



## IE5109 | 1-channel incremental encoder interface, 1 MHz

The IE5109 module is an interface for the direct connection of incremental encoders with differential inputs (RS485) or with single inputs. A 16 bit counter with a quadrature decoder and a 16 bit latch for the zero pulse can be read, set or enabled. The inputs can optionally be used as complementary or as single inputs. Incremental encoders with alarm outputs can be connected at the interface's status input. Interval measurement with a resolution of 200 ns is possible. The gate input allows the counter to be halted (high = stop). The value is read with a rising edge at the latch input.

Technical data	IE5109
Number of channels	1
Connection encoder/sensor	M23 connector with outer thread, 12-pin
Nominal voltage	24 V DC (-15 %/+20 %)
Gate/latch connection	M12, screw type
Encoder supply	5 V DC
Sensor supply	from control voltage, max. 0.5 A total, short-circuit-proof
Counter	16 bit, binary
Limit frequency	1 MHz (with 4-fold evaluation)
Quadrature decoder	1-, 2-, or 4-fold evaluation
Zero-pulse latch	16 bit
Commands	read, set, enable
Power supply connection	feed: 1 x M8 male socket, 4-pin; downstream connection: 1 x M8 female socket, 4-pin
Current consumption from Us (without sensor current)	55 mA
Bit width in the process image	input/output: 2 x 16 bit data + 1 x 8 bit control/status
Electrical isolation	yes, via IP-Link
Operating/storage temperature	0...+55 °C/-25...+85 °C
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 65/66/67 (conforms to EN 60529)/variable
Approvals	CE, UL