



IE3102 | 4-channel analog input ±10 V

The IE3102 analog input module handles signals in the range from -10 to +10 V. The voltage is digitised to a resolution of 16 bits and is transmitted, electrically isolated, to the higher-level automation device. The four input channels have differential inputs and possess a common, internal ground potential. The applied auxiliary voltage (which can be any value up to 30 V DC) is fed through to supply the sensor. It is thus possible, for instance, to supply a measuring potentiometer with 10 V DC from an external voltage source.

The module is quite versatile, but default settings have been selected in such a way that in most cases it is not necessary to perform configuration. The input filter and associated conversion times can be set within a wide range; several data output formats may be chosen. If required, the inputs can be scaled differently. Automatic limit monitoring is also available. Parameterisation may be carried out either via the fieldbus or using the KS2000 software tool.

Input connections M12, screw type Signal voltage -10/0+10 V Internal resistance > 100 kΩ Common-mode voltage Ucм 35 V max. Resolution 16 bit (for 010 V range: resolution 15 bit) Measuring error < ±0.3 % (relative to full scale value) Conversion time 250 ms, configurable to 5 ms Nominal voltage 24 V DC (-15 %/+20 %) Input filter configurable Sensor supply from load supply voltage UP Current consumption from Us (without sensor current) 55 mA Power supply connection feed: 1 x M8 male socket, 4-pin; downstream connection: 1 x M8 female socket, 4-pin Bit width in the process image input: 4 x 16 bit data (4 x 8 bit control/status optional) Electrical isolation channels/control voltage: 500 V, between the channels: no, control voltage/fieldbus: 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	Technical data	IE3102
Signal voltage -10/0+10 V Internal resistance > 100 kΩ Common-mode voltage Ucm 35 V max. Resolution 16 bit (for 010 V range: resolution 15 bit) Measuring error < ±0.3 % (relative to full scale value) Conversion time 250 ms, configurable to 5 ms Nominal voltage 24 V DC (-15 %/+20 %) Input filter configurable Sensor supply from load supply voltage UP Current consumption from Us (without sensor current) 55 mA Power supply connection feed: 1 x M8 male socket, 4-pin; downstream connection: 1 x M8 female socket, 4-pin Bit width in the process image input: 4 x 16 bit data (4 x 8 bit control/status optional) Electrical isolation channels/control voltage: 500 V, between the channels: no, control voltage/fieldbus: 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	Number of inputs	4
Internal resistance> 100 kΩCommon-mode voltage UcM35 V max.Resolution16 bit (for 010 V range: resolution 15 bit)Measuring error< ±0.3 % (relative to full scale value)	Input connections	M12, screw type
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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	Operating/storage temperature	0+55 °C/-25+85 °C
Protect. class/installation pos. IP 65/66/67 (conforms to EN 60529)/variable	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
Approvals CE, UL	Protect. class/installation pos.	IP 65/66/67 (conforms to EN 60529)/variable
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