



EL1252 | 2-channel digital input terminal with timestamping

The EL1252 digital input terminal acquires the fast binary control signals from the process level and transmits them, in an electrically isolated form, to the controller. The signals are furnished with a timestamp that identifies the time of the last edge change with a resolution of 1 ns. This technology enables signals to be traced exactly over time and synchronised with the distributed clocks across the system. With this technology, machine-wide parallel hardware wiring of digital inputs or encoder signals for synchronisation purposes is often no longer required. In conjunction with the EL2252 EtherCAT Terminal (digital output terminal with timestamp), the EL1252 enables responses with equidistant time intervals, largely independent of the bus cycle time.

Technical data	EL1252 ES1252
Connection technology	4-wire
Specification	similar to EN 61131-2, type 3, "0": -3...5 V DC, "1": 11...30 V DC, typ. 3 mA input current
Number of inputs	2
Nominal voltage	24 V DC (-15 %/+20 %)
"0" signal voltage	-3...+5 V (similar to EN 61131-2, type 3)
"1" signal voltage	11...30 V (similar to EN 61131-2, type 3)
Input current	typ. 3 mA (similar to EN 61131-2, type 3)
Input filter	typ. < 1 μ s
Resolution timestamp	1 ns (channel 0/1)
Precision of timestamp in the terminal	10 ns (+ input delay)
Distributed clock precision	<< 1 μ s
Input delay T_{ON}/T_{OFF}	< 1 μ s
Distributed clocks	yes
Time resolution signal	1 ns
Current consumption power contacts	typ. 6 mA + load
Current consumption E-bus	typ. 110 mA
Electrical isolation	500 V (E-bus/field potential)
Bit width in the process image	2 inputs + 36 byte timestamp
Configuration	no address or configuration setting
Special features	timestamping, latch last edge
Weight	approx. 55 g
Operating/storage temperature	-25...+60 °C/-40...+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

Related products	
EL1252-0050	2-channel digital input terminal 5 V DC, filter 1 μ s, with time stamp
Further information	
XFC	eXtreme Fast Control Technology