



e430

Main characteristics:

- Functional I/O module with 18 channels:
6 analog inputs + 4 analog outputs + 8 temperature inputs
- Powered by rack back-plane
- Single-slot module
- Status LED
- Integrated technology functions: temperature output values in tenth of degree centigrade, comparison of fast analog input with preprogrammed threshold and fast switching of assigned analog output.

Code	F057166
Model Number	e430
Description	18 channel digital I/O module 6 analog inputs + 4 analog outputs + 8 temperature inputs
Position rack	Free from slot 1 to slot 8, 1 slot employment

PROFILE

The e430 module manages 6 configurable analog inputs, 4 ± 10 VDC analog outputs and 8 thermocouple inputs with which you can:

- acquire various data from controlled devices and the environment by means of signals and sensors;
- control and adjust devices by means of different types of signals and commands.

The module installs in the rack and is powered by the back-plane, which connects it to the eCPU400 module.

The front of the module has 2 24-pin connectors for external connections and LEDs for diagnostics of module status.

TECHNICAL DATA

POWER SUPPLY	Internal	via backplane
	Power dissipation	3 W max
CONNECTIONS	Rack	Card-edge
	I/O Ports	2 polarized plug-in connectors, male, 24 pin (2 rows of 12 pins) *
DISPLAY ELEMENTS	Diagnostic	Alarm red LED Yellow LED for power potentiometer
ANALOG INPUT	Number	6, configurable as single-ended voltage 0...10 V, single ended voltage ± 10 V, potentiometer or current 0...20mA
ANALOG INPUT IN VOLTAGE 0...10 V	Max number	6
	Type	Single-ended voltage 0...10 V
	Input filter	Low-pass, 3 rd order Cut-off frequency: 100 Hz, 1 kHz, 10 kHz selectable via software
	Input impedance	> 1 M Ω
	Sampling time (for all channels)	< 250 μ s
	Output format	Type: UINT Resolution: 14 bit (0 ... 16 384) LSB: 0,61 mV
	Max error @ 25 °C	0,5% full scale
	Protections	Over-voltage: max 1 kV for 1 ms
	Electrical isolation	Channel - channel: no Channel - bus CPU: 2 kV
	ANALOG INPUT IN VOLTAGE ± 10 V	Max number
Type		Single-ended voltage ± 10 V
Input filter		Low-pass, 3 rd order Cut-off frequency: 100 Hz, 1 kHz, 10 kHz selectable via software
Input impedance		> 1 M Ω
Sampling time (for all channels)		< 250 μ s
Output format		Type: INT Resolution: 15 bit (-16 384 ... +16 384) LSB: 0,61 mV
Max error @ 25°C		0,5% full scale
Protections		Overvoltage: max 1 kV per 1 ms
Electrical isolation		Channel - channel: no Channel - bus CPU: 2 kV
ANALOG INPUT IN CURRENT 0...20 mA		Max number
	Type	Current 0...20 mA
	Input filter	Low-pass, 3 rd order Cut-off frequency: 100 Hz, 1 kHz, 10 kHz selectable via software
	Input impedance	100 Ω , 0,1%
	Sampling time (for all channels)	< 250 μ s
	Output format	Type: UINT Resolution: 14 bit (0 ... 16 384) LSB: 1,22 mA
	Max error @ 25 °C	0,3% full scale
	Protections	Overvoltage: max 1 kV per 1 ms
	Electrical isolation	Channel - channel: no Channel - bus CPU: 2 kV

ANALOG INPUT POTENTIOMETER	Max number	6
	Type	Potentiometer 2 kΩ min
	Transducer power supply	On card, 10 V - 100 mA max
	Input filter	Low-pass, 3 rd order Cut-off frequency: 100 Hz, 1 kHz, 10 kHz selectable via software
	Input impedance	> 1 MΩ
	Sampling time (for all channels)	< 250 μs
	Output format	Type: UINT Resolution: 14 bit (0 ... 16384) LSB: 0,61 mV
	Max Error @ 25 °C	0,5% full scale
	Protections	Overvoltage: max 1 kV per 1 ms
	Electrical isolation	Channel - channel: no Channel - bus CPU: 2 kV
THERMOCOUPLE INPUT	Number	8
	Type	Thermocouple J, K, S, N, T, E, B, R, L Differential voltage 0...60 mV
	Connection type	2 wires, for isolated and non-isolated probes
	Bandwidth	1 Hz
	Input impedance	> 1 MΩ
	Sampling time (for all channels)	< 12 ms
	Resolution	0,1 °C
	Max error @ 25 °C	0,5% full scale
	Thermocouple use interval (scale)	J: 0 ... 1000 °C K: 0 ... 1300 °C R: 0 ... 1750 °C S: 0 ... 1750 °C T: -200 ... 400 °C E: -100 ... 750 °C B: 0 ... 1820 °C (Err. max 0.5% f.s. for Temp. >300°C) L: 0 ... 800 °C N: 0 ... 1300 °C
	Temperature compensation	Internal
ANALOG OUTPUT	Number	4
	Type	Single-ended voltage ±10 V
	Max output current	20 mA
	Refresh time	1 ms
	Settling time	< 200 μs
	Output format	Type: INT Resolution: 14 bit (-8192 ... +8192) LSB: 1,22 mV
	Error max @ 25 °C	0,3% full scale
	Protections	Short circuit Overload: I ≥ 25 mA Max overvoltage 1 kV per 1 ms
	Electrical isolation	Channel - channel: no Channel - bus CPU: 2 kV
AMBIENT CONDITIONS	Operating temperature	0 ... +50 °C (as per IEC 68-2-14)
	Storage temperature	-20 ... +70 °C (as per IEC 68-2-14)
	Relative humidity	max 95% RH non-condensing (as per IEC 68-2-3)
ASSEMBLY		On rack, with snap hooks
PROTECTION LEVEL		IP20
WEIGHT		0,15 kg

CE STANDARDS	EMC (electromagnetic compatibility)	Conforms to Directive 2004/108/CE EMC Emission: EN 61000-6-4 EMC Immunity: EN 61131-2, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11
	LV (low voltage)	Conforms to Directive 2006/95/CE Safety LVD: EN 61010-1

* Female connectors not supplied. See accessories for order Model Number.

ORDER CODES

The codes below refer to the individual I / O modules. For the complete system, refer to the system documentation.

Code	Model Number	Description
F057166	e430	Single slot module with 6 analog inputs, 4 analog outputs and 8 temperature inputs. Module diagnostics LED. Analog inputs configurable as: - voltage 0...10 VDC, voltage \pm 10 VDC, potentiometer - current 0...20 mA Voltage type analog outputs \pm 10 VDC, 20 mA max. Thermocouple type temperature inputs (J, K, S, N, T, E, B, R, L)

ACCESSORIES

Code	Model Number	Description
F057774	eCON24	24-pin female connector