

CEP.S.. ELECTRONIC AMPLIFIER PLUG VERSION FOR SINGLE SOLENOID PROPORTIONAL VALVE.



The electronic amplifier Plug version was designed in compliance whit EN 175301-803 (ex DIN43650), for direct mounting on the valve solenoid. The CEP.S can used whit proportional valves XD.*.A..., XDP.*.A..., XP.3..., XQP.*..., CXQ.3..

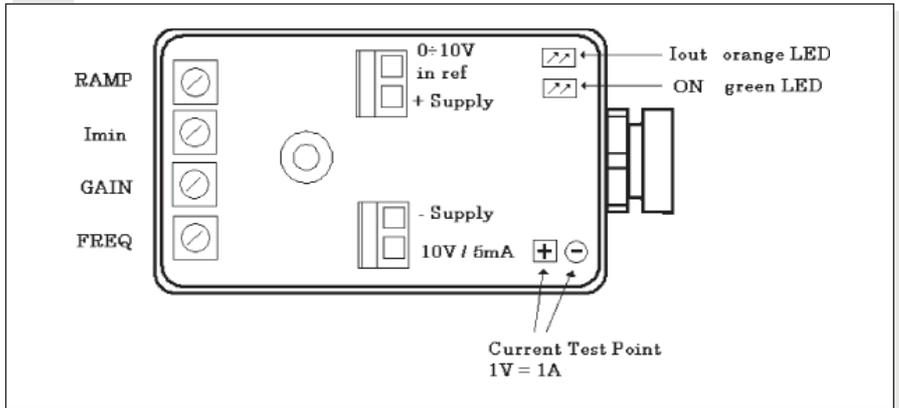
The output stage operates on the pulse width modulation principle (P.W.M.) and is provided with current feedback in order to obtain a solenoid output current proportional to the reference input signal.

Gain, minimum current and rise and fall ramp time adjustments are possible through the corresponding potentiometers fitted on top side of the card, and can be accessed by slackening the relative screw and opening the cover of the connector. While the output current to the solenoid can be measured via the Valve Current test points.

CEP.S...

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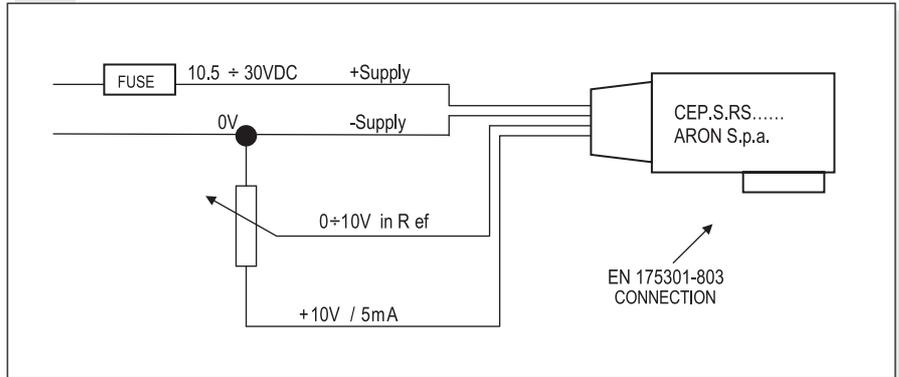
SETTINGS TOPOGRAPHY



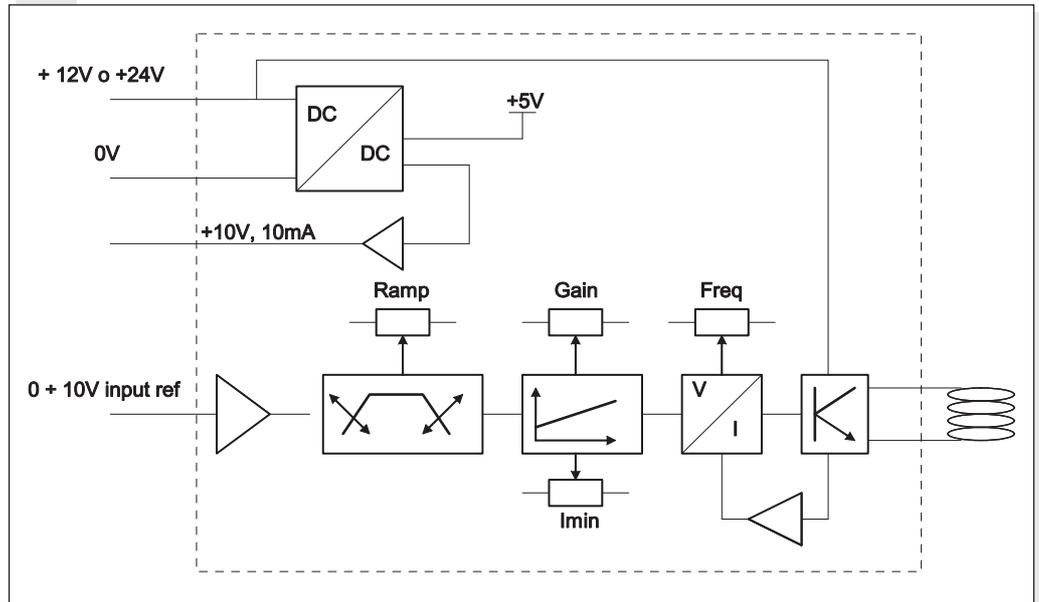
ORDERING CODE

- CEP** Electronic amplifier Plug version
- S** Single solenoid control
- RS** Symmetrical ramp
- *** Max. output current (I_{max})
X = 0.88 Amp
Y = 1.76 Amp
Z = 2.50 Amp
- 0** Input reference signal 0 ÷ 10V
- *** PWM frequency
2 = 400 Hz
3 = 150 Hz
- 00** 00 = No variant
RW = Electrical circuit protected with silicone paint (more moisture resistance)
- 1** Serial number

ELECTRICAL EN 175301-803 CONNECTIONS



FUNCTIONAL BLOCK DIAGRAM



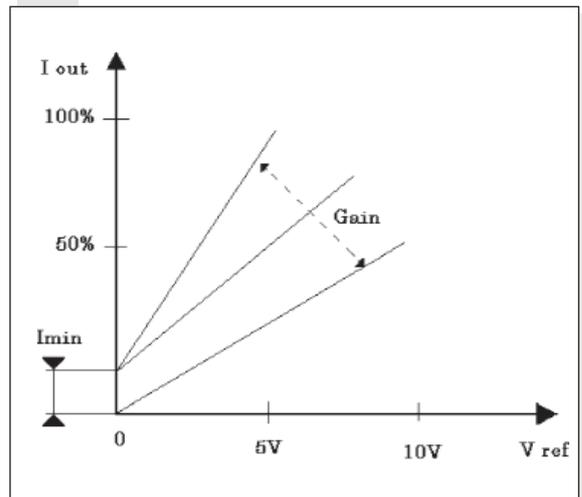
CE registered mark for industrial environment with reference to the electromagnetic compatibility. European norms:
 - EN61000-6-2 general safety norm - industrial environment
 - EN61000-6-4 emission general norm - residential environment

• Product in accordance with **RoHS** 2002/95/CE Europe Directive.

ELECTRICAL SPECIFICATIONS

| | |
|--|--------------------------------|
| Power supply | 12VDC o 24VDC |
| Peak supply | 40VDC |
| Minimum power supply | 10.5VDC |
| Required power | 30W |
| Type of protection | IP65 |
| Output current | I _{max} = 0.88Amp |
| All range values are come from the ordering code | I _{max} = 1.76Amp |
| | I _{max} = 2.50Amp |
| External reference potentiometer | +10V, I _{max} =5mA |
| Input signal reference | 0 ÷ 10V |
| I minimum adjustment | 0 ÷ 50% of I _{max} |
| Gain adjustment | 30% ÷ 100% of I _{max} |
| Ramp time adjustment | 0 ÷ 10 secondi |
| Operating Ambient temperature | -10C° ÷ +70°C |
| Current test point | 1V = 1Amp |
| Weight | Kg. 0, 250 |

REFERENCE SIGNAL



CALIBRATION PROCEDURE

POWER SUPPLY AND ELECTRICAL CONNECTIONS

The power supply voltage must be rectified and filtered, whit a capacitor 4700 uF minimum. **Protect the power supply circuit whit 3 A fuse.** **Respect the polarity supply.** Use the cabling wire whit 0.75 mm² or 1.0 mm² section. In order to facilitate the operation of wires connection, extracts the card from the enclosure, introduce the wires through the gland-nut, connects the wires to the clips and finally to lodge the card to the inside of the connector.

CALIBRATION PROCEDURE

To connect correctly the card respecting the electrical connection topography, plug the amplifier on the valve solenoid and turn completely anticlockwise the trimming I_{min}, Gain, Ramp, and position the reference potentiometer on zero signal.

MINIMUM CURRENT ADJUSTMENT

The minimum current allows to eliminate the mechanical overlapping of the valve also with the signal reference to 0 volt, if it is necessary to have the already open valve also with at null signal reference, to set up to 0 volt and turns slowly the I_{min} trimmer until an actuator movement.

GAIN CURRENT ADJUSTMENT

Turns the reference signal to its maximum setting (10 volt) and rotate slowly the (GAIN) trimming until the maximum required speed is obtained. If the system could be damaged by a too fast movement solenoid, turns clockwise the trimming Ramp time.

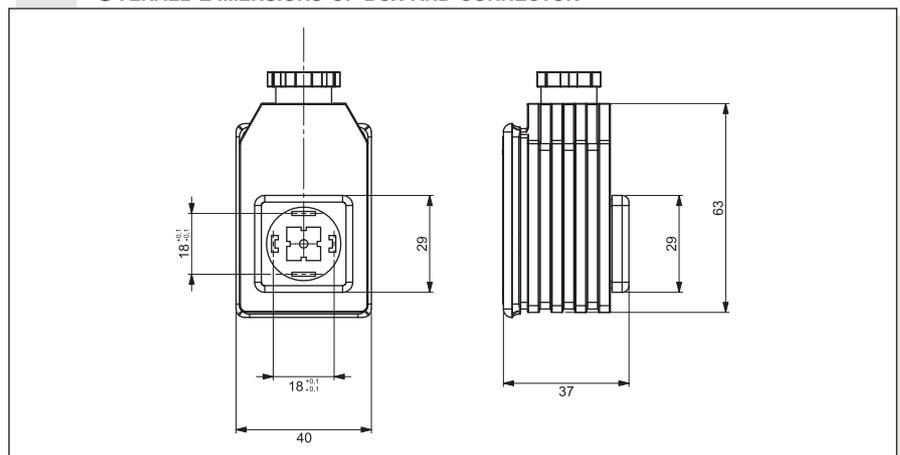
RAMP TIME ADJUSTMENT

The ramp time is the time taken to pass from the minimum to the maximum current value, and vice versa. It's adjustable from a minimum of 0s up to a maximum of 10s (to reach the maximum current value setted). Turning clockwise the trimming potentiometer, the ramp time increases.

NOTES

The ramp fall time affects the actuator stop position. Moving the reference to zero Volt, the actuator goes on moving till the setted ramp time is elapsed. Therefore it's necessary to adjust it properly.

OVERALL DIMENSIONS OF BOX AND CONNECTOR



Incorrect use of the products described in this catalogue may cause harm to personnel and equipment. The technical information given for each product in this catalogue may be subject to variation, and the manufacturer reserves the right to make constructional modifications without giving prior notice. Each product presented, its data, features and technical specifications must therefore be examined and checked by members of the user's staff (possessing suitable technical knowledge) taking into consideration the intended use of product. The user must, in particular, assess the operating conditions of each product in relation to the application that he intends to use it for, analysing the data, features and technical specifications in view of the proposed applications, and ensuring that, in use in the product, all of the conditions relating to the safety of personnel and equipment, also in the event of breakdown, are respected.