D Series Ex d Stainless Steel

2 and 3 Way Direct Acting Solenoid Valve Ex d IIC T4/T6
Flame Proof Stainless Steel Enclosure

DHD2SK-CM

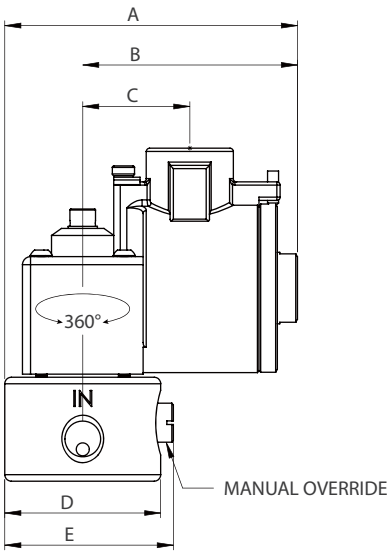
[FEATURES]

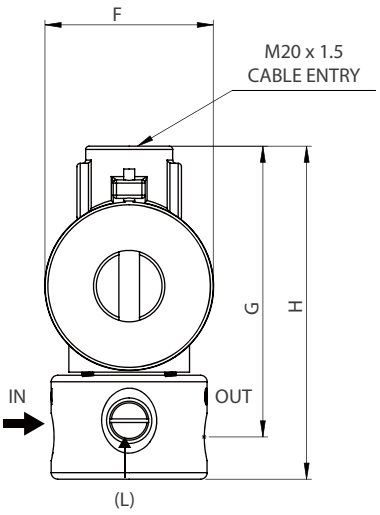
- Integral terminal box with coil housing.
- Valve do not require minimum operation pressure.
- Valve operation is not affected by mounting position.
- Wide range of voltages available.
- Low power consumption.
- Convenient fixing holes to enable bracket mounting.

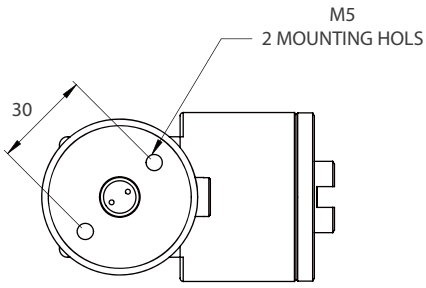
[INTRODUCTION]

3 port 2 position direct acting, normally closed solenoid valve, for the operation of single acting pneumatic devices. Suitable for Zone 1 and 2, manufactured in accordance with the requirements of the European harmonized standards EN50014 and EN50018.

[DIMESION]

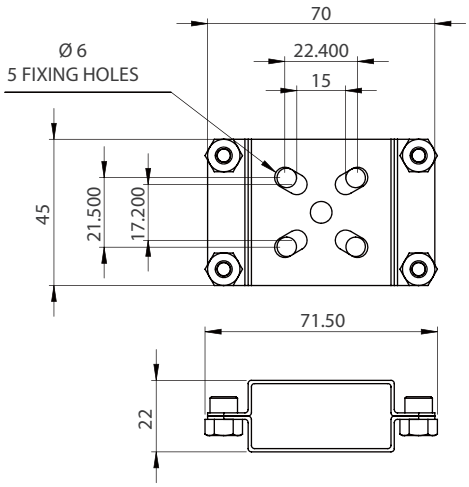




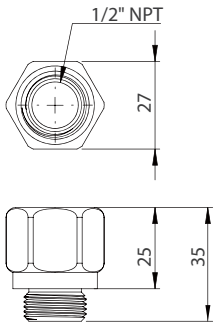


BOTTOM VIEW

Mounting Bracket (L)



M20 Male To 1/2" NPT Female Thread Adaptor (C)



	DIMENSIONS (mm)							
VIEW BY SIZE	A	B	C	D	E	F	G	H
1/4" NPT - 3/8" NPT	90	66	33	48	52	51.80	90	102

[VALVE]

MATERIAL SPECIFICATION	STANDARD
Body	Aluminum and Stainless Steel 316
Seals	H-NBR

VALVE SPECIFICATION	STANDARD
Port Connection Size	1/4" - 3/8" NPT
Working Pressure Internal Pilot Version	0 to 8 bar
Cv Factor	0.1
Maximum Ambient Temperature	+65°C
Minimum Working Temperature	-10°C

[COIL]

MATERIAL SPECIFICATION	STANDARD
Coil Case	Stainless Steel Epoxy Powerder Coated
Armature	Magnetic Solenoid Quality Stainless Steel
Springs	Stainless Steel
Seals and Seat	Viton
Coil Former	30% Glass Filled PBT
Magnetic	Class H Coated Copper

SOLENOID	STANDARD	
Type	DC Solenoid Coil	AC Solenoid
Voltage Standard	12, 24, 48, 110	24, 48, 110, 220, 415, 50/60 Hz
Coil Rating	Class H	Class H
Voltage Tolerance	±10%	±10%
Ambient Temperature	-10 to +80°C	-10 to +55°C
Duty Cycle	100%	100%
Degree of Protection	IP66	IP66
Connection	Junction Box with M20 Entry	Junction Box with M20 Entry
Power Consumption	3W (standard), 1.3W (optional)	Pull in - 9.5VA, Holding - 5A
Pressure Range	0 - 8 Bar	0 - 8 Bar

TEMP. RATING	PHASE	RATING	MAX. AMBIENT TEMP.	MAX. CABLE ENTRY TEMP.
T6	DC	3W	40°C	N/A
T4	AC	9.5va	40°C	90°C
T5	DC	3w	55°C	N/A
T3	AC	9.5va	55°C	105°C
T4	DC	3W	65°C	85°C
T4	DC	3W	80°C	105°C

[PRODUCT CODE]

D	●	D	●	●	●	●
COIL	VOLTAGE	SERIES CODE	PORT	VALVE MATERIAL	FUNCTION	OPTION

COIL

D AAV6360D00 RGS AV636D00 Ex d IIC Operator with Stainless Steel.

VOLTAGE

B 24V DC

H 24V DC
Low Power 1.3 Watt

T 110V AC (50/60 Hz)

U 240V AC (50/60 Hz)

PORT

2 1/4" CV1.0

3 3/8" CV1.0

VALVE MATERIAL

S Stainless Steel

A Alloy Aluminum

FUNCTION

K 3/2 Direct Operated

OPTION

C 1/2" NPT Electric Conduit

M Manual Override

L Mounting Bracket

X Customized (Additional Code is required)

H High Temperature FKM Seal

[INTRINSIC SAFETY]

Intrinsic safety is the safest form of protection for electrical equipment operating in potentially hazardous atmospheres. Intrinsic safety (IS) is based on the principle of restricting the electrical energy available in hazardous area circuits such that any sparks or hot surfaces that may occur as a result of electrical faults are too weak to cause ignition.

An intrinsically safe system consists of a certified IS interface which passes signals to and from the process (hazardous area) but limits the energy (that is voltage and current) that can reach the hazardous area under fault conditions.

The interface is usually mounted in the safe area and can be either a shunt diode safety barrier or a galvanic isolator.

In the hazardous area 'simple' or 'non-energy storing devices' (switches thermocouples & LED's) can be used without certification but 'Energy-storing' equipment such as solenoid valves must be designed so as to prevent this energy escaping and of necessity need to be of sufficiently low power to operate within the constraints of the IS signal.

[HAZARDOUS AREA SOLENOID VALVE]

The RGS EP000/ia solenoid coil is approved for this duty and is certified safe for all classified areas of hazard and gasses when installed in accordance with an approved system. The coil is protected by diodes which suppresses the inductance, effectively to zero, and there is no capacitive characteristics in the coil either.

The coil assembly, which is encapsulated, forms a compact solenoid actuator to interchange with the standard (non-hazardous duty) coil fitted to the 3 and 4 way spool valves.

The IS coil because of its low wattage requires that the spring load and travel of the armature be closely controlled and for this reason each solenoid has an inbuilt adjustable jet which is factory set so as to control the operating characteristics of the coil. Where the IS solenoid actuator is fitted to the spool valve, the jet in the end cap which is required for the normal coil, is removed.

[SOLENOID VALVE CONTROL SYSTEM]

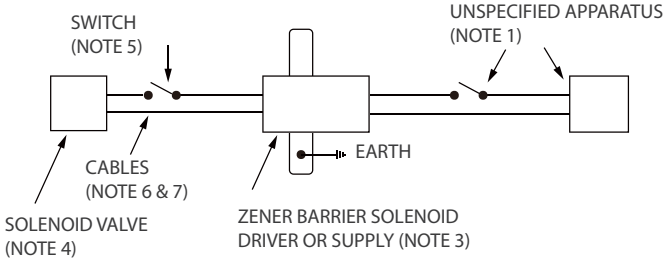


TABLE 1 (NOTE 7)

GROUP	CAPACITANCE (µF)	INDUCTANCE (mH)	L/R RATIO (µH/ohm)
IIC	0.13	1.32	40
IIB	0.39	3.96	120
IIA	1.04	10.56	320

NOTE 1
This apparatus is unspecified except that it must not contain under normal or abnormal conditions a source of potential with respect to earth in excess of 250V R.M.S. or 250V DC.

NOTE 2
The electrical circuit in the Hazardous area must be capable of withstanding an AC test voltage of 500V R.M.S. to earth of frame of the apparatus for one minute.

NOTE 3
Any single channel or single channel of a multiple channel shunt zener diode safety barrier, solenoid driver or supply certified by any EU notified certification body to [EExia] IIC, Whose output voltage (Uz, U max. : out OR Uo) does not exceed 28V and whose output current (I max. : out OR Io) is limited by resistance 'R' such that the output voltage (Uz, U max. : out OR Uo) does not exceed 25.5V and whose output current (I max. : out OR Io) is limited by resistance 'R' such that the output voltage divided by 'R' does not exceed 147mA.

NOTE 4
R.G.S. solenoid valve covered by Certificate of Conformity BAS. No. EX822147 to category EExia IIC T6.

NOTE 5
Switch must be selected and installed to meet the requirements of clauses 4.1 and 5 of EN50 020.

NOTE 6
The cable maybe twin pair, or a pair contained in a type A, or type B multicore cable (as defined in class 5.3 of EN50 039), provide that the peak voltage of any circuit contained within the multicore does not exceed 60 volts.

NOTE 7
The capacitance and inductance to resistance ratio of the hazardous area cables must not exceed the values shown in table 1.