

Sommario

Electrical Characteristics 3

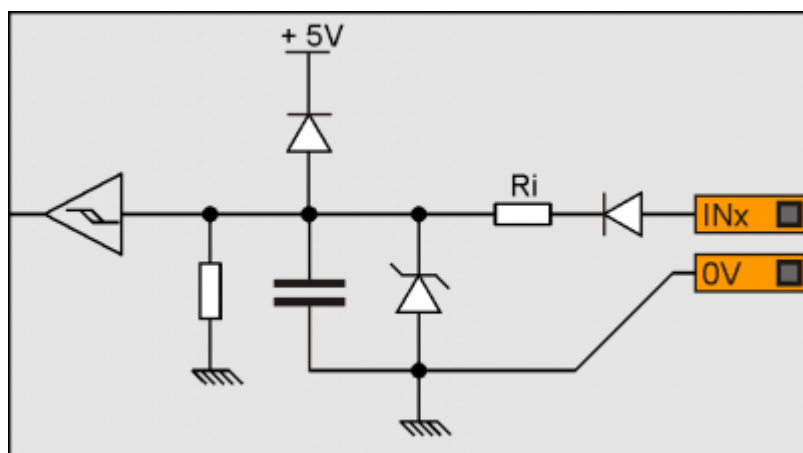
Electrical Characteristics

The electrical characteristics of the hardware are given below.

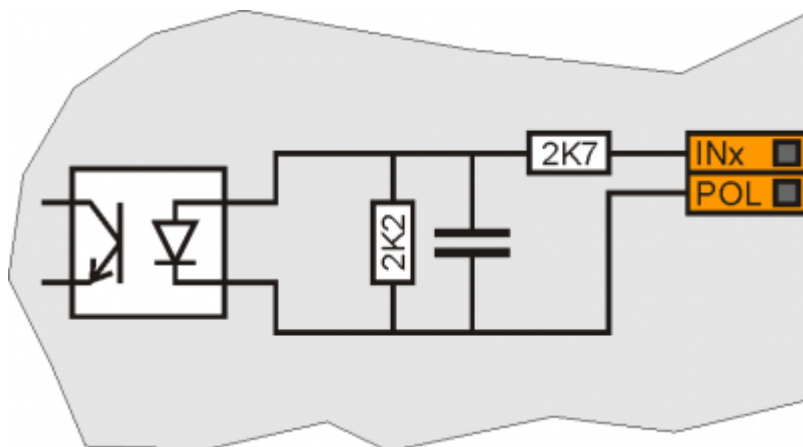
The maximum and minimum frequencies, and real acquisition times, may depend on eventual additional software filters, for example see the system variable "QMOVE:sys004" at paragraph [System Variables](#).

Type of polarisation	PNP
Min. acquisition time (hardware)	3ms
Isolation	1000Vrms
Rated operating voltage	24Vdc
Voltage of logic state 0	0-2 V
Voltage of logic state 1	10.5 - 26.5 V
Internal voltage drop	5V
Input resistance (Ri)	2700Ω
Sink current	2mA ÷ 8mA ¹⁾

¹⁾ **CAUTION:** If the device connected to the inputs needs a higher minimum current, inputs may not work properly.



Type of polarisation	NPN / PNP
Max. frequency	200KHz
Min. acquisition time (hardware)	5μs
Insulation	1000Vrms
Rated operating voltage	24Vdc
Voltage of logic status 0	0-2 V
Voltage of logic status 1	10.5 - 26.5 V
Internal voltage drop	1.2 V
Input resistance	2700Ω

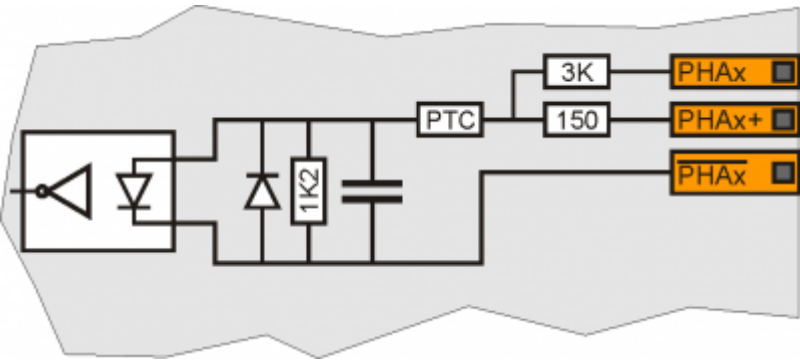


The values given in the table refer to input signals A, B and Z.
The max. frequency given in the table refers to A and B phase signals with a DutyCycle = 50%
With count frequencies over 50KHz the use of Line-Driver type encoders is recommended.

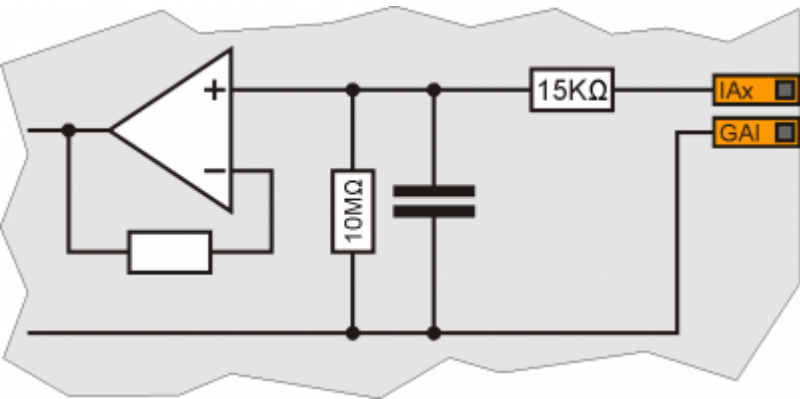
Type of polarisation	PNP/PP
Max frequency	200KHz
Min. acquisition time	5µs
Insulation	1000Vrms
Rated operating voltage	24Vdc
Voltage of logic status 0	0 - 2 V
Voltage of logic status 1	10.5 - 26.5 V
Internal voltage drop	1.2V
Input resistance	3100Ω

Line-Driver

Type of polarisation	Line-Driver
Max. frequency	200KHz
Min. acquisition time	5µs
Insulation	1000Vrms
Rated operating voltage (PHx+ ? PHx-)	5Vdc
Voltage of logic status 0 (PHx+ ? PHx-)	0-1.5 V
Voltage of logic status 1 (PHx+ ? PHx-)	2-5 V
Internal voltage drop	1.2V
Input resistance	150Ω

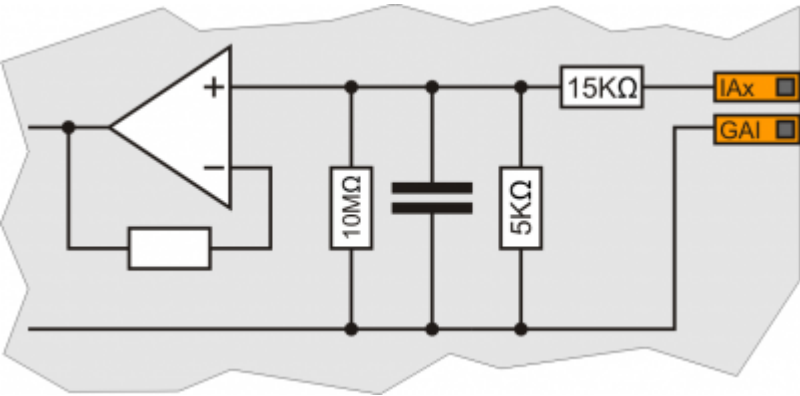


Type of connection	Potentiometric 1KΩ-20KΩ
Resolution	12bit/16bit
Reference voltage output	2.5Vdc
Max output current from reference	10mA
Input resistance	10MΩ
Max. linearity error	± 0,1% Vfs
Max. offset error	± 0,1% Vfs
S.n.	71 dB
Update speed	1ms
Insulation	1000 Vrms

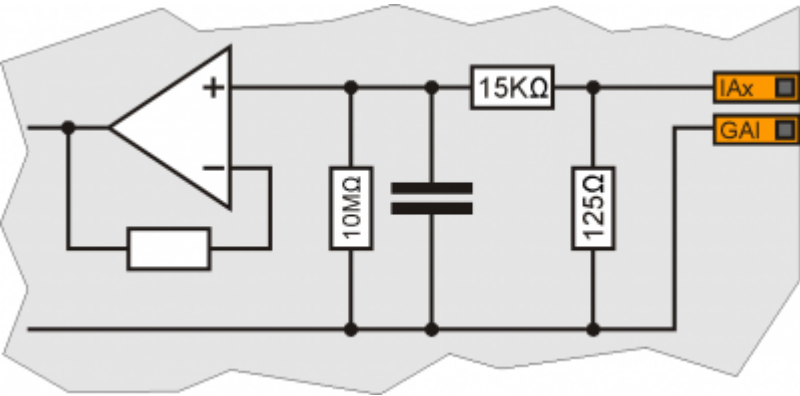


Type of connection	Voltmetric 0-10V
Resolution	12bit/16bit
Input resistance (Rin)	20KΩ
Damage value	20V
Max. linearity error	± 0.1% Vfs
Max. offset error	± 0.1% Vfs

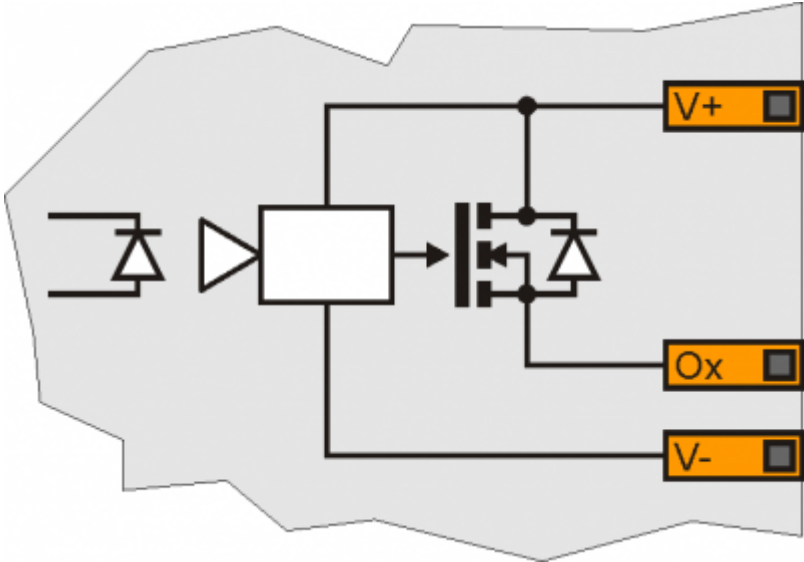
S.n.	71 dB
Update speed	1ms
Insulation	1000 Vrms



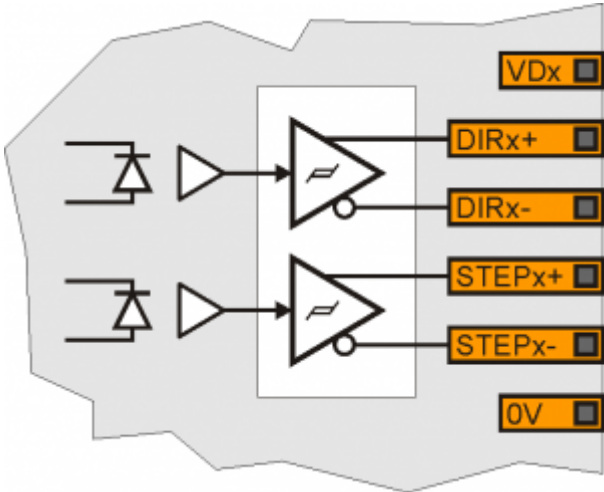
Type of connection	Amperometric (0-20 mA)
Resolution	12bit/16bit
Input resistance	125Ω
Damage value	25 mA
Max. linearity error	± 0,1% Vfs
Max. offset error	± 0,1% Vfs
S.n.	71 dB
Update speed	1ms
Insulation	1000 Vrms



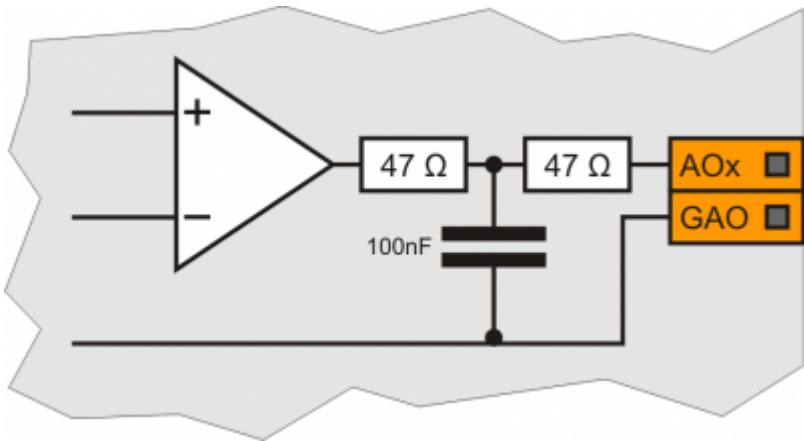
Switchable load	Dc (PNP)
Max. operating voltage	28V
Insulation	1000Vpp
Max. internal voltage drop	600mV
Max internal resistance @ON	90mΩ
Max. protection current	12A
Max. operating current	2A
Max. current @OFF	5μA
Max switching time from ON to OFF	270μs
Max switching time from OFF to ON	250μs



Type of polarisation	Push-Pull / Line-Driver
Max output frequency	50KHz
Insulation	1000Vpp
Max. operating current	20mA



Type of connection	Common mode
Insulation	1000Vrms
Voltage range (minimum no load)	-9.8V - +9.8V
Max. offset variation depending on temperature*	+/- 5mV
Resolution	16bit
Max. current	1mA
Output variation depending on load	100 μ V/mA
Output resistance	249 Ω



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