8.1 Technical details

Technical details	
Application range	**Failsafe**
Maximum achievable category in accordance with **EN 954-1**	**4**
Maximum achievable SIL value	**SIL3**
Module's device code	**0A00h**
Number of FS input bits	**4**
Support in system environment A	**yes** base type, T-type **no** R-type
from FS firmware version for other head modules	**4** base type, T-type
from FS firmware version PSSu H F PN	**1** base type, T-type
Support in system environment B	**yes**
from head module FS firmware version	**1.0.0** base type, T-type **1.5.0** R-type
Electrical data	
Internal supply voltage (module supply)	
Supply voltage range of module supply	**4.8 - 5.4 V**
Module's current consumption	**23 mA**
Module's power consumption	**0.12 W**
Periphery's supply voltage (periphery supply)	
Voltage range	**16.8 - 30.0 V**
Module's current consumption with no load	**8 mA**
Module's power consumption with no load	**0.19 W**
Max. power dissipation of the module	**1.50 W**
Inputs	
Number	**4**
Input voltage	**24 V DC**
Input current	**2.6 - 7.8 mA**
Min. threshold voltage when signal changes from “1” to “0”	**9.0 V**
Max. threshold voltage when signal changes from “0” to “1”	**10.0 V**
Potential isolation between input and voltage for the internal module bus	**yes**
Number of test pulse outputs	**2**
Number of outputs that can be configured as test pulses	**2**
Max. output current at “1” signal	**0.25 A**
Short circuit-proof	**yes**
Max. cable runs between test pulse output and input	**200 m**
Standard for voltage interruptions	**EN61131-2**, **EN61496-1**
Times	
Max. processing time for input when signal changes from “1” to “0”	**1.000 ms**
Max. processing time for input when signal changes from “0” to “1”	**1.000 ms**
Min. processing time for input when signal changes from “1” to “0”	**0.50 ms**
Min. processing time for input when signal changes from “0” to “1”	**0.50 ms**

8.1 Technical details

Environmental data	
Climatic suitability	**EN 50125-1**, **EN 50125-3**, **EN 60068-2-14**, **EN 60068-2-1**, **EN 60068-2-2**, **EN 60068-2-30**, **EN 60068-2-78**
Ambient temperature in accordance with **EN 60068-2-14**	
base type, T-type	**-40 - 70 °C** T-type
	0 - 60 °C base type
Storage temperature in accordance with **EN 60068-2-1/-2**	**-25 - 70 °C** base type
	-40 - 70 °C T-type
Climatic suitability in accordance with **EN 60068-2-30**, **EN 60068-2-78**	**93 % r. h. at 40 °C** base type, T-type
Condensation	**yes** T-type
	no base type
Max. operating height above sea level	**2000 m** base type
	5000 m T-type
EMC	**EN 61000-4-2**, **EN 61000-4-3**, **EN 61000-4-4**, **EN 61000-4-5**, **EN 61000-4-6**, **EN 61000-6-2**, **EN 61000-6-4**
Vibration to **EN 60068-2-6** base type, T-type	
Frequency	**10 - 150 Hz** base type, T-type
	10 - 55 Hz R-type
Max. acceleration	**1g** base type, T-type
Broadband noise in accordance with **EN 60068-2-64** T-type	
Frequency	**5 - 500 Hz** T-type
Max. acceleration	**1.9grms** T-type
Shock stress	
EN 60068-2-27 base type, T-type	**15g** base type, T-type
	11 ms base type, T-type
EN 60068-2-29 base type, T-type	**10g** base type, T-type
	16 ms base type, T-type
Protection type in accordance with **EN 60529** base type, T-type	
Mounting (e.g. cabinet)	**IP54** base type, T-type
Housing	**IP20** base type, T-type
Terminals	**IP20** base type, T-type
Airgap creepage in accordance with **EN 60664-1** base type, T-type	
Overvoltage category	**II** base type, T-type
Pollution degree	**2** base type, T-type
Environmental data for railway applications	
Installation location in accordance with **EN 50125-3** R-type	**Track area (1m – 3m)** R-type
Installation location in accordance with **EN 61373** R-type	**Category 1, Class A + B** R-type
Climatic suitability	**50125-1**, **50125-3**, **50155**
Max. operating height above sea level	**2,000 m** R-type
Ambient temperature in accordance with **EN 50155** R-type	**-40 ... +70 °C** R-type
Ambient temperature in accordance with **EN 50125-1** R-type, **EN 50125-3** R-type	**-40 ... +70 °C** R-type
Shock stress **EN 50125-3** R-type	
	2 g R-type
	11 ms R-type
Vibration to **50125-3** R-type	
	0.23 g R-type
	5 ... 2,000 Hz R-type

Pilz GmbH & Co. KG, Felix-Wankel-Straße 2, 73760 Ostfildern, Germany
Telephone: +49 711 3409-0, Telefax: +49 711 3409-133, E-Mail: pilz.gmbh@pilz.de

8.1 Technical details

Environmental data for railway applications	
Shock stress **EN 61373** R-type	
	5 g R-type
	30 ms R-type
Broadband noise in accordance with **EN 61373** R-type	
Max. acceleration	**0.79 g RMS** R-type
Frequency	**5 ... 150 Hz** R-type
Protection type in accordance with **EN 60529** R-type	
Mounting (e.g. cabinet)	**IP51** R-type
Housing	**IP20** R-type
Terminals	**IP20** R-type
Airgap creepage in accordance with **EN 50124-1** R-type	
Overvoltage category	**OV2** R-type
Pollution degree	**PD1** R-type
Supply interruptions in accordance with **EN 50155** R-type	**S2, C1, C2** R-type
Mechanical data	
Housing material	
Front	**PC**
Bottom	**PC**
Coding	**PA**
Dimensions	
Height	**76.0 mm**
Width	**12.6 mm**
Depth	**60.2 mm**
Weight	**44 g** base type
	45 g R-type, T-type
Mechanical coding	
Type	**D**
Colour	**yellow**

Safety characteristic data

Unit	Operating mode	EN ISO 13849-1: 2006 PL	EN 954-1 Category	EN IEC 62061 SIL CL	PFH [1/h]	EN ISO 13849-1: 2006 T_M [year]
digital inputs	single-channel	**PL d** (**Cat. 2**)	**Cat. 2**	**SIL CL 2**	**9.10E-09**	**20**
digital inputs	dual-channel	**PL e** (**Cat. 3**)	**Cat. 3**	**SIL CL 3**	**3.10E-09**	**20**
digital inputs	light beam device	**PL e** (**Cat. 4**)	**Cat. 4**	**SIL CL 3**	**2.91E-09**	**20**

All the units used within a safety function must be considered when calculating the safety characteristic data.

The standards current on **2009-10** apply.

8.2 Order reference

Order reference	
Description	**Order no.**
PSSu E F 4DI (Electronic module, base type)	312 200
PSSu E F 4DI-T (Electronic module, T-type)	314 200
PSSu E F 4DI-R (Electronic module, R-type)	315 200

Base Modules	Order no.
PSSu BP 1/8S (Base module without C-rail with screw terminals)	312 600
PSSu BP 1/8S-T (Base module without C-rail with screw terminals, T-type)	314 600
PSSu BP 1/8C (Base module without C-rail with cage clamp terminals)	312 601
PSSu BP 1/8C-T (Base module without C-rail with cage clamp terminals, T-type)	314 601
PSSu BP 1/12S (Base module without C-rail with screw terminals)	312 618
PSSu BP 1/12S-T (Base module without C-rail with screw terminals, T-type)	314 618
PSSu BP 1/12C (Base module without C-rail with cage clamp terminals)	312 619
PSSu BP 1/12C-T (Base module without C-rail with cage clamp terminals, T-type)	314 619
PSSu BP-C1 1/12S (Base module with C-rail and screw terminals)	312 622
PSSu BP-C1 1/12S-T (Base module with C-rail and screw terminals, T-type)	314 622
PSSu BP-C1 1/12C (Base module with C-rail and cage clamp terminals)	312 623
PSSu BP-C1 1/12C-T (Base module with C-rail and cage clamp terminals, T-type)	314 623

Pilz GmbH & Co. KG, Felix-Wankel-Straße 2, 73760 Ostfildern, Germany
Telephone: +49 711 3409-0, Telefax: +49 711 3409-133, E-Mail: pilz.gmbh@pilz.de