

KLS SERIES 2/2 WAY STAINLESS STEEL PILOT PISTON TYPE SOLENOID VALVE



KLS-20-D1



KLS-25-D1



KLS-50-D1



KLS-32-F



KLS-15-NO-D1



KLS-32-NO-D1



KLS-40-NO-D1



KLS-50-F



D1: IP65 DIN coil



D2, L: IP65 DIN coil



D3, D4: IP65 DIN coil



Z: Ex-proof coil



W: Wiring coil



A: Water-proof coil

Ordering Code

KLS

Specification Code
KLS: KLQD
Stainless Steel
Pilot piston type
Solenoid Valve

15

Port Size
15: G1/2"
20: G3/4"
25: G1"
32: G1 1/4"
40: G1 1/2"
50: G2"
Other customized
N: NPT
P: PT

-

Sealing Material
Blank: PTFE
V: VITON
E: EPDM
SI: SI
Other customized
Latching coil only use for rubber sealing.

-

Blank:
Normally closed
NO: Normally open
T: DIN coil with Timer

-

Customized Coil
D1: IP65 DIN 16433LP
D2: IP65 DIN AB410HP
D3: IP65 DIN AB510LP
D4: IP65 DIN AB510HP
L: IP65 DIN Latching Coil (Limited to DC6, 12, 24)
LD1: IP65 DIN 16433LP with LED
LD2: IP65 DIN AB410HP with LED
LD3: IP65 DIN AB510LP with LED
LD4: IP65 DIN AB510HP with LED
LL: IP65 DIN coil with LED latching coil (Limited to DC6, 12, 24)
W: IP65 wiring type coil AB410B
Z: Ex-proof coil 1680
A: IP67 waterproof coil 16431
ES: Energy saving coil
Other customized coils

AC220V

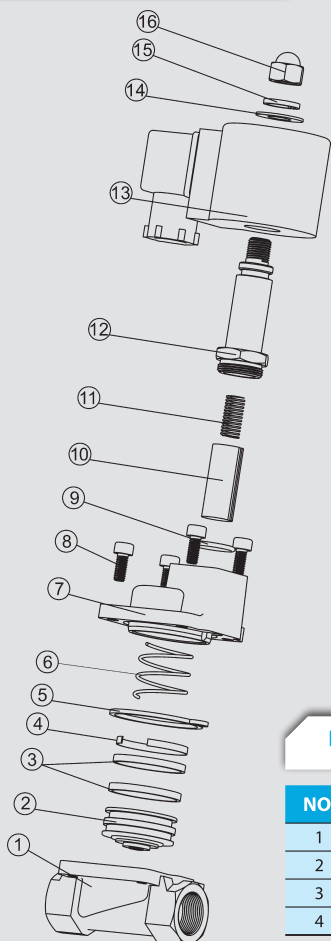
Standard Voltage
DC12V
DC24V
AC24V 50Hz/60Hz
AC110V 50Hz/60Hz
AC220V 50Hz/60Hz

KLS SERIES 2/2 WAY STAINLESS STEEL PILOT PISTON TYPE SOLENOID VALVE

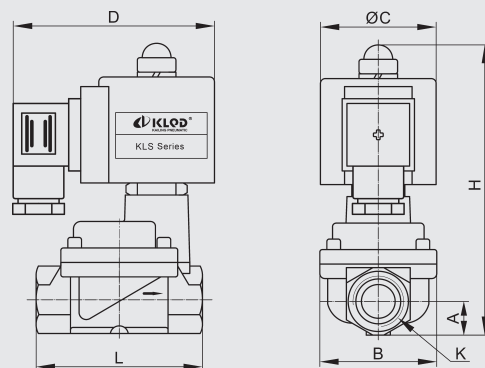
Technical Specification

Model	KLS-15	KLS-20	KLS-25	KLS-32	KLS-40	KLS-50
Port size	G1/2"	G3/4"	G1"	G1 1/4"	G1 1/2"	G2"
Operation Medium	Steam, air, water, light oil (below 50CST fluid), micro-corrosive media, multiple chemical fluids					
Operation	Pilot Piston Type					
Orifice Size	15mm	20mm	25mm	32mm	40mm	50mm
C Value	5	6	13	20	28	39.5
Pressure Difference	The minimum pressure: 0.05MPa the maximum pressure reference pressure table					
	When the medium is steam: the maximum operating pressure of 1.2MPa, short-term maximum operating pressure of 1.6MPa					
	Rubber: Max. 1.6MPa					
Operating Temperature	VITON: -10~150℃; PTFE: -20~+180℃; EPDM: -5~120℃					
Voltage Range	± 10%					
Protection Degree	IP65; IP67; Ex-proof Grade: Ex mb I Mb ; Ex mb II T4 Gb ; DIP A20 TA T4					
Insulation Class	H					
Installation	Horizontal or Slant					
Material of Body	SS304					

Internal Structure



Overall Dimension



Dimension Sheet

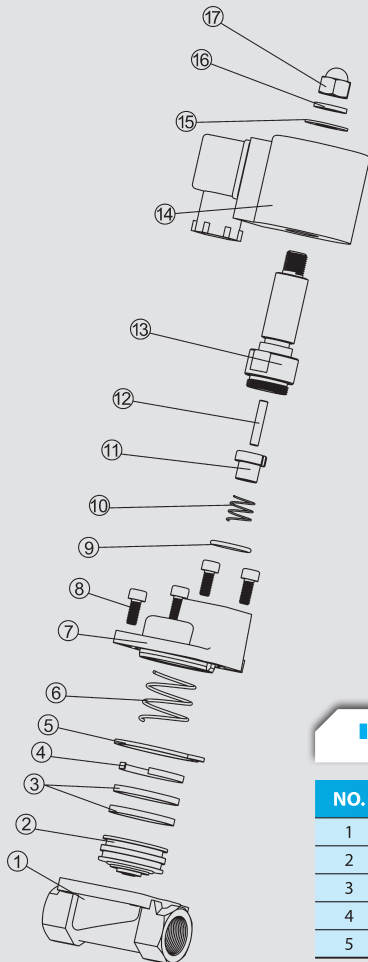
Model	L	H	A	B	ΦC	D	K
KLS-15	69	121	14	48.5	48	83.5	G1/2"
KLS-20	79	133	18	55.5			G3/4"
KLS-25	96	142	21	70			G1"
KLS-32	109	152	27				G1-1/4"
KLS-40	128	167	31	95			G1-1/2"
KLS-50	150	183	38	100			G2"

Parts

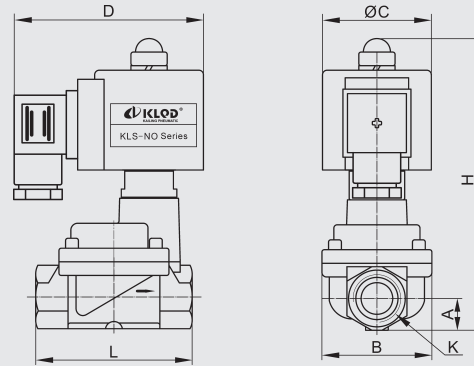
NO.	Name	NO.	Name	NO.	Name	NO.	Name
1	Valve body	5	Sealing Gasket	9	O-ring	13	O-ring
2	Piston assembly	6	Spring	10	Moving core assembly	14	Gasket
3	Piston ring	7	Valve cover	11	Straight spring	15	Spring washer
4	Spring slice	8	Screw	12	Pilot assembly	16	Cap nut

KLS SERIES 2/2 WAY STAINLESS STEEL PILOT PISTON TYPE SOLENOID VALVE

Internal Structure



Overall Dimension



Dimension Sheet

Model	L	H	A	B	ΦC	D	K
KLS-15-NO	69	128	14	48.5	48	83.5	G1/2"
KLS-20-NO	79	140	18	55.5			G3/4"
KLS-25-NO	96	149	21	70			G1"
KLS-32-NO	109	159	27				G1-1/4"
KLS-40-NO	128	174	31	95			G1-1/2"
KLS-50-NO	150	190	38	100			G2"

Parts

NO.	Name	NO.	Name	NO.	Name	NO.	Name
1	Valve body	6	Spring	11	Shaft assembly	16	Spring washer
2	Piston assembly	7	Valve cover	12	Stainless steel rod	17	Cap nut
3	Piston ring	8	Screw	13	Pilot assembly		
4	Spring slice	9	O-ring	14	O-ring		
5	Sealing Gasket	10	Shaft spring	15	Gasket		

Feature

- ✓ Pilot piston type solenoid valve, change quickly, start smooth, large flow.
- ✓ Compact structure, small size, light weight, easy repair.
- ✓ Body material stainless steel SUS304, solenoid valve coil heat-resistant grade H, rubber seal has better sealing performance and low pressure working conditions, wide range of applications.

PTFE (Teflon) seals is suitable for a variety of working media, chemical fluids, especially for high temperature and steam, sealing performance is worse than rubber.

- ✓ Coil protection class IP65, IP67 and explosion-proof, the connection mode has flying wire type, DIN socket type, for different occasions.
- ✓ Long service life.

Installation & Use

- ✓ Before installation, Check whether the component is damaged during the transportation.
- ✓ Coils has to be vertically up, pay attention to the flow direction and make sure thread is right. 40µm (or greater than 400 mesh) filter or filter mesh should be installed before solenoid valve.
- ✓ Check the installation conditions to meet the technical requirements (such as working pressure, temperature range,

voltage range, etc.), then install and use.

- ✓ Try to avoid the vibration in the environment, and pay attention to antifreeze measures at low temperatures.
- ✓ When connecting the main pipeline, thread sealing gaskets should be inside of thread, clear the pipe dust, iron scurf and other impurity.

KLS SERIES 2/2 WAY STAINLESS STEEL PILOT PISTON TYPE SOLENOID VALVE

Pressure Table

Model	Coil	Volatge	Max. Working Pressure (MPa)	Power (W)	Temperature Rise (Coil heating minus ambient temperature)			
KLS-15 KLS-20 KLS-25 KLS-32	D1: IP65 DIN 16433LP	AC24V	2.0	10	60℃			
		AC110V	3.2	11				
		AC220V	3.2	13				
		DC12V	2.0	15				
		DC24V	2.0					
	D2: IP65 DIN AB410HP W: IP65 Wiring type coil AB410B	AC24V	2.5	12	75℃			
		AC110V	4.0	14				
		AC220V	4.0	15				
		DC12V	2.5	25				
		DC24V	2.5	18				
	D3: IP65 DIN AB510LP	AC24V	4.0	15	70℃			
		AC110V	5.0	15				
		AC220V	5.0	15				
		DC12V	4.0	21				
	D4: IP65 DIN AB510HP	DC24V	4.0	21	90℃			
		AC24V	5.0	20				
		AC110V	6.0	20				
		AC220V	6.0	20				
	L: IP65 DIN coil with LED latching coil	DC12V	5.0	27	25	Ambient Temperature		
		DC24V	5.0	27				
		A: IP67 Waterproof coil 16431	DC12V	2.5			10	60℃
			DC24V	2.5				
	AC24V		2.4					
	AC110V		4.0					
	AC220V		4.0					
	Z: Ex-proof coil 1680	DC12V	1.6	14	40℃			
		DC24V	3.2	17				
		AC110V	3.2	13				
		AC220V	3.2	14				
DC12V		2.8	16					
	DC24V	2.8	16					

Model	Coil	Volatge	Max. Working Pressure (MPa)	Power (W)	Temperature Rise (Coil heating minus ambient temperature)		
KLS-40	D1: IP65 DIN 16433LP	AC24V	1.6	10	60℃		
		AC110V	2.0	11			
		AC220V	2.4	13			
		DC12V	1.6	15			
	DC24V	1.6					
	D2: IP65 DIN AB410HP W: IP65 Wiring type coil AB410B	AC24V	1.8	12	75℃		
		AC110V	2.6	14			
		AC220V	2.6	15			
		DC12V	1.8	25			
		DC24V	1.8	18			
	D3: IP65 DIN AB510LP	AC24V	2.2	15	70℃		
		AC110V	3.2	15			
AC220V		3.2	15				
DC12V		2.2	21				
KLS-50	D4: IP65 DIN AB510HP	DC24V	2.2	21	90℃		
		AC24V	4.0	20			
		AC110V	5.0	20			
		AC220V	5.0	20			
	L: IP65 DIN coil with LED latching coil	DC12V	4.0	27	25	Ambient Temperature	
		DC24V	4.0	27			
		DC12V	1.8	25			Ambient Temperature
		DC24V	1.8				
	A: IP67 Waterproof coil 16431	AC24V	1.6	10	60℃		
		AC110V	2.8	12			
		AC220V	2.8	13			
		DC12V	0.7	14			
DC24V		1.6	17				
Z: Ex-proof coil 1680	AC110V	2.6	13	40℃			
	AC220V	2.6	14				
	DC12V	1.6	16				
	DC24V	1.6	16				

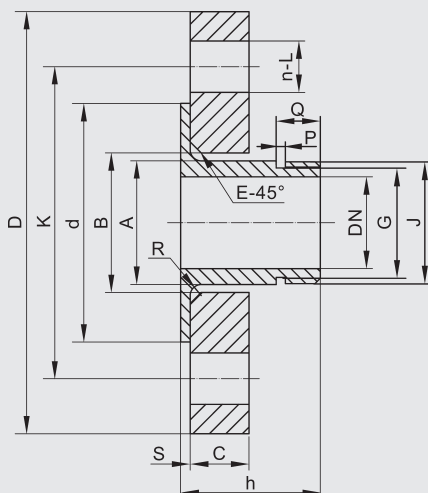
Model	Coil	Volatge	Max. Working Pressure (MPa)	Power (W)	Temperature Rise (Coil heating minus ambient temperature)
KLS-15-NO KLS-20-NO KLS-25-NO KLS-32-NO	D1: IP65 DIN 16433LP	AC24V	1.6	10	60℃
		AC110V	2.4	11	
		AC220V	2.4	13	
		DC12V	1.6	15	
		DC24V	1.6		
	D2: IP65 DIN AB410HP W: IP65 Wiring type coil AB410B	AC24V	1.6	12	75℃
		AC110V	2.4	14	
		AC220V	3.0	15	
		DC12V	1.6	25	
		DC24V	1.6	18	
	D3: IP65 DIN AB510LP	AC24V	2.4	15	70℃
		AC110V	3.0	15	
		AC220V	3.0	15	
		DC12V	2.4	21	
	D4: IP65 DIN AB510HP	DC24V	2.4	21	90℃
		AC24V	3.0	20	
		AC110V	3.0	20	
		AC220V	4.0	20	
		DC12V	3.0	27	
	A: IP67 Waterproof coil 16431	DC24V	3.0	27	60℃
		AC24V	1.6	10	
		AC110V	2.4	12	
		AC220V	3.0	13	
		DC12V	1.6	14	
	Z: Ex-proof coil 1680	DC24V	1.6	17	40℃
		AC110V	3.0	13	
		AC220V	3.0	14	
		DC12V	1.6	16	
DC24V		1.6	16		

Model	Coil	Volatge	Max. Working Pressure (MPa)	Power (W)	Temperature Rise (Coil heating minus ambient temperature)
KLS-40-NO KLS-50-NO	D1: IP65 DIN 16433LP	AC24V	1.0	10	60℃
		AC110V	1.6	11	
		AC220V	1.6	13	
		DC12V	1.0	15	
		DC24V	1.0		
	D2: IP65 DIN AB410HP W: IP65 Wiring type coil AB410B	AC24V	1.0	12	75℃
		AC110V	1.6	14	
		AC220V	2.2	15	
		DC12V	1.0	25	
		DC24V	1.0	18	
	D3: IP65 DIN AB510LP	AC24V	1.6	15	70℃
		AC110V	2.2	15	
		AC220V	2.2	15	
		DC12V	1.6	21	
		DC24V	1.6	21	
	D4: IP65 DIN AB510HP	AC24V	2.2	20	90℃
		AC110V	2.2	20	
		AC220V	2.8	20	
		DC12V	2.2	27	
		DC24V	2.2	27	
	A: IP67 Waterproof coil 16431	AC24V	1.0	10	60℃
		AC110V	1.6	12	
		AC220V	2.2	13	
		DC12V	1.0	14	
		DC24V	1.0	17	
	Z: Ex-proof coil 1680	AC110V	2.2	13	40℃
		AC220V	2.2	14	
		DC12V	1.0	16	
		DC24V	1.0	16	

KLS SERIES 2/2 WAY STAINLESS STEEL PILOT PISTON TYPE SOLENOID VALVE

Overall Dimension

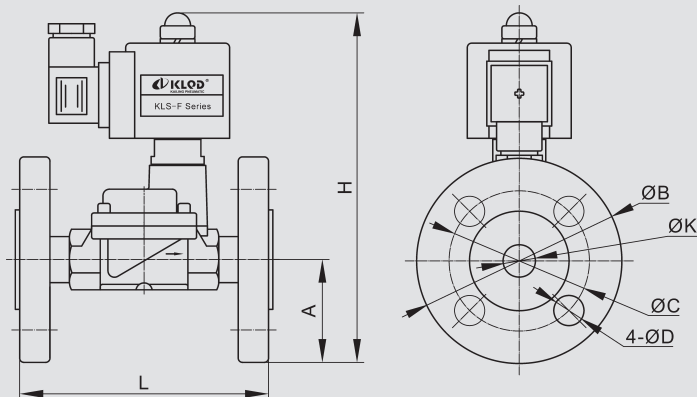
1.6MPa
GB standard
lapped flange



Looper Flange Dimension

Orifice	Pipe outside diameter	Flange outside diameter	Bolt hole center	Bolt aperture	Holes	Flange thickness	Flange inside diameter	Round corner	Chamfer	Height	Boss outer diameter	Boss thickness	Slot diameter	Thread	Slot width	Thread length
DN	A	D	K	L	n	C	B	R	E	h	d	S	G	J	P	Q
15	21.3	95	65	14	4	14	25	2	2	35	46	2	18	G1/2"	2	10
20	26.9	105	75	14	4	16	31	2	2	36.5	56	2.3	23.5	G3/4"	2	11
25	33.7	115	85	14	4	16	38	2	2	38	65	2.6	29.8	G1"	2.5	12
32	42.4	140	100	18	4	18	47	3	3	42	76	2.6	38.5	G1 1/4"	2.5	15
40	48.3	150	110	18	4	18	53	3	3	45	84	2.6	44.4	G1 1/2"	2.5	16
50	60.3	165	125	18	4	20	65	3	3	48	99	2.9	56	G2"	2.5	20

Overall Dimension



Dimension Sheet

Model	L	H	A	ØB	ØC	ØD	ØK
KLS-15	115	155	47.5	95	65	14	15
KLS-15-NO		162					
KLS-20	126	167	52.5	105	75	14	20
KLS-20-NO		174					
KLS-25	143	178	57.5	115	85	14	25
KLS-25-NO		185					
KLS-32	158	195	70	140	100	18	32
KLS-32-NO		202					
KLS-40	181	211	75	150	110	18	40
KLS-40-NO		218					
KLS-50	200	227	82.5	165	125	18	80
KLS-50-NO		234					