SIEMENS

Data sheet

6ES7141-6BH00-0AB0



SIMATIC DP, ET 200ECO PN, 16 DI 24 V DC; 8xM12, duplicate assignment; Degree of protection IP67 $\,$

Figure simila

| Figuresimilar | |
|---|--------------------|
| General information | |
| Vendor identification (VendorID) | 002AH |
| Device identifier (DeviceID) | 0306H |
| Supply voltage | |
| Rated value (DC) | 24 V |
| Reverse polarity protection | Yes |
| power supply according to NEC Class 2 required | Yes |
| Input current | |
| Current consumption, typ. | 100 mA |
| from supply voltage 1L+, max. | 4 A |
| Encoder supply | |
| Number of outputs | 8 |
| 24 V encoder supply | |
| Short-circuit protection | Yes; Electronic |
| Output current, max. | 100 mA; per output |
| Power loss | |
| Power loss, typ. | 6.5 W |
| Digital inputs | |
| Number of digital inputs | 16 |
| • in groups of | 2 |
| Input characteristic curve in accordance with IEC 61131, type 3 | Yes |
| Number of simultaneously controllable inputs | |
| all mounting positions | |
| — up to 60 °C, max. | 16 |
| Input voltage | |
| Rated value (DC) | 24 V |
| • for signal "0" | -3 to +5V |
| • for signal "1" | +11 to +30V |
| Input current | |
| ● for signal "1", typ. | 7 mA |
| Input delay (for rated value of input voltage) | |
| for standard inputs | |
| — at "0" to "1", max. | typically 3 ms |
| — at "1" to "0", max. | typically 3 ms |
| Cable length | |
| • unshielded, max. | 30 m |
| Encoder | |
| Connectable encoders | |
| • 2-wire sensor | Yes |

| Interfaces | permissible quiescent current (2-wire sensor), max. | 1.5 mA |
|--|---|----------------------------------|
| Transmission procedure | | |
| Interface types | | 100BASE-TX |
| Interface yees * MIZ port * Interplace system * Interface yees * MIZ port * Uninegotation * Ves * Uninegotation * Uninegota | · | 1 |
| Interface yees * MIZ port * Interplace system * Interface yees * MIZ port * Uninegotation * Ves * Uninegotation * Uninegota | | |
| Mil | Interface types | |
| Interface types Miz port | • • | Yes |
| MX2 port Autonegotiation Autonegotiation Autonegotiation Autonessing Yes Autonegotiation Transmission rate, max. 100 Mbit/s Protocols Supports protocol for PROFINET IO Yes PROFINET CBA No PROFINET CBA No PROFINET IO Device Services — IRT with the option "high flexibility" Yes Protocols Autonegotiation — IRT with the option "high flexibility" Yes Redundancy mode Media restordancy — MRP Yes Open IE communication - ICP/IP No - SNMP Yes - CPP Yes - LLDP - LIDP - Yes - LIDP - Ing - Ing - Yes - Yes - Ing - Yes - Ing - Yes - Yes - Yes - Ing - Yes - Yes - Yes - Yes - Yes - Yes - Ing - Yes - Ing - Yes - Y | • integrated switch | Yes |
| . Autorcrossing | Interface types | |
| - National Protection - Transmission rate, max. 100 Mbit/s | M12 port | |
| Protection Supports protect for PROFINET IO PROFINET CBA No PROFINET CBA No PROFINET IO Device Services — IRT with the option "high floxibility" — Prioritized startup Yes Services — IRT with the option "high floxibility" — Prioritized startup Yes Gedundancy — MRP Ves Open IE communication • TCPIP No • SNMP • CCP • Yes • LLDP • pilig • pi | Autonegotiation | Yes |
| Supports protocol for PROFINET IO Yes PROFINET IO BA No PROFIsafe No PROFISAFE No PROFINET IO Device Services | | Yes |
| Supports protocol for PROFINET IO Yes PROFINET CBA No PROFINET Device PROFINET Device Services | Transmission rate, max. | 100 Mbit/s |
| PROFINET CBA PROFIsate No PROFIsate No PROFINET IO Device Services — IRT with the option "nigh flexibility" — Prioritized startup Yes Redundancy mode Media redundancy — MRP | Protocols | |
| PROFINET IO Device Services — IRT with the option "high flexibility" Yes — Prioritized startup Yes Redundancy mode Media redundancy — MiRP Yes Open IE communication • TCPIP No • SNMP Yes • DCP Yes • LLDP Yes • ping Yes • ARP Yes Open Services • Diagnostic sfunction Diagnostic sfunction Yes • Diagnostic information readable Yes • Diagnostic information readable Yes • Monitoring the supply voltage Yes; green "ON" LED • Wire-break in signal transmitter cable Yes • Short-Circult encoder supply • Group error Yes; Red/yellow "SF-MT" LED Potential separation Detween the load voltages and all other switching components No Detween the load voltages Potential separation Detween the foat name is • Detween the channels • Detween the protection Itested with • 24 V DC circuits • Test voltage for interface, rms value [Vrms] • Test voltage for interface onnection Design of electrical connection Design of electrical connection ### Degree of protection Uniformations Width ### Height ### Degree of protection ### Prior V DC (vpe test) • Test voltage for interface, rms value [Vrms] ### Degree of protection #### Degree of protection ### Degree of protection ### Degree of protection | Supports protocol for PROFINET IO | Yes |
| PROFINET IO Device | PROFINET CBA | No |
| Services | PROFIsafe | No |
| - IRT with the option "high flexibility" Yes Prioritzed startup Yes Redundancy Yes Redundancy - MRP Yes Popen IE communication • TCP/IP No • SNMP Yes • DCP Yes • LLDP Yes • LLDP Yes • ILLDP Yes • ILLDP Yes • ILLDP Yes • Interrupted lagnostics/status information Diagnostics function • Tight the supply voltage Yes; green "ON" LED • Monitoring the supply voltage Yes; green "ON" LED • Wire-break in signal transmitter cable Yes • Short-circuit encoder supply Yes; Per channel group • Group error Potential separation between the load voltages Yes Potential separation bannels • between the channels • between the channels • between the channels • between the channels • Croup error Potential separation channels • between the channels • between the channels • Degree and chase of protection Test voltage for interface, ms value [Vrms] • 1500 V; According to IEEE 802.3 Degree and chase of protection IP65/67 connection method Design of electrical connection With Height • Height • 75 mm | PROFINET IO Device | |
| Redundancy mode Media redundancy — MRP Media redundancy — MRP Yes Open IE communication | Services | |
| Redundancy mode Media redundancy | — IRT with the option "high flexibility" | Yes |
| Media redundancy | — Prioritized startup | Yes |
| Open IE communication TCP/IP SNMP OC | Redundancy mode | |
| TCP/IP | Media redundancy | |
| ■ TCP/IP ■ SNIMP ■ SNIMP ■ CPP ■ LLDP ■ Yes ■ LLDP ■ yes ■ ping ■ ARP ■ Yes ■ ARP ■ ARP ■ Yes Interrupts/diagnostics/status information Diagnostics function Alarms ■ Diagnostic alarm ■ Diagnostic information readable ■ Monitoring the supply voltage ■ Monitoring the supply voltage ■ Monitoring the supply voltage ■ Wire-break in signal transmitter cable ■ Short-circuit encoder supply ■ Group error Potential separation Between the load voltages and all other switching components Detween the load voltages ■ Detween the endancels ■ between the channels ■ between the channels ■ between the channels ■ between the channels ■ Detween the channels ■ Test voltage for interface, rms value [Vrms] □ Test voltage f | | Yes |
| SNMP DCP PCP PCP PCP PCP PCP PCP PCP PCP PC | Open IE communication | |
| DCP LLDP Yes Ping ping ARP Yes Nes Nes Interrupts/diagnostics/status information Diagnostics function Diagnostics function Polagnostic alarm Diagnoses Diagnoses Diagnoses Diagnoses Diagnoses Nont-circuit encoder supply voltage Short-circuit encoder supply Fes; Per channel group Forum Yes; Red/yellow "SF/MT" LED Potential separation Detween the load voltages and all other switching components Detween the channels Poetroil | • TCP/IP | No |
| LLDP Ping Ping ARP Yes ARP Yes Interrupts/diagnostics/status information Diagnostics function Alarms Diagnostic alarm Pisapnoses Diagnostic information readable Nonitoring the supply voltage Nonitoring the supply Vess, Per channel group Short-circuit encoder supply Ses; Per channel group Short-circuit encoder supply Nes; Red/yellow "SF/MT" LED Potential separation between the load voltages Nonitoring the switching components Nonitoring the switching the switchin | • SNMP | Yes |
| Ping Yes ARP Nes | • DCP | Yes |
| • ARP Yes Interrupts/diagnostics/status information Diagnostics function Yes Alarms • Diagnostic alarm Yes Diagnoses • Diagnostic information readable Yes • Monitoring the supply voltage Yes; green "ON" LED • Wire-break in signal transmitter cable Yes • Short-circuit encoder supply Yes; Per channel group • Group error Yes; Red/yellow "SF/MT" LED Potential separation between the load voltages Yes between load voltage and all other switching components No between Ethernet and electronics Yes Potential separation channels • between the channels • between the channels • Detween the channels • Tor V DC (type test) • Test voltage for interface, rms value [Vrms] 1500 V; According to IEEE 802.3 Degree and class of protection IP degree of protection IP degree of protection Design of electrical connection 4/5-pin M12 circular connectors Dimensions Width 60 mm Height 175 mm Depth 49 mm | • LLDP | Yes |
| Interrupts/diagnostics/status information | • ping | Yes |
| Diagnostic function Yes Alarms • Diagnostic alarm Yes Diagnoses • Diagnostic information readable Yes • Monitoring the supply voltage Yes; green "ON" LED • Wire-break in signal transmitter cable Yes • Short-circuit encoder supply Yes; Per channel group • Group error Yes; Red/yellow "SF/MT" LED Potential separation between the load voltages Yes between load voltage and all other switching components No between Ethernet and electronics Yes Potential separation channels • between the channels • between the channels • between the channels • between for interface, rms value [Vrms] Pegree and class of protection IP degree of protection IP65/67 connection method Design of electrical connection 4/5-pin M12 circular connectors Dimensions Width Height 175 mm Depth 49 mm | | Yes |
| Diagnostic alarm Diagnoses Diagnoses Diagnoses Diagnoses Diagnoses Polagnostic information readable Monitoring the supply voltage Wes; green "ON" LED Wire-break in signal transmitter cable Short-circuit encoder supply Group error Poential separation Between the load voltages Petween the load voltage and all other switching components Detween Ethernet and electronics Potential separation channels between the channels No Isolation tested with 24 V DC circuits Tor V DC (type test) Test voltage for interface, rms value [Vrms] Degree and class of protection IP degree of protection IP65/67 connection method Design of electrical connection Midth 60 mm Height 175 mm Depth 49 mm | Interrupts/diagnostics/status information | |
| Diagnostic alarm Diagnoses Diagnostic information readable Monitoring the supply voltage Wire-break in signal transmitter cable Short-circuit encoder supply Group error Potential separation between the load voltages Potential separation between Ethernet and electronics Potential separation obetween Ethernet and electronics Potential separation channels Detween Ethernet and electronics Potential separation channels Detween the channels Detween the channels 1 | Diagnostics function | Yes |
| Diagnoses Diagnostic information readable Monitoring the supply voltage Wire-break in signal transmitter cable Short-circuit encoder supply Group error Yes; Per channel group Group error Yes; Red/yellow "SF/MT" LED Potential separation between the load voltages Yes between load voltage and all other switching components No between Ethernet and electronics Yes Potential separation channels between the channels No Isolation tested with 24 V DC circuits Test voltage for interface, rms value [Vrms] Degree and class of protection IP degree of protection IP degree of protection Upgeree and class of protection IP degree of protection Dimensions Width Both Height 175 mm Depth 49 mm | Alarms | |
| Diagnostic information readable Monitoring the supply voltage Yes; green "ON" LED Yes Short-circuit encoder supply Group error Yes; Per channel group Yes; Red/yellow "SF/MT" LED Potential separation between the load voltages between load voltage and all other switching components No between Ethernet and electronics Potential separation channels between the channels No Isolation Test voltage for interface, rms value [Vrms] Degree and class of protection IP degree of protection Upegree of protection Dimensions Width 60 mm Height 175 mm Depth 49 mm | Diagnostic alarm | Yes |
| Monitoring the supply voltage Wire-break in signal transmitter cable Short-circuit encoder supply Group error Potential separation between the load voltages between tand electronics Potential separation No between Ethernet and electronics Potential separation No Isolation tested with 24 V DC circuits Test voltage for interface, rms value [Vrms] Degree and class of protection IP degree of protection Design of electrical connection Vidth 60 mm Height 175 mm Depth Ves; Red/yellow "SF/MT" LED Yes Yes Yes Yes Yes Yes Yes Ye | 9 | |
| Wire-break in signal transmitter cable Short-circuit encoder supply Group error Yes; Per channel group Yes; Red/yellow "SF/MT" LED Potential separation between the load voltages Yes between load voltage and all other switching components No between Ethernet and electronics Yes Potential separation channels • between the channels No Isolation tested with • 24 V DC circuits • Test voltage for interface, rms value [Vrms] Degree and class of protection IP degree of protection Pesign of electrical connection Design of electrical connection Dimensions Width 60 mm Height 175 mm Depth 49 mm | | |
| Short-circuit encoder supply Group error Yes; Red/yellow "SF/MT" LED Potential separation between the load voltages Yes between load voltage and all other switching components between Ethernet and electronics Yes Potential separation channels • between the channels No Isolation tested with • 24 V DC circuits • Test voltage for interface, rms value [Vrms] Pegree and class of protection IP degree of protection Design of electrical connection ### Add To many Width ### 60 mm Height Height 175 mm Depth Potential separation channels No Yes Yes No No IP description IP description IP 65/67 Connection method ### Add To many ### A | | |
| Group error Yes; Red/yellow "SF/MT" LED Potential separation between the load voltages Yes between load voltage and all other switching components No between Ethernet and electronics Yes Potential separation channels • between the channels No Isolation tested with • 24 V DC circuits • Test voltage for interface, rms value [Vrms] IP degree and class of protection IP degree of protection connection method Design of electrical connection Width 60 mm Height 175 mm Depth Depth 49 mm | | |
| Potential separation between the load voltages between load voltage and all other switching components No between Ethernet and electronics Potential separation channels • between the channels No Isolation tested with • 24 V DC circuits • Test voltage for interface, rms value [Vrms] Pegree and class of protection IP degree of protection Peging of electrical connection Dimensions Width 60 mm Height 175 mm Depth | | • |
| between the load voltages between load voltage and all other switching components No between Ethernet and electronics Yes Potential separation channels • between the channels No Isolation tested with • 24 V DC circuits • Test voltage for interface, rms value [Vrms] Degree and class of protection IP degree of protection Design of electrical connection Width 60 mm Height Depth Person August Augus | · | Yes; Red/yellow "SF/MT" LED |
| between load voltage and all other switching components between Ethernet and electronics Potential separation channels • between the channels No Isolation tested with • 24 V DC circuits • Test voltage for interface, rms value [Vrms] Degree and class of protection IP degree of protection IP degree of protection Design of electrical connection Width Height Depth No Yes Yos Yos Yes Yos Yes Yos Yes No No IP 65/67 Tor V DC (type test) 1 500 V; According to IEEE 802.3 PF65/67 Connection method 4/5-pin M12 circular connectors Dimensions Width 60 mm Height 175 mm Depth | | |
| between Ethernet and electronics Potential separation channels • between the channels No Isolation tested with • 24 V DC circuits • Test voltage for interface, rms value [Vrms] IP degree and class of protection IP degree of protection IP degree of protection Uesign of electrical connection Design of electrical connection Width 60 mm Height 175 mm Depth | | |
| Potential separation channels • between the channels No Isolation tested with • 24 V DC circuits • Test voltage for interface, rms value [Vrms] Degree and class of protection IP degree of protection IP degree of protection Design of electrical connection Dimensions Width 60 mm Height 175 mm Depth | | |
| between the channels Isolation tested with 24 V DC circuits Test voltage for interface, rms value [Vrms] IP degree and class of protection IP degree of protection IPesign of electrical connection Design of electrical connection Width 60 mm Height Depth No 707 V DC (type test) 708 V; According to IEEE 802.3 709 V DC (type test) 809 V; According to IEEE 802.3 809 V; Accor | | Yes |
| Isolation tested with • 24 V DC circuits • Test voltage for interface, rms value [Vrms] Degree and class of protection IP degree of protection IP degree of protection Design of electrical connection Dimensions Width Height Depth 175 mm Depth | · | |
| tested with • 24 V DC circuits • Test voltage for interface, rms value [Vrms] Degree and class of protection IP degree of protection IP degree of protection Design of electrical connection Dimensions Width Height Depth 175 mm Depth 49 mm | | No |
| ● 24 V DC circuits ● Test voltage for interface, rms value [Vrms] 1 500 V; According to IEEE 802.3 Degree and class of protection IP degree of protection IP degree of protection UP65/67 connection method Design of electrical connection Vidth 60 mm Height 175 mm Depth 49 mm | | |
| ● Test voltage for interface, rms value [Vrms] 1 500 V; According to IEEE 802.3 Degree and class of protection IP degree of protection IP65/67 connection method Design of electrical connection 4/5-pin M12 circular connectors Dimensions Width 60 mm Height 175 mm Depth 49 mm | | |
| Degree and class of protection IP degree of protection IP degree of protection Connection method Design of electrical connection Dimensions Width Height Depth 175 mm Depth 49 mm | | |
| IP degree of protection connection method Design of electrical connection Dimensions Width Height Depth 175 mm 49 mm | | 1 500 V; According to IEEE 802.3 |
| connection method Design of electrical connection 4/5-pin M12 circular connectors Dimensions Width 60 mm Height 175 mm Depth 49 mm | | |
| Design of electrical connection 4/5-pin M12 circular connectors Dimensions Width 60 mm Height 175 mm Depth 49 mm | | IP65/67 |
| Dimensions Width 60 mm Height 175 mm Depth 49 mm | | |
| Width 60 mm Height 175 mm Depth 49 mm | | 4/5-pin M12 circular connectors |
| Height 175 mm Depth 49 mm | Dimensions | |
| Depth 49 mm | Width | 60 mm |
| | Height | 175 mm |
| Weights | | 49 mm |
| | Weights | |

| Weight, approx. | 910 g |
|-----------------|-------|
| | |

last modified: 8/16/2023 🖸