

SIMATIC Compact Field Unit PA edition with 16x I/O channels (8x PROFIBUS PA and 8x freely configurable DIQ (DI 24 V DC; DQ 24 V DC 0.5 A; counter)) installation up to hazardous zone 2 channel diagnostics PROFINET interface, use of PROFINET BusAdapter Configuration in Run (CiR) media redundancy (MRP) PROFINET system redundancy (S2) temperature range -40 to +70 °C conformal coating mounting on 35 mm DIN rail



Figure similar

General information	
Product type designation	CFU PA
HW functional status	FS02
Firmware version	V2.0.1
• FW update possible	Yes
Vendor identification (VendorID)	002AH
Device identifier (DeviceID)	060DH
Number of channels	16
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	No
• The user can configure digital channels as input/output as required	Yes
• Digital channels can be parameterized	Yes
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V19 Update 2
• STEP 7 configurable/integrated from version	STEP 7 V5.7.1.4
• PCS 7 configurable/integrated from version	V9.1 SP2 UC7
• PROFIBUS from GSD version/GSD revision	- / -
• PROFINET from GSD version/GSD revision	GSDML V2.43 2024.03.08
Operating mode	
• DI	Yes
• Counter	Yes
• DQ	Yes
CiR - Configuration in RUN	
Reparameterization possible in RUN	Yes
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 ² t	0.3 A ² ·s
Encoder supply	
Number of outputs	8
Output voltage, 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)
Address area	
Address space per station	
• Address space per station, max.	1 440 byte; Dependent on configuration
Digital inputs	
Number of digital inputs	8
Digital inputs, parameterizable	Yes
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
Digital input functions, parameterizable	
• Counter	Yes
— Number, max.	1
— Counting frequency, max.	1 kHz
— Counting width	32 bit
— Counting direction up/down	Yes; Up
Input voltage	
• Rated value (DC)	24 V
• for signal "0"	-30 to +5 V
• 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; for counter function 0,1 ms
— at "1" to "0", max.	3.2 ms; for counter function 0,1 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

Open-circuit detection	Yes
Limitation of inductive shutdown voltage to	Typ. L+ (-50 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
• with resistive load, max.	0.5 A
• 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.	Ue 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; isolated between power supply and PROFINET interface
• 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
Isolated	Yes
Interface types	
• Number of ports	2; via BusAdapter
• integrated switch	Yes
• BusAdapter (PROFINET)	Yes
Protocols	

• PROFINET IO Device	Yes
• PROFIBUS DP device	No
• Media redundancy	Yes; as MRP client
Interface types	
RJ 45 (Ethernet)	
• 100 Mbps	Yes
• Autonegotiation	Yes
• Autocrossing	Yes
Protocols	
Supports protocol for PROFINET IO	Yes
PROFINET IO Device	
Services	
— Shared device	No
Redundancy mode	
• PROFINET system redundancy (S2)	Yes; Type S2
Media redundancy	
— MRP	Yes
Open IE communication	
• LLDP	Yes
Interrupts/diagnostics/status information	
Status indicator	Yes
Alarms	Yes
Diagnostics function	Yes
Alarms	
• Diagnostic alarm	Yes
• Maintenance interrupt	Yes
• Limit value alarm	Yes
• Hardware interrupt	Yes
Diagnoses	
• Monitoring the supply voltage	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; green/red LED
• Channel status display	Yes; green/red LED
• Status indicator digital input (green)	Yes
• Status indicator digital output (green)	Yes
• Connection display LINK TX/RX	Yes; 2x green LEDs on BusAdapter
• 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 other electronics
Degree and class of protection	
IP degree of protection	IP20
Ambient conditions	
Ambient temperature during operation	
• min.	-40 °C

• max. • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max.	70 °C -40 °C 70 °C; Observe derating -40 °C 60 °C; Observe derating																																				
Ambient temperature during storage/transportation																																					
• min. • max.	-40 °C 70 °C																																				
Relative humidity																																					
• Operation, max.	95 %																																				
Connection method																																					
Design of electrical connection	Connection plug																																				
Spur line																																					
• Number of spur lines • Type of cable • Cable diameter, min. • Cable diameter, max. • Conductor cross-section, min. • Conductor cross-section, max. • Cable length, max. • total current output to field devices, max. • Number of connectable field devices • Current limitation per field device, max. • No-load voltage, max. • short-circuit proof • Short-circuit current (test current); max. • intrinsically safe according to FISCO model • Debounce logic	8 Type A 6 mm 12 mm 0.2 mm² 2.5 mm² 120 m 320 mA 8 40 mA 15.3 V Yes 8 mA Yes Yes																																				
Dimensions																																					
Width	329 mm																																				
Height	123 mm																																				
Depth	74 mm																																				
Weights																																					
Weight, approx.	650 g																																				
Classifications																																					
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last modified:

10/10/2025 