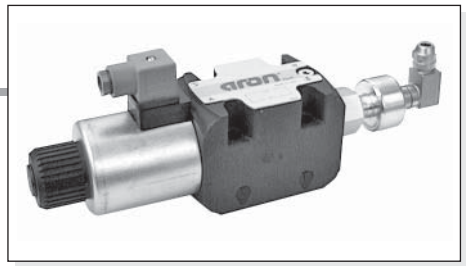


ADP.5.V... WITH PROXIMITY SENSOR L.V.D.T. CETOP 5/NG10

brevini

ADP.5.V...	
"D19" DC SOLENOIDS	CH. I PAGE 41
STANDARD CONNECTORS	CH. I PAGE 20
L.V.D.T.	CH. I PAGE 22

The ARON NG10 directional control valves are designed for subplate mounting with an interface in accordance with UNI ISO 4401 - 05 - 04 - 0 - 94 standard (ex CETOP R 35 H 4.2-4-05).

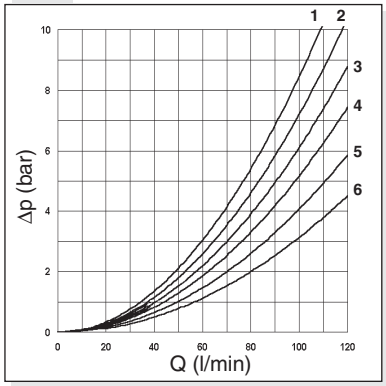
The single solenoid directional valves type ADP5V are used in applications where the monitoring of the position of the spool inside the valve is requested to manage the machine safety cycles in according with the accident prevention legislation. These directional valves are equipped with an horizontal positioned inductive sensor on the opposite side of the solenoid, which is capable of providing the first movement of the valve when the passage of a minimum flow is allowed. Integrated in safety systems, these valves intercept actuator movements that could be dangerous for the operators and for the machine.

- **Possible mountings: E / F**
- **The solenoid is in DC voltage only**

Max. operating pressure: ports P/A/B	350 bar
Max. operating pressure: port T (*)	250 bar
Max. flow	120 l/min
Max. excitation frequency	3 Hz
Duty cycle	100% ED
Fluid viscosity	10 ÷ 500 mm²/s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Type of protection (in relation to connector used)	IP 66
Weight	6,2 Kg

(*) Pressure dynamic allowed for 2 millions of cycles

PRESSURE DROPS



The diagram at the side shows the pressure drop curves for spools during normal usage. The fluid used is a mineral oil with a viscosity of 46 mm²/s at 40°C; the tests have been carried out at a fluid temperature of 40°C. For higher flow rates than those in the diagram, the losses will be those expressed by the following formula:

$$\Delta p1 = \Delta p \times (Q1/Q)^2$$

where Δp will be the value for the losses for a specific flow rate Q which can be obtained from the diagram, Δp1 will be the value of the losses for the flow rate Q1 that is used.

Spool type	Connections				
	P→A	P→B	A→T	B→T	P→T
01	3	3	5	5	
02	4	4	6	6	5
66	3	3	6	5	
06	3	3	5	6	
16	1	1	2	2	
	Curve No.				

ORDERING CODE

ADP	High performances directional control valve
5	CETOP 5/NG10
V	Directional valve with single solenoid and L.V.D.T. proximity sensor
***	Spool and mounting (table 1)
*	Voltage (table 2)
**	Variants (table 3)
1	Serial No.

TAB.2 - DC VOLTAGE

DC VOLTAGE **		
L	12V	
M	24V	
N	48V*	115Vac/50Hz 120Vac/60Hz with rectifier
P	110V*	
Z	102V*	230Vac/50Hz 240Vac/60Hz with rectifier
X	205V*	
W	Without DC coils and connectors	

Voltage codes are not stamped on the plate, their are readable on the coils.

* Special voltage
** Technical data see page I • 41

TAB1 - STANDARD SPOOL

ONE SOLENOID			
Spool type		Covering	Transient position
01E		+	
01F		+	
02E		-	
02F		-	
66E		-	
06F		-	
16E		+	
16F		+	
32E		+	

TAB.3 - VARIANTS

VARIANTS	CODE
No variant (without connectors)	S1(*)
Rotary emergency button	P2(*)
Without proximity connector LVDT	S3
Without coils and proximity connector	S4
With solenoid chamber external drainage (Y)	S5(*)
Other variants available on request.	

(*) Coils with Hirschmann connection supplied without connectors. The connectors can be ordered separately, ch. I page 20.

CE **registered mark for industrial environment with reference to the electromagnetic compatibility.**

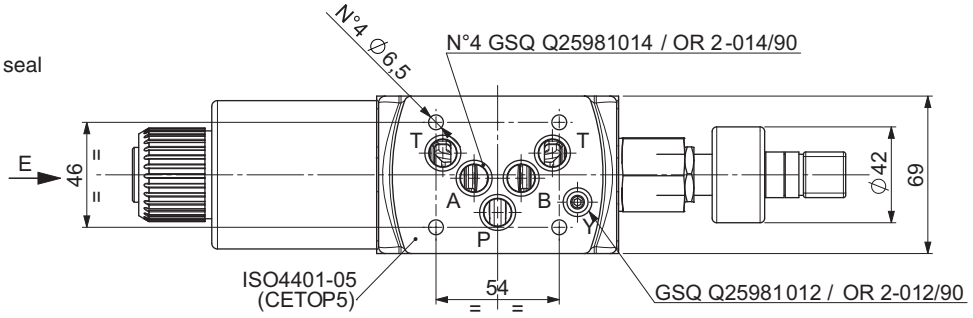
European norms:

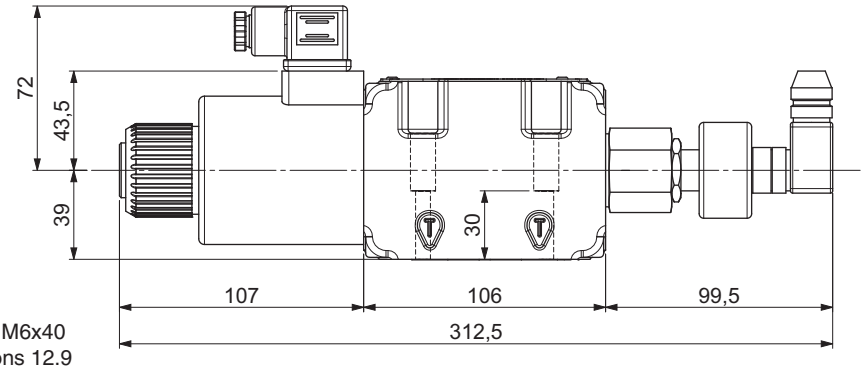
- EN50082-2 general safety norm - industrial environment
- EN 50081-1 emission general norm - residential environment

OVERALL DIMENSIONS

E = Manual override

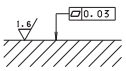
GSQ = Square section seal

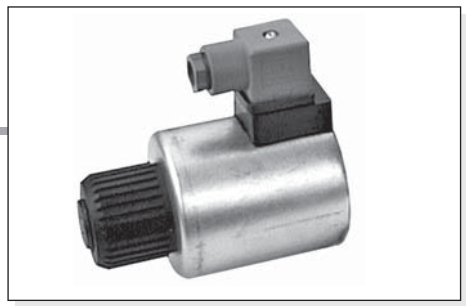




Fixing screws UNI 5931 M6x40
with material specifications 12.9
Tightening torque
8 ÷ 10 Nm / 0.8 ÷ 1 Kgm

Support plane
specifications





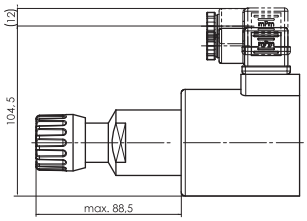
"D19" DC SOLENOIDS

brevini

Type of protection (in relation to the connector used)	IP 66
Number of cycle	18.000/h
Supply tolerance	±10%
Ambient temperature	-54°C ÷ 60°C
Duty cycle	100% ED
Max static pressure	210 bar
Insulation class wire	H
Weight	1,63 Kg

ROTARY EMERGENCY

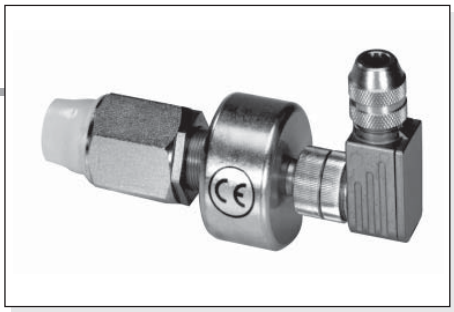
WITHOUT CONNECTOR (**P2**)
WITH CONNECTOR (**P1**)



VOLTAGE (V)	MAX WINDING TEMPERATURE (AMBIENT TEMPERATURE 25°C)	RATED POWER (W)	RESISTANCE AT 20°C (OHM) ±10%
12V	105°C	42	3.43
24V	105°C	42	13.71
48V*	105°C	42	55
102V(*)(**)	105°C	42	248
110V(*)(**)	105°C	42	288
205V(*)(**)	105°C	42	1000

* Special voltage

** The european low voltage directive is applied to electronical equipments used at a nominal voltages between 50 and 1000 VAC or 75 and 1500 VDC. In conformity with the low directive each part of the manifold or the subplate on which the valve is mounted should be connected to a protective earth with a resistence less than 0.1 ohms.



PROXIMITY SENSOR TYPE L.V.D.T.

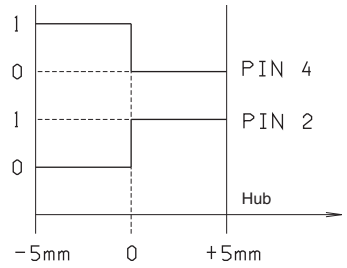
brevini

Supply voltage	24 V ± 20%
Polarity reversal protection	max 300 V
Switching point hysteresis	≤ 0,06 mm
Reproducibility	± 0,02 mm
Max. output current	≤ 250 mA
Protection against short circuit	yes
Operating temperature	-25°C ÷ 85°C
Connection type	connector
Protection according to DIN	IP65
Max. pressure	315 bar

CE certificate according to 89/336/EEC EMC is provided. A screened cable is needed.

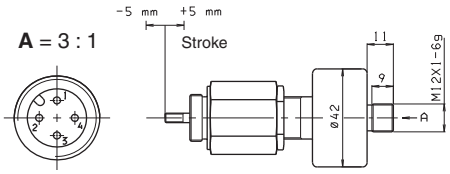
The LVDT position transducers allow to check exactly the very instant when the passage of a minimum flow is allowed.

FUNCTIONAL DIAGRAM ON PIN 2 AND 4

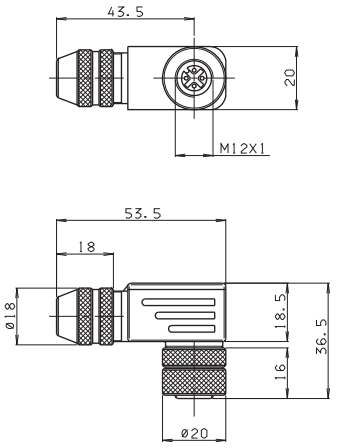


0 = Voltage Pin 2 and Pin 4 < 1,8 V
1 = Voltage Pin 2 and Pin 4 24 V ± 20%

OVERALL DIMENSION LVDT



OVERALL DIMENSIONS CONNECTOR

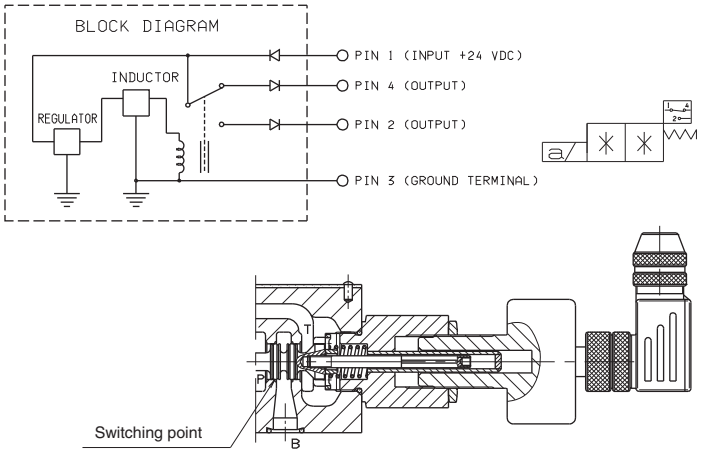


Type of protection IP67
Ambient temperature -40°C ÷ 85°C

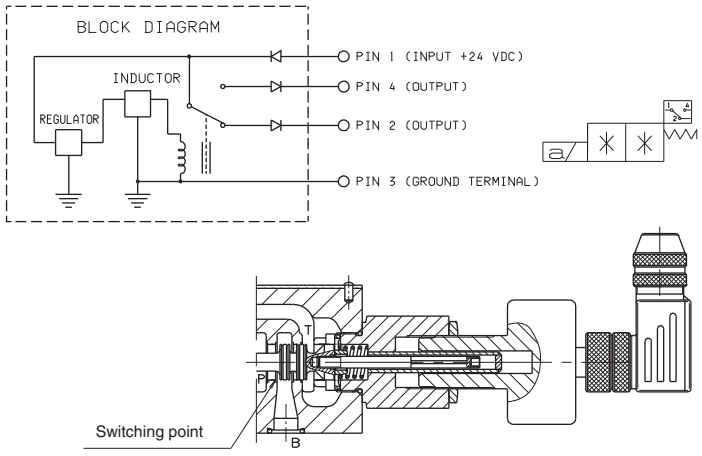
Ordering code: V86400003

ELECTRICAL CONNECTIONS LVDT

A With this connection, on the Pin 4 an output signal is active when no oil is crossing the valve (from P → B).



B With this connection, on the Pin 4 there is no output signal when oil is crossing the valve (from P → B).



NB:
connecting the output to Pin 4 or Pin 2 the type of contact, normally closed or open, can be chosen.