

SIMATIC ET 200eco PN

Block I/O with IP67 protection
and PROFINET connection

September 2009

SIMATIC ET 200eco PN - small and versatile with a high degree of protection

The new space-saving IP67 block I/O is located exactly where it is needed – directly at the machine, immediately adjacent to the sensors and actuators, even when conditions are cramped or difficult. The system can also be expanded via the integrated PROFINET interface.

Bus and star topologies are supported. The vast system expansion capacity, based on PROFINET, can be calculated by means of the ET 200 configurator. Thanks to the fully-sealed zinc die-cast housing of the ET 200eco PN, its functionality cannot be affected in any way by machine vibration, dust or moisture.

Functional highlights

Compact design in two versions

- Housing, long and narrow, for sensors and actuators 4 x M12: 30 x 200 x 37 mm
- Housing, wide and short, for sensors and actuators 8 x M12: 60 x 175 x 37 mm
- Rugged M12 connection technology, for energy and data
- Vertical or horizontal mounting

Mechanically rugged

- Fully-sealed zinc die-cast housing
- Degree of protection IP65/66/67
- Vibrostability 20 g constant, 40 g tested
- Temperature range -25 ... 60°C

Flexible network designs and topologies

- PROFINET connection with 2-port switch integrated in each module
- 100 Mbit/s full duplex data transmission
- Distance between modules up to 100 m (PROFINET)
- Flexible network structures such as bus and/or star

Configuration and diagnostics

- Configurable from STEP 7 V5.4 SP4
- Extensive diagnosis of external errors such as wire break or short circuit

IO-Link master

- Intelligent connection of sensors and actuators
- Wide type of construction



SIMATIC

Answers for industry.

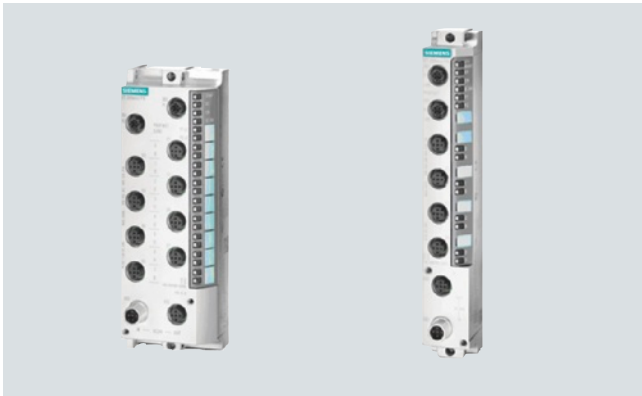
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Business drivers

The modular machine-building market is characterized by the following trends:

The IP20 IO is migrating from the control cabinet to gaps in the machinery

This is because costs can be saved by omitting the switching or control cabinet while simultaneously reducing the size of the machinery or plant. Inputs or outputs are connected near the sensors/actuators to save unnecessary wiring and cabling costs.



Switch from bus to star topology when drag chains are used

Drag chains are widely used in modular machine building due to the large number of moving units. At the same time, as few cables as possible must be routed via the drag chain, in order to minimize cable wear and the space required. Energy and bus must therefore be split again at the end of the drag chain. A load voltage distributor is available for the redistribution of energy; the bus can be divided using a SCALANCE X 208 PRO.

Advantages at a glance

- Savings on switching cabinets and installation costs by installing directly on the machine
- The IO system can be flexibly divided into bus and/or star topologies directly at the application
- The fully-sealed zinc die-cast housing is suitable for use in hostile environmental conditions (temperature, water, dust, vibration, oil)
- Easy, familiar configuration and extensive diagnostics in the SIMATIC environment
- Extensive range of modules (DI/DO, also parameterizable), analog modules, IO-Link master, load voltage distributor)

Module range

Designation	Order No. ¹⁾	Features
8 DI 24 V DC, 4 x M12	6ES7 141-6BF00-0AB0	8 inputs / double assignment
8 DO 24 V DC/1.3 A, 4 x M12	6ES7 142-6BF00-0AB0	8 outputs, max. current per output 1.3 A, double assignment
16 DI 24 V/ DC, 8 x M12	6ES7 141-6BH00-0AB0	16 inputs / double assignment
8 DI 24 V/ DC, 8 x M12	6ES7 141-6BG00-0AB0	8 inputs / single assignment
16 DO 24 V/DC 1.3 A, 8 x M12	6ES7 142-6BH00-0AB0	16 outputs, max. current per output 1.3 A, double assignment
8 DO 24 V/DC 1.3 A, 8 x M12	6ES7 142-6BG00-0AB0	8 outputs / max. current per output 1.3 A, single assignment
8 DO 24 V DC, 4 x M12	6ES7 142-6BF50-0AB0	8 outputs / max. current per output 0.5 A, double assignment
8 AI analog module	6ES7 144-6KD00-0AB0	8 analog inputs (4 UII + 4 RTD/TC), single assignment
4 AO analog module	6ES7 145-6HD00-0AB0	4 analog outputs (UII), single assignment
8 DIO 24 V/DC 1.3 A, 8 x M12	6ES7 147-6BG00-0AB0	Param. module with 8 digital inputs or outputs / single assignment
8 DO 24 V DC/2.0 A, 8 x M12	6ES7 142-6BR00-0AB0	8 outputs / max. current per output 2.0 A, single assignment
IO-Link master	6ES7148-6JA00-0AB0	4 IO-L + 8 DI + 4 DO 24 V DC / 1.3 A, double assignment
Load voltage distributor	6ES7148-6CB00-0AA0	PD 24 V DC, 1 X 7/8", 4 x M12

¹⁾ Terms and conditions of sale and delivery and export restrictions can be found in Catalog IK PI.

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