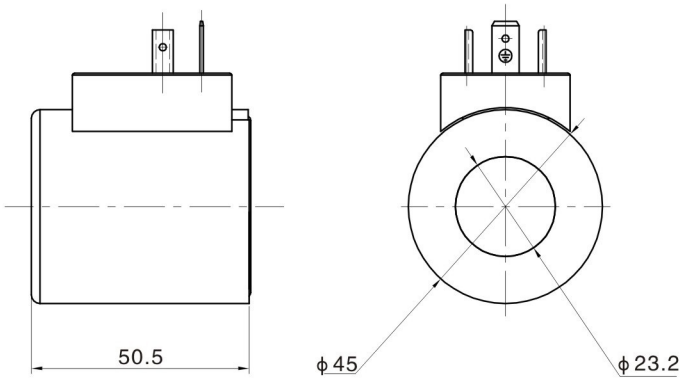


【option of electronic connector】

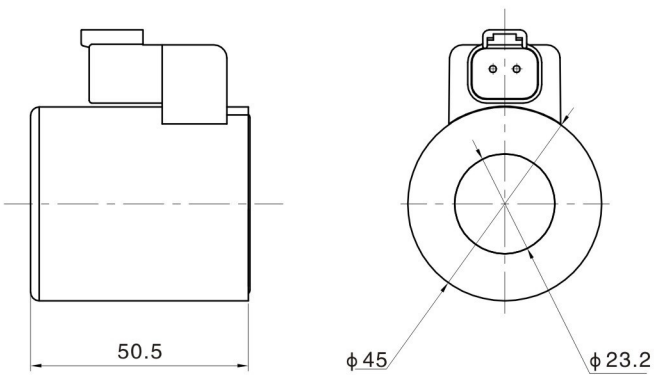
Without coil, fastening the tube and locknut on the homologous valve body, according to the different IP grade, then choose the coil with homologous structure.



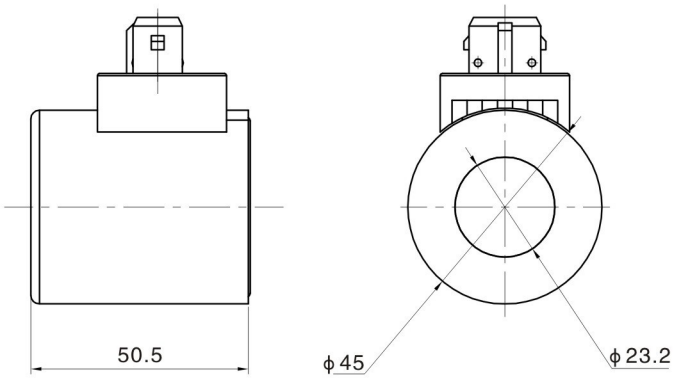
Coil with connector meets
DIN43650EN175301-803 ISO4400



Coil with connector AMP, the IP grade of coil house is IP67



coil with connector
DEUTSCH DT04-2P, the IP grade of coil house is IP-69K



apply to pin type coil with connection type B

