

## EL8



### Technical Features

- › External electronics for DIN rail is designed for control of single or double solenoid hydraulic valves in open or closed loop with spool position feedback
- › The electronics continuously control the position of the valve spool proportional to the size of the input signal with minimal hysteresis
- › The output control current for the solenoid coil is independent of temperature changes and changes in load impedance
- › Control of the coil using a PWM signal reduces the hysteresis characteristics of the valve and optimizes the accuracy of spool positioning
- › At the core of the reliable and flexible electronics is a 32-bit processor with high performance reserve.
- › The electronics are resistant to transmission errors. Integrated algorithm for error correction prevents signal distortion during data transmission or storage

### Functional Description

The EL8 is a multifunctional DIN rail mounted electronic control unit for control of proportional hydraulic valves with one or two solenoids in an open or closed loop, normally with spool position feedback. The unit controls the position of the valve spool based on a reference input signal, ensuring linear control with minimal hysteresis.

The front panel is equipped with LED diodes to indicate function.

The EL8 electronics are designed for control with a maximum of two simultaneous process signals.

The use of a functional interface allows parameters to be changed during operation, without interfering with or interrupting the operation. A PC configuration program allows direct access to the set parameters of the electronics and to monitor operations in real time.

### Technical Data

|                                    |          |                                                                                                                                                                    |
|------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical connection              |          | 16 (4 x 4) connecton pins 0,2 ... 2,5 mm <sup>2</sup>                                                                                                              |
|                                    |          | Phoenix Combicon MSTBT 2,5/4-ST                                                                                                                                    |
| Processor resolution               | bit      | 32-bit                                                                                                                                                             |
| Resolution of A/D converters       | bit      | 16-bit                                                                                                                                                             |
| PWM frequency                      | kHz      | up to 22,2                                                                                                                                                         |
| Connection for parameterization    |          | USB-C                                                                                                                                                              |
| Recommended cable cross section    |          | For power supply: 1.5mm <sup>2</sup> (AWG16) for power supply and coil; max. length = 50 m,<br>For control signal : 0.5mm <sup>2</sup> with maximum length = 50 m. |
| Cycle rate                         | ms       | 0,1                                                                                                                                                                |
| Nominal coil voltage STD           | V DC     | 12                                                                                                                                                                 |
| Nominal coil voltage PRL           | V DC     | 24                                                                                                                                                                 |
|                                    |          | 24 (+/- 10 %)                                                                                                                                                      |
| LED signalization                  |          | Multi-colour status LED: Green = Working fine<br>Yellow = Active input „ENABLE“<br>Red = Error                                                                     |
| Compensated temperature            | °C (°F)  | -40 ... +85 (-40 ... 185)                                                                                                                                          |
| Operating temperature              | °C (°F)  | -40 ... +70 (-40 ... 158)                                                                                                                                          |
| Air humidity                       |          | max. 95 % (uncondensed)                                                                                                                                            |
| Casing material                    |          | PA 66 - FR                                                                                                                                                         |
| Dimensions                         | mm (in)  | 22,5 x 100 x 114 (0.89 x 3.94 x 4.49) [§ x v x h (W x H x D)]                                                                                                      |
| Weight                             | kg (lbs) | 0,13 (0.287)                                                                                                                                                       |
| EMC resistance                     |          | EMC 2014/30/EU                                                                                                                                                     |
| Degree of coverage                 |          | IP20                                                                                                                                                               |
| Electrical parameters              |          |                                                                                                                                                                    |
| Supply voltage STD                 | V DC     | 10,8 ... 28,8                                                                                                                                                      |
| Supply voltage PRL                 | V DC     | 21,6 ... 28,8                                                                                                                                                      |
| Analogue input signal              |          | ±10 V DC ; 4...20 mA                                                                                                                                               |
| Analogue input signal for feedback |          | ±10 V DC ; 4...20 mA                                                                                                                                               |
| Input impedance (voltage; current) |          | U = 200 kΩ ; I = 255 Ω                                                                                                                                             |
| Digital output signal              |          | 2x PWM = 0,8 ... 3,5 A                                                                                                                                             |
| Number of digital inputs           |          | 3 (S1.01; S1.02; ENABLE)                                                                                                                                           |

## Ordering Code

EL8 -

Electronic control unit EL8

STD  
PRL

Version  
standard  
PRL2 version

Total number of variants:

|                               |
|-------------------------------|
| 12 / 24V DC; STD / PRL        |
| EL8-STD                       |
| EL8-PRL (only with 24V coil!) |

## BLOCK CONNECTION DIAGRAM





