

SIMATIC ET 200eco

Economic digital block I/O

SIMATIC ET 200eco is the economic digital block I/O with degree of protection IP65/67. It is characterized by easiest handling and installation as well as economic efficiency. ET 200eco offers users the possibility to economically process digital signals on the PROFIBUS DP.

Your advantages

- Compact, rugged with easy handling
- Variable terminal blocks: M12 and ECOFAST®
- Higher plant availability with integral T-functionality in the terminal block: the electronics block can be exchanged without interrupting the power supply or the bus
- Available modules: 8 DI, 8 DO, 8 DI/8 DO, 16 DI, 16 DO
- Possibility of connecting antivalence sensors for 16 DI version

- Module diagnostics for load voltage and encoder short-circuit protection
- Link to PROFIBUS DP with data transmission rates of up to 12 Mbit/s

Design

ET 200eco consists of a basic module and two different terminal blocks. You can choose between M12 and ECOFAST:

- M12: 2 x M12 and 2 x 7/8" with two rotary coding switches for PROFIBUS address assignments
- ECOFAST: 2 x RS 485 hybrid fieldbus circuit with identification connector for setting PROFIBUS address

A compact, coordinated module range for digital I/Os (see below) is available for using and integrating PROFIBUS applications (see below).

The pin assignments for actuators and sensors are matched to IP65/67 standardization trends.

Parameter assignment

A GSD file for parameter assignment is available for linking the modules to master modules which are not parameterized with STEP 7.

It can be loaded into the configuration tool of the master, and provides all relevant information in plain text for setting the ET 200eco parameters.

Mode of operation

Communication takes place entirely using the PROFIBUS DP.

Diagnostics functions are available for testing the ET 200eco mode of operation:

- BF (bus error)
- SF (system error)
- Power supply for encoder and load

Diagnostics data are displayed by an LED on the module, and can be evaluated by software on the programming device/PC or by the PLC.

Technical specifications	
Transmission rates	9.6 / 19.2 / 45.45 / 93.75 / 187.5 / 500 kbit/s; 1.5 / 3 / 6 / 12 Mbit/s
Power supply	24 V DC
Curr. consumpt. from load circuit 1, up to 55 °C	up to 1 A (according to version)
Curr. carrying capacity of the outputs / channel	0.5/1.3/2 A (according to version)
Curr. consumpt. from load circuit 2, up to 55 °C	Max. 8 A
Diagnostics functions	
• Cumulative error signal	Yes
• Short-circuit (encoder supply)	By the module
• Load voltage	By the module
Dimensions (W x H x D, in mm)	
• Basic module	210 x 60 x 28
• Basic module with ECOFAST	210 x 60 x 54
• Basic module with M12, 7/8	210 x 60 x 53



ET 200eco with the terminal blocks M12 (left) and ECOFAST (right)

Available modules for SIMATIC ET 200eco

	Basic modules						Fail-safe Modules	Terminal blocks	
	8 DI	16 DI	8 DO (2 A)	16 DO (0.5 A)	8 DI/8 DO (2 A)	8 DI/8 DO (1.3 A)		ECOFAST RS 485	M12 - 7/8"
No. of I/O channels	8/0	16/0	0/8	0/16	8/8	8/8	4/0 ¹⁾ 8/0 ²⁾	–	–
Connections	8 x M12 screwed joints (for 16 channels with double assignment)							ECOFAST	M12 connector
Order No. group	6ES7141-3BF..	6ES7141-3BH..	6ES7142-3BF..	6ES7142-3BH..	6ES7143-3BH..	6ES7143-3BH..	6ES7148-3FA..	6ES7194-3AA..	6ES7194-3AA..

1) 2-channel for SIL 3 sensors
2) 1-channel for SIL 2 sensors