

SIPLUS ET 200S F-DO 24 V PROFIsafe -25...+60°C with conformal coating based on 6ES7138-4FB04-0AB0 . Electronics module for ET 200S, 4 F-DO PROFIsafe, 24 V DC/2 A, 30 mm overall width, up to Category 4 (EN 954-1)/ SIL3 (IEC 61508)/PLE (ISO 13849), can also be used in PROFINET configuration with IM 151-3 HF



Figure similar

Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
• Reverse polarity protection	No
Input current	
From load voltage L+ (no load), typ.	100 mA
from backplane bus 3.3 V DC, max.	28 mA
Power loss	
Power loss, typ.	3.5 W
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	4
Short-circuit protection	Yes
Limitation of inductive shutdown voltage to	Typ. (2L+) -47 V
Controlling a digital input	No
Switching capacity of the outputs	

• on lamp load, max.	10 W
Load resistance range	
• lower limit	12 Ω
• upper limit	1 kΩ
Output voltage	
• for signal "1", min.	L+ (-2,0 V), current sourcing switch: L+ (-1,5 V), voltage drop on current sinking switch: max. 0.5 V
Output current	
• for signal "1" rated value	2 A
• for signal "1" permissible range, min.	20 mA
• for signal "1" permissible range, max.	2.4 A
• for signal "0" residual current, max.	0.5 mA; Current-sourcing and current-sinking switches
Parallel switching of two outputs	
• for uprating	No
• for redundant control of a load	No
Switching frequency	
• with resistive load, max.	30 Hz; Symmetrical
• with inductive load, max.	0.1 Hz; Symmetrical
• on lamp load, max.	10 Hz; Symmetrical
Total current of the outputs	
• Current per module, max.	6 A
Total current of the outputs (per group)	
horizontal installation	
— up to 40 °C, max.	6 A
— up to 55 °C, max.	5 A
— up to 60 °C, max.	4 A
vertical installation	
— up to 40 °C, max.	4 A
Cable length	
• shielded, max.	500 m
• unshielded, max.	500 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Diagnostic messages	
• Wire-break	Yes
• Short-circuit	Yes
Diagnostics indication LED	
• Group error SF (red)	Yes
• Status indicator digital output (green)	Yes
Potential separation	
Potential separation digital outputs	

- between the channels
- between the channels and backplane bus
- Between the channels and load voltage L+

No
Yes
No

Standards, approvals, certificates

Highest safety class achievable in safety mode

- acc. to EN 954
- Performance level according to ISO 13849-1
- SIL acc. to IEC 61508

4
PLe
SIL 3

Ambient conditions

Ambient temperature during operation

- min.
- max.

-25 °C
60 °C

Altitude during operation relating to sea level

- Installation altitude above sea level, max.
- Ambient air temperature-barometric pressure-altitude

2 000 m
Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)

Relative humidity

- With condensation, tested in accordance with IEC 60068-2-38, max.

100 %; RH incl. condensation/frost (no commissioning under condensation conditions)

Resistance

Use in stationary industrial systems

- to biologically active substances according to EN 60721-3-3
- to chemically active substances according to EN 60721-3-3
- to mechanically active substances according to EN 60721-3-3

Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
Yes; Class 3S4 incl. sand, dust, *

Use on ships/at sea

- to biologically active substances according to EN 60721-3-6
- to chemically active substances according to EN 60721-3-6
- to mechanically active substances according to EN 60721-3-6

Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
Yes; Class 6S3 incl. sand, dust, *

Usage in industrial process technology

- Against chemically active substances acc. to EN 60654-4
- Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04

Yes; Class 3 (excluding trichlorethylene)
Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)

Remark

— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04

* The supplied plug covers must remain in place over the unused interfaces during operation!

Dimensions

Width	30 mm
Height	81 mm
Depth	52 mm

Weights

Weight, approx.	85 g
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last modified: 05/06/2020