



## SAFEMASTER PRO

The configurable safety system  
– versatile and extendable





**UG6951**  
CANopen

**UG6952**  
PROFIBUS DP

**UG6954**  
PROFINET

**UG6955**  
Ethernet / IP

**UG6956**  
EtherCAT

**UG6957**  
USB



**CONTENTS**

INTRODUCTION.....2

ELECTRICAL CONNECTIONS, DIMENSIONS.....2

PROTOCOL DATA PACKAGE COMPOSITION .....3

DIAGNOSTICS .....5

    1. Byte: "I/O index".....5

    2. Byte: "Diagnostic code" .....5

        Inputs.....5

        Safety outputs OSSD.....5

EXAMPLES OF DIAGNOSTICS .....6

    Example 1.....6

    Example 2.....6

    Example 3.....7

    Example 4.....7

SOFTWARE BUS CONFIGURATOR".....8

CONFIGURATION .....8

STATUS MONITOR .....10

    Diagnostic example .....11

VISUALISATIONS.....12

TECHNICAL FEATURES .....15

ORDERING DATA .....16

Declaration of conformity .....17

**INTRODUCTION**

This technical data sheet describes the operation of the fieldbus modules of the configurable safety system SAFEMASTER PRO:

- UG6951 Fieldbus module (CANopen)
- UG6952 Fieldbus module (PROFIBUS DP-V1)
- UG6954 Fieldbus module (PROFINET)
- UG6955 Fieldbus module (Ethernet IP)
- UG6956 Fieldbus module (EtherCAT)
- UG6957 Fieldbus module (USB)

The fieldbus module exports the system status and the status and diagnostics elements of all I/Os configured on the SAFEMASTER PRO system.

➤ These fieldbus modules have no influence on the safety functions of the configurable safety system SAFEMASTER PRO.

**ELECTRICAL CONNECTIONS, DIMENSIONS**

Each module is provided with four connectors:

- 5 way IN-RAIL-BUS connector to the system SAFEMASTER PRO
- micro USB connector --> to the PC (for SW programming)
- BUS connector --> to the fieldbus
- Terminal block --> power supply

TERMINAL BLOCK	
Terminal	Signal
1	+24VDC ±20%
2	
3	
4	GND

Table 1

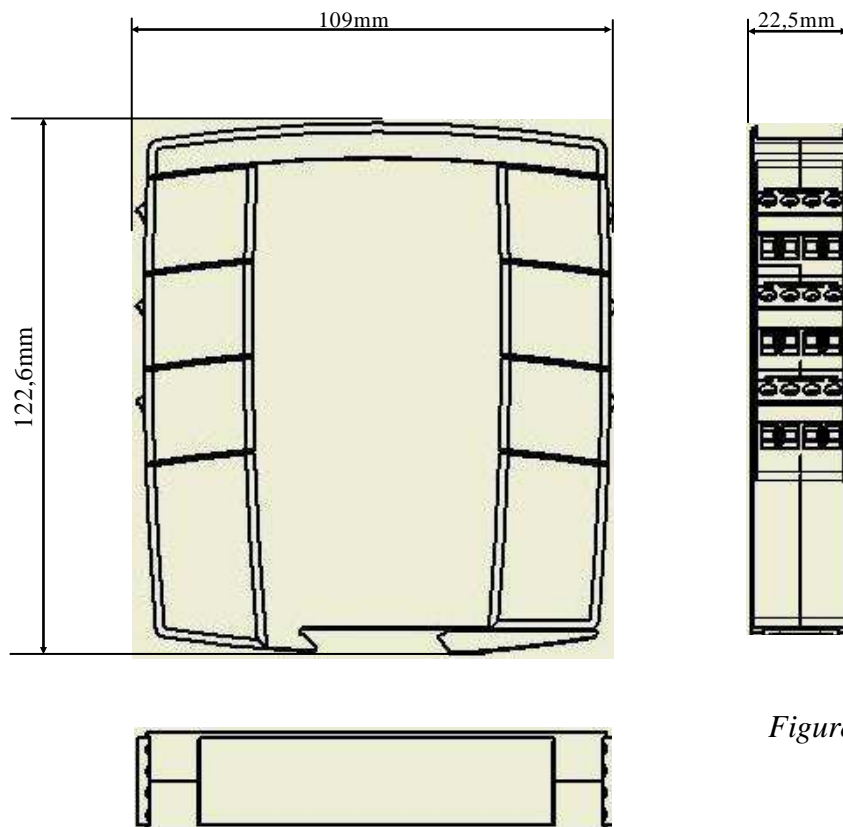






Figure 1



-  Install SAFEMASTER PRO modules in an enclosure with a protection class of at least IP54.
-  The supply voltage to the units must be 24Vdc ±20% (PELV, in compliance with the standard EN 60204-1).
-  Do not use SAFEMASTER PRO to supply external devices.
-  The same ground connection (0VDC) must be used for all system components.

## PROTOCOL DATA PACKAGE COMPOSITION

The fieldbus module exports the system status and the status and diagnostics elements of all I/Os configured on the SAFEMASTER PRO system. Also import of eight inputs from fieldbus is possible.

The system status is shown as 1 byte:

- Bit 0 indicates whether the SAFEMASTER PRO is online/offline
- Bit 1 indicates the presence of diagnostics elements.

**This byte is always present.**

Each input and each output (OSSD) configured on the system is associated with two information elements: status and diagnostics.

- Status is a binary value, 0 or 1

Each module with inputs has a number of bits corresponding to the number of physical inputs that are present; thus modules UG6911.10, UG6913.08, UG6916.10 are associated with 1 byte, modules UG6913.12, UG6913.16 with 2 bytes.

The input byte location varies according to the type of modules that are installed, in the following order: **UG6911.10, UG6916.10, UG6913.16, UG6913.08, UG6913.12**.

If several modules of the same type are installed the order follows the node number.

All safety outputs are summarised in 1 or 2 bytes (depending on system configuration).

- Diagnostics is a code indicating the condition of the I/O, which can be OK or indicate a problem on the I/O. Diagnostics elements are in the form of 2 bytes which indicate the index of the I/O with the problem and the value of the diagnostics element.  
If there is more than one diagnostics element, the relative values alternate every 500 ms.

Each set of information:

- input status,
- input diagnostics,
- fieldbus inputs status,
- fieldbus probes status,
- safety output status,
- safety output diagnostics

can be enabled/disabled in order to control the information and thus the number of output bytes exported to the fieldbus.

One input byte with the wished state of fieldbus inputs must always be present, also if no fieldbus inputs are used in the electric schema.

For the fieldbuses in which the mapping position is mandatory (i.e. PROFIBUS) the input byte must be mapped before the output bytes.

For the fieldbuses based on CANOpen the data can be accessed only via PDO. SDO access is not supported.

This table shows the placement of the Fieldbus output bytes (Fieldbus module to Fieldbus PLC)

← (1 byte) →			
	B1	B0	<b>SYSTEM STATUS</b> <b>(always present)</b>
			B0=1: SAFEMASTER PRO online B1=1: Diagnostics present
			<b>INPUTS</b> (Minimum: 1byte Maximum: 16 bytes)
			recognised state of <b>Fieldbus inputs</b> (1 byte)
			<b>Fieldbus probes</b> (2 bytes)
			<b>OUTPUTS OSSD</b> (max. 2 bytes)
Index of I/O			<b>DIAGNOSTICS</b> (2 bytes)
Diagnostic code			
			see Table 2, 3

One input byte (Fieldbus PLC to Fieldbus module) must always be defined for the wished states of fieldbus inputs.

← (1 Byte) →		
	wished state of fieldbus inputs (1 Byte)	This byte must always be present, also if no fieldbus inputs are used in the electric schema.

➤ If the SAFEMASTER PRO system includes a fieldbus module, the SAFEMASTER PRO Designer report will include a table with the I/O index for all the inputs, fieldbus probes and safety outputs used in the electric circuit.

## DIAGNOSTICS

Each input and safety output is associated with a relative diagnostic code.  
 When the I/O is connected correctly the diagnostic code is OK and is not exported to the fieldbus;  
 if there is a problem on the I/O, the system exports 2 bytes to the fieldbus with:

- the index of the I/O in question
- the related diagnostic code

### 1. Byte: "I/O index"

This field indicates the number used to identify the I/O with a diagnostic code other than OK.  
 Possible values for this field are shown in Table 2.

TYPE OF SIGNAL	I/O INDEX
Input	1-128
Output	192-255

Table 2

### 2. Byte: "Diagnostic code"

The "Diagnostic code" field indicates the diagnostics for the I/O. Possible values for this field are shown in the following tables.

#### Inputs

Input diagnostics		
<b>128 (0x80)</b>	Input diagnostics OK	
<b>1</b>	Not in initial position	Both switches have to go to rest condition
<b>2</b>	Concurrent failed	Both switches have to change state simultaneously
<b>3</b>	Concurrent failed hand1	Wrong connection on one side of a two-hands switch
<b>4</b>	Concurrent failed hand2	Wrong connection on one side of a two-hands switch
<b>7</b>	invalid switch position	The selector can't have more than one input set
<b>8</b>	Switch not connected	The selector can't have any input set
<b>10 (0x0A)</b>	OUT_TEST error	OUT_TEST failure on this input
<b>11 (0x0B)</b>	Second input defective	Redundancy check failed on input
<b>12</b>	OUT_TEST diagnostics OK	
<b>13</b>	Output connected to other inputs	Test output not connected to the right input
<b>14</b>	Output OK but input connected to 24VDC	Stuck input
<b>15</b>	Short circuit between photocell test and photocell input	Photocell response time too low
<b>16</b>	No response from photocell	The test signal on the photocell emitter is not seen on the receiver
<b>17</b>	Short circuit between photocells	The test signal is present on two different photcells
<b>18</b>	MAT disconnected	Wrong mat connection
<b>19</b>	Output inconsistent with feedback	The test signal on input is present on more than one OUT_TEST
<b>20</b>	Connection incorrect	The test signal is present on more than one input
<b>21</b>	Output stuck	The test signal on the input is not present on the OUT_TEST
<b>22 (0x16)</b>	Second OUT_TEST KO	Redundancy check failed on OUT_TEST
<b>133 (0x85)*</b>	TWO-HAND concurrent failed	Two-hands switch has to change state simultaneously
<b>134 (0x86)*</b>	Not started	Start test failed
<b>137 (0x89)*</b>	Waiting for restart	The input has manual reset and has not been restarted

Table 3

\*) The diagnostic 133, 134 and 137 do not provide visual error message on the LED from SAFEMASTER PRO

#### Safety outputs OSSD

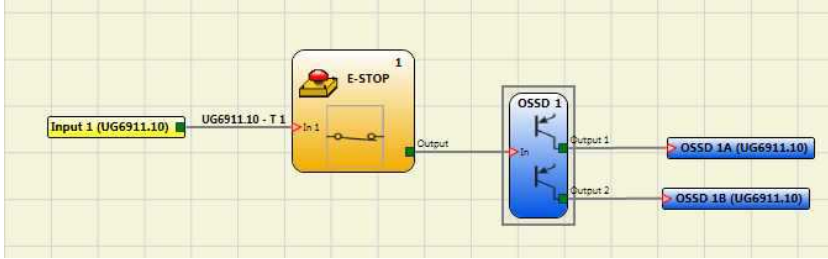
OSSD Diagnostics		
<b>0</b>	OSSD DIAGNOSTICS OK	
<b>1</b>	ENABLE MISSING	
<b>2</b>	WAITING FOR RESTART OSSD	
<b>3</b>	FEEDBACK K1/K2 MISSING	
<b>4</b>	WAITING FOR OTHER MICRO	Redundancy check failed on OSSD

Table 4

➤ If there are more than one diagnostic codes, the information changes every 500ms.

**EXAMPLES OF DIAGNOSTICS**

**Example 1**



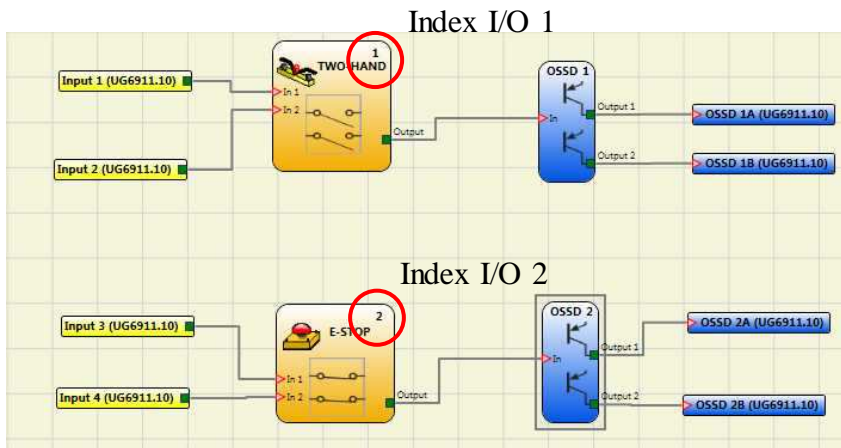
*Figure 2*

In the example shown in Figure 2, Input 1 (connected to module UG6911.10) is tested with the UG6911.10-T1 test signal.

During wiring, the 24Vdc is connected to input 1 instead of the UG6911.10-T1 test signal.

- The I/O index and Diagnostic code show the following values: 1 - 10 to indicate the diagnostics on input 1 of module UG6911.10 (OUT\_TEST error)

**Example 2**



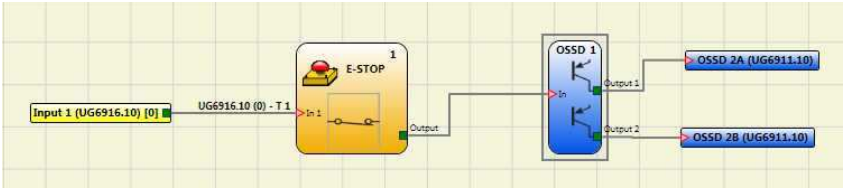
*Figure 3*

In this example, the I/O index corresponds to the logical block and not to the physical terminal on module UG6911.10.

In Figure 3 for example, the two-hand element connected to the Input 1 and Input 2 physical terminals corresponds to I/O index No. 1 and the emergency stop connected to the Input 3 and Input 4 terminals corresponds to I/O index No. 2.



### Example 3



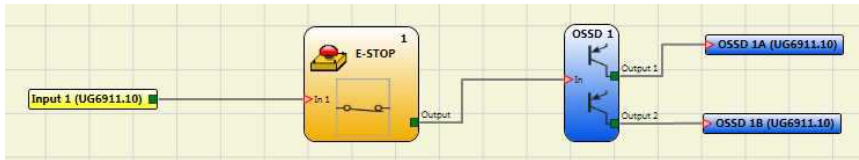
*Figure 4*

The example in Figure 4 is similar to example 1, except in this case Input1 is connected to module UG6913.16 and is tested with the UG6913.16-T1 test signal.

During wiring, the 24Vdc is connected to input 1 instead of the UG6913.16-T1 test signal.

- The I/O index and Diagnostic code show the following values: **1 - 10** (OUT\_TEST error) to indicate the diagnostics on input 1 of module UG6913.16

### Example 4



*Figure 5*

In the example shown in Figure 5 the manual reset function is enabled on OSSD 1.

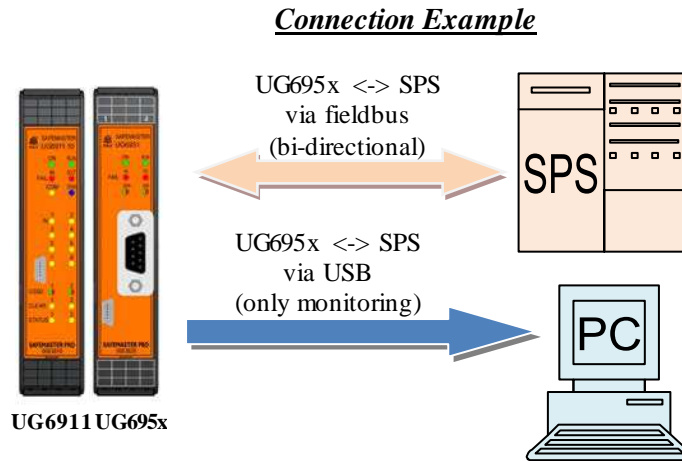
The E-Stop-button connected to input 1 is released without sending a reset command.

- The I/O index and Diagnostics code show the following values: **192 - 2**
- to indicate the OSSD 1A/1B (Table 2: 192 = first output).
- to indicate the diagnostic code (Table 4: 2 = Waiting for OSSD to restart).

## SOFTWARE BUS CONFIGURATOR"

The fieldbus module is configured via the micro USB interface on the front panel and using the "BUS CONFIGURATOR" software on the SAFEMASTER PRO Designer CD-ROM.

This software allows configuring all fieldbus modules. It allows also the bi-directional communication of the SAFEMASTER PRO system with a PC (using fieldbus module UG6957 for USB) or the display of the data, that is transferred on the INRAIL-Bus of the SAFEMASTER PRO System (via the USB Port of the fieldbus modules). The following picture demonstrates the possible connections:




*Figure 6*

It is important to point out the difference in behaviour of the BUS CONFIGURATOR when communicating with the modules UG6951 to UG6956 and the module UG6957 (USB):

- **Module UG6951 to UG6956:** The software only allows the display of data that is transferred on the INRAIL Bus.
- **Module UG6957:** The software allows the bi-directional data transfer. In this case the operator can set the state of the inputs "Fieldbus Input" directly from the computer.

## CONFIGURATION

 The module must be configured with the outputs disabled (outputs OFF).

Following parameters to exchange can be set:

- Input / output states
- diagnostic data
- bytes "fieldbus input" and "fieldbus output" used in the electric schema
- module address in the fieldbus network
- baudrate, in modules where this is envisaged

The address range depends on the type of fieldbus that is installed.

Module configuration can be queried at any time during module operation.

To configure the fieldbus module, proceed as follows:

1. connect the module via the IN-RAIL-BUS to the SAFEMASTER PRO system;
2. connect the SAFEMASTER PRO system to the 24VDC +20% voltage power supply via the terminal strip;  
**ATTENTION:** the master unit UG6911.10 must be without error state.
3. connect the USB cable to the PC and to the fieldbus module;
4. start up the "BUS CONFIGURATOR" software.

The configuration window is displayed (Figure 7). The program recognizes that a bus module is connected; By click on the "Connect" button the fieldbus type and its firmware version is displayed (Figure 8).

The configurable parameters can be adjusted by selecting the different tabs (Figures 8 to 11):

Start window



Figure 7

diagnostic selection

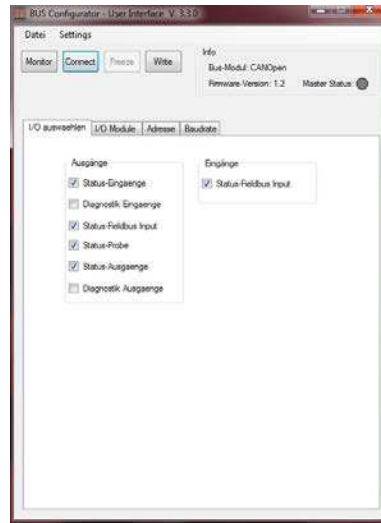


Figure 8

Baudrate  
(not all module types)

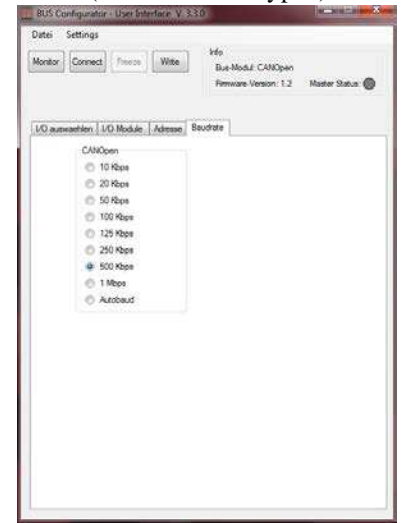


Figure 9

(UG6951, UG6952, UG6953, UG6956)

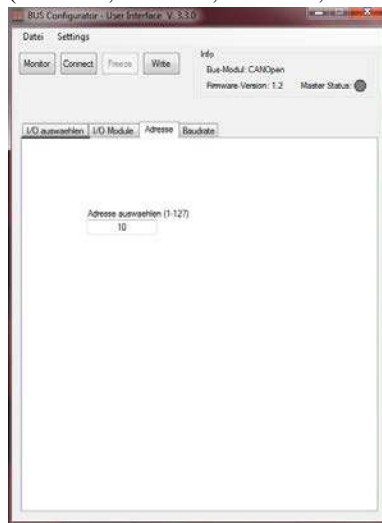


Figure 10

Address selection  
(UG6954, automatic address selection)



Figure 11

(UG6955)

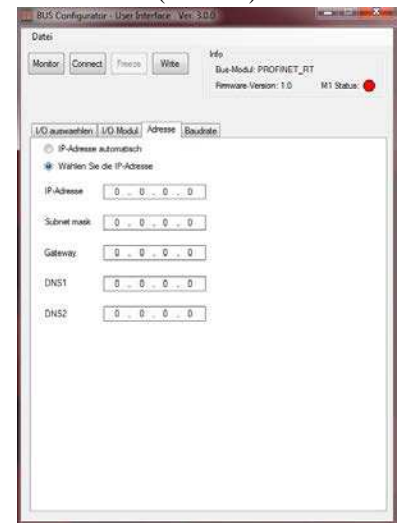


Figure 12

After setting the parameters, click on "Write" to send the new configuration to the module.

	ADDRESS	BAUDRATE
<b>UG6951 (CANopen)</b>	127	AUTO
<b>UG6952 (PROFIBUS DP-V1)</b>	126	N/A
<b>UG6954 (Profinet)</b>	auto selection	N/A
<b>UG6955 (Ethernet IP)</b>	0.0.0.0	AUTO
<b>UG6956 (EtherCAT)</b>	0	N/A

Data sets
Input status, Fieldbus input status, probe status, output status

Table 5 - Default values

## STATUS MONITOR

After transmission of the parameters it is possible to change to the status monitoring window to watch the status of the system by pressing the button „**MONITOR**“ (figure 12).

By pressing the button "**Connect**" the cyclic reading of the diagnosis data is started. As soon as the data arrives in the Bus module, the dynamic status display is shown (figure 13). The status of the control unit UG6911.10 (Master Status) is displayed:

- green: UG6911.10 active (RUN);
  - red: UG6911.10 not active (e. g. in communication with "SAFEMASTER PRO Designer").
- Window area figure 14 shows the status of the in- and outputs.
  - Window area figure 15 shows the diagnosis in the case of failures (cyclic display, if more than one incorrect event happens).
  - Window area figure 16 shows the inputs „Fieldbus Inputs“, the status of which can be changed by the user on PC screen with the Bus Configurator using module UG6917 for USB or which is sent via fieldbus.

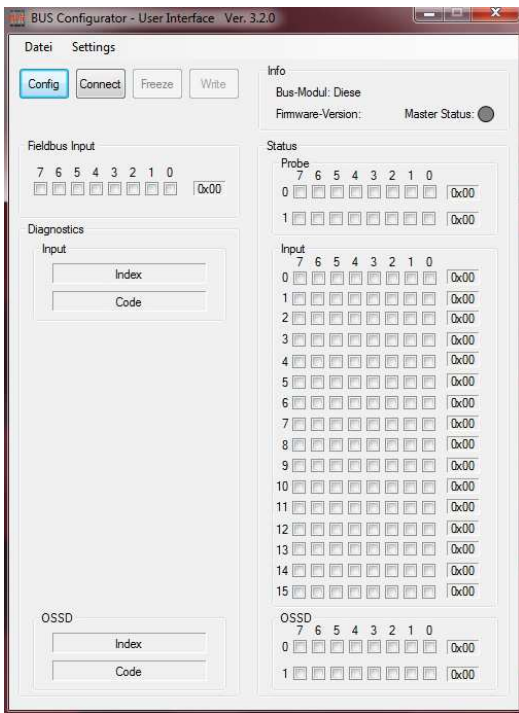


Figure 13: Monitor-window

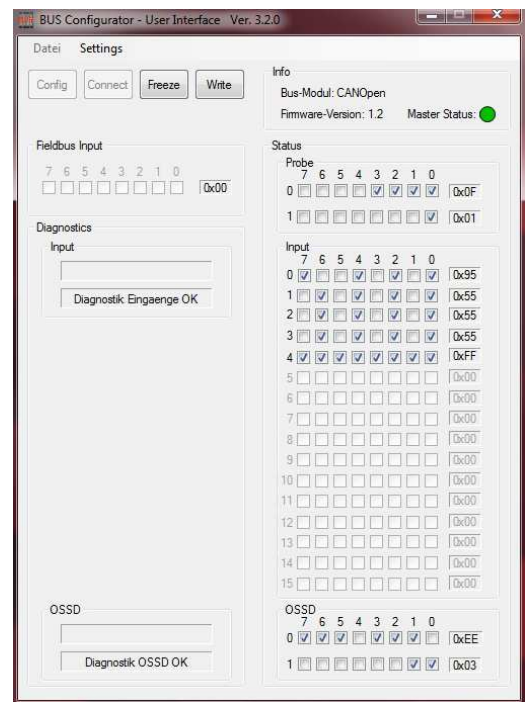
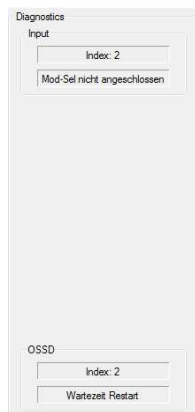


Figure 14: Diagnostic data



state of inputs / outputs  
 Figure 15



inputs / outputs diagnostics  
 Figure 16



fieldbus Input (adjustable only with UG6957)  
 Figure 17

**Diagnostic example**

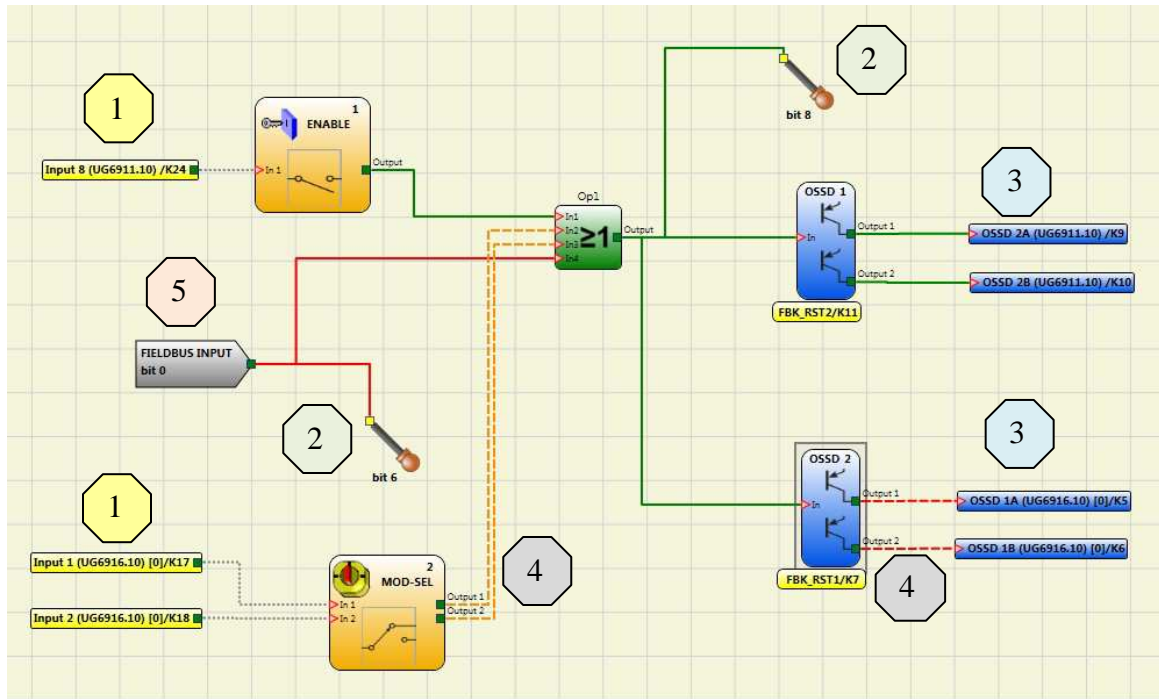
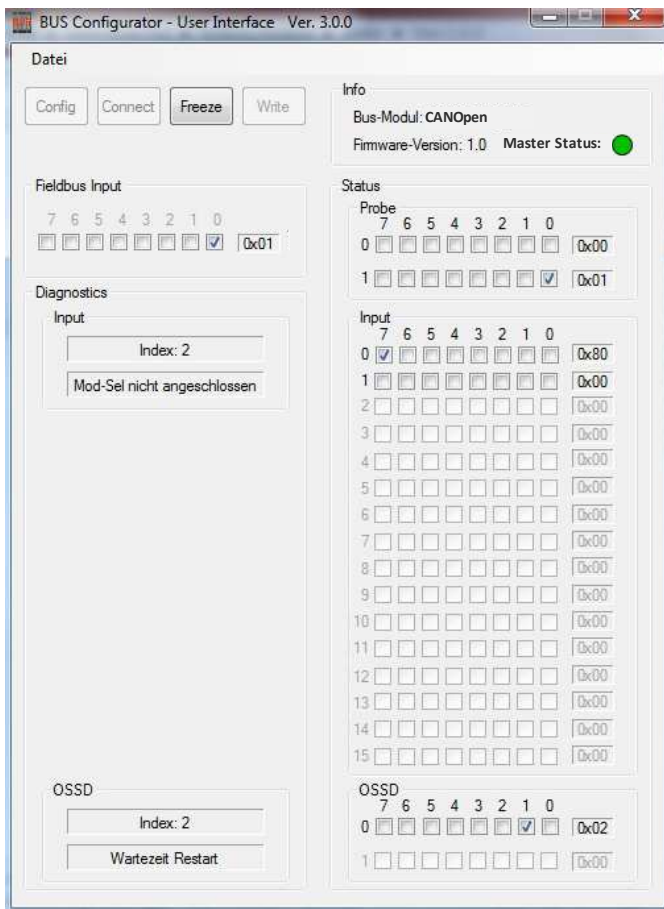


Figure 18: Project example on SAFEMASTER PRO DESIGNER

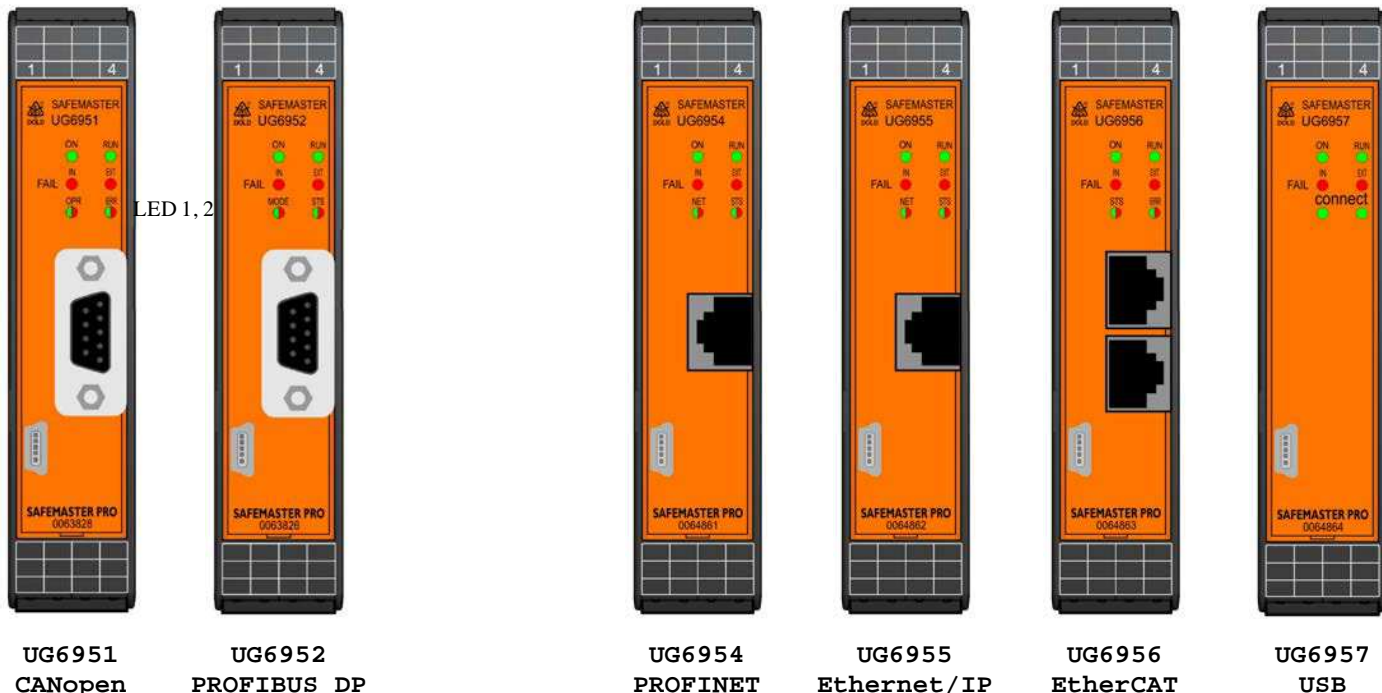


- 1 - The input 1 ENABLE is connected to Input 8 (terminal 24) of the control unit UG6911.10 and its status (0 or 1) is shown in the field "Status Input" at bit 7 of the bytes 0.
- 1 4 - The input 2 MOD-SEL is connected to inputs 1 and 2 (terminals 17 and 18) of the extension module UG6916.10. The diagnosis indicates failure (dotted orange line). The status is indicated in the section "Status Input" and by the bit pair 0 and 1 of the byte 1. The diagnosis is displayed in the section "Diagnostics Input" with index 2 and the corresponding description.
- 2 - The Probe at Bit 6 and Bit 8 are displayed in green and the corresponding bits are indicated in the section "Status Probe". Bit 8 is displayed as bit 0 of the second byte.
- 3 - OSSD 1 is ON and connected to the second output pair of the control unit UG6911.10 (terminals 9 and 10). Its status is displayed in section "Status OSSD" at bit 1 of byte 0.
- 3 4 - OSSD 2 is OFF and connected to the second output pair (terminals 5 and 6) of the extension module UG6916.10. The diagnosis shows that the system is waiting for a restart. Its status is displayed in section "Status OSSD" at bit 3 of bytes 0. The diagnosis is displayed in section "Diagnostics OSSD" with Index 2 and the corresponding description.
- 5 - In section "Fieldbus Input" Bit 0 is selected and as a result the "Fieldbus Input" Bit 0 in the configuration plan appears in green color.

Figure 19

**Attention:** The function "Setting of Fieldbus Input" can only be used with the Bus-Configurator Software via a field bus module UG6957 (USB). With the modules (UG6951 to UG6956) for other field bus systems the change of these inputs can only be made via the bus.

**VISUALISATIONS**



NORMAL OPERATION						
Description	upper 4 LEDs				LED 1	LED 2
	ON GREEN	RUN GREEN	INT FAIL RED	EXT FAIL RED	RED/GREEN	RED/GREEN
Startup - Initial test	ON	ON	ON	ON	ON	ON
Waiting for configuration	ON	flashing	OFF	OFF	OFF	OFF
Configuration received	ON	ON	OFF	OFF	see the module tables	

Table 6

FAULT STATE						
Description	upper 4 LEDs				LED 1	LED 2
	ON GREEN	RUN GREEN	INT FAIL RED	EXT FAIL RED	RED/GREEN	RED/GREEN
Internal fault microcontroller	ON	OFF	2 flashes*	OFF	see the module tables	
Internal failure	ON	OFF	3 flashes*	OFF		
Configuration Error	ON	OFF	5 flashes*	OFF		
BUS communication Error	ON	OFF	5 flashes*	OFF		
BUS communication interruption	ON	OFF	ON	OFF		
Identical module detected	ON	OFF	5 flashes*	5 flashes		

Table 7

\* The LED frequency of flashing is: ON for 300ms and OFF for 400ms, with an interval between two sequences of 1s.

MODULE UG6951 (CANopen)					
LED 1: OPR			LED 2: ERR		
STATUS	INDICATION	DESCRIPTION	STATUS	INDICATION	DESCRIPTION
GREEN	OPERATIONAL	OPERATIONAL status	OFF	-	Normal operation
GREEN flashing slow	PRE-OPERATIONAL	PRE-OPERATIONAL status	RED flashing (1 flash)	Warning level	A bus error counter has reached the warning level
GREEN flashing (1 flash)	STOPPED	STOPPED status	RED flashing fast	LSS	LSS service operative
GREEN blinking fast	Autobaud	Baudrate detection	RED flashing (2 flashes)	Event Control	Detected <b>Node Guarding</b> (NMT master or slave) or <b>Heartbeat</b> (Consumer)
RED	EXCEPTION	EXCEPTION status	RED	Missing BUS	BUS not working

Table 8

MODULE UG6952 (PROFIBUS DP V1)					
LED 1: MODE			LED 2: STS		
STATUS	INDICATION	DESCRIPTION	STATUS	INDICATION	DESCRIPTION
GREEN	On-line	data exchange	OFF	UG6952 not initialized	STATUS SETUP or NW_INIT
GREEN flashing	On-line	CLEAR	GREEN	Initialized	End of initialization NW_INIT
RED flashing (1 flash)	Parameterization error	ref. IEC 61158-6	GREEN flashing	Initialized with diagnostic active	EXTENDED DIAGNOSTIC bit set
RED flashing (2 flashes)	PROFIBUS configuration error	configuration data MASTER or UG6952 wrong	RED	Exception error	EXCEPTION STATUS

Table 9

MODULE UG6954 (PROFINET)					
LED 1: NET			LED 2: STS		
STATE	INDICATES	DESCRIPTION	STATE	INDICATES	DESCRIPTION
OFF	Offline	no power no connection	OFF	not initialised	
green	Online (Run)	connection established RUN state	green	Normal operation	
green flashing	Online (stop)	connection established STOP state	green flashing (1 flash)	Diagnostic event	
			green flashing (2 flash)	Blink	Used to identify the network node
			red	Exception	Module in EXCEPTION state
			red flashing (1 flash)	Configuration error	Identification error
			red flashing (2 flashes)	IP address error	IP address not configured
			red flashing (3 flashes)	Station name error	Station name not configured
			red flashing (4 flashes)	Internal error	

Table 10

UG6955 (Ethernet IP)				
LED 1: NET		LED 2: STS		
STATE	INDICATES/DESCRIPTION	STATE	INDICATES	DESCRIPTION
<b>OFF</b>	no power or no IP address	<b>OFF</b>	no power	
<b>green</b>	on-line, connected	<b>green</b>	RUN state	
<b>green flashing</b>	on-line, not connected	<b>green flashing</b>	not configured	
<b>red</b>	duplicate IP address	<b>red</b>	fatal error	one or more non-recoverable errors detected
<b>red flashing</b>	connection timeout	<b>red flashing</b>	error	one or more recoverable errors detected

*Table 11*

UG6956 (EtherCAT)					
LED 1: STS			LED 2: ERR		
STATE	INDICATES	DESCRIPTION	STATE	INDICATES	DESCRIPTION
<b>OFF</b>	INIT	INIT or no power	<b>OFF</b>	No error	No error or no power
<b>green</b>	OPERATIONAL	OPERATIONAL state	<b>red flashing</b>	Configuration not valid	Status change requested by master not possible
<b>green flashing</b>	PRE-OPERATIONAL	PRE-OPERATIONAL state	<b>red flashing (2 flashes)</b>	Watchdog timeout	Synch manager watchdog timeout
<b>green flashing (1 flash)</b>	SAFE-OPERATIONAL	SAFEOPERATIONAL state	<b>red</b>	Controller fault	module in EXCEPTION state
<b>Red</b>	(Fatal Event)	System locked	-	-	-

*Table 12*

UG6957 (USB)		
2 LEDs: connect		
STATE	INDICATES	DESCRIPTION
<b>ON</b>	USB connection	Module connected on PC
<b>OFF</b>	no USB connection	Module not connected

*Table 13*



## TECHNICAL FEATURES

<b>Rated voltage</b>	24VDC $\pm$ 20% / Remote Class 2 Source or limited voltage limited current
<b>Nominal consumption</b>	max. 3 W
<b>Connection to Safemaster Pro</b>	via 5-pole IN-RAIL-BUS
<b>Connection to PC</b>	USB 2.0 (Hi Speed) - front plug Max cable length: 3m
<b>Connection to fieldbus</b>	via 2. front connector
<b>Plug in with screw terminals max. cross section for connection:</b>	1 x 0,25 ... 2,5 mm <sup>2</sup> solid or stranded ferruled (isolated) or 2 x 0,25 ... 1,0 mm <sup>2</sup> solid or stranded ferruled (isolated)
<b>Insulation of wires or sleeve length:</b>	7 mm
<b>Wire fixing:</b>	captive slotted screw M3
<b>Tightening torque:</b>	0,5 ... 0,6 Nm
<b>Operating temperature</b>	-10 $\div$ 55°C
<b>Storage temperature</b>	-20 $\div$ 85°C
<b>Relative humidity</b>	10% $\div$ 95%
<b>Enclosure</b>	Electronic housing DIN-Rail mounting
<b>Enclosure material</b>	Polyamide
<b>Enclosure protection class</b>	IP 40
<b>Terminal blocks protection class</b>	IP 20
<b>Fastening</b>	Quick fixing to rail according to EN 60715
<b>Dimensions (h x l x d)</b>	109 x 22,5 x 120,3
<b>Weight</b>	150g

<b>UL-Data</b>	the safety functions were not evaluated by UL. Listing is accomplished according to requirements of Standard UL 508, "general use applications"
<b>UL hint</b>	For use in Pollution degree 2, overvoltage category II environment only
<b>Max surrounding air temperature</b>	55°C
<b>Wire connection</b>	60°C / 75°C copper conductors only AWG 30 $\div$ 12 (solid/stranded) Torque 5-7 lb-in

**ORDERING DATA**

MODEL	DESCRIPTION	Reference
<b>UG6911.10</b>	Control unit (8 Input / 2 dual channel OSSD), with software SAFEMASTER PRO DESIGNER	0063818
<b>UG6916.10</b>	Input/Output module (8 Input / 2 dual channel OSSD)	0063819
<b>UG6913.08</b>	Input module (8 inputs)	0063820
<b>UG6913.12</b>	Input module (12 inputs)	0064865
<b>UG6913.16</b>	Input module (16 inputs)	0063821
<b>UG6912.02</b>	Output module OSSD (2 dual channel OSSD)	0063822
<b>UG6912.04</b>	Output module OSSD (4 dual channel OSSD)	0063823
<b>UG6912.14</b>	Output module relay (1 safety relay output)	0063824
<b>UG6912.28</b>	Output module relay (2 safety relay output)	0063825
<b>UG6914.04/000</b>	Output module relay (4 safety relay output)	0066057
<b>UG6914.04/008</b>	Output module relay (4 safety relay output + 8 status outputs)	0065990
<b>UG6917/002</b>	speed monitoring module (for 2 proximity switches)	0066059
<b>UG6917/102</b>	speed monitoring module (for 2 proximity switches + 1 TTL encoder)	0066060
<b>UG6917/112</b>	speed monitoring module (for 2 proximity switches + 2 TTL encoder)	0066061
<b>UG6917/202</b>	speed monitoring module (for 2 proximity switches + 1 HTL encoder)	0066062
<b>UG6917/222</b>	speed monitoring module (for 2 proximity switches + 2 HTL encoder)	0066063
<b>UG6917/302</b>	speed monitoring module (for 2 proximity switches + 1 Sin/Cos Encoder)	0066064
<b>UG6917/332</b>	speed monitoring module (for 2 proximity switches + 2 Sin/Cos Encoder)	0065992
<b>UG6918</b>	Bus Extender	0064866
<b>UG6951</b>	Fieldbus module CanOpen	0063828
<b>UG6952</b>	Fieldbus module PROFIBUS DP	0063826
<b>UG6954</b>	Fieldbus module PROFINET	0064861
<b>UG6955</b>	Fieldbus module Ethernet IP	0064862
<b>UG6956</b>	Fieldbus module EtherCAT	0064863
<b>UG6957</b>	Fieldbus module Universal Serial Bus (USB)	0064864
<b>OA6911</b>	memory chip	0063829
<b>OA6920</b>	USB-Connection cable for PC	0064160
<b>BU6921</b>	Mounting set IN-RAIL-Bus 250mm for DIN 7,5mm Rail	0064244
<b>BU6922</b>	Mounting set IN-RAIL-Bus 250mm for DIN 15mm Rail	0064245
<b>PN6919</b>	Software SAFEMASTER PRO Designer	0064246

Please, visit the website [www.dold.com](http://www.dold.com) for the list of the authorized representative of each Country.

## Declaration of conformity

EG-Konformitätserklärung  
Declaration of Conformity  
Déclaration de conformité européenne



Hersteller: E. Dold & Söhne KG Ort, Datum: Furtwangen, 21.1.2015  
Manufacturer: 78120 Furtwangen Place, Date: / Lieu, date:  
Fabricant: Bregstr. 18  
Germany

Produktbezeichnung: **Safemaster Pro**  
Product description: / Désignation du produit:

Das bezeichnete Produkt stimmt mit den Vorschriften folgender Europäischer Richtlinien überein:  
We declare that this product conforms to the following European Standards: / Le produit désigné est conforme aux instructions des directives européennes.

2004/108/EG	EMV-Richtlinie: EMC-Directive: / Directives CEM:
2006/42/EG	Maschinenrichtlinie: Machinery directive: / Directives Machines:
2006/95/CE	Niederspannungsrichtlinie: Low voltage directive: / Directives basse tension:

stimmt mit folgender Normen überein:  
and complies with the following standards: / et est conforme aux normes suivantes:

DIN EN 61131-2 (2007)	Speicherprogrammierbare Steuerungen, Teil 2: Betriebsmittelanforderungen und Prüfungen Programmable controllers, part 2: Equipment requirements and tests Automates programmables, partie 2: Spécifications et essais des équipements
DIN EN ISO 13849-1 (2008)	Sicherheit von Maschinen, Sicherheitsbezogene Teile von Steuerungen, Teil 1: Allgemeine Gestaltungsleitsätze Safety of machinery: Safety related parts of control systems, Part 1: General principles for design Sécurité des machines: Parties des systèmes de commande relatives à la sécurité, partie 1: Principes de conception généraux
DIN EN 61496-1 (2013)	Sicherheit von Maschinen - Berührungslos wirkende Schutzeinrichtungen, Teil 1: Allgemeine Anforderungen und Prüfungen Safety of machinery: Electro-sensitive protective equipment. Part 1: General requirements and tests. Sécurité des machines: Équipements de protection électro-sensibles, Partie 1: Prescriptions générales et essais.
DIN EN 61508 (2010)	Funktionale Sicherheit sicherheitsbezogener elektrischer/elektronischer/programmierbarer elektronischer Systeme Functional safety of electrical/electronic/programmable electronic safety-related systems Sécurité fonctionnelle des systèmes électriques/électroniques/programmables relatifs à la sécurité
DIN EN 61508-1 (2010)	Teil 1: Allgemeine Anforderungen. part 1: General requirements. partie 1: Prescriptions générales.
DIN EN 61508-2 (2010)	Teil 2: Anforderungen an sicherheitsbezogene elektrische/elektronische/programmierbare elektronische Systeme, part 2: Requirements for electrical/electronic/programmable electronic safety-related systems. partie 2: Prescriptions pour les systèmes électriques/électroniques/programmables relatifs à la sécurité.
DIN EN 61508-3 (2010)	Teil 3: Anforderungen an Software part 3: Software requirements. partie 3: Prescriptions concernant les logiciels
DIN EN 61508-4 (2010)	Teil 4: Begriffe und Abkürzungen part 4: Definitions and abbreviations partie 4: Définitions et abréviations
DIN EN 61784-3 (2008)	Industrielle Kommunikationsnetze - Profile, Teil 3: Funktional sichere Übertragung bei Feldbussen - Allgemeine Regeln und Profifestlegungen Digital data communication for measurement and control, Part 3: Functional safety fieldbuses. Communications numériques pour les systèmes de mesure et de commande, partie 3: profils pour les communications de sécurité fonctionnelle dans les réseaux industriels
DIN EN 62061 (2005)	Sicherheit von Maschinen - Funktionale Sicherheit sicherheitsbezogener elektrischer, elektronischer und programmierbarer elektronischer Steuerungssysteme Safety of machinery. Functional safety of safety-related electrical, electronic and programmable electronic control systems Sécurité des machines. Sécurité fonctionnelle des systèmes de commande électriques, électroniques programmables relatifs à la sécurité

erreicht einen Sicherheitslevel entsprechend: SIL 3 / SILCL 3 / PLe / Cat. 4 / Type 4 (siehe entsprechende Normen)  
reaching a safety level corresponding to: SIL 3 / SILCL 3 / PLe / Cat. 4 / Type 4 (see related standards)  
atteint un niveau de sécurité correspondant à: SIL 3 / SILCL 3 / PLe / Cat. 4 / Type 4 (voir normes correspondantes)

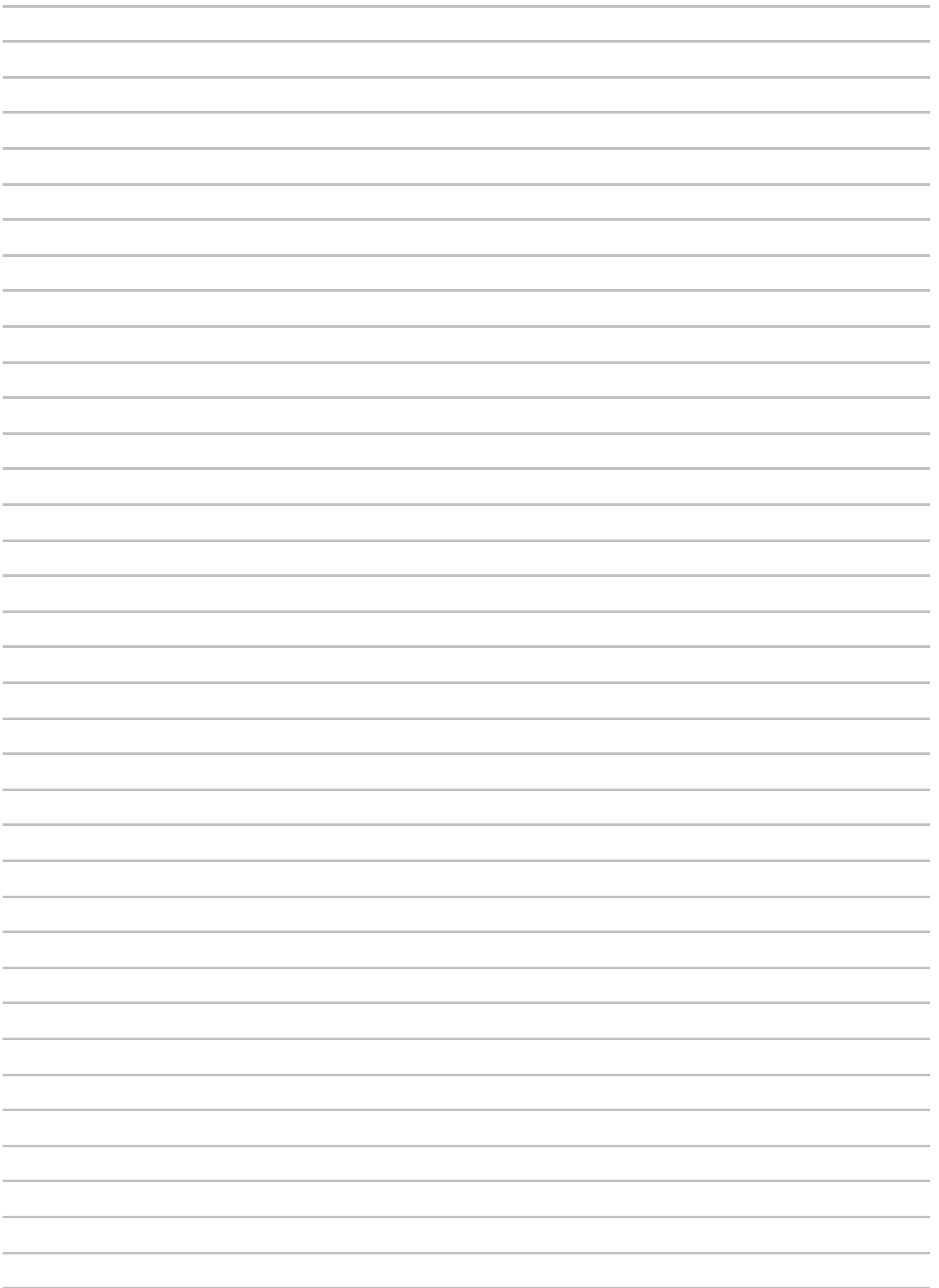
Die Übereinstimmung eines Baumusters des bezeichneten Produktes mit der oben genannten Maschinen-Richtlinie wurde bescheinigt durch:

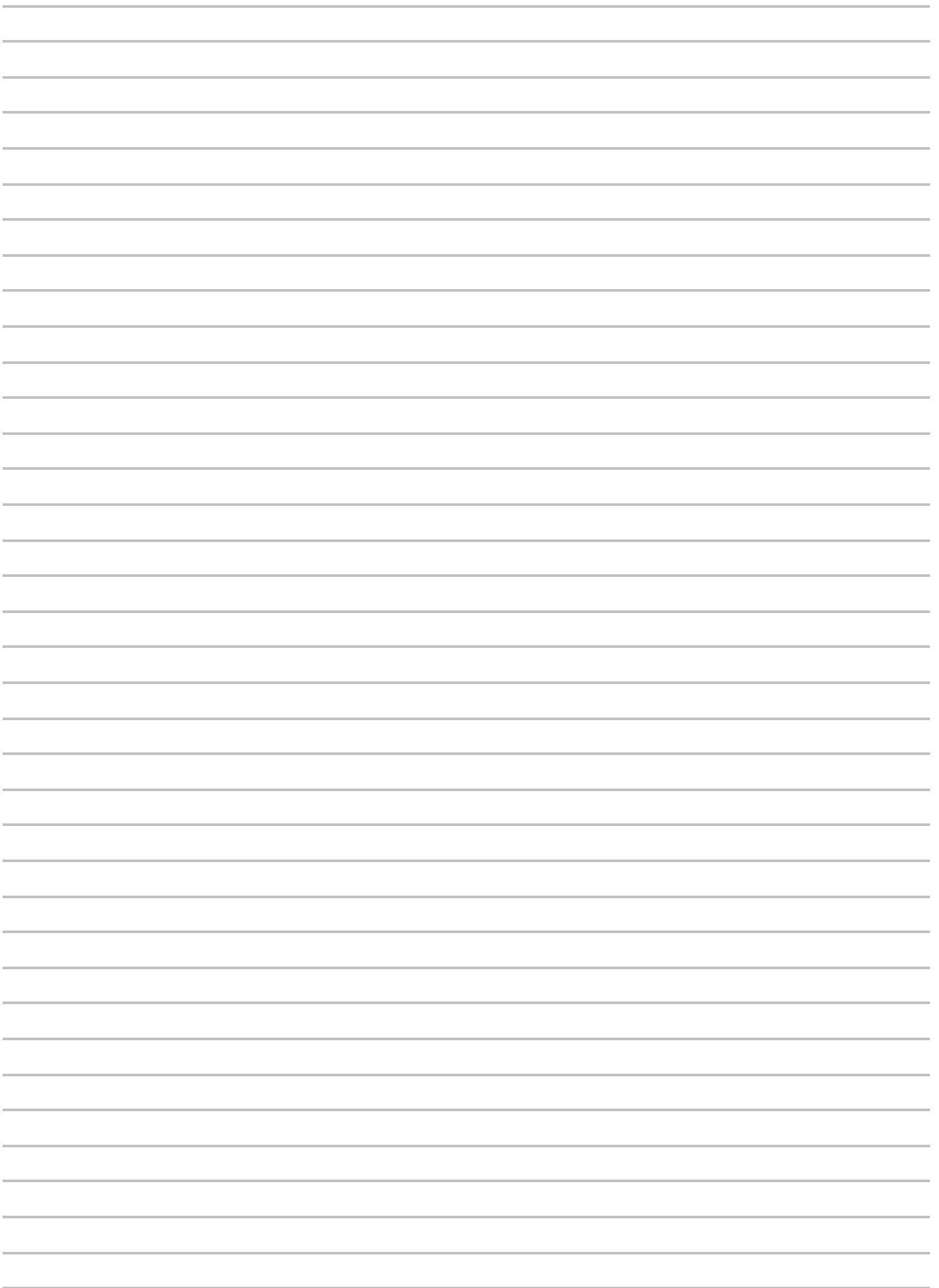
Consistency of a production sample with the marked product in accordance to the above machines directive has been certified by:  
La conformité d'un échantillon du produit désigné aux directives machine susmentionnées a été certifiée par :

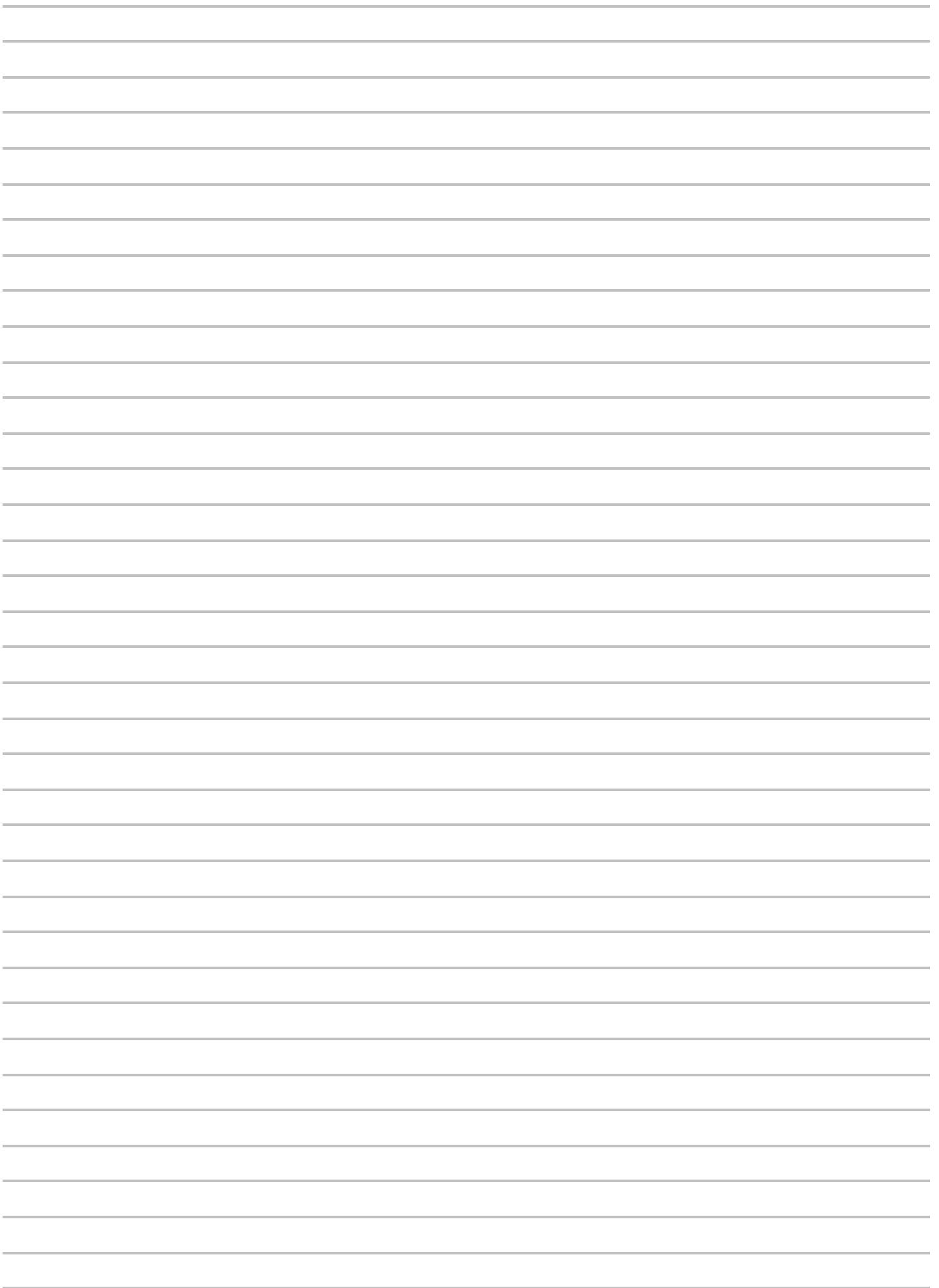
TÜV SÜD Rail GmbH - Ridlerstrasse 65 - D-80339 - München - Germany

Gamal Hagar  
Entwicklungsleiter / R&D Manager

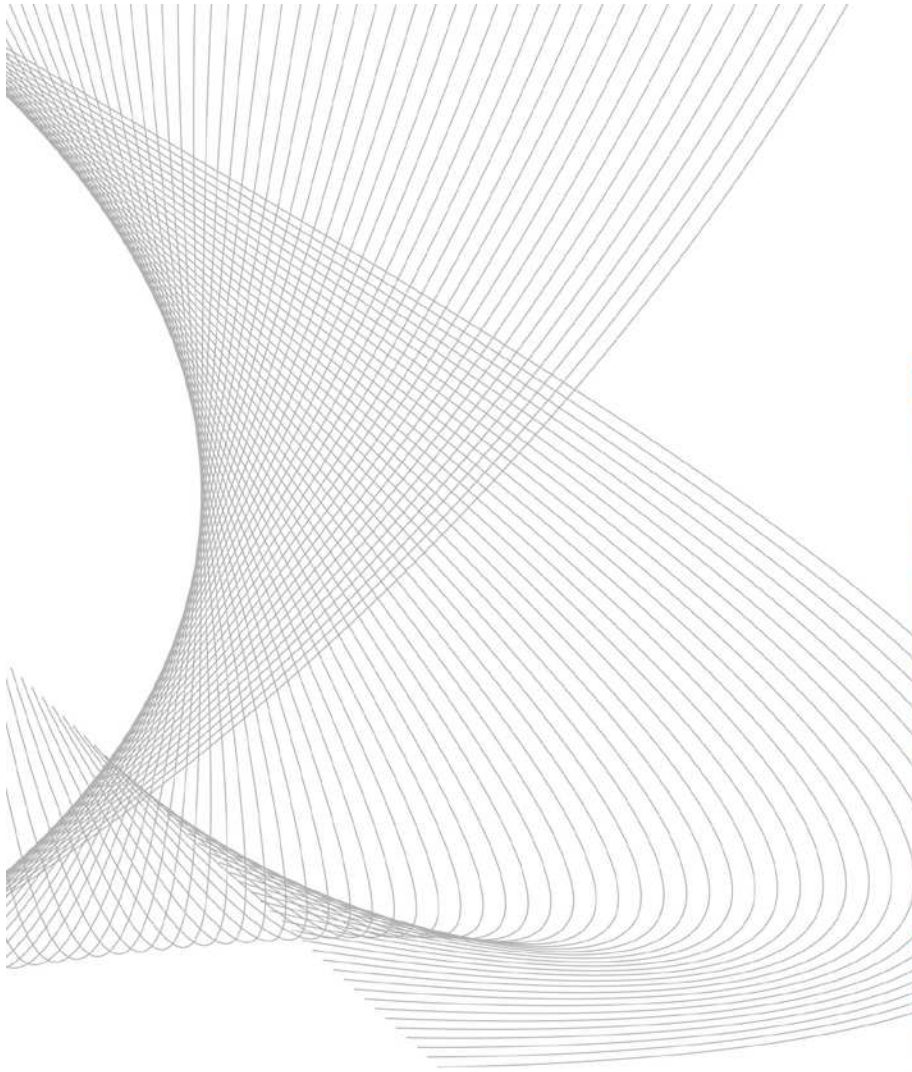
ppa. Christian Dold  
Produktmanagement











**DOLD**



E. DOLD & SÖHNE KG  
Postfach 1251 • D-78114 Furtwangen  
Phone +49 7723 6540 • Fax +49 7723 654356  
dold-relays@dold.com • www.dold.com