

SIMATIC Compact Field Unit PA Edition with 16x I/O channels
 PROFINET interface V2.3 (RT) Use of PROFINET bus adapter
 Media redundancy (MRP) PROFINET system redundancy (S2)
 Configuration in Run (CiR) Process interfaces: 8x PROFIBUS PA
 and 8x freely configurable DIQ Installation up to hazardous zone 2
 Temperature range -40 to +70 °C Conformal coating Mounting on 35
 mm standard mounting rail



Figure similar

General information	
Product type designation	Compact Field Unit
HW functional status	E01
Firmware version	V1.0
<ul style="list-style-type: none"> FW update possible 	Yes
Vendor identification (VendorID)	002AH
Device identifier (DeviceID)	060DH
Number of channels	16
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M4
<ul style="list-style-type: none"> The user can configure digital channels as input/output as required 	Yes
<ul style="list-style-type: none"> Digital channels can be parameterized 	Yes
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated as of version 	- / -
<ul style="list-style-type: none"> STEP 7 configurable/integrated as of version 	From STEP 7 V5.6 HF1 and higher

- PCS 7 configurable/integrated as of version V9.0
- PROFIBUS as of GSD version/GSD revision - / -

Installation type/mounting

Mounting	on 35 mm DIN rail, 2 spacing units wide
Mounting position	Horizontal, vertical

Supply voltage

Type of supply voltage	24 V DC
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Short-circuit protection	Yes
Redundant power supply	Yes

Mains buffering

- Mains/voltage failure stored energy time 5 ms; Bridging for field devices and communication

Input current

Current consumption (rated value)	2.5 A
Current consumption, max.	2.55 A
Inrush current, max.	8 A
I^2t	0.3 A ² ·s

Encoder supply

Number of outputs	8
Output voltage encoder supply, min.	18.2 V
Short-circuit protection	Yes; Electronic

Output current

- up to 60 °C, max. 2 A
- up to 70 °C, max. 1 A

Power loss

Power loss, typ.	8.2 W; Depending on the type of BusAdapter used (typ. RJ45)
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Address area

Address space per station	
• Address space per station, max.	1 440 byte; Dependent on configuration

Digital inputs

Number of digital inputs	8
Source/sink input	Yes; P-reading
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Input characteristic curve in accordance with IEC 61131, type 2	No

Input characteristic curve in accordance with IEC 61131, type 3	Yes
Pulse extension	No
Number of simultaneously controllable inputs	
horizontal installation	
— up to 60 °C, max.	8; Total current must be observed, see DQ
— up to 70 °C, max.	8; Total current must be observed, see DQ
vertical installation	
— up to 60 °C, max.	8; Total current must be observed, see DQ
Input voltage	
• Rated value (DC)	24 V
• for signal "0"	-30 to +5V
• for signal "1"	+11 to +30V
Input current	
• for signal "1", typ.	2.5 mA; Typical
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	No
— at "0" to "1", max.	3.2 ms
— at "1" to "0", max.	3.2 ms
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	8
Current-sinking	No
Current-sourcing	Yes
Short-circuit protection	Yes
• Response threshold, typ.	0.7 to 1.3 A
Limitation of inductive shutdown voltage to	Typ. L+ (-50 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
• on lamp load, max.	5 W
Load resistance range	
• lower limit	48 Ω
• upper limit	12 kΩ
Output voltage	
• Type of output voltage	DC
• for signal "1", min.	U _e minus 1 V
Output current	
• for signal "1" rated value	0.5 A

• for signal "0" residual current, max.	0.1 mA
Output delay with resistive load	
• "0" to "1", max.	50 µs
• "1" to "0", max.	100 µs
Parallel switching of two outputs	
• for uprating	No
• for redundant control of a load	No
Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	2 Hz
• on lamp load, max.	10 Hz
Total current of the outputs	
• Current per channel, max.	0.5 A
horizontal installation	
— up to 60 °C, max.	2 A
— up to 70 °C, max.	1 A
vertical installation	
— up to 60 °C, max.	2 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m

Encoder

Connectable encoders	
• 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA

Interfaces

Number of PROFINET interfaces	1
Number of PROFIBUS interfaces	0
PROFIBUS PA	
• Transmission rate, max.	31.25 kbit/s
• Number of connectable PA field devices	8; Electrically isolated from other interfaces, isolation tested at 2 500 V DC
• Current output to PA field devices, max.	320 mA
• permissible current per spur line	40 mA
• Automatic addressing	Yes
• System-supported integration of field devices via PA profiles	Yes
• Extended fieldbus diagnostics	Yes

1. Interface

Interface type	PROFINET
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Isolated	Yes
Interface types	
• Number of ports	2
• integrated switch	Yes
• BusAdapter (PROFINET)	Yes
Protocols	
• PROFINET IO Device	Yes
• PROFIBUS DP slave	No
Interface types	
RJ 45 (Ethernet)	
• 100 Mbps	Yes
• Autonegotiation	Yes
• Autocrossing	Yes
Protocols	
Supports protocol for PROFINET IO	Yes
PROFINET IO Device	
Redundancy mode	
— MRP	Yes
— PROFINET system redundancy (S2)	Yes; Type S2
Open IE communication	
• LLDP	Yes
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No
Interrupts/diagnostics/status information	
Status indicator	Yes
Alarms	Yes
Diagnostic functions	Yes
Diagnostic messages	
• Monitoring of encoder power supply	Yes
• Wire-break	Yes
• Short-circuit	Yes
Diagnostics indication LED	
• RUN LED	Yes; Green LED
• ERROR LED	Yes; Red LED
• MAINT LED	Yes; yellow LED
• Monitoring of the supply voltage (PWR-LED)	Yes
• Digital input status indicator	Yes
• Digital output status indicator	Yes
• Spur line status/fault	Yes

Potential separation	
between the channels and PROFINET	Yes
Potential separation digital inputs	
• between the channels	No
• between the channels and the power supply of the electronics	No
Potential separation digital outputs	
• between the channels	No
• between the channels and the power supply of the electronics	No
Isolation	
Isolation tested with	1 500 V AC between PROFINET and electronics
Degree and class of protection	
Degree of protection acc. to EN 60529	IP20
Ambient conditions	
Ambient temperature during operation	
• min.	-40 °C
• max.	70 °C
• horizontal installation, min.	-40 °C
• horizontal installation, max.	70 °C; Observe derating
• vertical installation, min.	-40 °C
• vertical installation, max.	60 °C; Observe derating
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	85 °C
Relative humidity	
• Operation, max.	95 %
Connection method	
Design of electrical connection	Connection plug
Spur line	
• Number of spur lines	8
• Type of cable	Type A
• Cable diameter, min.	6 mm
• Cable diameter, max.	12 mm
• Conductor cross-section, min.	0.2 mm ²
• Conductor cross-section, max.	2.5 mm ²
• Cable length, max.	120 m
• total current output to field devices, max.	320 mA
• Number of connectable field devices	8
• Current limitation per field device, max.	40 mA

• No-load voltage, max.	15.3 V
• short-circuit proof	Yes
• Short-circuit current (test current); max.	8 mA
• intrinsically safe according to FISCO model	Yes
• Debounce logic	Yes

Dimensions

Width	329 mm
Height	123 mm
Depth	74 mm

Weights

Weight, approx.	580 g
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last modified: 09/26/2018