



EL4712 | 2-channel analog output terminal 0...20 mA with oversampling

The EL4712 analog output terminal generates output signals in the range between 0 and 20 mA. The voltage is supplied to the process level with a resolution of 16 bits and is electrically isolated. The output channels have a common ground potential. The outputs are sampled with an adjustable, integer multiple (oversampling factor: n) of the bus cycle time (n microcycles per bus cycle). For each microcycle, the EtherCAT Terminal receives a process data block that is output consecutively. The time base of the terminal can be synchronised precisely with other EtherCAT devices via distributed clocks. This procedure enables the temporal resolution of the analog output signals to be increased to n times the bus cycle time. In conjunction with the EL37xx (analog input terminal with oversampling), responses with equidistant time intervals, e.g. in the event of a threshold value being exceeded, become possible. The EL4712 device can output a maximum of 100,000 values (100 ksamples/s) per channel and second.

Technical data	EL4712 ES4712
Connection technology	3-wire, single-ended
Number of outputs	2
Power supply	24 V DC via power contacts
Signal current	0...20 mA
Oversampling factor	n = integer multiple of the cycle time, 1...100 selectable
Distributed clocks	yes
Distributed clock precision	$\ll 1 \mu\text{s}$
Load	$< 500 \Omega$ (short-circuit proof)
Output error	$< 0.1 \%$ (relative to end value)
Resolution	16 bit (incl. sign)
Electrical isolation	500 V (E-bus/signal voltage)
Conversion time	$\sim 10 \mu\text{s}$
Output rate	max. 100 ksamples/s
Current consumption power contacts	typ. 20 mA + load
Current consumption E-bus	typ. 100 mA
Bit width in the process image	output: $n \times 2 \times 16$ bit data, max. 8 byte additional information
Special features	oversampling
Weight	approx. 65 g
Operating/storage temperature	0...+55 °C/-25...+85 °C
Relative humidity	95 %, no condensation
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Protect. class/installation pos.	IP 20/variable
Pluggable wiring	for all ESxxxx terminals
Approvals	CE, UL, Ex

Further information

XFC	eXtreme Fast Control Technology
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