D Series EEx me Aluminum

2 and 3 Way Direct Acting Valve EEx me II T5
Aluminum Encapsulated Coil

9UD2SK-CM

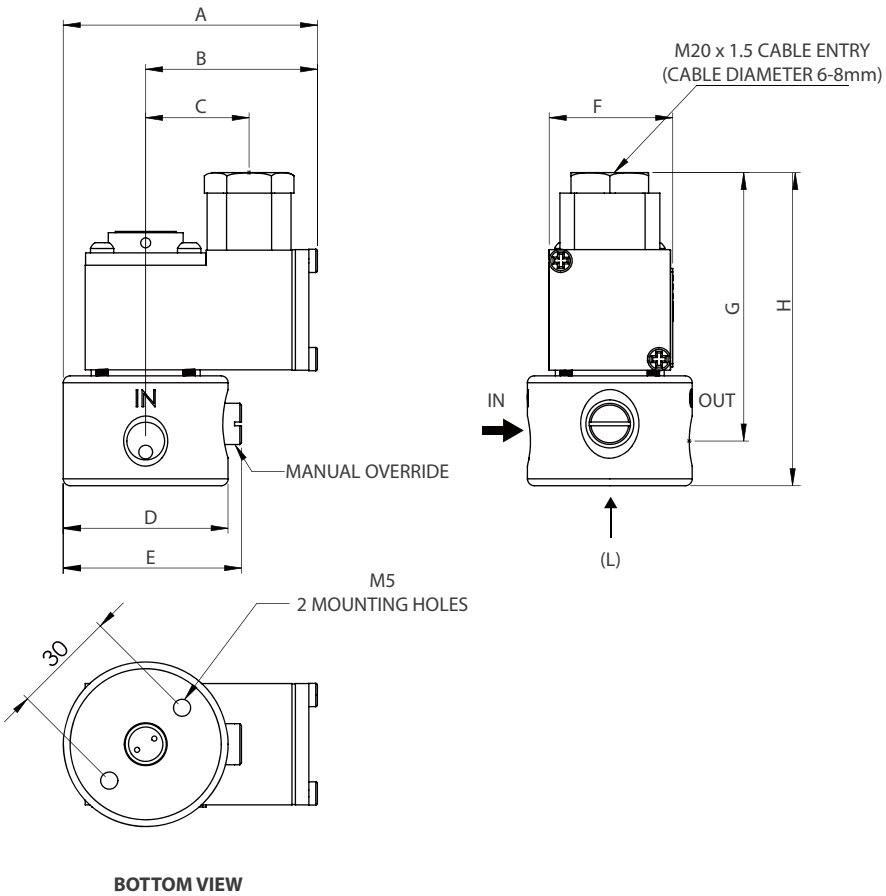
[FEATURES]

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

[INTRODUCTION]

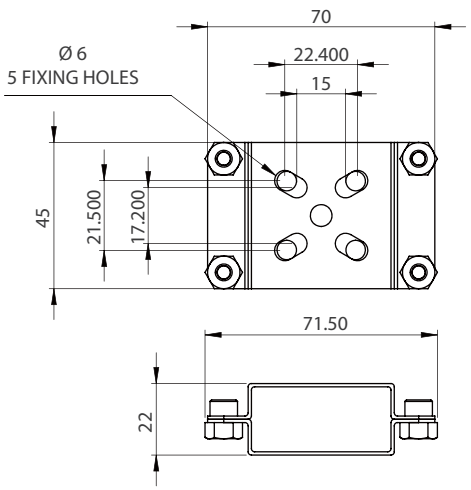
3 port 2 position direct acting, normally closed solenoid valve, for the operation of single acting pneumatic devices. Suitable for Zones 1 and 2, manufactured in accordance with the requirements of the European harmonized standards EN50014. EEx me II T5.

[DIMESION]

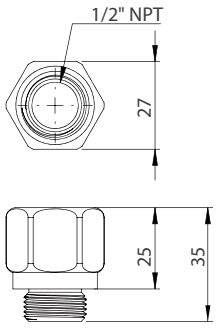


BOTTOM VIEW

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	74	50	30	48	52	36	78	91

[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	Zinc Alloy 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
Voltage Tolerance	±10%	±10%
Ambient Temperature	-20 to +65°C	-20 to +65°C
Duty Cycle	100%	100%
Degree of Protection	IP66	IP66
Connection	Junction Box with M20 Entry	Junction Box with M20 Entry
Power Consumption	0.5 Watts	Pull in - 10VA, 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]

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

COIL

A AV636900 RGS AV636900 EEx me Operator With Aluminum Enclosure.

VOLTAGE

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

[ENCAPSULATION SAFETY]

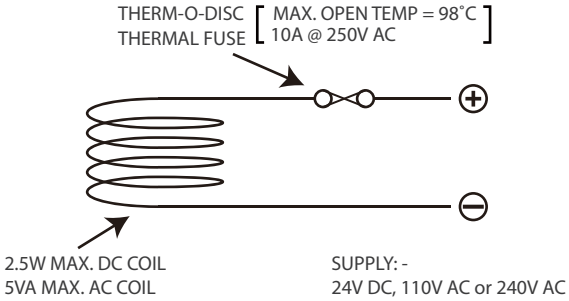
Type 'm' (Encapsulation) is a type of protection in whitch the parts which could ignite an explosive atmosphere by either sparking or heaying are encloses in a compound in such a way that the explosive atmosphere cannot be ignited.

The R.G.S. 'm' coil is housed in a metal enclosure which is potted with epoxy resin to form a hermetically sealed unit. A thermal fuse is embedded in the resin to prevent the coil overheating in the event of a fault.

[CABLE GLANDS AND CABLE]

The coil must be protected for a propective short circuit current of 4000A by providing a fuse in the supply with a breaking capacity of 4000A. The recommended rating for each fuse is 250mA for all EEx'm' coil voltages.

[COIL CIRCUIT]



[METHODS OF PROTECTION]

The generic term for all methods of protection of electrical equipment used in Europe is ' explosion proof '. American practice is to use this term for flameproof equipment. The table lists the more usual methods of protection.

TECHNIQUES	
Oil Immersion	o
Pressurisation	p
Powder Filling	q
Flameproof Enclosure	d
Increased Safety	e
Intrinsically Safe	ia
Intrinsically Safe	ib
Non-incendive	N
Encapsulation	m
Special Protection	s

[SOLENOIDS VALVES IN HAZARDOUS AREAS]

Not all of these methods are applicable to solenoid protection, the more commonly used are listed below.

1. Flameproof This form of protection entails enclosing the coils in a robust enclosure which will contain an internal explosion should it occur and prevent its transmission to the surrounding atmosphere.

2. N-Type Protection (Non-incendive) Generally applied to non-sparking electrical components such as a solenoid coil which will not get abnormally hot even if the armature is locked out.

3. Encapsulation This involves enclosing the coil and any associated electrical components in a compound so as to prevent the ignition of a surrounding explosive atmosphere.

4. Intrinsically Safe Intrinsic safety is a technique that achieves safety by limiting the electrical-spark energy (and surface temperature) that can aries in hazardous area circuits to levels that are insufficient to ignite an explosive atmosphere.

An intrinsically safe system consists of a certified Intrinsically safe 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.

5. Special Protection Offers combination of one or more methods of protection and in the case of solenoids these are usually 'e' and 'm', where the coil is encapsulated, has over temperature protection and the terminals are approved under the increased safety requirement.