

Solenoid Valves

Direct-acting, Normally Closed
Type 21TG, 1/8" and 1/4"

APPLICATION

Low cost direct-acting solenoid valve for on-off control of non-aggressive fluids and gases, air, oil, or water, compatible with materials of construction.

FEATURES

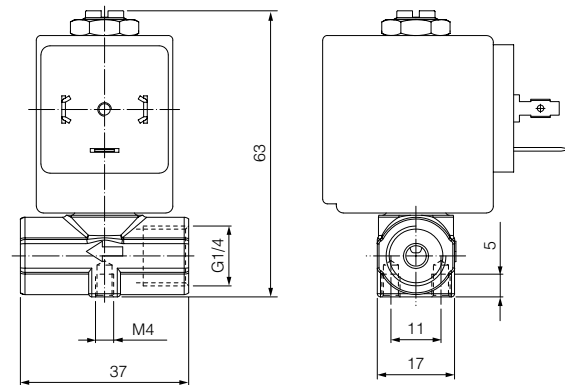
- Simple design - low-cost
- Choice of orifice sizes
- Compact design



TECHNICAL DATA

Functions: Normally closed, energised to open
 Ambient temp: -10°C to +55°C
 Fluid temp: Maximum 140°C Viton
 Viscosity: Max. 53 Cst. 7°E
 Materials: Body and tube: brass; other inner parts: stainless steel; seal: Viton (V)
 Coil voltage: See page 26
 Voltage tolerance: +/-10%
 Consumption: DC: approx. 8 watts
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050 with correctly assembled connectors
 Coil insulation: Class F

DIMENSIONS (mm)



FLOW & PRESSURE RATING CHART (bar)

Pipe	Code	Max Viscosity		Ø mm	Kv m³/h	Power Watt	Pressure bar		
		Cst	°E				Min.	M.O.P.D.	
							AC	DC	
G 1/8"	21TG1KR0V17	37	~5	1.7	0.09	8	0	30	20
	21TG1KR0V22			2.2	0.12			20	15
	21TG1KR0V28	53	~7	2.8	0.21			14	10
	21TG1KR0V40			4	0.30			6	3
G 1/4"	21TG2KR0V17	37	~5	1.7	0.09			30	20
	21TG2KR0V22			2.2	0.12			20	15
	21TG2KR0V28	53	~7	2.8	0.21			14	10
	21TG2KR0V40			4	0.30			6	3

Solenoid Valves

Direct-acting, Normally Closed or Open
Type 21A, 1/8" - 1/2"

APPLICATION

Direct-acting, two-way normally open or normally closed solenoid valve for on/off control of non-aggressive liquids and gases, e.g. air, oil, water, compatible with materials of construction. Port sizes G1/8" to 1/2"; for orifice sizes see table. Available seal materials NBR, Viton, and synthetic Ruby.

FEATURES

- Normally open or normally closed
- Manual override available
- Wide choice of orifice sizes and seal materials
- Easy coil replacement
- Wide range of coils

TECHNICAL DATA

Functions: 2-way normally open (code Z) or normally closed (code K)

Port sizes: G1/8", 1/4", 3/8" and 1/2"

Ambient temp: -20°C to +55°C

Fluid temp: -10°C to max. temp. shown in tables

Viscosity: Max. 37 Cst. 5°E

Materials: Brass body, tube and tube nut of stainless steel; metal to metal seal between tube and body, except normally open or manual override versions, which employ 'O'-ring seals

Coil voltage: See page 26

Voltage tolerance: +/-10%(+10% -5% on pure DC)

Duty cycle: 100% continuous rating

Protection class: IP 65 to DIN 40050 with correctly assembled connectors

Response time: 10 to 30 ms

Cycling frequency: Max. 1500 cpm

Orifice sizes: G1/8": 1.5mm, 2.0mm, 2.5mm, 3.0mm
G1/4": 1.5mm, 2.0mm, 2.5mm, 3.0mm, 4.5mm, 5.5mm
G3/8" and 1/2": 4.5mm, 5.5mm

SEAL MATERIALS (All sizes)

B (NBR)	Max. 90°C	Natural gases and fluids
V (Viton)	Max. 130°C	Oils, petrol, hot water, steam
R (Ruby)	Max. 180°C	Steam (max. 9 bar) Max. 3mm orifice



COIL CONSUMPTION

Description	Standard	High Temp.	12 Watt	14 Watt
Inrush current, VA (AC)	25	35	43	
Holding current, VA (AC)	14	25	27	
Power consumption W (AC/DC)	8	12	14	

COIL TYPES

Standard	max. temp. 120°C	Protection class IP65
High Temperature	max. temp. 150°C	Protection class IP65
High Power	max. temp. 160°C	Protection class IP65

HOW TO ORDER

Example:

21A 2 K B 30 + voltage

VALVE TYPE

PORTS
3 G1/8"
2 G1/4"
5 G3/8"
8 G1/2"

FUNCTION
K-Normally closed
Z-Normally open

ORIFICE SIZES x 10
15 1.5mm
20 2.0mm
25 2.5mm
30 3.0mm
45 4.5mm
55 5.5mm

SEAL MATERIAL
B NBR
V VITON
R RUBY

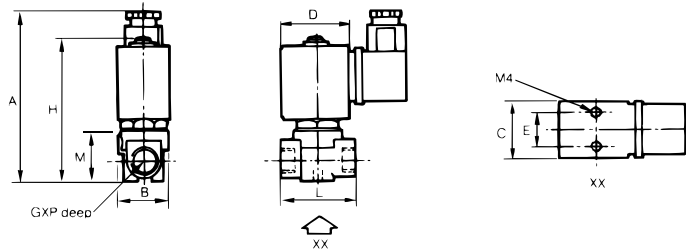
Solenoid Valves

Direct-acting, Normally Closed or Open
Type 21A, 1/8" - 1/2"

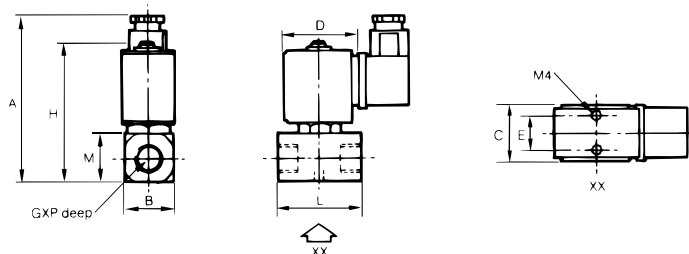
FLOW AND PRESSURE RATING CHART (bar)

Seal Type	Orifice mm	Kv (m³/h)	Maximum Operating Pressure (bar)								
			Normally Closed K				Normally Open Z				
			Coil 8 watt		Coil 12 watt		Coil 14 watt		Coil 8 watt	Coil 12 watt	Coil 14 watt
AC	DC	AC	DC	AC	DC	AC & DC	AC & DC	AC & DC			
V	1.5	0.08	30	18	-	-	40	30	25	-	25
B			30	18	-	-	50	40	25	-	40
R			35	15	-	-	-	-	30	-	30
V	2.0	0.12	22	16	35	30	35	30	20	-	30
B			22	16	35	30	40	30	20	-	32
R			25	9	-	-	-	-	24	30	30
V	2.5	0.15	14	9	30	25	30	25	14	-	17
B			14	9	30	25	30	25	13	-	17
R			14	5	-	-	-	-	15	17	-
V	3.0	0.18	10	6	25	18	25	20	10	15	15
B			10	6	25	18	25	20	10	15	15
R			10	4	-	-	-	-	10	15	15
V	4.5	0.38	5	2	12	7	12	8	4	6	6
B			5	2	12	7	12	8	4	6	6
V	5.5	0.54	3	1	7	2.5	10	5	2.5	3.5	3.5
B			3	1	7	2.5	10	5	2.5	3.5	3.5

DIMENSIONS (mm)



Size G	Coil Type	B	C	D	E	M	H	A	P	L	Weight Kg
1/8"	8 watt	28	31	42	16	28	78	91	7	41	0.32
	14 watt		52	55				91			0.60
1/4"	8 watt	28	31	42	16	28	78	91	7	41	0.32
	14 watt		52	55				91			0.60



Size G	Coil Type	B	C	D	E	M	H	A	P	L	Weight Kg
3/8"	8 watt	26	31	42	16	28	76	89	10	44	0.37
	14 watt		52	55				89			0.65
1/2"	8 watt	26	31	42	16	28	76	89	14	59	0.40
	14 watt		52	55				89			0.68

Solenoid Valves

Direct-acting, Normally Closed
Type 21A Series, Sub-Base

APPLICATION

Direct-acting, two-way normally closed solenoid valve for on/off control of non-aggressive liquids and gases, e.g. air, oil, water, compatible with materials of construction. Available seal materials NBR, Viton, and synthetic Ruby.

FEATURES

- Normally closed
- Manual override available
- Wide choice of orifice sizes and seal materials
- Easy coil replacement
- Wide range of coils



TECHNICAL DATA

Functions: 2-way normally closed (code K)

Ambient temp: -20°C to +55°C

Fluid temp: Max. temp. 180°C

Viscosity: Max. 37 Cst. 5°E

Materials: Brass body, tube and tube nut of stainless steel; metal to metal seal between tube and body, except manual override versions, which employ 'O'-ring seals

Coil voltage: See page 26

Voltage tolerance: +/-10%(+10% -5% on pure DC)

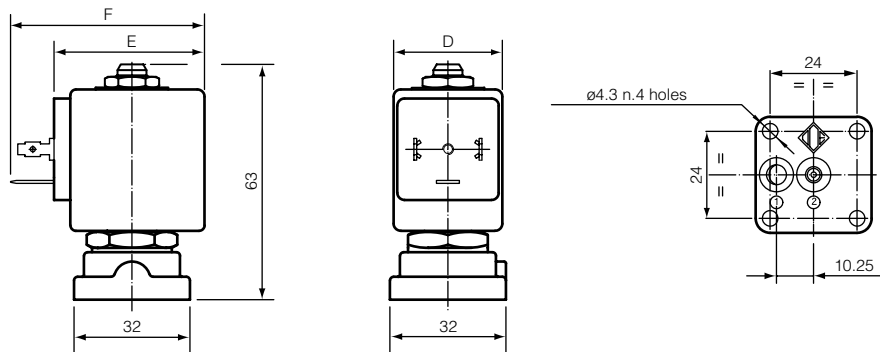
Duty cycle: 100% continuous rating

Protection class: IP 65 to DIN 40050 with correctly assembled connectors

FLOW AND PRESSURE RATING CHART (bar)

Seal Type	Orifice mm	Kv (m³/h)	Max. Operating Pressure (bar) Normally Closed K Coil 8 watt	
			AC	DC
V	1.5	0.08	30	18
B			30	18
R			35	15
V	2.0	0.12	22	16
B			22	16
R			25	9
V	2.5	0.15	14	9
B			14	9
R			14	5
V	3.0	0.18	10	6
B			10	6
R			10	4

DIMENSIONS (mm)



Coil	Type	D mm	E mm	F mm
8W	B	30	42	54

Solenoid Valves

3-Way Direct-acting Type 31A Series, Sub-Base

APPLICATION

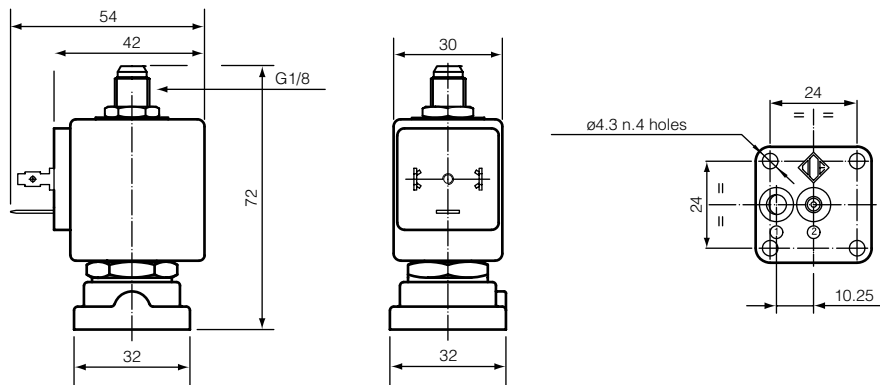
Three-way solenoid valves for air, water, oil and similar non-aggressive media. The standard configuration is normally closed with vent-drain.

TECHNICAL DATA

Function: 3-way direct-acting solenoid valve
 Ambient temp: -20°C to +55°C
 Fluid temp: Max. temp. 140°C
 Viscosity: Max. 53 Cst. 7°E
 Materials: Body: brass
 Tube seat and inner parts: stainless steel;
 seal: Viton
 Coil voltage: See page 26
 Voltage tolerance: +/-10% (+10% -5% on pure DC)
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050 with correctly assembled connectors
 Response time: 10 to 30ms
 Cycling frequency: Max. 1500cpm



DIMENSIONS (mm)



FLOW & PRESSURE RATING CHART (bar)

Pipe	Code	Max Viscosity		Ø mm	Kv m³/h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
Subplate mounting	31A1AV10	12	~2	1*	0.06	8	0	20	20
	31A1AV15	12	~2	1.5*	0.08			15	15
	31A1AV20	37	~5	2*	0.12			10	10
	31A1AV25	53	~7	2.5*	0.15			6	6

* Note: 3rd way exhaust = Ø 2.5mm

Solenoid Valves

Proportional Direct-acting, Normally Closed
Type 21A, 1/4"

APPLICATION

Direct-acting, normally closed, solenoid valve designed for a fluid output proportional to voltage change. Port size G1/4" with Viton seals.

TECHNICAL DATA

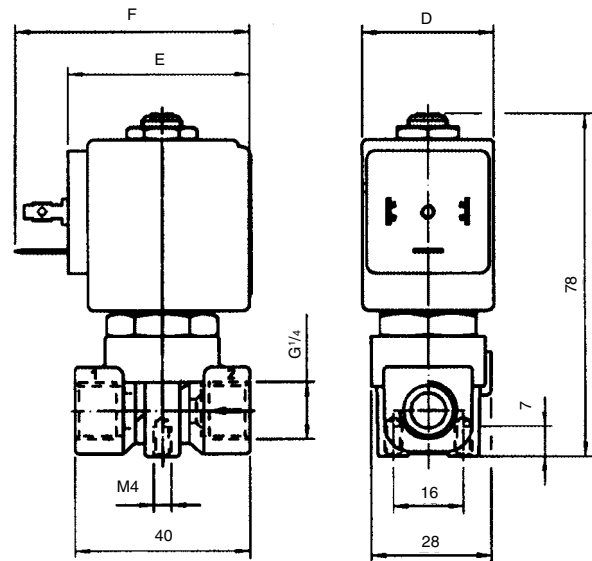
Functions: 2-way normally closed
 Port size: G1/4"
 Orifice size: 3mm
 Ambient temp: -10°C to +60°C
 Fluid temp: -10°C to +140°C
 Hysteresis: ≤ 5%
 Repeatability: ≤ 3%
 Sensitivity: ≤ 2%
 Tension range: 0-24V DC

24 VDC impulse range modulation (600 ÷ 800Hz)

These solenoid valves are not suitable for fluids that can deposit solid residues.

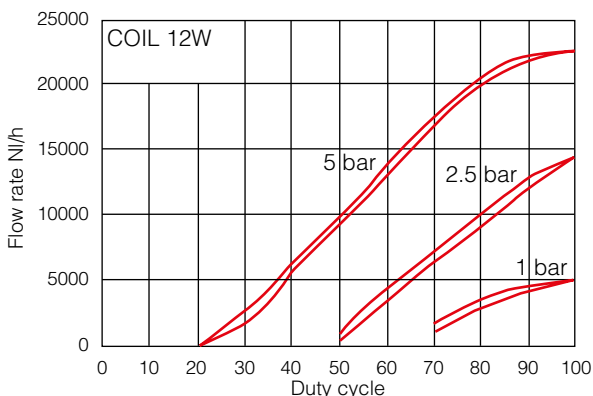
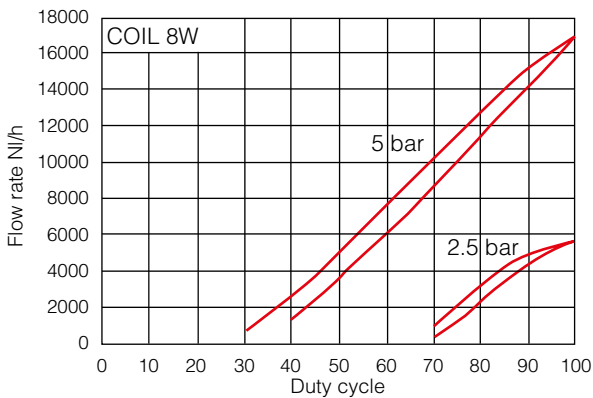


DIMENSIONS (mm)



Coil	Type	D mm	E mm	F mm
8W	B	30	42	54
	S	32		
12W	U	36	48	60

Solenoid Valve Calibrated at 5 bar- Flow Rate in Air



FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Fluid Temp.		Ø mm	Pressure bar M.O.P.D.			Watt	Kv m³/h
		Min°C	Max°C		Min	AC	DC		
G1/4"	21A2KCV30-05	-10	+140	3	0	-	5	8 12	0.24

Solenoid Valves

Proportional Direct-acting, Normally Closed
Type 21A, 1/4"

APPLICATION

Direct-acting, normally closed, solenoid valve designed for a fluid output proportional to voltage change. Port size G1/4" with Viton seals.

TECHNICAL DATA

Functions: 2-way normally closed
 Port size: G1/4"
 Orifice size: 5.5mm
 Ambient temp: -10°C to +60°C
 Fluid temp: -10°C to +140°C
 Hysteresis: ≤ 5%
 Repeatability: ≤ 3%
 Sensitivity: ≤ 2%
 Tension range: 0-24V DC

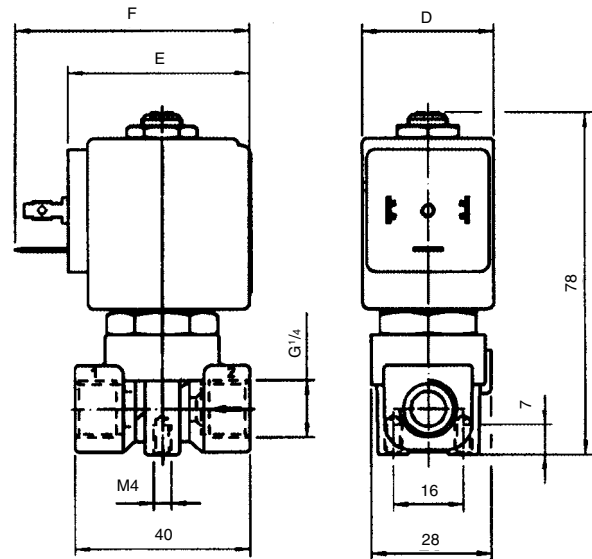
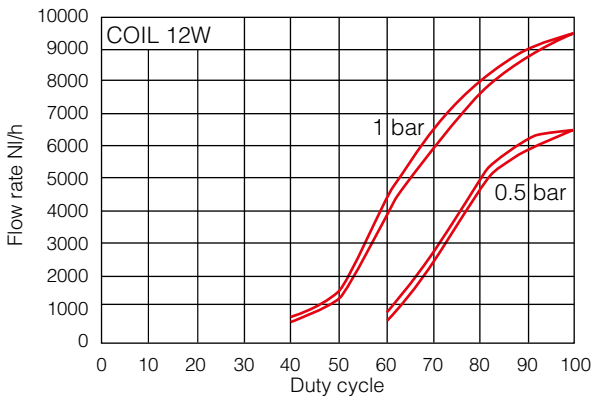
24 VDC impulse range modulation (600 ÷ 800Hz)

These solenoid valves are not suitable for fluids that can deposit solid residues.



DIMENSIONS (mm)

Solenoid Valve Calibrated at 1 bar- Flow Rate in Air



Coil	Type	D mm	E mm	F mm
8W	B	30	42	54
	S	32		
12W	U	36	48	60

FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Fluid Temp.		Ø mm	Pressure bar M.O.P.D.			Watt	Kv m³/h
		Min°C	Max°C		Min	AC	DC		
G1/4"	21A2KCV55-01	-10	+140	5.5	0	-	1	12	0.54

Solenoid Valves

Servo-acting, Normally Closed or Open
Types 21H7-9, 21W3-7, 3/8" - 2"

APPLICATION

Servo-acting solenoid valves for on-off control of non-aggressive fluids, e.g. air, oil, or water compatible with materials of construction. Minimum pressure drop of 0.2 bar required to ensure satisfactory operation.

FEATURES

- Available normally closed or normally open
- Coil replacement without exposing fluid
- Manual override
- Adjustable pilot throttle available to reduce water hammer size 3/4"-2" (MR)

TYPES AVAILABLE

- 21H7-9 3/8", 1/2" and 3/4" normally closed only 16 bar max pressure; seals: Viton
- 21W3-7 3/4" to 2" normally closed (K) or normally open (Z); seals: NBR or Viton

TECHNICAL DATA

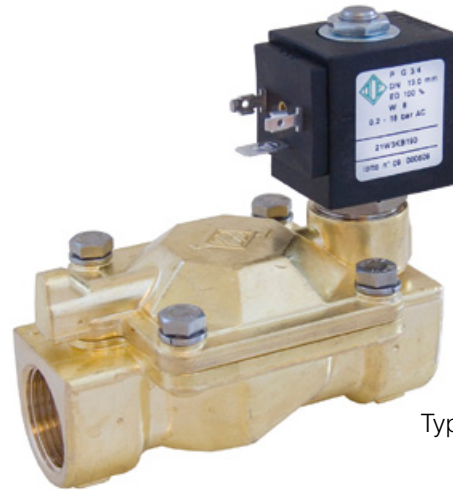
- Ambient temp: -20°C to +55°C
- Fluid temp: Dependent on seal material (see list)
- Viscosity: Max. 21 Cst. 3°E
- Materials: Body: brass; inner parts: brass and stainless steel; seals: NBR (Viton FKM or EPDM on request)
- Coil voltage: See page 26
- Voltage tolerance: +/-10%
- Consumption: AC: 25VA inrush, 14VA hold 8 watts
 AC: 43VA inrush, 27VA hold 14 watts
- Duty cycle: 100% continuous rating
- Protection class: IP 65 to DIN 40050 with correctly assembled connectors

NOTE

The line fluid must be completely free of any particles and of any crystal forming substance as these can obstruct the functioning of the servo systems.
The use of an inline filter is recommended.



Types 21H7-9



Types 21W3-7

HOW TO ORDER

Example: 21W 3 K B 190 + voltage

VALVE TYPE	
21H7-8-9	
21W3-7	
21W3-7 MR throttle device	

ORIFICE SIZES	
190	19mm
250	25mm
350	35mm
400	40mm
500	50mm

PORTS	
21W Series only	
3	G3/4"
4	G1"
5	G1 1/4"
6	G1 1/2"
7	G2"

SEAL MATERIAL	
B NBR	-10°C to +90°C
V VITON	-20°C to +140°C
E EPDM	on request

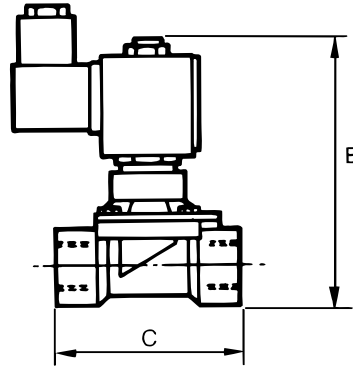
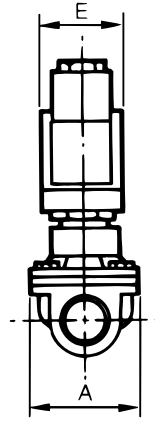
FUNCTION	
K	Normally closed
Z	Normally open

Solenoid Valves

Servo-acting, Normally Closed or Open

Types 21H7-9, 21W3-7, 3/8" - 2"

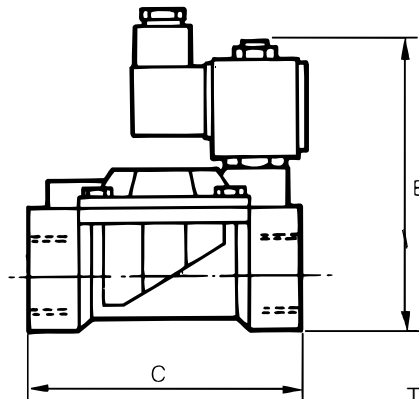
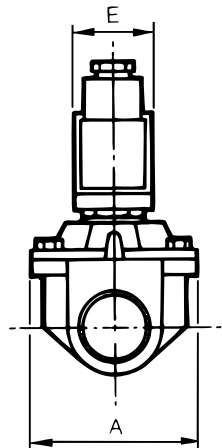
DIMENSIONS (mm)



Types 21H7-9
Sizes 3/8" to 3/4"

Code	Orifice (mm)	Ports	A	B	C	E	Kv (m ³ /h)	Weight (Kg)	Pressure Range (bar)	
									AC	DC
21H7	12	3/8"	40	92	50	30	2.1	0.28	20	10
21H8	12	1/2"	40	92	50	30	2.7	0.28	20	10
21H9*	18	3/4"	50	96	65	30	3.0	0.65	16	16

* High Power Coil



Type 21W3-7
Sizes 3/4" to 2"

Code	Orifice (mm)	Ports	A	B	C	E	Kv (m ³ /h)	Weight (Kg)	Pressure Range (bar)
21W3KB190	19	3/4"	65	105	104	30	8.4	1.15	0.2-16
21W4KB250	25	1"	65	112	104	30	11	1.15	0.2-16
21W5KB350	35	1 1/4"	98	125	144	30	24	2.65	0.2-10
21W6KB400	40	1 1/2"	98	125	144	30	31	2.65	0.2-10
21W7KB500	50	2"	118	141	172	30	45	4.30	0.2-10

Solenoid Valves

Servo-acting, Normally Closed or Open
Type 21WA, 3/8" - 1/2"

APPLICATION

Servo-acting solenoid valves for on-off control of non-aggressive fluids, e.g. air, oil, or water compatible with materials of construction. Minimum pressure drop of 0.2 bar required to ensure satisfactory operation.

FEATURES

- Available normally closed or normally open*
- Coil replacement without exposing fluid
- Manual override on request

TECHNICAL DATA

Ambient temp:	-20°C to +55°C
Fluid temp:	Dependent on seal material
Viscosity:	Max. 12 Cst. 2°E
Materials:	Body: brass; inner parts: brass and stainless steel; seals: Viton
Coil voltage:	See page 26
Voltage tolerance:	+/-10%
Consumption:	AC: 25VA inrush, 14VA hold 8 watt DC AC: 15VA inrush, 11VA hold 5 watt DC
Duty cycle:	100% continuous rating
Protection class:	IP 65 to DIN 40050 with correctly assembled connectors

DIMENSIONS (mm)

Code	Pipe Size	A mm	B mm	C mm
21WA3ROV130	3/8"	40	84.5	60
21WA4ROV130	1/2"			66
Codes	Pipe Size	A mm	B mm	C mm
21WA3KOV130	3/8"	40	97	60
21WA4KOV130	1/2"			66

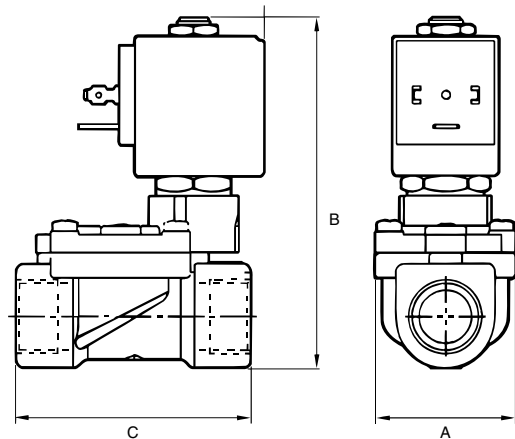
N.C.



* N.C. / N.O.

NOTE

The line fluid must be completely free of any particles and of any crystal forming substance as these can obstruct the functioning of the servo systems.
The use of an inline filter is recommended.



FLOW & PRESSURE RATING CHART (bar)

Pipe Size	Code	Fluid Temp.		Ø mm	Pressure bar			Watt	Kv m³/h
		Min°C	Max°C		Min	Max	AC/DC (n.c.)		
G3/8"	21WA3ROV130	-10	+140	13	0.2	12	-	5	3.6
G1/2"	21WA4ROV130	-10	+140		0.2	12	-		
G3/8"	21WA3KOV130	-10	+140	13	0.2	16	16	8	3.6
G1/2"	21WA4KOV130	-10	+140		0.2	16	16		

Solenoid Valves

Servo-acting, Normally Closed

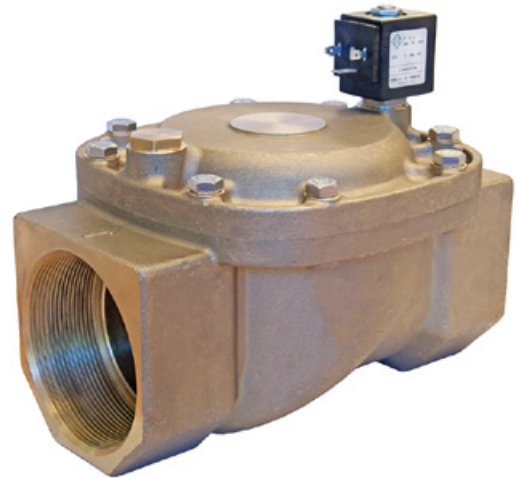
Type 21W8-9, 2 1/2" - 3"

APPLICATION

Servo-acting solenoid valves for on-off control of non-aggressive fluids, e.g. air, oil, or water compatible with materials of construction. Minimum pressure drop of 0.3 bar required to ensure satisfactory operation.

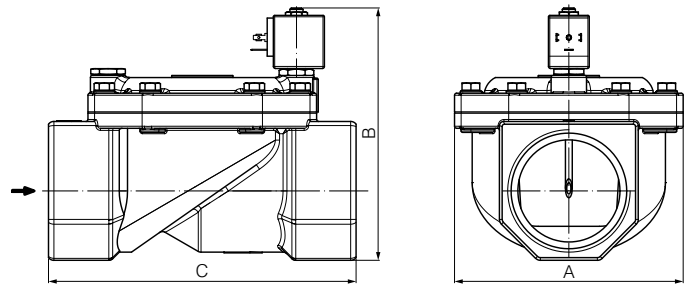
FEATURES

- Normally closed
- Coil replacement without exposing fluid
- Wide range of coil voltages available
- High pressure version available
- Built-in adjustable anti-hammer regulation



TECHNICAL DATA

Ambient temp: -10°C to +55°C
 Fluid temp: -10°C to +90°C
 Viscosity: Max. 12 Cst. 2°E
 Materials: Body: brass; inner parts: brass and stainless steel; seal: NBR
 Coil voltage: See page 26
 Voltage tolerance: +/-10%
 Consumption: AC: 25VA inrush, 14VA hold 8 watts DC
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050 with correctly assembled connectors



DIMENSIONS (mm)

Code	Pipe Size	A mm	B mm	C mm
21W8KB650	G2 1/2"	168	187	226
21W8KB650-HP				
21W9KB750	G3"			
21W9KB750-HP				

FLOW & PRESSURE RATING CHART (bar)

Pipe	Code	Max Viscosity		Ø mm	Kv m³/h	Power Watt	Pressure bar M.O.P.D.		
		Cst	°E				Min.	AC	DC
G2 1/2"	21W8KB650	12	~2	65	75	8	0.3	5	5
	21W8KB650-HP						3	15	15
G3"	21W9KB750						0.3	5	5
	21W9KB750-HP						3	15	15

* Note: the solenoid is supplied with already assembled nozzle Ø 1.2mm in the standard configuration. Undersized and oversized nozzles are supplied to adjust the switching velocity depending on the valve application.

Solenoid Valves

Coupled Diaphragm, Normally Closed

Types 21H, 3/8" - 1 1/2"

APPLICATION

Solenoid valves Type 21H are normally closed valves, energised to open and similar in design to servo-acting valves 21W Series but with the diaphragm coupled to the solenoid plunger. This enables the valve to operate from zero pressure without the need for a pressure differential, thus overcoming the problems associated with gravity feed and circulatory systems.

FEATURES

- Operate from zero pressure, no differential required
- Coil replacement without exposing fluid

TYPES AVAILABLE

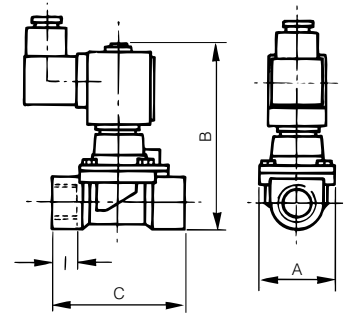
G^{3/8}" to 1/2", with 8 watt, 12 watt and 14 watt.
 G^{3/4}" to 1 1/2", with 8 watt, 12 watt and 14 watt.

TECHNICAL DATA

Ambient temp: -20°C to +55°C
 Fluid temp: -10°C to +90°C NBR(+140°C Viton)
 Viscosity: Max. 21 Cst. 3°E
 Materials: Seal: NBR or Viton
 Coil voltage: See page 26
 Voltage tolerance: +/-10%
 Consumption: 8 watts 25/14 VA
 12 watts 35/25 VA
 14 watts 43/27 VA
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050 with correctly assembled connectors



DIMENSIONS (mm)

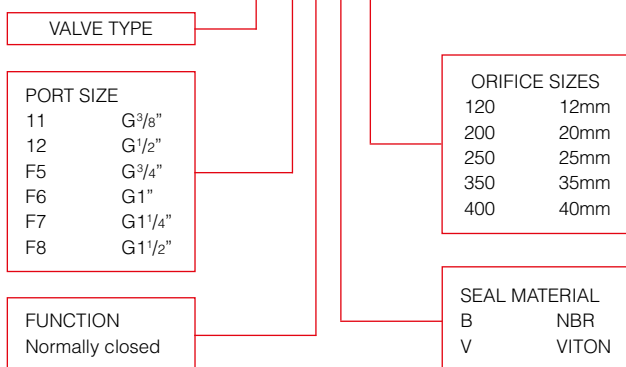


Code	A	B	C	I
21H11	40	99	50	11
21H11	40	99	50	11
21H12	40	99	50	14
21H12	40	99	50	14
21HF5	65	103	104	14
21HF6	65	110	104	17
21HF7	94	130	128	22
21HF8	94	130	128	22

HOW TO ORDER

Example:

21H 11 K B 120



FLOW & PRESSURE RATING CHART (bar)

Code	Ports	Orifice	AC	DC	Watt	Kv*
21H11K-120	3/8"	12	16	1.5	8	1.6
21H11K-120	3/8"	12	20	6	12	1.6
21H11K-120	3/8"	12	20	15	14	1.6
21H12K-120	1/2"	12	16	1.5	8	1.9
21H12K-120	1/2"	12	20	6	12	1.9
21H12K-120	1/2"	12	20	15	14	1.9
21HF5K-200	3/4"	20	16	6	8	7.2
21HF5K-200	3/4"	20	16	16	12	7.2
21HF6K-250	1"	25	16	5	8	8.4
21HF6K-250	1"	25	16	16	12	8.4
21HF7K-350	1 1/4"	35	16	6	14	16.2
21HF7K-350	1 1/4"	35	16	0	12	16.2
21HF8K-400	1 1/2"	40	16	6	14	16.8
21HF8K-400	1 1/2"	40	16	0	12	16.8

*Kv measured in m³/h water at 1 barΔP

Solenoid Valves

Coupled Diaphragm, Normally Open

Types 21HT3-5, 3/8" - 3/4"

APPLICATION

Solenoid valves Type 21HT are normally open valves, energised to close and similar in design to servo-acting valves but with the diaphragm coupled to the solenoid plunger. This enables the valve to operate at zero pressure and without the need for a pressure differential, thus overcoming the problems associated with gravity feed systems.

FEATURES

- Operate from zero pressure, no differential required
- Coil replacement without exposing fluid

TYPES AVAILABLE

G^{3/8"} to ^{3/4"}, with 8 watt coils

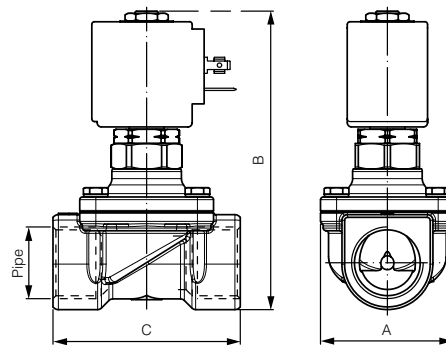
TECHNICAL DATA

Ambient temp: -10°C to +80°C
 Fluid temp: -10°C to +90°C NBR (+140°C Viton)
 Viscosity: Max. 21 Cst. 3°E
 Materials: Body: brass; stainless steel tube and plunger
 Seal: NBR or Viton
 Coil voltage: See page 26
 Voltage tolerance: +10% -5% DC
 +10% -15% AC*
 Consumption: 8 watts 25/14 VA
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050 with correctly assembled connectors

* To use AC voltage, a DC coil and Bridge Rectifier will be supplied



DIMENSIONS (mm)



Code	Pipe ISO 228/1	A mm	B mm	C mm
21HT3Z0Y110	G ^{3/8"}	50	101	56
21HT4Z0Y160	G ^{1/2"}	50	112	70
21HT5Z0Y160	G ^{3/4"}	50	112	70

FLOW & PRESSURE RATING CHART (bar)

Code	Ports	Orifice	Watt	Min	AC	DC	Kv**
21HT3Z0Y110	3/8"	11	8	0	10*	10	1.2
21HT4Z0Y160	1/2"	16	8	0	10*	10	2.4
21HT5Z0Y160	3/4"	16	8	0	10*	10	2.4

** Kv measured in m³/h water at 1 barΔP

Solenoid Valves

3-Way Direct-acting, Normally Closed Type 31A, 1/8" - 1/4"

APPLICATION

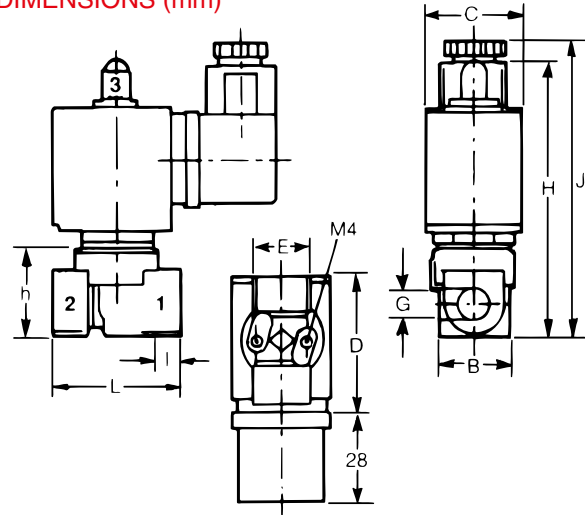
Three-way solenoid valves for air, water, oil and similar non-aggressive media. The standard configuration is normally closed with vent-drain.

TECHNICAL DATA

Function: 3-way direct-acting solenoid valve
 Port size: G1/8", 1/4"
 Ambient temp: -20°C to +55°C
 Fluid temp: -10°C to max. temp. shown in tables
 Viscosity: Max. 37 Cst. 5°E
 Materials: Body: brass; tube seat and inner parts: stainless steel; seal: Viton
 Coil voltage: See page 26
 Voltage tolerance: +/-10% (+10% -5% on pure DC)
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050 with correctly assembled connectors
 Response time: 10 to 30ms
 Cycling frequency: Max. 1500cpm
 Orifice sizes: G1/8" + G1/4": 2.0mm, 2.5mm, 3.0mm



DIMENSIONS (mm)



B	E	h	H	I	L
28	16	28	88	7	41

Coil Type	C	D	J	Weight (whole valve) Kg
8 watt	31	42	92	0.31

Supply 2 Output 1 Exhaust 3
 Normally closed

HOW TO ORDER

Example:

31A 3A V 25

VALVE TYPE

ORIFICE SIZES

20 2.0mm
 25 2.5mm
 30 3.0mm

PORT SIZES

3 G1/8"
 2 G1/4"
 upper port is
 always G1/8" male
 thread

SEAL MATERIAL

V VITON

FLOW & PRESSURE RATING CHART (bar)

Code	Fluid Temp.		Ø 10 ⁻¹ mm	Pressure bar Max			Watt	Kv m³/h
	Min°C	Max°C		Min	AC	DC		
31A3AV20	-10	+140	20(25)	0	10	10	8	0.12
31A3AV25	-10	+140	25(25)	0	6	6	8	0.19
31A3AV30	-10	+140	30(25)	0	5	5	8	0.24
31A2AV20	-10	+140	20(25)	0	10	10	8	0.12
31A2AV25	-10	+140	25(25)	0	6	6	8	0.19
31A2AV30	-10	+140	30(25)	0	5	5	8	0.24

Solenoid Valves

Direct-acting, Normally Closed
Types 21JN, 31JN, 1/8"

APPLICATION

Low cost direct-acting solenoid valve for on-off control of non-aggressive fluids and gases, e.g. air, oil or water, compatible with materials of construction.

FEATURES

- Simple design
- Choice of orifice sizes
- Compact design

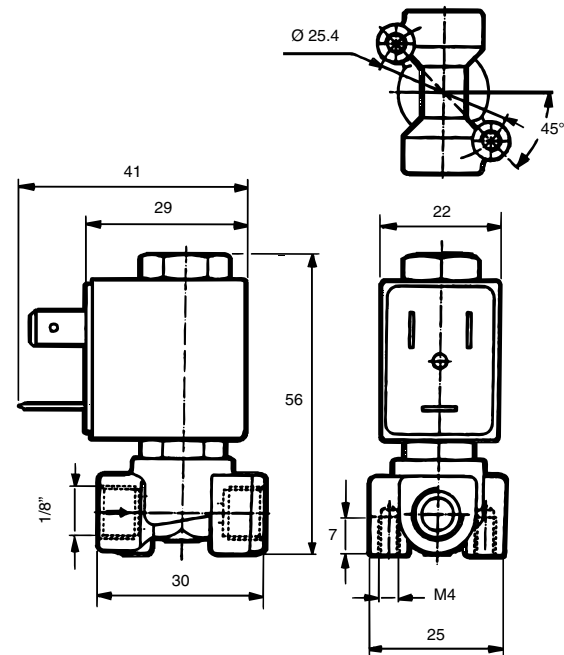
TECHNICAL DATA

Functions: Normally closed, energised to open*
 Ambient temp: -10°C to +55°C
 Fluid temp: -10°C to +140°C
 Viscosity: Max. 21 Cst. 5°E
 Materials: Body: brass; other parts: 430F stainless steel
 Seal: Viton
 Coil voltage: See page 26
 Voltage tolerance: +/-10%
 Consumption: DC: approx. 5 watts
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050 with correctly assembled connectors

* Normally open available on request.



DIMENSIONS (mm)



FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m³/h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
G 1/8"	21JN1ROV12	12	~2	1.2	0.06	2.5	0	20	3.5
						5		25	12
	21JN1ROV23	21	~5	2.3	0.14	2.5		6	-
						5		18	8
G 1/8"	31JN1WOV12	12	~2	1.2	0.06	5	0	15	15
								31JN1WOV23	21

Solenoid Valves

Direct Acting, Normally Closed, Plastic
Types 21JP, 31JP, 1/8"

APPLICATION

Low cost direct-acting plastic solenoid valves for on-off control of non-aggressive fluids, eg. air, oil and water.

FEATURES

- Choice of orifice sizes
- Compact design
- Low watt coil available
- 2-way and 3-way types

TECHNICAL DATA

Functions: Normally Closed
 Ambient temp: -10°C to +60°C class F coil
 -10°C to +80°C class H coil
 Fluid temp: -10°C to +140°C NBR
 Viscosity: Max. 21 Cst. 3°E
 Materials: Body: PPS plastic; tube: brass;
 plunger in stainless steel
 Seal: Viton
 Coil voltage: See page 26
 Voltage tolerance: +10% -5% DC
 +10% -15% AC
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050 with correctly
 assembled connectors

MAX TORQUE FOR ASSEMBLY: 2NM

Coil W =	Power Absorption		Type	Dimensions		
	Inrush VA~	Hold VA~		D mm	E mm	F mm
5W	15	10	L	22	27.5	39.5

FLOW & PRESSURE RATING CHART (bar)

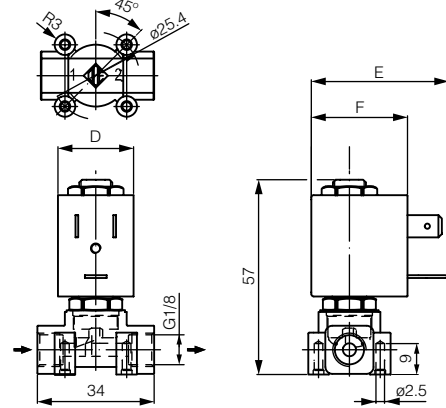
Code	Ports	Orifice	Watt	Min	AC	DC	Kv*
21JP1RRV12	1/8"	1.2	5	0	15	12	0.06
21JP1RRV23	1/8"	1.2	5	0	15	8	0.126
31JP1XRV12	1/8"	2.3	5	0	10*	-	0.045
21JP1XRV23	1/8"	2.3	5	0	5	-	0.126

*Kv measured in m³/h water at 1 barΔP

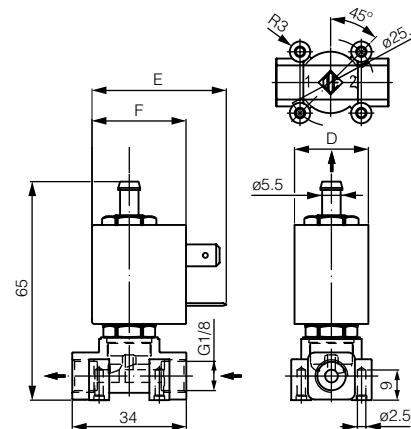


DIMENSIONS (mm)

21JP1RRV



31JP1XRV



Solenoid Valves

Direct-acting, Normally Closed, Stainless Steel
Types 21JP, 31JP, 1/8"

APPLICATION

Normally closed solenoid valve with body and metal parts pf stainless steel. Ports G1/8".

FEATURES

- Choice of orifice sizes
- Compact design
- Low wattage coil
- 2-way and 3-way types

TECHNICAL DATA

Functions:	Normally Closed
Ambient temp:	-10°C to +60°C class F coil -10°C to +80°C class H coil
Fluid temp:	-10°C to +140°C NBR
Viscosity:	Max. 21 Cst. 3°E
Materials:	Body and tube: 316 stainless steel; plunger in stainless steel
Seal:	Viton
Coil voltage:	See page 26
Voltage tolerance:	+10% -5% DC +10% -15% AC
Duty cycle:	100% continuous rating
Protection class:	IP 65 to DIN 40050 with correctly assembled connectors

Coil W =	Power Absorption		Type	Dimensions		
	Inrush VA~	Hold VA~		D mm	E mm	F mm
5W	15	10	L	22	27.5	39.5

FLOW & PRESSURE RATING CHART (bar)

Code	Ports	Orifice	Watt	Min	AC	DC	Kv*
21JL1RV12	1/8"	1.2	5	0	25	12	0.06
21JL1RV23	1/8"	2.3	5	0	18	8	0.126
31JL1XP1V12	1/8"	2.3	5	0	15	-	0.045

*Kv measured in m³/h water at 1 barΔP



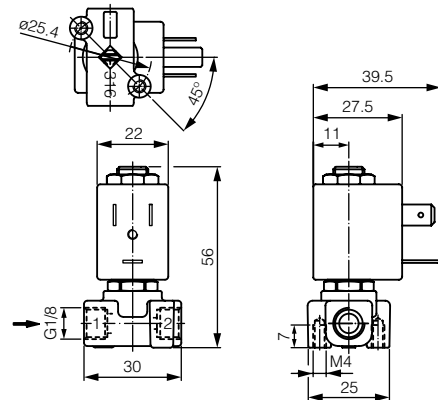
Types 21JL



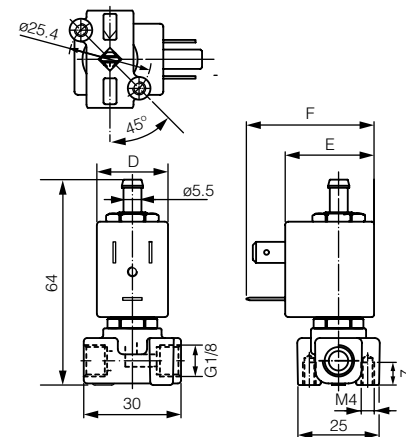
Type 31JL

DIMENSIONS (mm)

21JL



31JL



Solenoid Valves

Direct-acting, Normally Closed, Stainless Steel
Type 21L1, 1/8"

APPLICATION

Normally closed solenoid valve with body and metal parts of stainless steel. Ports G1/8".

FEATURES

- Wide variety of coil types, and orifice sizes
- Neat, compact hexagonal design
- Integral flow adjustment - type RI

TECHNICAL DATA

Function:	2-way normally closed
Ports:	G1/8"
Ambient temp:	-20°C to +55°C
Fluid temp:	-10°C to max. temp. shown in table
Viscosity:	Max. 37 Cst. 5°E
Coil voltage:	See page 26
Voltage tolerance:	+/-10% (+10% -5% on pure DC)
Current Consumption:	See table
Duty cycle:	100% continuous rating
Response Time:	10-30ms
Cycling speed:	Max. 1500cpm
Body:	Stainless steel AISI 316
Inner Parts:	Stainless steel AISI 430 F
Shading ring:	Silver
Tube and body seal:	O-ring
Seals:	As listed

SEAL MATERIAL

V (Viton)	Max. 140°C	Oils, petrol, hot water, steam
T* (Teflon PTFE)	Max. 150°C	Some aggressive chemicals
*Replace PTFE O-ring each time valve is re-assembled		

COIL CONSUMPTION

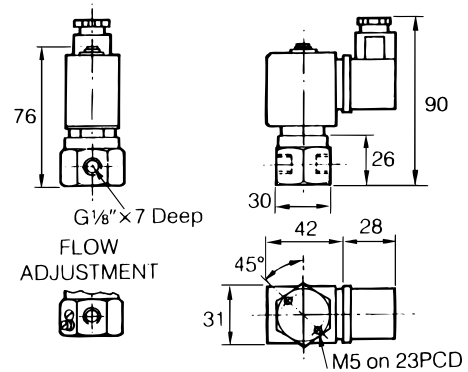
Description	Standard	High Temp.	High Power
Inrush current, VA (AC)	25	25	43
Hold current, VA (AC)	14	14	27
Consumption W (DC)	8	8	14

FLOW AND PRESSURE RATING CHART (bar)

Orifice	Kv (m³/h)	Coil 8 watt		Coil 14 watt	
		AC	DC	AC	DC
2.5	0.19	14	9	30	25
3.0	0.24	10	6	25	20
4.0	0.30	6	1.7	15	8



DIMENSIONS (mm)

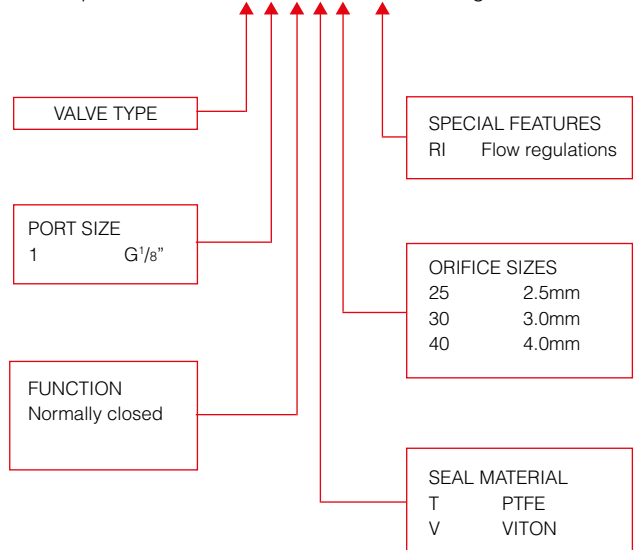


COIL TYPES

Standard	max. temp. 120°C	Protection class IP65
High Temperature	max. temp. 150°C	Protection class IP65
High Power	max. temp. 160°C	Protection class IP65

HOW TO ORDER

Example: 21L 1 K1 T 25 - RI + voltage



Note: order DIN connector separately.

Solenoid Valves

Direct-acting, Normally Closed, Stainless Steel
Type 21L2, 1/4"

APPLICATION

Normally closed solenoid valve with body and metal parts of stainless steel. Ports G1/4"

FEATURES

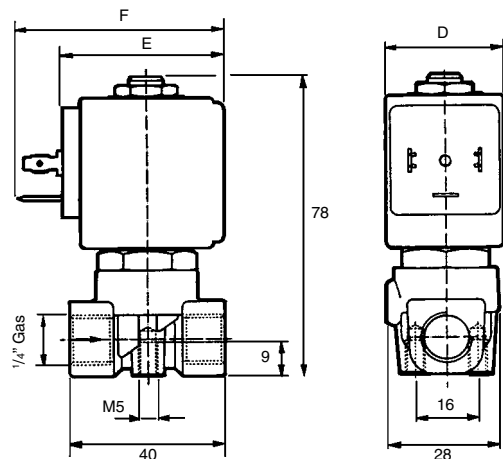
- Wide variety of coil types and orifice sizes
- Neat, compact design
- Coil replacement without exposing fluid

TECHNICAL DATA

Function: 2 way normally closed
 Ports: G1/4"
 Ambient temp: -20°C to +55°C
 Fluid temp: -40°C to +180°C
 Viscosity: Max. 37 Cst. 3°E
 Coil voltage: See page 26
 Voltage tolerance: +/-10% (+10% -5% pure DC)
 Duty cycle: 100% continuous rating
 Response time: 10 - 30ms
 Cycling speed: 1500cpm
 Body: Stainless steel 316
 Inner parts: Stainless steel 430F



DIMENSIONS (mm)

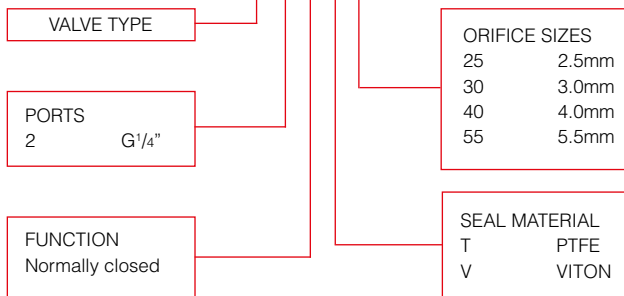


Coil	D mm	E mm	F mm
8W	30	42	54
14W	52	55	67

HOW TO ORDER

Example:

21L 2 K 1 T 25 + voltage



FLOW & PRESSURE RATING CHART (bar)

Pipe Size	Code	Fluid Temp.		Ø 10 ⁻¹ mm	Pressure bar Max			Watt	Kv m ³ /h
		Min°C	Max°C		Min	AC	DC		
1/4"	21L2K1T25	-40	+180	25	0	14	9	8	0.19
1/4"	21L2K1T25	-40	+180	25	0	30	25	14	0.19
1/4"	21L2K1T30	-40	+180	30	0	10	6	8	0.24
1/4"	21L2K1T30	-40	+180	30	0	25	20	14	0.24
1/4"	21L2K1T40	-40	+180	40	0	6	1.7	8	0.30
1/4"	21L2K1T40	-40	+180	40	0	15	8	14	0.30
1/4"	21L2K1T55	-40	+180	55	0	3.5	1	8	0.54
1/4"	21L2K1T55	-40	+180	55	0	7	3	14	0.54

Solenoid Valves

Servo-acting, Normally Closed, Stainless Steel
Type 21X, 1/2" - 1"

APPLICATION

Servo-acting solenoid for on-off control of aggressive fluids compatible with materials of construction.
Minimum pressure drop of 0.5 bar required.

FEATURES

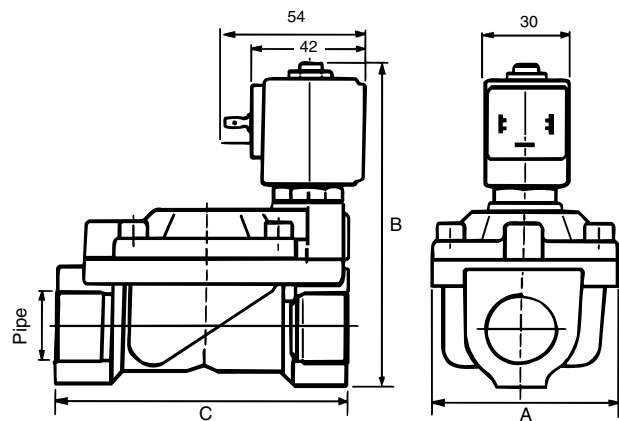
- Normally closed
- Coil replacement without exposing line fluid
- All 316 ST/ST

TECHNICAL DATA

Function: Normally closed
 Port sizes: G 1/2", 3/4", 1"
 Ambient temp: -20°C to +55°C
 Fluid temp: -20°C to 180°C
 Viscosity: Max. 21 Cst. 3°E
 Materials: Body and tube: 316 stainless steel; seals: PTFE as standard, Viton on request
 Coil voltage: See page 26
 Voltage tolerance: +/-10%
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050 with correctly assembled connectors
 Cycling frequency: 200cpm



DIMENSIONS (mm)



COIL CONSUMPTION

Description	Standard	High Temp.
Inrush current, VA(AC)	25	25
Holding current, VA(AC)	14	14
Power consumption W(AC/DC)	8	8

Code	Pipe	A mm	B mm	C mm
21X2KT120	1/2"	40	103	72
21X3KT190	3/4"	65	115	104
21X4KT250	1"	65	115	104

FLOW & PRESSURE RATING CHART (bar)

Code	Port Size	Fluid Temp.		Ø 10 ⁻¹ mm	Pressure bar Max			Watt	Kv m ³ /h	Body	Seal
		Min°C	Max°C		Min	AC	DC				
21X2KT120	1/2"	-30°C	+180°C	12	0.5	10	10	8	2.1	ST/ST	PTFE
21X3KT190	3/4"	-30°C	+180°C	19	0.5	10	10	8	7.2	ST/ST	PTFE
21X4KT250	1"	-30°C	+180°C	25	0.5	10	10	8	7.8	ST/ST	PTFE

Solenoid Valves

Coupled Diaphragm, Normally Closed, Stainless Steel,
Type 21IH, 3/8" - 1 1/2"

APPLICATION

Solenoid valves Type 21IH are normally closed valves, energised to open and similar in design to servo-acting valves but with the diaphragm coupled to the solenoid plunger. This enables the valve to operate at zero pressure and without the need for a pressure differential, thus overcoming the problems associated with gravity feed systems.

FEATURES

- Operate from zero pressure, no differential required
- Coil replacement without exposing fluid

TYPES AVAILABLE

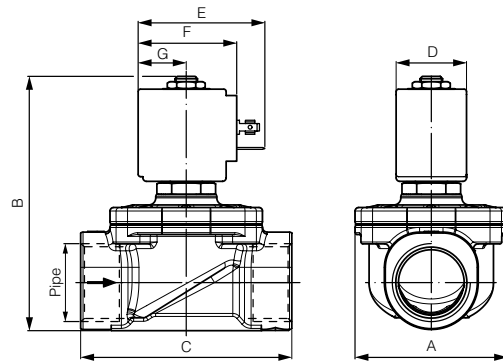
G^{3/8}" to 1 1/2", with 8 watt, 12 watt, 14 watt coils

TECHNICAL DATA

Ambient temp: -10°C to +80°C
 Fluid temp: -10°C to +90°C NBR (+140°C Viton)
 Viscosity: Max. 21 Cst. 3°E
 Materials: Body: 316 stainless steel
 Seal: NBR or Viton
 Coil voltage: See page 26
 Voltage tolerance: +10% -5% DC
 +10% -15% AC
 Consumption: 8 watts 25/14 VA
 12 watts 35/25 VA
 14 watts 43/27 VA
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050 with correctly assembled connectors



DIMENSIONS (mm)



Code	A mm	B mm	C mm
21IH3K1V150	52	92	68
21IH4K1V160	52	92	68
21IH5K1V200	58	100	75
21IH6K1V250	65	109	90
21IH7K1V350	94	126	128
21IH8K1V400	94	126	128

Coil	W mm	D mm	E mm	F mm	G mm
B	8	30	42	54	20.5
U	12	36	48	60	23.5
G	14	52	55	67	25

FLOW & PRESSURE RATING CHART (bar)

Code	Ports	Orifice	Watt	Min	AC	DC	Kv*
21IH3K1V150	3/8"	15	8	0	14	6	2.4
21IH3K1V150	3/8"	15	12	0	-	14	2.4
21IH4K1V160	1/2"	16	8	0	14	6	3
21IH4K1V160	1/2"	16	12	0	-	14	3
21IH5K1V200	3/4"	20	8	0	-	6	3.6
21IH5K1V200	3/4"	20	12	0	-	14	3.6
21IH6K1V250	1"	25	8	0	13	3	8.4
21IH6K1V250	1"	25	12	0	-	8	8.4
21IH6K1V250	1"	25	14	0	-	14	8.4
21IH7K1V350	1 1/4"	35	14	0	14	7	18
21IH8K1V400	1 1/2"	40	14	0	14	7	21

*Kv measured in m³/h water at 1 barΔP

Solenoid Valves

Servo-acting, Piston Control, Normally Open or Closed
Type 21YC, 1/2" - 1"

APPLICATION

Servo-acting solenoid valves for on-off control of steam.
Minimum pressure drop of 0.9 bar required to ensure satisfactory operation. Maximum pressure 10 bar.

FEATURES

- Available normally closed or normally open
- Coil replacement without exposing fluid
- 1/2" to 1"

TYPES AVAILABLE

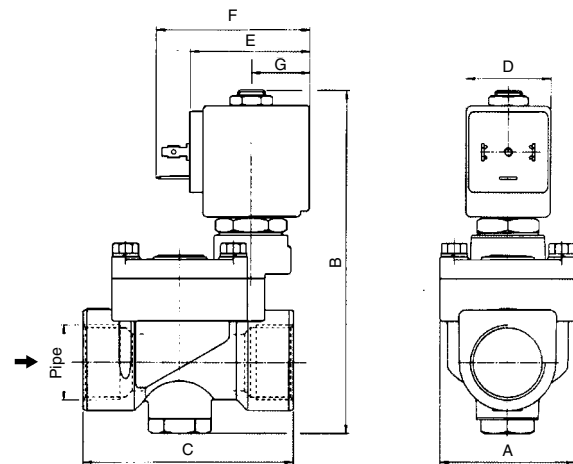
1/2" to 1", normally closed (K) or normally open (Z)

TECHNICAL DATA

Ambient temp: -20°C to +80°C
 Fluid temp: -40°C to +180°C
 Materials: Body: brass; inner parts: brass and stainless steel; piston seal: modified PTFE; main seal: glassfibre reinforced PTFE
 Coil voltage: See page 26
 Voltage tolerance: +/-10%
 Consumption: AC: 25 VA inrush, 14.5 VA hold
 DC: 8 watts
 Duty cycle: 100% continuous rating
 Protection class: IP65 to DIN 40050 with correctly assembled connectors

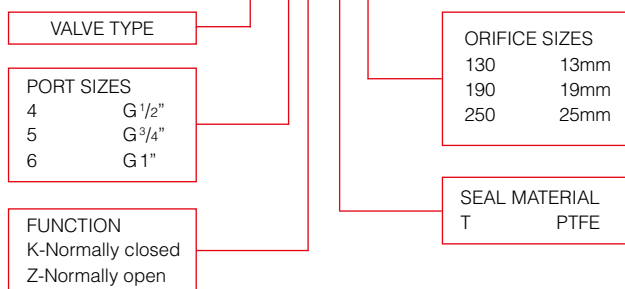


DIMENSIONS (mm)



HOW TO ORDER

Example: 21YC 5 K0 T 190 + voltage



Code	Pipe ISO 228/1	A mm	B mm	C mm
21YC4K0T130	G 1/2"	40	107	65
21YC5K0T190	G 3/4"	48	120	74
21YC6K0T250	G 1"	62	130	93

FLOW & PRESSURE RATING CHART (bar)

Pipe Size	Code	Coil	Fluid Temp.		Ø 10 ⁻¹ mm	Pressure bar Max			Watt	Kv m ³ /h	Body	Seal
			Min°C	Max°C		Min	AC	DC				
1/2"	21YC4K0T130	B	-40	+180	130	0.9	10	10	8	3	OT	Teflon
3/4"	21YC5K0T190	B	-40	+180	190	0.9	10	10	8	5.4	OT	Teflon
1"	21YC6K0T250	B	-40	+180	250	0.9	10	10	8	9.6	OT	Teflon

Solenoid Valves

Direct-acting, High Pressure, Normally Closed
Type 21A, 1/4"

APPLICATION

Direct-acting 2-way solenoid valve for on-off control of non-aggressive liquids and gases, eg. air, oil and water for pressures up to 100 bar.

FEATURES

- Normally closed
- Coil replacement without exposing line fluid

TYPES AVAILABLE

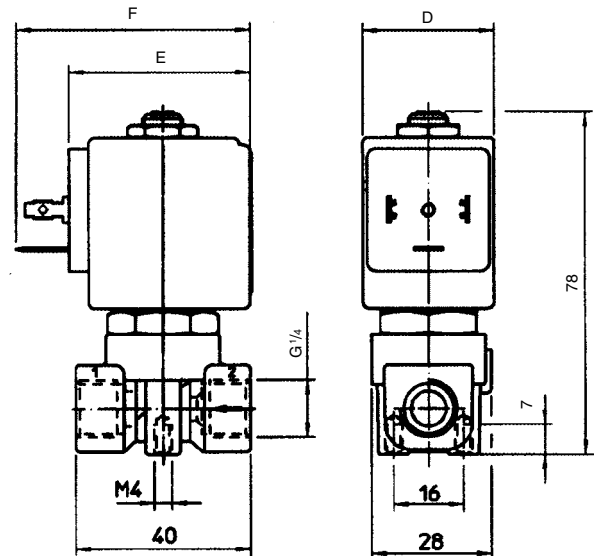
G¹/₄" with 8 watt and 12 watt coils

TECHNICAL DATA

Ambient temp: -10°C to +80°C
 Fluid temp: -10°C to +180°C
 Viscosity: Max. 21 Cst. 3°E
 Materials: Body: brass
 Seal: PTFE
 Coil voltage: See page 26
 Voltage tolerance: +10% -5% DC
 +10% -15% AC
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050 with correctly assembled connectors



DIMENSIONS (mm)



Coil W =	Power Absorption		Type mm	Dimensions		
	Inrush VA~	Hold VA~		D mm	E mm	F mm
8W	25	14.5	B	30	42	54
12W	35	14.5	U	36	48	60

FLOW & PRESSURE RATING CHART (bar)

Code	Ports	Orifice	Watt	Min	AC	DC	Kv*
21A2K0T12-XC	1/4"	1.2	8	0	100	90	0.06
21A2K0T12-XC	1/4"	1.2	12	0	100	100	0.06

*Kv measured in m³/h water at 1 barΔP

Solenoid Valves

Servo-acting, Piston Control, High Pressure, Normally Closed
Type 4, 3/8" - 3/4"

APPLICATION

Servo-acting piston valves for control of high pressure media. A minimum of pressure drop is required to ensure satisfactory operation. Maximum pressure is 100 bar.

FEATURES

- Available in normally closed and normally open
- Coil replacement without exposing fluid

TYPES AVAILABLE

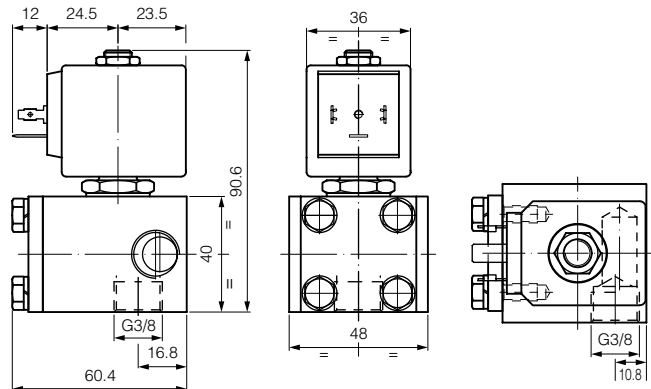
G^{3/8}" normally closed
G^{1/2}" normally closed and open
G^{3/4}" normally closed

TECHNICAL DATA

Ambient temp: -10°C to +80°C
Fluid temp: -40°C to +100°C
Viscosity: Max. 21 Cst. 3°E
Materials: Body: brass; inner parts: brass and stainless steel
Seal: PTFE, PBT, POM C
Coil voltage: See page 26
Duty cycle: 100% continuous rating
Protection class: IP 65 to DIN 40050 with correctly assembled connectors



DIMENSIONS (mm)



Code	Ports	A mm	B mm	C mm	F mm	G mm
4731K0T70	3/8"	90.6	40	42	60.4	48
4731K0T70	3/8"	90.6	40	48	60.4	48
4731K0T70	3/8"	90.6	40	54.5	60.4	48
4966K0Q120	1/2"	107.5	57.3	42	64	50
4966K0Q120	1/2"	107.5	57.3	48	64	50
4966Z0Q120D	1/2"	107.5	57.3	42	64	50
4592MZU190	3/4"	122.5	75	54.5	89	52

FLOW & PRESSURE RATING CHART (bar)

Code	Ports	Orifice	Watt	Min	AC	DC	Kv*
4731K0T70	3/8"	7	8	0.7	90	40	0.84
4731K0T70	3/8"	7	12	0.7	100	90	0.84
4731K0T70	3/8"	7	14	0.7	100	100	0.84
4966K0Q120	1/2"	12	8	3	100	90	3.6
4966K0Q120	1/2"	12	12	3	100	100	3.6
4966Z0Q120D	1/2"	12	8	3	50	50	3.6
4592MZU190	3/4"	19	14	1	-	50	6.6

*Kv measured in m³/h water at 1 barΔP

Automatic Drain Valve

Type D50, 1/2"

APPLICATION

For use on compressed air, oils & water (after coolers, separators, receivers, filters, drain legs and compressors).

FEATURES

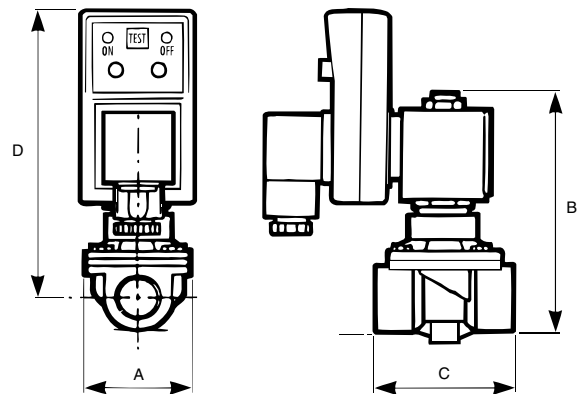
- Simple to install
- Long life
- Minimum maintenance
- Manual test facility
- Solid state timer
- Variable discharger frequency times
- LED indicators showing operational status
- Timer can be wired with an AC or DC supply
- CE tested



TECHNICAL DATA

Pressure:	0.1 - 20 bar
Temperature range:	-10°C - +90°C
Voltage:	AC or DC
Discharge time (variable):	0.5 - 10 seconds
Interval time (variable):	0.5 - 45 minutes
Enclosure:	IP65
Valve body:	Brass
Seals:	NBR
Min. pressure:	0.5 bar

DIMENSIONS (mm)



A	B	C	D
40	75	40	120

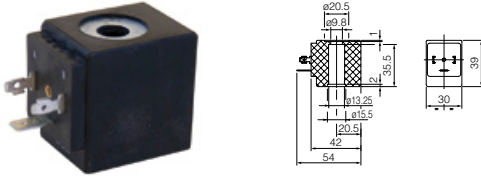
VARIATIONS

Variations available:

- High pressure
- Diverts
- Stainless steel bodies
- 1/8" to 2" ports

Coils

BDA Moulding material: PA - Black polyamide - Class F (155°C)
 BDF Moulding material: PPS - Black polyphenylsulphide - Class H (180°C)
 BDV Moulding material: PET - Black polyethylene - Class H (180°C)
 Winding: in class H
 Electrical connections: with connector EN175301-803 paragraph 5.3.1 - protection degree IP65 EN 60529 (DIN 40050)



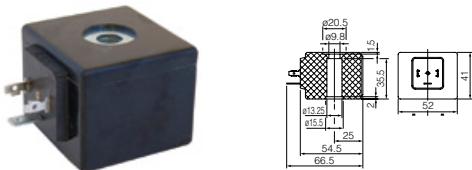
Code	Power	Voltages/ Frequency	ED	Approvals
BDA08012AS	14.5VA	12~50	100%	CE
BDA08012CS	8W	12 DC	100%	CE
BDA08024CS	8W	24 DC	100%	CE
BDA08024DS	14.5VA	24~50/60	100%	CE
BDA08110DS	14.5VA	110~50/60	100%	CE
BDA08223DS	14.5VA	220/230~50/60	100%	CE
BDA08380DS	14.5VA	380~50/60	100%	CE
BDF08012CU	11W	12 DC	100%	CE/UL/CSA
BDV08024CY	11W	24 DC	100%	CE/UL/CSA/VDE
BDV08024DY	17VA	24~50/60	100%	CE/UL/CSA/VDE
BDV08110AY	15VA	110~50/110~60	100%	CE/UL/CSA/VDE
BDV08230AY	16VA	230~50/240~60	100%	CE/UL/CSA/VDE

UDA Moulding material: PA - Black polyamide - Class F (155°C)
 UDV Moulding material: PET - Black polyethylene - Class H (180°C)
 Winding: in class H
 Electrical connections: with connector EN175301-803 paragraph 5.3.1 - protection degree IP65 EN 60529 (DIN 40050)



Code	Power	Voltages/ Frequency	ED	Approvals
UDA12024AS	23VA	24~50	100%	CE
UDA12024CS	12W	24 DC	100%	CE
UDA12110DS	23VA	110~50/60	100%	CE
UDA12230AS	23VA	230~50	100%	CE
UDV12112DW	23VA	110/120~50/60	100%	CE/UL/CSA
UDV12230DW	23VA	230~50/60	100%	CE/UL/CSA

GDH Moulding material: EP - Black epoxy resin - Class H (180°C)
 GDV Moulding material: PET - Black polyethylene - Class H (180°C)
 Winding: in class H
 Electrical connections: with connector EN175301-803 paragraph 5.3.1 - protection degree IP65 EN 60529 (DIN 40050)



Code	Power	Voltages/ Frequency	ED	Approvals
GDH14024CS	14W	24 DC	100%	CE
GDH14024DS	27VA	24~50/60	100%	CE
GDH14110DS	27VA	110~50/60	100%	CE
GDH14223DS	27VA	220/230~50/60	100%	CE
GDV14024CY	14W	24 DC	100%	CE/UL/CSA/VDE
GDV14024DY	26VA	24~50/6	100%	CE/UL/CSA/VDE
GDV14110AY	23VA	110~50/120~60	100%	CE/UL/CSA/VDE
GDV14230AY	27VA	230~50/240~60	100%	CE/UL/CSA/VDE

Nominal Voltage: DC +10% -5%
 Tolerances: AC +10% -15%

LBA Moulding material: PA - Black polyamide - Class F (155°C)
 LBF Moulding material: PPS - Black polyphenylsulphide - Class H (180°C)
 LBV Moulding material: PET - Black polyethylene - Class H (180°C)
 Winding: in class H
 Electrical connections: with connector EN175301-803 whellbase 11 - protection degree IP65 EN 60529 (DIN 40050)



Code	Power	Voltages/ Frequency	ED	Approvals
LBA05024AS	10VA	24~50	100%	CE
LBA05024CS	5W	24 DC	100%	CE
LBA05230AS	10VA	230~50	100%	CE
LBF05024BU	10VA	24~60	100%	CE/UL
LBV05024AV	11.5VA	24~50	100%	CE/VDE
LBV05224BW	12.5VA	24~60	100%	CE/UL/CSA
LBV05024CY	7W	24 DC	100%	CE/UL/CSA/VDE
LBV05110AY	10VA	110~50/120~60	100%	CE/UL/CSA/VDE
LBV05110BU	13.5VA	110~60	100%	CE/UL
LBV05220BU	13.5VA	220~60	100%	CE/UL
LBV05230AY	11.5VA	230~50/240~60	100%	CE/UL/CSA/VDE
LBV08024HU	10W	24 DC	100%	CE/UL

DIN Connectors

STANDARD CONNECTORS

Standard Connector		KA132000B9
Diode	12-230V DC Only	KA132D10A9
LED and Diode	24V DC	KA132D54T9
FWB REC	0-230V AC	KA132R13B9
LED and VDR	24V AC/DC	KA132V54T9
LED and VDR	110V AC	KA132V55T9
LED and VDR	230V AC	KA132V56T9



MINI CONNECTORS

Standard Mini Connector		KB132000B9
LED and VDR	24V AC/DC	KB132V54T9
LED and VDR	110V AC/DC	KB132V55T9



MOULDED CABLE CONNECTORS

Standard Connectors		
0.5 metre cable		MA134000PA05050
1.0 metre cable		MA134000PA05100
3.0 metre cable		MA134000PA05300



Please consult our Sales Office for our full range of DIN Connectors.

Solenoid Valves

Direct-acting, EEx m II T 4, Normally Closed
Type 21A, 1/8" - 1/4"

APPLICATION

Low cost direct-acting solenoid valve for on-off control of non-aggressive fluids and gases, air, oil or water, compatible with materials of construction. For use in explosive atmospheres.

FEATURES

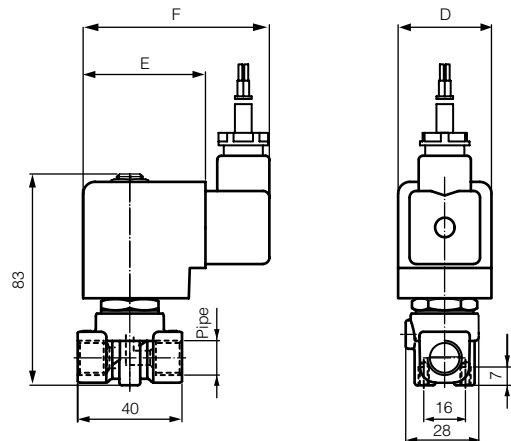
- Simple design – low cost
- Choice of orifice sizes and seal materials
- Compact design

TECHNICAL DATA

Functions:	Normally closed, energised to open
Ambient temp:	-20°C to +50°C
Fluid temp:	+80°C
Viscosity:	Max. 53 Cst. 7°E
Materials:	Body: brass; tube and tube nut: stainless steel; seal: FKM (V)
Coil voltage:	24V DC; 24V, 100V and 230V, 50Hz
Voltage tolerance:	+/-10%
Consumption:	DC: approx. 10 watts
Duty cycle:	100% continuous rating
Protection class:	IP 65 to DIN 40050
Coil insulation:	Class H



DIMENSIONS (mm)



TYPE	D mm	E mm	F mm
T	36	47	71.4

FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m³/h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
G 1/8"	21A3QDV15	12	~2	1.5	0.08	10	0	16	16
	21A3QDV20	37	~5	2	0.12			16	16
	21A3QDV25	53	~7	2.5	0.15			14	9
	21A3QDV30			3	0.18			10	6
	21A3QDV45			4.5	0.38			5	2
G 1/4"	21A2QDV15	12	~2	1.5	0.08			16	16
	21A2QDV20	37	~5	2	0.12			16	16
	21A2QDV25	53	~7	2.5	0.15			14	9
	21A2QDV30			3	0.18			10	6
	21A2QDV45			4.5	0.38			5	2
	21A2QDV55			5.5	0.54	3	1		

According to Directive 2014/34/EU ATEX

Solenoid Valves

Direct-acting, EEx d II T 6, Normally Closed
Type 21A, 1/8" - 1/4"

APPLICATION

Direct-acting solenoid valve for on-off control of non-aggressive fluids and gases, air, oil or water, compatible with materials of construction. For use in explosive atmospheres.

FEATURES

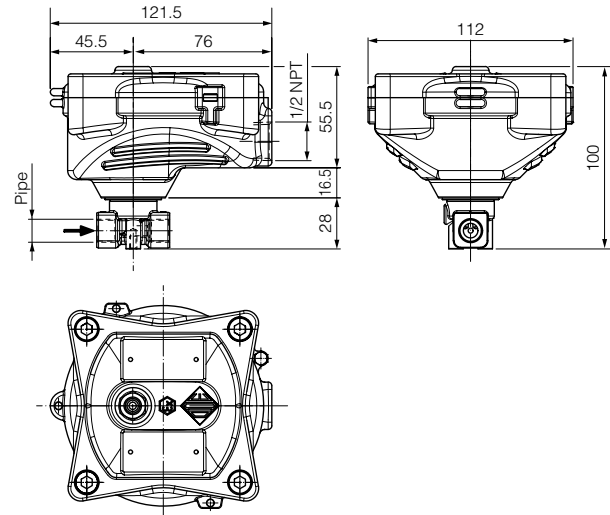
- Simple design
- Choice of orifice sizes

TECHNICAL DATA

Functions: Normally closed, energised to open
 Ambient temp: -20°C to +50°C
 Fluid temp: +80°C
 Viscosity: Max. 53 Cst. 7°E
 Materials: Body: brass; tube and tube: nut stainless steel; seals: FKM (V)
 Coil voltage: See page 26
 Voltage tolerance: +/-10%
 Consumption: DC: approx. 8 watts
 Duty cycle: 100% continuous rating
 Protection class: IP 67
 Coil insulation: Class F



DIMENSIONS (mm)



FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m³/h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
G1/8"	21A3KIV15	12	~2	1.5	0.08	8	0	30	18
	21A3KIV20	37	~5	2	0.12			22	16
	21A3KIV25	53	~7	2.5	0.19			14	9
	21A3KIV30			3	0.124			10	6
G1/4"	21A2KIV15	12	~2	1.5	0.08			30	18
	21A2KIV20	37	~5	2	0.12			22	16
	21A2KIV25	53	~7	2.5	0.19			14	9
	21A2KIV30			3	0.24			10	6

Solenoid Valves

Servo-acting, EEx m II T 4, Normally Closed
Type 21A, 3/8" - 1/2"

APPLICATION

Servo-acting solenoid valve for on-off control of non-aggressive fluids and gases, air, oil or water, compatible with materials of construction. For use in explosive atmospheres.

FEATURES

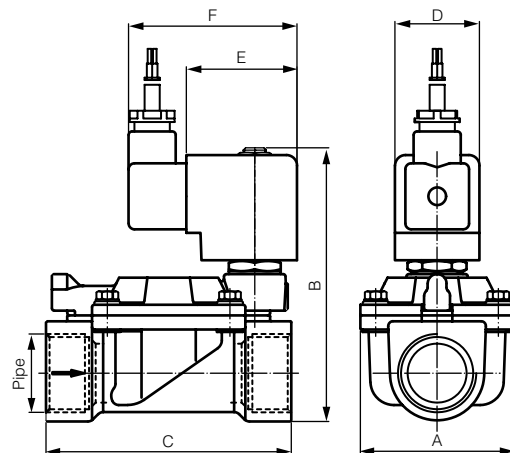
- Simple design
- Choice of port sizes
- Compact design

TECHNICAL DATA

Functions: Normally closed, energised to open
 Ambient temp: -20°C to +50°C
 Fluid temp: +80°C
 Viscosity: Max. 12 Cst. 2°E
 Materials: Body: brass; tube and tube nut: stainless steel; seal: FKM (V)
 Coil voltage: 24V DC; 24V, 100V and 230V, 50Hz
 Voltage tolerance: +/-10%
 Consumption: DC: approx. 10 watts
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050
 Coil insulation: Class H



DIMENSIONS (mm)



Code	Pipe ISO 228/1	A mm	B mm	C mm
21WA3QDV130	G ^{3/8} "	40	103	60
21WA4QDV130	G ^{1/2} "	40	103	66

TYPE	D mm	E mm	F mm
T	36	47	71.4

FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m ³ /h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
G ^{3/8} "	21WA3QDV130	12	~2	13	3.6	8	0.2	16	16
G ^{1/2} "	21WA4QDV130	12	~2	13	4.2				

According to Directive 2014/34/EU ATEX

Solenoid Valves

Servo-acting, EEx d II T 6, Normally Closed
Type 21WA, 3/8" - 1/2"

APPLICATION

Servo-acting solenoid valve for on-off control of non-aggressive fluids and gases, air, oil or water, compatible with materials of construction. For use in explosive atmospheres.

FEATURES

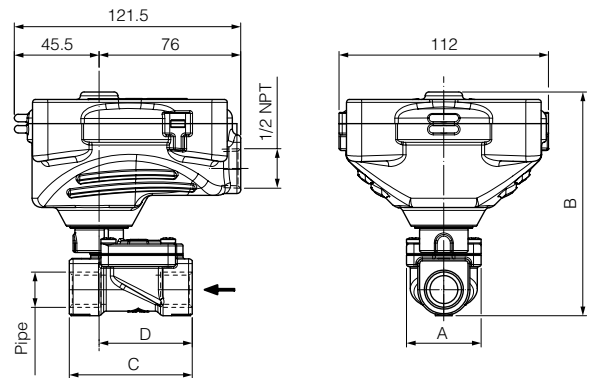
- Simple design
- Choice of port sizes

TECHNICAL DATA

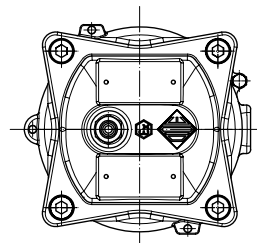
Functions: Normally closed, energised to open
 Ambient temp: -20°C to +50°C
 Fluid temp: +80°C
 Viscosity: Max. 12 Cst. 2°E
 Materials: Body: brass; tube and tube nut: stainless steel.; seal: FKM (V)
 Coil voltage: See page 26
 Voltage tolerance: +/-10%
 Consumption: DC: approx. 8 watts
 Duty cycle: 100% continuous rating
 Protection class: IP 67
 Coil insulation: Class F



DIMENSIONS (mm)



Code	Pipe ISO 228/1	A mm	B mm	C mm	D mm
21WA3KIV130	G 3/8"	40	1120	60	47
21WA4KIV130	G 1/2"	40	120	66	50



FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m³/h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
G 3/8"	21WA3KIV130	12	~2	13	3.6	8	0.2	16	16
G 1/2"	21WA4KIV130	12	~2	13	4.2				

Solenoid Valves

Servo-acting, EEx m II T 4, Normally Closed
Type 21W, 3/4" - 1"

APPLICATION

Servo-acting solenoid valve for on-off control of non-aggressive fluids and gases, air, oil or water, compatible with materials of construction. For use in explosive atmospheres.

FEATURES

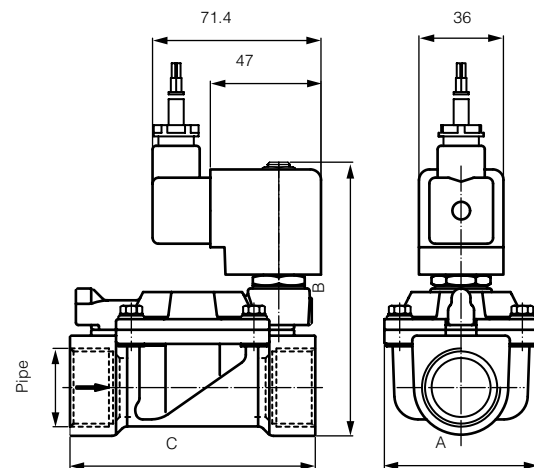
- Simple design
- Choice of port sizes
- Compact design

TECHNICAL DATA

Functions: Normally closed, energised to open
 Ambient temp: -20°C to +50°C
 Fluid temp: +80°C
 Viscosity: Max. 12 Cst. 2°E
 Materials: Body: brass; tube and tube nut: stainless steel; seal: FKM (V)
 Coil voltage: 24V DC; 24V, 100V and 230V, 50Hz
 Voltage tolerance: +/-10%
 Consumption: DC: approx. 10 watts
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050
 Coil insulation: Class H



DIMENSIONS (mm)



Code	Pipe ISO 228/1	A mm	B mm	C mm	D mm	E mm	F mm
21W3QDV190	G ^{3/4} "	65	111	104	36	47	71.4
21W4QDV250	G1"	65	118	104	36	47	71.4

FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m ³ /h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
G ^{3/4} "	21W3QDV190	12	~2	19	8.4	8	0.2	16	16
G1"	21W4QDV250	12	~2	25	11				

According to Directive 2014/34/EU ATEX

Solenoid Valves

Servo-acting, EEx d II T 6, Normally Closed
Type 21W, 3/4" - 1"

APPLICATION

Servo-acting solenoid valve for on-off control of non-aggressive fluids and gases, air, oil or water, compatible with materials of construction. For use in explosive atmospheres.

FEATURES

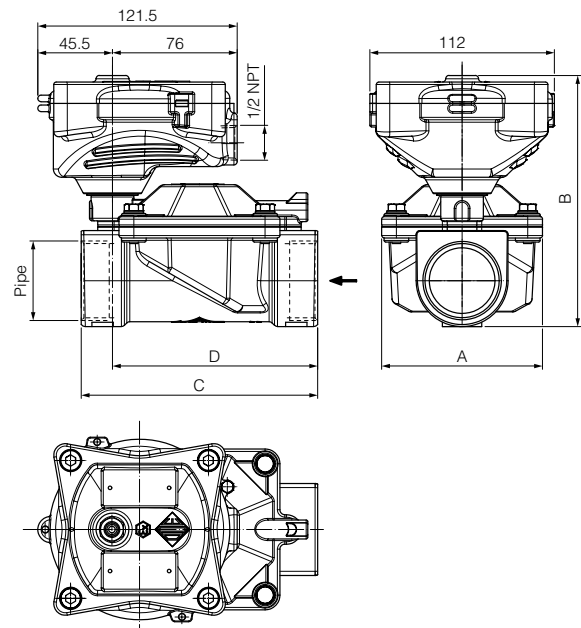
- Simple design
- Choice of orifice sizes and seal materials

TECHNICAL DATA

Functions: Normally closed, energised to open
 Ambient temp: -20°C to +50°C
 Fluid temp: +80°C
 Viscosity: Max. 21 Cst. 2°E
 Materials: Body: brass; tube and tube nut: stainless steel; seal: FKM (V)
 Coil voltage: See page 26
 Voltage tolerance: +/-10%
 Consumption: DC: approx. 8 watts
 Duty cycle: 100% continuous rating
 Protection class: IP 67
 Coil insulation: Class F



DIMENSIONS (mm)



Code	Pipe ISO 228/1	A mm	B mm	C mm	D mm
21W3KIV190	G 3/4"	65	128	104	89
21W4KIV250	G 1"	65	136	104	8
21W5KIV350	G 1 1/4"	98	153	144	125
21W6KIV400	G 1 1/2"	98	153	144	125
21W7KIV500	G 2"	118	155	172	150

FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m³/h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
G 3/4"	21W3KIV190	12	~2	19	8.4	8	0.2	16	16
G 1"	21W4KIV250			25	11.4				
G 1 1/4"	21W5KIV350			35	24				
G 1 1/2"	21W6KIV400			40	31.2				
G 2"	21W7KIV500			50	45			10	10

According to Directive 2014/34/EU ATEX

Solenoid Valves

Coupled Diaphragm, EEx d II T 6, Normally Closed
Type 21HT, 3/8" - 1"

APPLICATION

Solenoid valves Type 21HT are normally closed valves, energised to open and similar in design to servo-acting valves but with the diaphragm coupled to the solenoid plunger. This enables the valve to operate at zero pressure and without the need for a pressure differential, thus overcoming the problems associated with gravity feed systems.

FEATURES

- Operate from zero pressure, no differential required
- Coil replacement without exposing fluid

TYPES AVAILABLE

G^{3/8}" to 1", with 8 watt coils

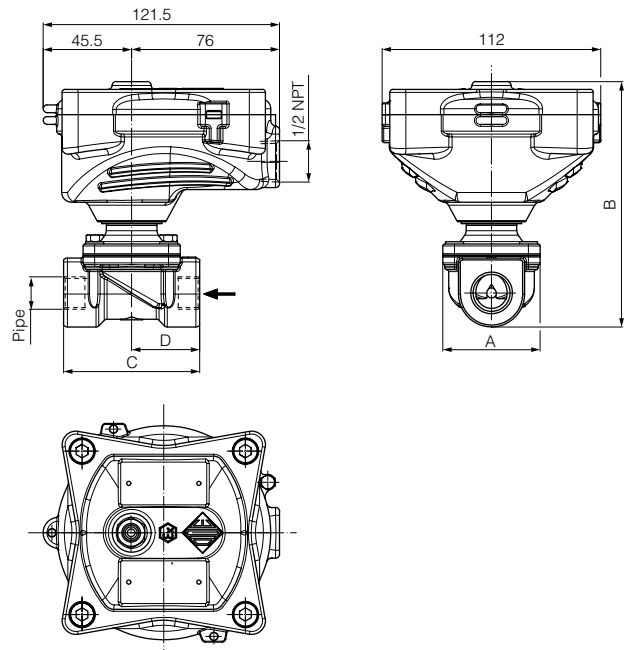
TECHNICAL DATA

Ambient temp:	-10°C to +80°C
Fluid temp:	+140°C
Viscosity:	Max. 12 Cst. 2°E
Materials:	Body: brass; tube and plunger: stainless steel
Seal:	Viton
Coil voltage:	See page 26
Voltage tolerance:	+10% -5% DC +10% -15% AC
Consumption:	8 watts 25/14 VA
Duty cycle:	100% continuous rating
Protection class:	IP 67
Coil insulation:	Class F

Code	Pipe ISO 228/1	A mm	B mm	C mm	D mm
21HT3KIV110	G ^{3/8} "	50	113	56	28
21HT4KIV160	G ^{1/2} "	50	125	70	35
21HT5KIV160	G ^{3/4} "	50	125	70	35
21HT6KIV250	G1"	65	131	104	52



DIMENSIONS (mm)



FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m ³ /h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
G ^{3/8} "	21HT3KIV110	12	~2	11	1.2	8	0	14	5
G ^{1/2} "	21HT4KIV160			16	2.4				
G ^{3/4} "	21HT5KIV160			16	2.4				
G1"	21HT6KIV250			25	7.2			6	-

According to Directive 2014/34/EU ATEX

Solenoid Valves

Coupled Diaphragm, EEx d II T 6, Normally Closed, Stainless Steel
Type 21IH, 3/8" - 1 1/2"

APPLICATION

Solenoid valves Type 21IH are normally closed valves, energised to open and similar in design to servo-acting valves but with the diaphragm coupled to the solenoid plunger. This enables the valve to operate at zero pressure and without the need for a pressure differential, thus overcoming the problems associated with gravity feed systems.

FEATURES

- Operate from zero pressure, no differential required
- Coil replacement without exposing fluid

TYPES AVAILABLE

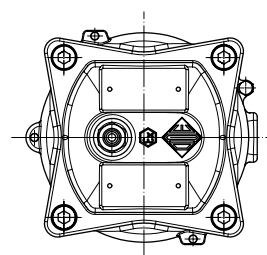
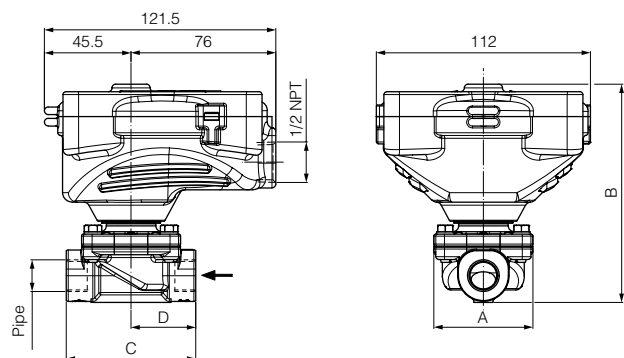
G^{3/8}" to 1 1/2", with 8 watt coils

TECHNICAL DATA

Ambient temp: -10°C to +80°C
 Fluid temp: +140°C
 Viscosity: Max. 12 Cst. 2°E
 Materials: Body: brass; tube and plunger: stainless steel
 Seal: Viton
 Coil voltage: See page 26
 Voltage tolerance: +10% -5% DC
 +10% -15% AC
 Consumption: 8 watts 25/14 VA
 Duty cycle: 100% continuous rating
 Protection class: IP 67
 Coil insulation: Class F



DIMENSIONS (mm)



Code	Pipe ISO 228/1	A mm	B mm	C mm	D mm
21IH3KIV150	G ^{3/8} "	52	114.5	68	34
21IH4KIV160	G ^{1/2} "	52	114.5	68	34
21IH5KIV200	G ^{3/4} "	58	123	75	37.5
21IH6KIV250	G1"	65	131	90	45
21IH7KIV350	G1 1/4"	94	126.5	128	64
21IH8KIV400	G1 1/2"	94	126.5	128	64

FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m ³ /h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
G ^{3/8} "	21IH3KIV150	12	~2	15	2.4	8	0	14	6
G ^{1/2} "	21IH4KIV160			16	3				
G ^{3/4} "	21IH5KIV200			20	3.6				
G1"	21IH6KIV250			25	8.4			9	-
G1 1/4"	21IH7KIV350			35	18				
G1 1/2"	21IH8KIV400			40	20.4				

According to Directive 2014/34/EU ATEX

Solenoid Valves

Direct-acting, EEx m II T 4, Normally Closed, Stainless Steel
Type 21L, 1/4"

APPLICATION

Normally closed solenoid valve with body and metal parts of stainless steel. Ports G1/4". For use in explosive atmospheres.

FEATURES

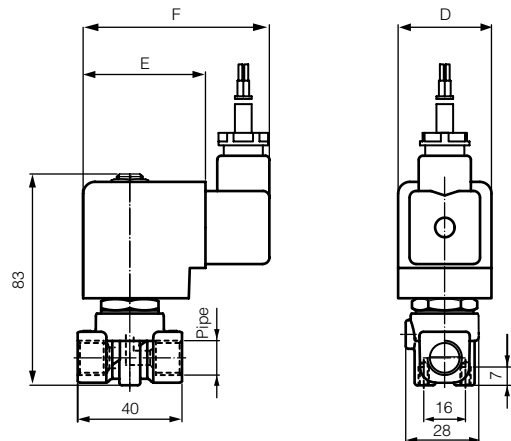
- Simple design
- Choice of orifice sizes
- Compact design
- 316 stainless steel body

TECHNICAL DATA

Functions: Normally closed, energised to open
 Ambient temp: -20°C to +50°C
 Fluid temp: +80°C
 Viscosity: Max. 37 Cst. 5°E
 Materials: Body: 316 stainless steel; inner parts: 430F stainless steel; seal: FKM (V)
 Coil voltage: 24V DC; 24V, 100V and 230V, 50Hz
 Voltage tolerance: +/-10%
 Consumption: DC: 10 watts max.
 Duty cycle: 100% continuous rating
 Protection class: IP 65 to DIN 40050
 Coil insulation: Class H



DIMENSIONS (mm)



TYPE	D mm	E mm	F mm
T	36	47	71.4

FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m³/h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
G1/4"	21L2QDV25	53	~7	2.5	0.19	8	0	14	9
	21L2QDV30			3.0	0.24			10	6
	21L2QDV40			4.0	0.30			6	1.7
	21L2QDV55			5.5	0.54			3.5	1

Solenoid Valves

Direct-acting, EEx d II T 6, Normally Closed, Stainless Steel
Type 21L, 1/4"

APPLICATION

Normally closed solenoid valve with body and metal parts of stainless steel. Ports G1/4". For use in explosive atmospheres.

FEATURES

- Simple design
- Choice of orifice sizes
- 316 stainless steel body

TECHNICAL DATA

Functions: Normally closed, energised to open

Ambient temp: -20°C to +50°C

Fluid temp: +140°C

Viscosity: Max. 37 Cst. 5°E

Materials: Body: 316 stainless steel; inner parts: 430F stainless steel; seal: FKM (V)

Coil voltage: See page 26

Voltage tolerance: +/-10%

Consumption: DC: approx. 8 watts

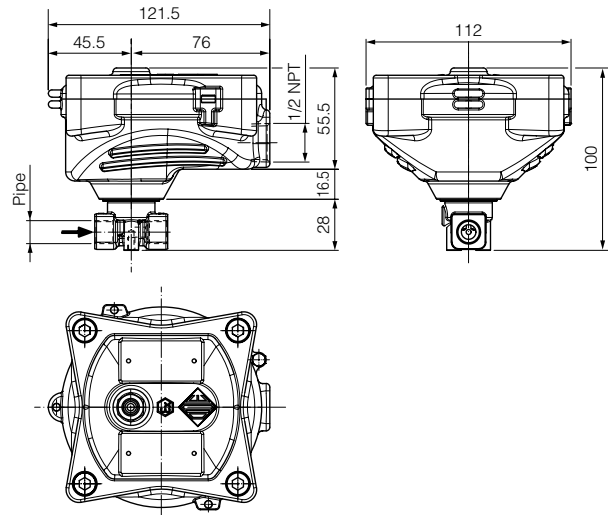
Duty cycle: 100% continuous rating

Protection class: IP 67

Coil insulation: Class F



DIMENSIONS (mm)



FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m³/h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
G1/4"	21L2KIV25	53	~7	2.5	0.19	8	0	14	9
	21L2KIV30			3.0	0.24			10	6
	21L2KIV40			4.0	0.30			6	1.7
	21L2KIV55			5.5	0.54			3.5	1

Solenoid Valves

Servo-acting, EEx m II T 4, Normally Closed, Stainless Steel
Type 21X, Sizes 1/2" - 1"

APPLICATION

Normally closed solenoid valve with body and metal parts of stainless steel. Ports G1/2" to G1". For use in explosive atmospheres.

FEATURES

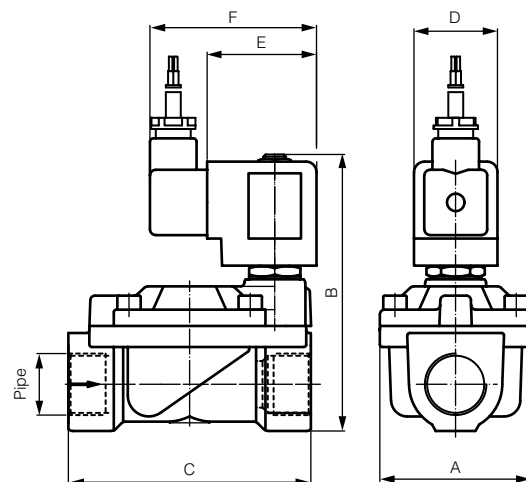
- Simple design
- Choice of port sizes
- 316 stainless steel body

TECHNICAL DATA

Functions: Normally closed, energised to open
 Ambient temp: -20°C to +50°C
 Fluid temp: +80°C
 Viscosity: Max. 37 Cst. 5°E
 Materials: Body: 316 stainless steel; inner parts: 430F stainless steel; seal: FKM (V)
 Coil voltage: 24V DC; 24V, 100V and 230V, 50Hz
 Voltage tolerance: +/-10%
 Consumption: DC: approx. 10 watts
 Duty cycle: 100% continuous rating
 Protection class: IP 65
 Coil insulation: Class H



DIMENSIONS (mm)



Type	Pipe ISO 228/1	A mm	B mm	C mm
21X2QDV120	G 1/2"	40	103	72
21X3QDV190	G 3/4"	65	115	104
21X4QDV250	G 1"	65	115	104

TYPE	D mm	E mm	F mm
T	36	47	71.4

FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m ³ /h	Power Watt	Pressure bar M.O.P.D.		
		Cst	°E				Min.	AC	DC
G 1/2"	21X2QDV120	12	~2	12	2.1	10	0.1	16	16
G 3/4"	21X3QDV190			19	7.8				
G 1"	21X4QDV250			25	9.6				

According to Directive 2014/34/EU ATEX

Solenoid Valves

Servo-acting, EEx d II T 6, Normally Closed, Stainless Steel
Type 21X, Sizes 1/2" - 1"

APPLICATION

Normally closed solenoid valve with body and metal parts of stainless steel. For use in explosive atmospheres.

FEATURES

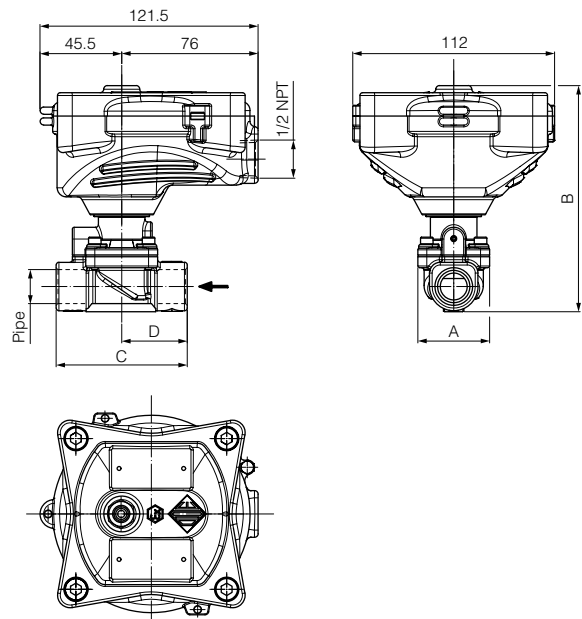
- Simple design
- 316 stainless steel body

TECHNICAL DATA

Functions: Normally closed, energised to open
 Ambient temp: -20°C to +50°C
 Fluid temp: +80°C
 Viscosity: Max. 37 Cst. 5°E
 Materials: Body: 316 stainless steel; inner parts: 430F stainless steel; seal: FKM (V)
 Coil voltage: See page 26
 Voltage tolerance: +/-10%
 Consumption: DC: approx. 8 watts
 Duty cycle: 100% continuous rating
 Protection class: IP 67
 Coil insulation: Class F



DIMENSIONS (mm)



Type	Pipe ISO 228/1	A mm	B mm	C mm	D mm
21X2KIV120	G 1/2"	40	120	73	36.5
21X3KIV190	G 3/4"	65	136	104	88.5
21X4KIV250	G 1"	65	136	104	88.5

FLOW & PRESSURE RATING CHART (bar)

Pipe ISO 228/1	Code	Max Viscosity		Ø mm	Kv m³/h	Power Watt	Min.	Pressure bar M.O.P.D.	
		Cst	°E					AC	DC
G 1/2"	21X2KIV120	12	~2	12	2.1	8	0.1	20	20
G 3/4"	21X3KIV190			19	7.8			16	16
G 1"	21X4KIV250			25	9.6				

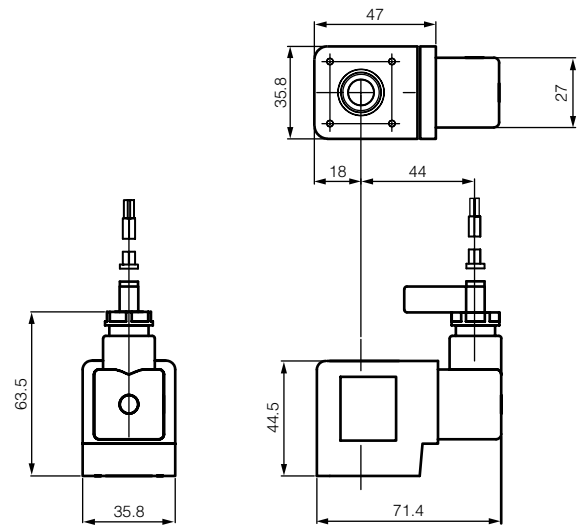
According to Directive 2014/34/EU ATEX

Coils

Explosion Proof – EEx m II T 4

Type	TNA...			TNA...		
Current	AC			DC		
Ambient Temperature Manifold Assembly	-20°C + 50°C			-20°C + 50°C		
Max. media Temperature	80°C			80°C		
Manifold Assembly Min. Distance	Yes			Yes		
	0 mm			0 mm		
Rated Voltage UN (V)	Rated Current IN (mA)	Rated Power Pn (VA)	Fuse (mA)	Rated Current IN (MA)	Rated Power Pn (VA)	Fuse (mA)
24	315	7.2	800	421	10.1	800
110	83	9.1	200	76	8.4	160
115	70	8.1	200	-	-	-
120	72	8.6	200	-	-	-
220	35	7.7	100	43	9.5	100
230	37	8.5	100	-	-	-
240	39	9.2	100	-	-	-

DIMENSIONS (mm)



Code	Power VA	Voltage Rating V	Frequency	External Use mA
TNA4X024D4	7.2	24	50 - 60 Hz	315
TNA5X110D4	9.13	110	50 - 60 Hz	83
TNA05224D4	7.7 - 9.24	220 - 240	50 - 60 Hz	35 - 38.5
TNA10024C4	10.1	24	DC	421

According to Directive 2014/34/EU ATEX

2/2 Angle Seat Valves

Normally Closed G1/2" - G2" In Stainless Steel

Type 211A

APPLICATION

Direct acting valve for the on-off control of water, steam, air and oil, compatible with materials of construction.

FEATURES

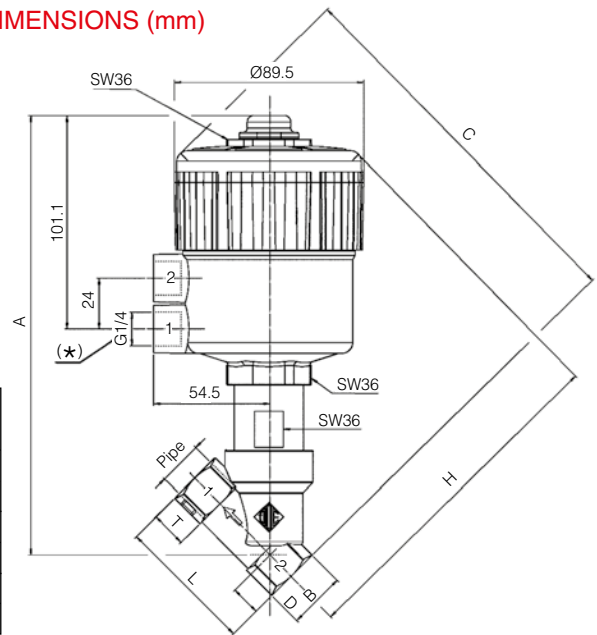
- Proven design
- No minimum operating pressure
- Visual indication of valve state

TECHNICAL DATA

Function: Normally closed
 Ambient temp: -10°C to +160°C
 Fluid temp: -10°C to +180°C
 Viscosity: Max. 37 Cst. 3°E
 Valve material: Stainless steel AISI 316
 Seal: PTFE
 Seal pack: PTFE, Viton
 Actuator: Polyamide 66 with 30% glass fibre
 Gaskets: NBR
 Fluid: Dry or lubricated air, gas and neutral fluids



DIMENSIONS (mm)



(*) Pilot solenoid valve connection

Pipe ISO 228/1	A mm	B mm	C mm	D mm	E mm	H mm	L mm	T mm
G1/2"	206.8	SW 27	178.7	15.4	SW 30	163.3	66	17
G3/4"	211.7	SW 32	188.6	21.9	SW 36	166.7	75.5	19
G1"	220.1	SW 41	197.8	25.1	SW 36	172.7	90	21
G1 1/4"	235.9	SW 50	212.3	28.5	SW 41	183.8	110	24
G1 1/2"	238.9	SW 55	217.0	31.0	SW 41	186	122	25.2
G2"	247.8	SW 70	229.7	37.5	SW 41	192.2	151	28.5

FLOW & PRESSURE RATING CHART (bar)

Pipe Size ISO 228/1	Code	Ø mm	KV l/mn	Pilot pressure		Pressure		Max allowable pressure PS (bar)	Weight Kg
				Min	Max (bar)	Min	Max (bar)		
G1/2"	211A4T15GC2	15	80	4	10	0	16	40	1.4
G3/4"	211A5T20GC2	20	150	4	10	0	10	40	1.5
G1"	211A6T25GC2	25	190	4	10	0	10	40	1.8
G1 1/4"	211A7T32GC2	32	340	4	10	0	7	25	2.4
G1 1/2"	211A8T40GC2	40	430	4	10	0	4.5	25	2.7
G2"	211A9T50GC2	50	620	4	10	0	3	16	3.9

Notes

SOLENOID VALVE DATA SHEET

Company: _____

Contact: _____

Date: _____

Tel: _____

Fax: _____

Application: _____

Valve Type	2 Way	3 Way							
Function	N/C	N/O	Divert						
Port Size	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Orifice Dia.									
Voltage	AC	DC							
Supply Source	Mains	Tr'former	Battery	Other					
Line Pressure	Inlet:		Outlet:						
Line Media									
Line Temperature	0 – 90c NBR	0 – 130c Viton	0 – 130c EPDM	0 – 180c RUBY					
Body Material	Brass		ST/ST						

Flow Required: _____

Frequency of Operation: _____

Quantity: _____

Notes: _____



ODE, Italy