

SIPLUS ET200S F-DO 24V PROFISAF -25 ... +60 GRAD C MIT CONFORMAL COATING BASED ON 6ES7138-4FB04-0AB0 . ELECTRON. MODULE F. ET200S, 4 F-DO PROFISAFE, DC 24V/2A, 30 MM WIDTH UP TO CATEGORY 4 (EN954-1)/ SIL3 (IEC61508)/PLE (ISO13849), ALSO USEABLE IN PROFINET-NETWORKS WITH IM151-3 HF

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
Digital outputs	
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

<b>Total current of the outputs</b>	
• Current per module, max.	6 A
<b>Total current of the outputs (per group)</b>	
<b>horizontal installation</b>	
— up to 40 °C, max.	6 A
— up to 55 °C, max.	5 A
— up to 60 °C, max.	4 A
<b>vertical installation</b>	
— up to 40 °C, max.	4 A
<b>Cable length</b>	
• shielded, max.	500 m
• unshielded, max.	500 m
<b>Interrupts/diagnostics/status information</b>	
Diagnostic functions	Yes
<b>Diagnostic messages</b>	
• Wire-break	Yes
• Short-circuit	Yes
<b>Diagnostics indication LED</b>	
• Group error SF (red)	Yes
• Status indicator digital output (green)	Yes
<b>Potential separation</b>	
<b>Potential separation digital outputs</b>	
• between the channels	No
• between the channels and backplane bus	Yes
• Between the channels and load voltage L+	No
<b>Isolation</b>	
<b>tested with</b>	
• Load voltage L+ against backplane bus	2545 V DC
<b>Standards, approvals, certificates</b>	
<b>Highest safety class achievable in safety mode</b>	
• acc. to EN 954	4
• Performance level according to EN ISO 13849-1:2008	PLe
• SIL acc. to IEC 61508	SIL 3
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• min.	-25 °C
• max.	60 °C
<b>Extended ambient conditions</b>	

<ul style="list-style-type: none"> <li>• relative to ambient temperature-atmospheric pressure-installation altitude</li> <li>• At cold restart, min.</li> </ul>	<p>Tmin ... Tmax at 1080 hPa ... 795 hPa (-1000 m ... +2000 m)</p> <p>-25 °C</p>
<b>Relative humidity</b>	
— With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
<b>Resistance</b>	
— against biologically active substances / conformity with EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna). The supplied connector covers must remain on the unused interfaces during operation!
— against chemically active substances / conformity with EN 60721-3-3	Yes; Class 3C4 incl. salt spray according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!
— against mechanically active substances / conformity with EN 60721-3-3	Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!
<b>Dimensions</b>	
Width	30 mm
Height	81 mm
Depth	52 mm
<b>Weights</b>	
Weight, approx.	85 g
<b>last modified:</b>	12.11.2015