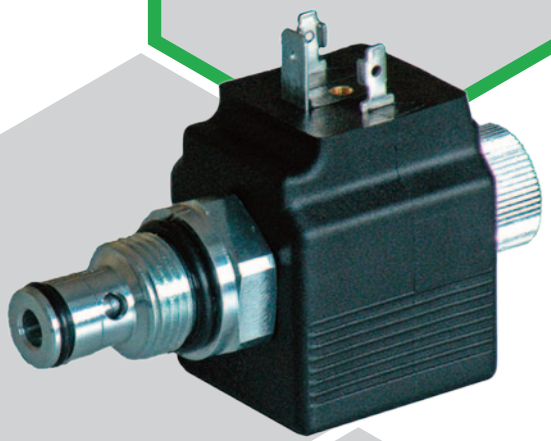
HYDRECO
a member of DAIKIN group

KT**

POPPET SOLENOID VALVES, CARTRIDGE

KT08	max 350 bar	40 l/min
KT10	max 350 bar	80 l/min
KT12	max 350 bar	150 l/min



TECHNICAL CATALOGUE

KT_EN_2024_01

INTRODUCTION

The KT* are 2-port pilot operated poppet valve, actuated by solenoid.

They are available in three nominal sizes, normally closed version (NC) or normally open version (NO) in standard configuration (S), reverse flow (R) or double seal (D), with nominal flow rate up to 150 l/min.

Manual override is available.

FLUIDS

Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department.

Using fluids at temperatures higher than 80 °C (180 °F) causes the accelerated degradation of seals as well as the fluid physical and chemical properties.

Concerning safety standpoint, temperatures above 55 °C (130 °F) are not recommended.

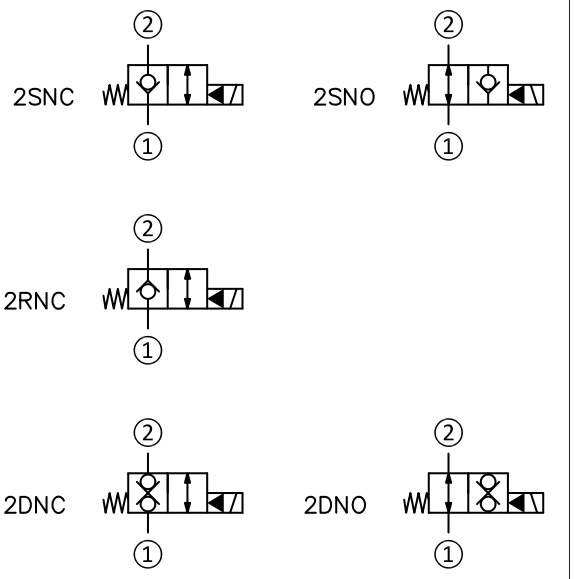
KT** OPERATING PARAMETERS

MAXIMUM OPERATING PRESSURE		350 bar	5000 psi
MAX INTERNAL LEAKAGES AT 350 BAR		0.25 cm³/min	
FLOW CAPACITY	KT08	40 l/min	10.6 gpm
	KT10	80 l/min	21.1 gpm
	KT12	150 l/min	39.7 gpm
CAVITY	KT08	SAE08	
	KT10	SAE10	
	KT12	SAE12	

SWITCHING TIMES 0→100 / 100→0	KT08-2SNC KT08-2SNO KT08-2RNC KT08-2DNC KT10-2SNO	30 ms	60 ms
	KT10-2RNC	50 ms	70 ms
	KT08-2DNO KT10-2SNO	100 ms	50 ms
	KT12-2SNC	40 ms	90 ms

TEMPERATURE RANGE	ambient	-20 to +54 °C	- 4 to +130 °F
	fluid	-20 to +82 °C	- 4 to +180 °F
FLUID VISCOSITY	range	7.4 - 420 cSt	50.3 - 1950 SUS
	recommended	25 cSt	120 SUS
FLUID CONTAMINATION		ISO 4406:1999 class 20/18/15	

HYDRAULIC SYMBOLS



CARTRIDGES FOR SAE CAVITIES

KT □ -2 □ □ - □ □ - N □ -1 ——— design mark

FUNCTION	
KT	solenoid actuated poppet valve

CAVITY	
08	3/4 -16 UNF-2B
10	7/8 -14 UNF-2B
12	1/16 -12 UN-2B

PORTS	
2	2-ports

SEAL TYPE (refer to the availability table here below)	
S	2 to 1 (**standard**)
R	1 to 2 reverse seal
D	double seal

VOLTAGE	
D12	12 V DC solenoid
D24	24 V DC solenoid
D00	without coils (retainer and seals are supplied)

NORMAL POSITION	
NC	normally closed
NO	normally open

SEAL	
N	NBR

COIL	
K1	DIN 43650
K2	AMP Junior
K7	DT04-2P 'deutsch'

MANUAL OVERRIDE	
N	no override, blind
K2	push and twist

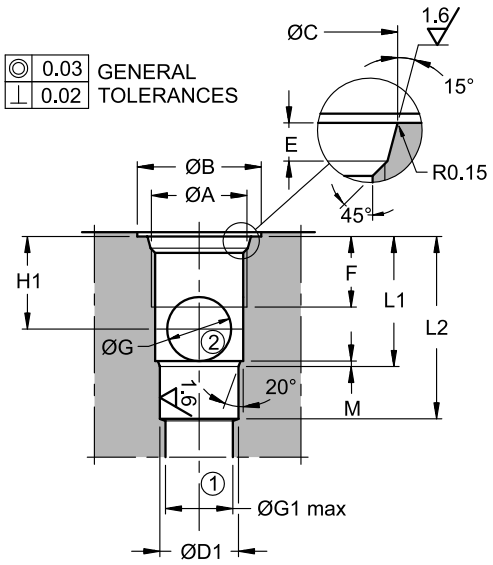
AVAILABILITY

	SAE CAVITY 08	10	12
2SNC	■	■	■
2RNC	■	■	-
2DNC	■	-	-
2SNO	■	■	-
2DNO	■	-	-

CODE EXAMPLES:

KT08-2SNO-D00-NK2-1
KT08-2SNO-D12K7-NK2-1

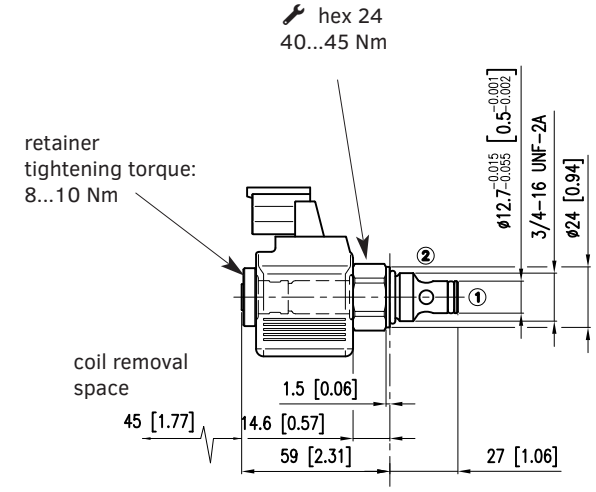
SAE CAVITIES

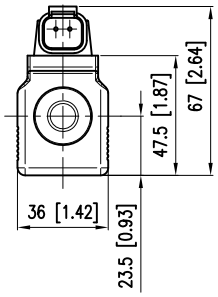


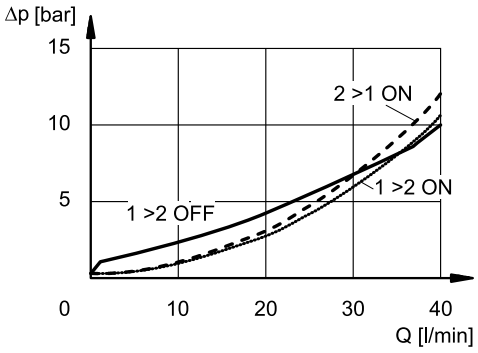
	KT08	KT10	KT12
cavity	SAE 08-2N	SAE 10-2N	SAE 12-2N
øA	3/4-16 UNF-2B	7/8-14 UNF-2B	1-1/16 12 UN-2B
øB	26	30	35
øC	$20.6^{+0.1}_{0}$	$23.9^{+0.1}_{0}$	$29.2^{+0.1}_{0}$
øD1	$12.7^{+0.05}_{0}$	$15.87^{+0.05}_{0}$	$22.22^{+0.05}_{0}$
E	$2.6^{+0.3}_{0}$	$2.6^{+0.3}_{0}$	$3.3^{+0.3}_{0}$
F	13	15	20
øG	9	11.75	18
øG1 max	12	15	19
H1	14	17.5	25.3
L1	$20.5^{\pm0.3}$	$25.5^{\pm0.3}$	$36.5^{\pm0.3}$
L2	$29^{\pm0.3}$	$34.5^{\pm0.3}$	$48^{\pm0.3}$
M	1.5	1.5	1.6

KT08-2SNC

dimensions in mm [in]

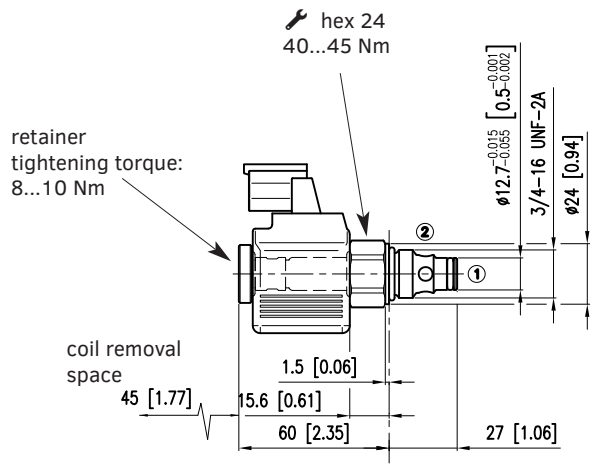


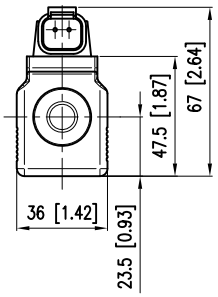


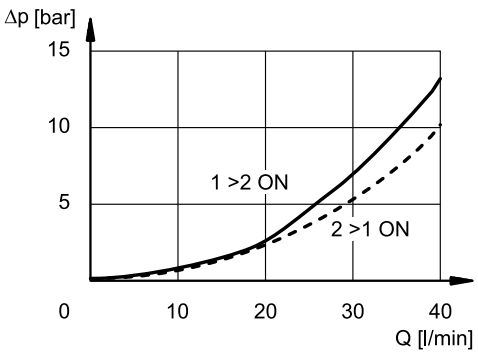


KT08-2DNC

dimensions in mm [in]

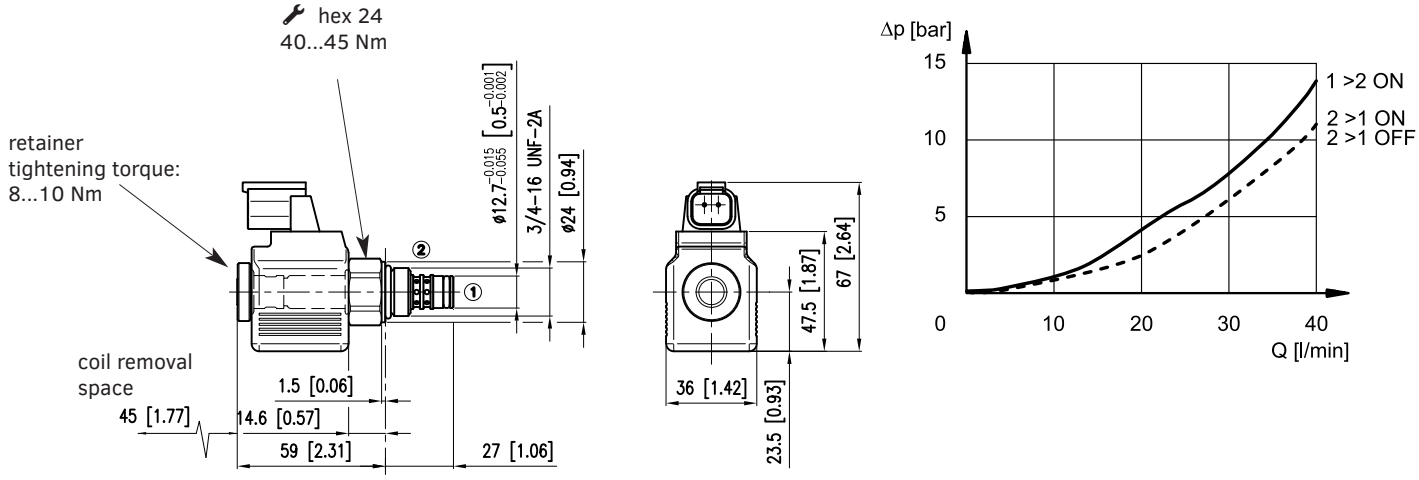






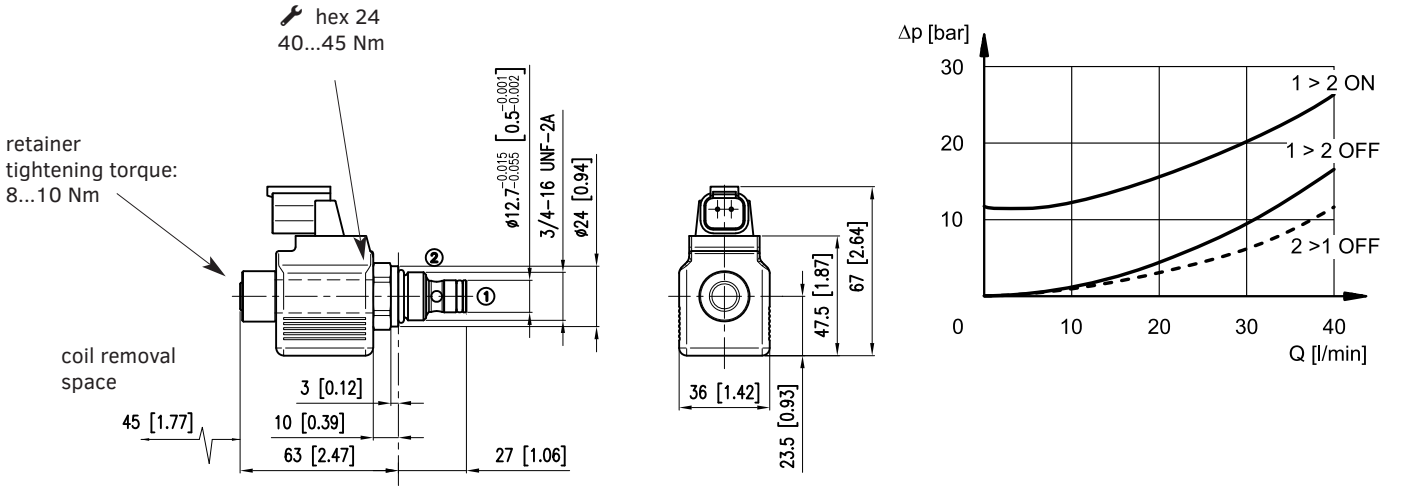
KT08-2RNC

dimensions in mm [in]



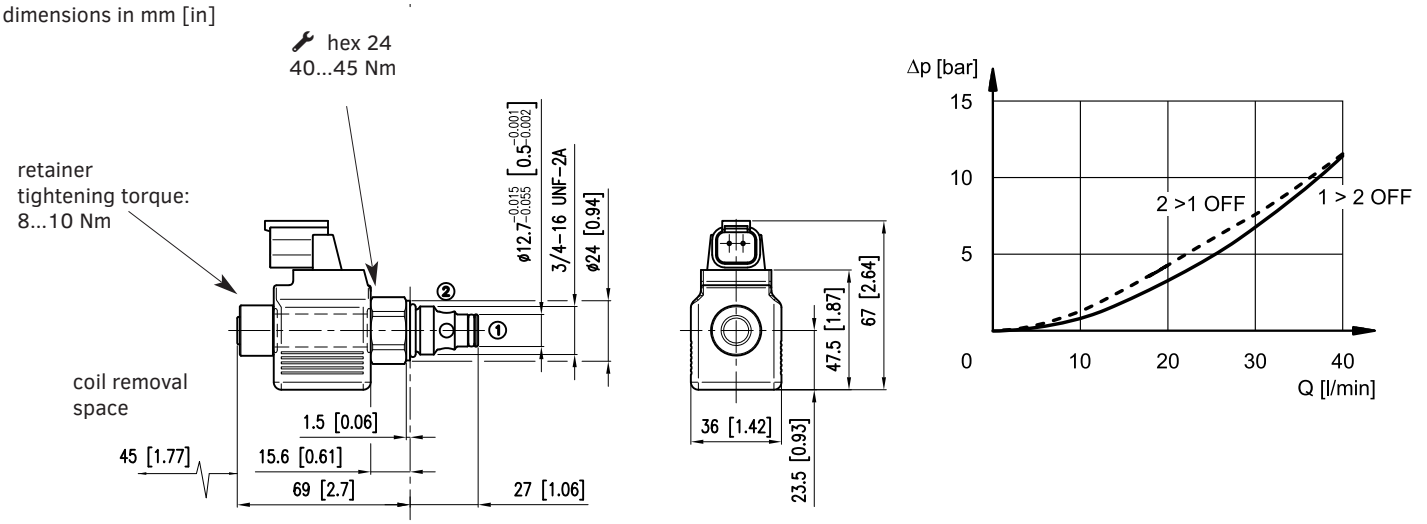
KT08-2SNO

dimensions in mm [in]



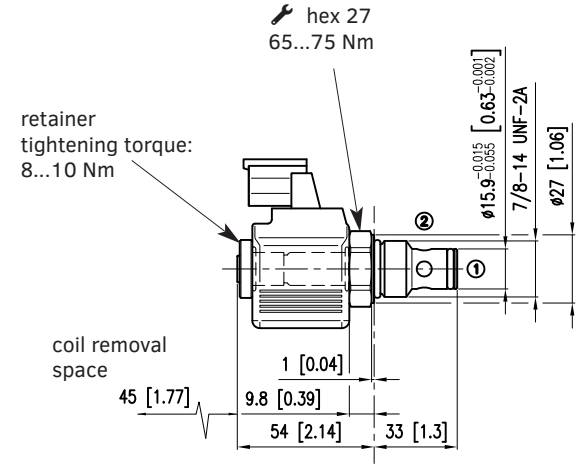
KT08-2DNO

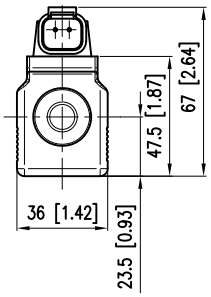
dimensions in mm [in]

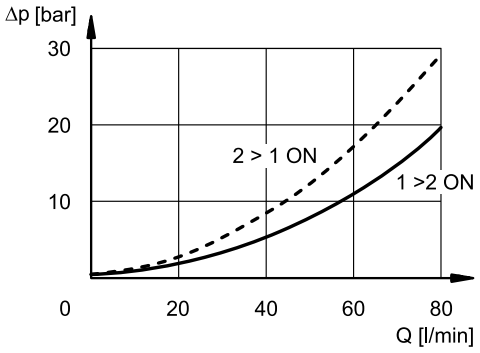


KT10-2SNC

dimensions in mm [in]

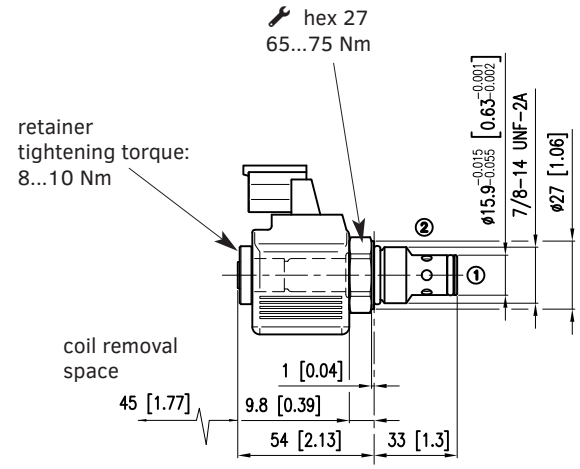


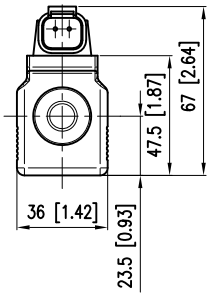


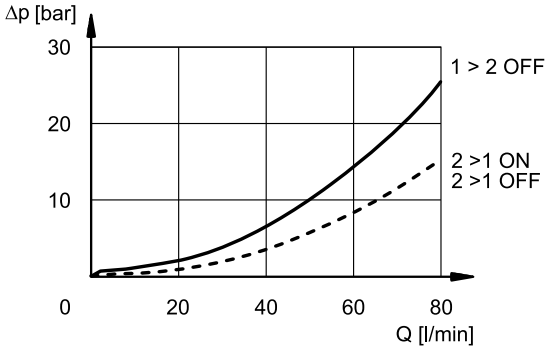


KT10-2RNC

dimensions in mm [in]

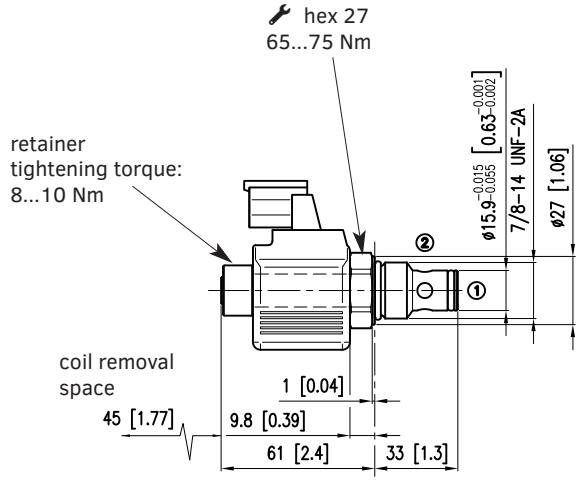


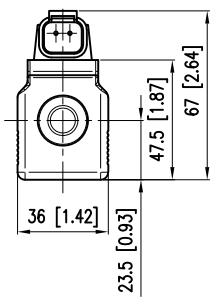


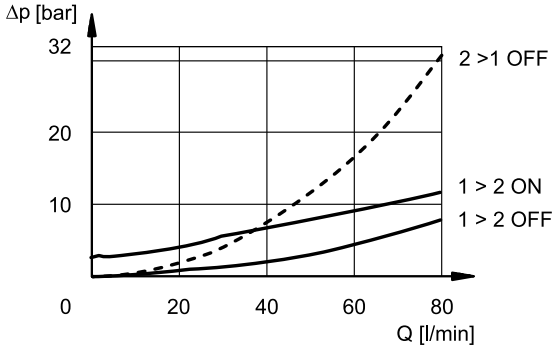


KT10-2SNO

dimensions in mm [in]

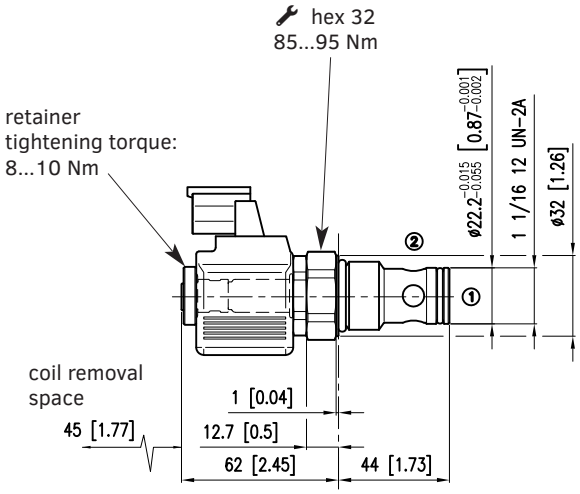


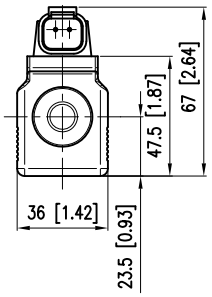


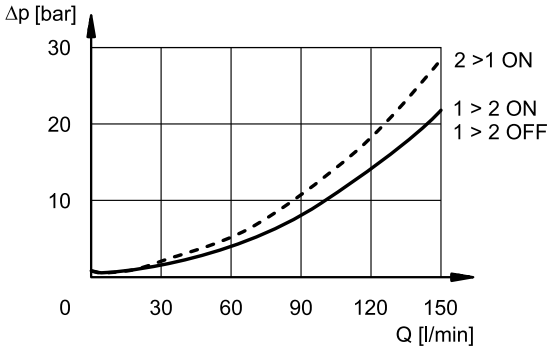


KT12-2SNC

dimensions in mm [in]







Solenoid is made up of two parts: tube and coil.

The tube is integrated in the cartrige. The coil is fastened to the tube by a retainer, and can be indexed 360°, to suit the clearance space.

Seals between coil and tube guarantee the IP protection degree.

Contact us to order coils as spare parts.

DUTY CYCLE		100%
MAXIMUM SWITCH ON FREQUENCY		10,000 cycles/hr
SUPPLY VOLTAGE FLUCTUATION		±10% Vnom
ELECTROMAGNETIC COMPATIBILITY (EMC)		2014/30/EU
LOW VOLTAGE		2014/35/EU
PROTECTION CLASS FOR INSULATION	copper wire	class H (200 °C)
	coil	class F (155 °C)

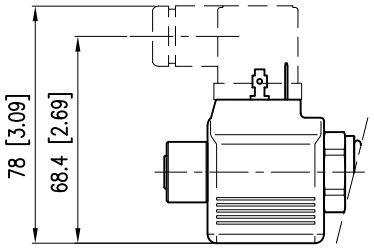
Electrical data of coils

	Nominal voltage [V] ± 10%	Resistance at 20°C [Ω] ± 7%	Current consumpt. [A]	Power consumpt [W]
D12	12	6.5	1.84	22
D24	24	26.2	0.92	22

Declared IP degrees are intended according to EMC 2014/30/EU, only for both valve and connectors of an equivalent IP degree, installed properly. Valves with manual override are to be intended IP65 always.

Mating connectors are not included in solenoid valves delivery. Connectors for K1 coils can be ordered separately.

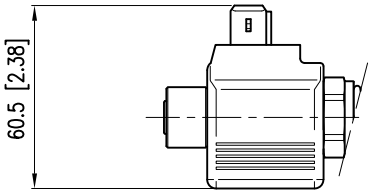
K1



DIN 43650 (EN 175301-803)
Mating connectors type ISO 4400 / DIN 43650 (EN 175301-803).

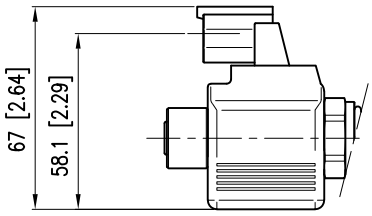
IP degree of electrical connection: IP65
IP degree of whole valve: IP65

K2



AMP Junior
IP degree of electrical connection: IP65/IP67
IP degree of whole valve: IP65

K7



DEUTSCH DT04 MALE
IP degree of electrical connection: IP65/IP67
IP degree of whole valve: IP65

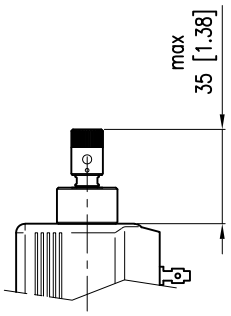
Valves can be delivered with push and twist manual override (K2 code) or without any override (N code).

The override K2 type is activated by pressing and turning the knob (clockwise for NO versions, anticlockwise for NC versions); it is disengaged by pressing and turning the knob again in the opposite direction. A small spring allows the knob to return to its initial position.

The shape is different depending on NC or NO version.

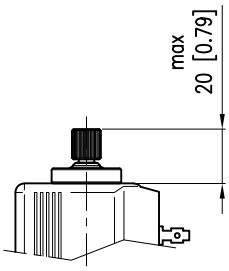
NO VERSIONS

Code K2



NC VERSIONS

Code K2



HYDRECO

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Hydreco Hydraulics - Version Control Number: KT_EN_2024_01

QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001:2015

www.hydreco.com

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