

EC-Type Examination Certificate

No. M6A 020132 0262 Rev. 02

Holder of Certificate: **Pilz GmbH & Co. KG**
Felix-Wankel-Str. 2
73760 Ostfildern
GERMANY

Product: **Safety components**
Electronic Safety Relay

Model(s): **PNOZsigma**

Parameters: Protection Class: IP20 (terminals)
IP40 (housing)

The report and the user documentation in the current valid revision are mandatory part of this certificate. The product complies with the following safety requirements only if the specifications documented in the currently valid revision of this report are met. The certified components are listed in report PO87415T in the current valid revision.

This EC Type Examination Certificate is issued according to Article 12(3) b or 12(4) a of Council Directive 2006/42/EC relating to machinery. It confirms that the listed Annex-IV equipment complies with the principal protection requirements of the directive. It refers only to the sample submitted to TÜV SÜD Product Service GmbH for testing and certification. For details see: www.tuvsud.com/ps-cert

Test report no.: **PO87414T**

Valid until: 2028-01-29

Date, 2023-02-01



(Peter Weiß)



Product Service

CERTIFICATE

No. Z10 020132 0252 Rev. 02

Holder of Certificate: **Pilz GmbH & Co. KG**

Felix-Wankel-Str. 2
73760 Ostfildern
GERMANY

Certification Mark:



Product: **Safety components
Electronic Safety Relay**

Model(s): **PNOZsigma**

Parameters: Protection Class: IP20 (terminals)
IP40 (housing)

The report and the user documentation in the current valid revision are mandatory part of this certificate. The product complies with the following safety requirements only if the specifications documented in the currently valid revision of this report are met. The certified components are listed in report PO87415T in the current valid revision.

Tested according to: EN ISO 13849-1:2015 (up to Cat.4 PL e)
EN IEC 62061:2021
EN 60947-5-1:2017
IEC 61508-1:2010
IEC 61508-2:2010
IEC 61508-3:2010
IEC 61511-1:2016

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: **PO87414T**
Valid until: **2028-01-29**

Date, 2023-02-01

(Peter Weiß)



**Liste der Varianten
der Sicherheitsschaltgeräte-Familie
PNOZsigma**

**List of variants
of safety relay family
PNOZsigma**

Hersteller / Manufacturer:

Pilz GmbH & Co. KG
Felix-Wankel-Straße 2
D-73760 Ostfildern
Germany

Bericht-Nr. / Report no: PO87415T

Revision 2.1
2023-02-01

Prüfstelle / Test body:

TÜV SÜD RAIL GmbH
Rail Automation

Zertifizierungsstelle / Certification body:

TÜV SÜD Product Service GmbH
Ridlerstraße 65
D-80339 München



Inhalt / content:

Seite / Page

1	Grundgeräte / Basic modules.....	3
2	Zweihandüberwachung / Two-hand monitoring.....	7
3	Kontakterweiterung / Contact expander	8
4	Zubehör / Accessory	11
5	Anmerkungen / Comment	12

Änderungshistorie / Change history:

Version	Name	Datum / Date	Änderungen / Changes
2.1	Jens Luther	2023-02-01	Rezertifizierung / Re-certification

Änderungen zur Vorgängerversion / Changes to the previous version:

Kapitel Chapter	Type / Device	Bemerkung / Remarks
All	Exchange of CPU PNOZ s3 / s4 Update to EN IEC 62061:2015 Update of type plate (UKCA) Add. new standards (IEC 61508/ IEC 61511)	PO99999T V1.0/ PO100252T V1.0/ PO87414T V2.0



1 Grundgeräte / Basic modules

Typ Type	Sach-Nr. ¹⁾ Oder No. ¹⁾	Version	Internal Test- Report	Sicherheitsrelevante Strompfade ($T_M = 20$) ³⁾ Safety related circuits ($T_M = 20$) ³⁾					Bemerkung ²⁾ Remark ²⁾
				Safety Output	PFH _D	max. SIL	Cat	PL	
PNOZ s1 24VDC	750101 751101	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24	$2,00 \cdot 10^{-07}$	2	3	c	Einsatz bis 5000m über NN For use up to 5000m over sea level
PNOZ s2 24VDC	750102 751102	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97795T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34	$2,50 \cdot 10^{-09}$	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
PNOZ s3 24VDC	750103 751103	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97795T V1.0 PO97688T V1.0 PO98209T V1.0 PO99999T V1.0 PO100252T V1.0	13-14 23-24	$2,31 \cdot 10^{-09}$	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
PNOZ s4 24VDC	750104 751104	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97795T V1.0 PO97688T V1.0 PO98209T V1.0 PO99999T V1.0 PO100252T V1.0	13-14 23-24 33-34	$2,31 \cdot 10^{-09}$	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level

1 Grundgeräte / Basic modules

Typ Type	Sach-Nr. ¹⁾ Oder No. ¹⁾	Version	Internal Test- Report	Sicherheitsrelevante Strompfade (T _M = 20) ³⁾ Safety related circuits (T _M = 20) ³⁾					Bemerkung ²⁾ Remark ²⁾
				Safety Output	PFH _D	max. SIL	Cat	PL	
PNOZ s4 24VDC coated	751184	1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97795T V1.0 PO97688T V1.0 PO98209T V1.0 PO99999T V1.0 PO100252T V1.0	13-14 23-24 33-34	2,31·10⁻⁰⁹	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
PNOZ s4 48-240VACDC	750134 751134	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97795T V1.0 PO97688T V1.0 PO98209T V1.0 PO99999T V1.0 PO100252T V1.0	13-14 23-24 33-34	2,31·10⁻⁰⁹	3	4	e	--
PNOZ s4.1 24VDC	750124 751124	1.1/ 1.2 1.1/ 1.2	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97795T V1.0 PO97688T V1.0 PO98209T V1.0 PO99999T V1.0 PO100252T V1.0	13-14 23-24 33-34	2,31·10⁻⁰⁹	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
PNOZ s4.1 48-240VACDC	750154 751154	1.1/ 1.2 1.1/ 1.2	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97795T V1.0 PO97688T V1.0 PO98209T V1.0 PO99999T V1.0 PO100252T V1.0	13-14 23-24 33-34	2,31·10⁻⁰⁹	3	4	e	--



1 Grundgeräte / Basic modules

Typ Type	Sach-Nr. ¹⁾ Oder No. ¹⁾	Version	Internal Test- Report	Sicherheitsrelevante Strompfade (T _M = 20) ³⁾ Safety related circuits (T _M = 20) ³⁾					Bemerkung ²⁾ Remark ²⁾
				Safety Output	PFH _D	max. SIL	Cat	PL	
PNOZ s5 24VDC	750105 751105	1.2/ 1.3 1.2/ 1.3	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24	2,31·10 ⁻⁰⁹	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
				37-38 47-48					2,34·10 ⁻⁰⁹
PNOZ s5 HT 24VDC	750105HT	1.2/ 1.3	PO94902T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24	2,31·10 ⁻⁰⁹	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
				37-38 47-48					2,34·10 ⁻⁰⁹
PNOZ s5 24VDC coated	751185	1.2/ 1.3	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24	2,31·10 ⁻⁰⁹	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
				37-38 47-48					2,34·10 ⁻⁰⁹
PNOZ s5 48-240VACDC	750135 751135	1.2/ 1.3 1.2/ 1.3	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24	2,31·10 ⁻⁰⁹	3	4	e	--
				37-38 47-48					2,34·10 ⁻⁰⁹
PNOZ s6.1 24VDC	750126 751126	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34	5,99 10 ⁻⁸	3	4	e	NOT-AUS-Funktion / Schutztürüberwachung / Zustimmungstaster - Gleichzeitigkeits-Überwachung gemäß EN 60204-1, Einsatz bis 5000m über NN Emergency stop function / Safety gate monitoring / Pushbutton - simulta- neity monitoring according EN 60204-1, For use up to 5000m over sea level



1 Grundgeräte / Basic modules

Typ Type	Sach-Nr. ¹⁾ Oder No. ¹⁾	Version	Internal Test- Report	Sicherheitsrelevante Strompfade (T _M = 20) ³⁾ Safety related circuits (T _M = 20) ³⁾					Bemerkung ²⁾ Remark ²⁾
				Safety Output	PFH _D	max. SIL	Cat	PL	
PNOZ s6.1 48-240VACDC	750156 751156	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34	5,99 10⁻⁸	3	4	e	NOT-AUS-Funktion / Schutztürüberwachung / Zustimmungstaster - Gleichzeitigkeits-Überwachung gemäß EN 60204-1 Emergency stop function / Safety gate monitoring / Pushbutton - simulta- neity monitoring according EN 60204-1



2 Zweihandüberwachung / Two-hand monitoring

Typ Type	Sach- Nr. <small>Fehler! Text- marke nicht defi- niert.</small> Oder No.	Version	Internal Test-Report	Sicherheitsrelevante Strompfade ($T_M = 20$) ³⁾ Safety related circuits ($T_M = 20$) ³⁾					Bemerkung ²⁾ Remark ²⁾
				Safety Output	PFH _D	max. SIL	Cat	PL	
PNOZ s6 24VDC	750106 751106	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34	2,62·10-09	3	4	e	Geeignet für Zweihandschaltungen bis Typ IIIC gemäß EN 574 / EN ISO 13851, Einsatz bis 5000m über NN Applicable for two-hand controls until type IIIC according EN 574 / EN ISO 13851, For use up to 5000m over sea level
PNOZ s6 48-240VACDC	750136 751136	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34	2,62·10-09	3	4	e	Geeignet für Zweihandschaltungen bis Typ IIIC gemäß EN 574 / EN ISO 13851 Applicable for two-hand controls until type IIIC according EN 574574 / EN ISO 13851
PNOZ s6.1 24VDC	750126 751126	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34	5,99 10-8	1	1	c	Geeignet für Zweihandschaltungen bis Typ IIIA gemäß EN 574 / EN ISO 13851, Einsatz bis 5000m über NN Applicable for two-hand controls until type IIIA according EN 574 / EN ISO 13851, For use up to 5000m over sea level
PNOZ s6.1 48-240VACDC	750156 751156	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34	5,99 10-8	1	1	c	Geeignet für Zweihandschaltungen bis Typ IIIA gemäß EN 574 / EN ISO 13851 Applicable for two-hand controls until type IIIA according EN 574 / EN ISO 13851



3 Kontakterweiterung / Contact expander

Hinweis: Die tatsächlich erreichbaren Sicherheitskennwerte sind vom verwendeten Auswertegerät abhängig /
 Remark: The at last reachable safety parameters are dependent on the used basic module

Typ Type	Sach-Nr. ¹⁾ Oder No. ¹⁾	Version	Internal Test-Report	Sicherheitsrelevante Strompfade (T _M = 20) ³⁾ Safety related circuits (T _M = 20) ³⁾					Bemerkung ²⁾ Remark ²⁾
				Safety Output	PFH _D	max. SIL	Cat	PL	
PNOZ s7 24VDC	750107 751107	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34	2,31·10 ⁻⁰⁹	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
PNOZ s7 24VDC coated	751187	1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34	2,31·10 ⁻⁰⁹	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
PNOZ s7.1 24VDC	750167 751167	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34	2,31·10 ⁻⁰⁹	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
PNOZ s7.2 24VDC	750177 751177	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO100252T V1.0	13-14 23-24 33-34	2,31·10 ⁻⁰⁹	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
PNOZ s8 24VDC	750108 751108	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24	2,00·10 ⁻⁰⁷	2	3	c	Einsatz bis 5000m über NN For use up to 5000m over sea level



3 Kontakterweiterung / Contact expander

Hinweis: Die tatsächlich erreichbaren Sicherheitskennwerte sind vom verwendeten Auswertegerät abhängig /
 Remark: The at last reachable safety parameters are dependent on the used basic module

Typ Type	Sach-Nr. ¹⁾ Oder No. ¹⁾	Version	Internal Test-Report	Sicherheitsrelevante Strompfade (T _M = 20) ³⁾ Safety related circuits (T _M = 20) ³⁾					Bemerkung ²⁾ Remark ²⁾
				Safety Output	PFH _D	max. SIL	Cat	PL	
PNOZ s9 24VDC	750109 751109	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34	2,34·10-09	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
PNOZ s9 24VDC coated	751189	1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34	2,34·10-09	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
PNOZ s10 24VDC	750110 751110	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34 43-44	2,31·10-09	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
PNOZ s11 24VDC	750111 751111	1.0/ 1.1 1.0/ 1.1	717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	13-14 23-24 33-34 43-44 63-64 73-74 83-84 93-94	2,31·10-09	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level



3 Kontakterweiterung / Contact expander

Hinweis: Die tatsächlich erreichbaren Sicherheitskennwerte sind vom verwendeten Auswertegerät abhängig /
 Remark: The at last reachable safety parameters are dependent on the used basic module

Typ Type	Sach-Nr. ¹⁾ Oder No. ¹⁾	Version	Internal Test-Report	Sicherheitsrelevante Strompfade (T _M = 20) ³⁾ Safety related circuits (T _M = 20) ³⁾					Bemerkung ²⁾ Remark ²⁾
				Safety Output	PFH _D	max. SIL	Cat	PL	
PNOZ s20 24VDC	750160 751160	1.0/ 1.1 1.0/ 1.1	717510562 V1.0 717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	14 (24)	1,32·10-08	2	2	d	Einkanalig, Einsatz bis 5000m über NN Single channel, for use up to 5000m over sea level
				14 & 24	2,03·10-09	3	4	e	Zweikanalig, Einsatz bis 5000m über NN Dual channel, for use up to 5000m over sea level
PNOZ s22 24VDC	750132 751132	1.0/ 1.1 1.0/ 1.1	717510562 V1.0 717509892 V1.3 PO87414T V2.0 PO96728T V1.0 PO97688T V1.0 PO98209T V1.0 PO100252T V1.0	Ext.1/O0: 13-14 23-24 33-34	2,50·10-09	3	4	e	Einsatz bis 5000m über NN For use up to 5000m over sea level
				Ext.2/O1: 13-14 23-24 33-34					



4 Zubehör / Accessory

Für diese Module wurde die Rückwirkungsfreiheit nachgewiesen.
For these modules the absence of interaction was proven.

Typ Type	Sach-Nr. ¹⁾ Oder No. ¹⁾	Version	Internal Test-Report	Bemerkung Remark
PNOZ s pIE	750900	1.0	717505994	Reihenklempen mit Filterfunktion für Sicherheitseingänge mit positiven Spannungspotenzial Terminal blocks with filter function for safety inputs with positive voltage potential
PNOZ s nIE	750910	1.0	717505994	Reihenklempen mit Filterfunktion für Sicherheitseingänge mit positiven Spannungspotenzial Terminal blocks with filter function for safety inputs with positive voltage potential



5 Anmerkungen / Comment

1 Sachnummer / Order No.

Kann durch Zeichen im Bereich 00...99 und AA...ZZ ergänzt sein.
Can be added by Character in range 00...99 and AA...ZZ.

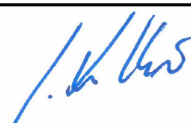

2 Bemerkungen / Remarks

Zulässige Einsatzhöhe / Allowed operation altitude

Dieses Produkt darf bis zu angegebenen Höhe über NN eingesetzt werden. Ab 2000 Meter müssen die in der Benutzerdokumentation angegebenen Einschränkungen unbedingt eingehalten werden.
This product can be used up to the altitude above sea level. Above 2000 meter the restriction mentioned in the user documentation must be strictly adhered.

3 Sicherheitskennwerte / Safety characteristics

max. SIL:	Maximal erreichbarer Safety Integrity Level entsprechend EN / IEC 62061 Maximum obtainable Safety Integrity Level according EN / IEC 62061
Cat/ PL:	Maximal erreichbare Kategorie und Performance Level entsprechend EN 13849-1 Maximum obtainable Category and Performance Level according EN 13849-1.

	Freigabe Prüfstelle: Release by Test Body:	Freigabe Zertifizierstelle: Release by Certification Body:
Datum: Date:	2023-02-01	2023-02-01
Unterschrift: Signature:	 Digitally signed by Jens Luther Date: 2023.02.01 13:15:50 +01'00'	 Digital unterschrieben von Peter Weiß Datum: 2023.02.01 13:31:19 +01'00'