

SIMATIC ET 200 distributed I/O

ET 200eco PN

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Overview



- Compact block I/O for processing digital, analog and IO-Link signals for connection to the PROFINET bus system
- Cabinet-free design with degree of protection IP65/66/67 with M12 connections
- Very rugged and resistant metal enclosure and encapsulated

- Compact module in two types of enclosures:
 - 30 mm x 200 mm x 37 mm (W x H x D, long and narrow enclosure), with 4 x M12 for digital signals
 - 60 mm x 175 mm x 37 mm (W x H x D, short and wide enclosure), with 8 x M12 for digital signals and IO-Link
 - 60 mm x 175 mm x 37 mm (W x H x D, short and wide enclosure) with 4 x M12 or 8 x M12 for analog signals
- PROFINET connection: 2 x M12 and automatic PROFINET address assignment
- Data transmission rate 100 Mbit/s
- LLDP proximity detection without PG and Fast Startup (boot up within approx 0.5 seconds)
- Supply and load voltage connection: 2 x M12
- Module variance:
 - 8 DI
 - 16 DI
 - 8 DO (2 A)
 - 8 DO (1.3 A)
 - 8 DO (0.5 A)
 - 16 DO (1.3 A)
 - 8 DI/DO (1.3 A),
 - 8 AI (U, I, TC, RTD)
 - 4 AO (U, I)
 - 4 IO-Link + 8 DI + 4 DO (1.3 A)
- Channel-specific diagnostics

Technical specifications

	6ES7 141-6BF00-0AB0	6ES7 141-6BG00-0AB0	6ES7 141-6BH00-0AB0
General information			
Vendor identification (VendorID)	002AH	002AH	002AH
Device identifier (DeviceID)	0306H	0306H	0306H
• 24 V DC	Yes	Yes	Yes
• permissible range, lower limit (DC)	20.4 V	20.4 V	20.4 V
• permissible range, upper limit (DC)	28.8 V	28.8 V	28.8 V
• reverse polarity protection	Yes	Yes	Yes
Current consumption, typ.	100 mA	100 mA	100 mA
Encoder supply			
Number of outputs	4	8	8
Output current, rated value	100 mA; per output	100 mA; per output	100 mA; per output
24 V encoder supply			
• Short-circuit protection	Yes	Yes	Yes
Power losses			
Power loss, typ.	5.5 W	4.5 W	6.5 W
Digital inputs			
Number of digital inputs	8	8	16
• in groups of	2	1	2
Number of simultaneously control- lable inputs			
• all mounting positions			
- Concurrently controllable inputs, up to 60 °C	8	8	16
Input characteristic curve acc. to IEC 1131, Type 3	Yes	Yes	Yes
Input voltage			
• Rated value, DC	24 V	24 V	24 V
• for signal "0"	-3 to +5 V	-3 to +5 V	-3 to +5 V
• for signal "1"	11 to 30 V	11 to 30 V	11 to 30 V

Technical specifications (continued)

	6ES7 141-6BF00-0AB0	6ES7 141-6BG00-0AB0	6ES7 141-6BH00-0AB0
Input current			
• for signal "0", max. (permissible quiescent current)	1.5 mA	1.5 mA	1.5 mA
• for signal "1", typ.	7 mA	7 mA	7 mA
Input delay (for rated value of input voltage)			
• for standard inputs			
- at "0" to "1", max.	Typ. 3 ms	Typ. 3 ms	Typ. 3 ms
- at "1" to "0", max.	Typ. 3 ms	Typ. 3 ms	Typ. 3 ms
Cable length			
• Cable length unshielded, max.	30 m	30 m	30 m
Interfaces			
Transmission procedure	100BASE-TX	100BASE-TX	100BASE-TX
Transmission rate, max.	100 Mbit/s	100 Mbit/s	100 Mbit/s
• Number of PROFINET interfaces	2	2	2
• Autocrossing	Yes	Yes	Yes
• Automatic detection of transmission speed	Yes	Yes	Yes
• Integrated switch	Yes	Yes	Yes
• PROFINET IO device			
- IRT with the option "high flexibility" supported	Yes	Yes	Yes
- Prioritized startup supported	Yes	Yes	Yes
Protocols			
PROFINET IO	Yes	Yes	Yes
Protocols (Ethernet)			
• SNMP	Yes	Yes	Yes
• DCP	Yes	Yes	Yes
• LLDP	Yes	Yes	Yes
• ping	Yes	Yes	Yes
• arp	Yes	Yes	Yes
Alarms/diagnostics/status information			
Status indicator	Yes; green LED	Yes; green LED	Yes; green LED
Alarms			
• Diagnostic alarm	Yes	Yes	Yes
Diagnostics			
• Diagnostic functions	Yes	Yes	Yes
• Diagnostic information readable	Yes	Yes	Yes
• Monitoring the supply voltage to the electronics	Yes; green "ON" LED	Yes; green "ON" LED	Yes; green "ON" LED
• Wire break in signal transmitter cable	Yes	Yes	Yes
• Short circuit encoder supply	Yes; per channel group	Yes; per channel group	Yes; per channel group
• Group error	Yes; red/yellow "SF/MT" LED	Yes; red/yellow "SF/MT" LED	Yes; red/yellow "SF/MT" LED
Galvanic isolation			
between the load voltages	Yes	Yes	Yes
between load voltage and all other switching components	No	No	No
between Ethernet and electronics	Yes	Yes	Yes
Galvanic isolation digital inputs			
• between the channels	No	No	No
Permissible potential difference			
between different circuits	75 V DC/60 V AC	75 V DC/60 V AC	75 V DC/60 V AC