

**GC 341**

**MANUFACTURER'S STATEMENT**

Read this operation manual carefully before use to ensure proper operation of this product. Failure to read this operation manual may cause improper operation and may result in serious injury or death of a person. The meanings of the symbols are as follows.

	<b>WARNING</b>	Disregard of the warning symbol can cause improper operation which may cause death or serious injury.
	<b>CAUTION</b>	Disregard of the caution symbol can cause improper operation which may cause injury of a person or damage the object.
	<b>NOTE</b>	Special attention is required to the section of this symbol.

**NOTE**

- This product is a non-contact switch intended for operator cover mount or wall mount for use on an automatic sliding door. Do not use for any other applications.
- When setting the sensor's detection area, make sure that there is no traffic around the installation site.
- Before turning the power ON, check the wiring to prevent damage or malfunction of equipment connected to the product.
- Only use the product as specified in the operation manual provided.
- Be sure to install and adjust the sensor in accordance with the local laws and standards of the country in which the product is installed.
- Before leaving the installation site make sure that the product is operating properly and instruct the building owner/operator on proper operation of the door and the product.
- The product settings can only be changed by an installer or service engineer. When changed, the changed settings and the date shall be registered in the maintenance logbook accompanying the door.

	<b>WARNING</b>	Do not wash, disassemble, rebuild or repair the sensor, otherwise it may cause electric shock or breakdown of the equipment.
<b>Danger of electric shock</b>		

**NOTE**

- The following conditions are not suitable for sensor installation.
- Fog or exhaust emission around the door
  - Wet floor
  - Vibrating operator cover or mounting surface
  - Moving objects, steel plate, emergency lights or illumination in the detection area or in vicinity
  - Highly reflecting floor or highly reflecting objects around the door
  - Make sure that the operator cover has been earthed.

**SPECIFICATIONS**

Model : GC 341	Operating temperature : -20 to +55 °C (-4 to 131 °F)
Cover color : Black	Relative air humidity : <80 % (non-condensing)
Mounting height : 2.0 (6'7") to 3.5 m (11'6")	Noise level : <70 dBA
Detection area : See <b>DETECTION AREA</b>	Output hold time : <500 ms
Detection method : Active infrared reflection (*1)	Response time : <300 ms
Depth angle adjustment : -6 to +6 °	IP rate : IP54
Power supply (*2) : 12 to 24 VAC ±10 % (50 / 60 Hz)	Category : 2 (EN ISO13849-1 : 2008)
	Performance level : d (EN ISO13849-1 : 2008)
Power consumption : < 1W (< 2 VA at AC)	ESPE : Type 2
Operation indicator : See <b>Operation indicator table</b>	Weight : 250 g (8.8 oz.)
Test input : Opto coupler	Accessories : 1 Operation manual
	2 Mounting screws
	1 Mounting template
Safety output : Opto coupler (NPN)	1 Area adjustment tool
	1 Cable 3 m (9'10")
	1 Cable 3 m (9'10")
	(8×0.22 mm <sup>2</sup> AWG24) (*3)
	(Resistance load)

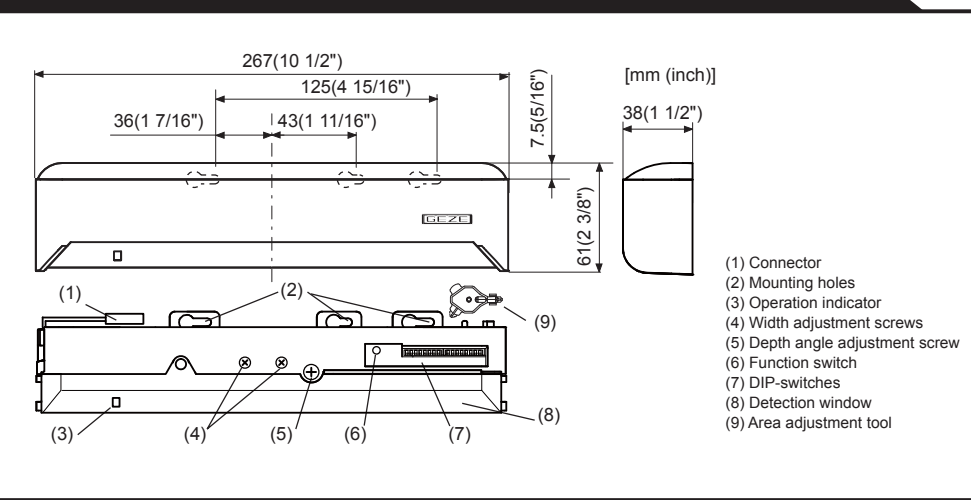
**Operation indicator table**

Status	Operation indicator color	Timing
Set-up	Yellow Blinking	1000 ms
Installation mode	Yellow	
Operating mode	Green	
1st row detection	Red Blinking	
2nd row detection	Red	
Adjustment confirmation required	Red & Green Blinking	
Signal saturation	Slow Green Blinking	
Sensor failure / sensitivity too low	Fast Green Blinking	

**NOTE** The specifications herein are subject to change without prior notice due to improvements.

- \*1 : Active infrared reflection has a presence detection function.
- \*2 : The sensor has to be connected to a door system which has a SELV circuit.
- \*3 : Overcurrent protection with less than 2 A.

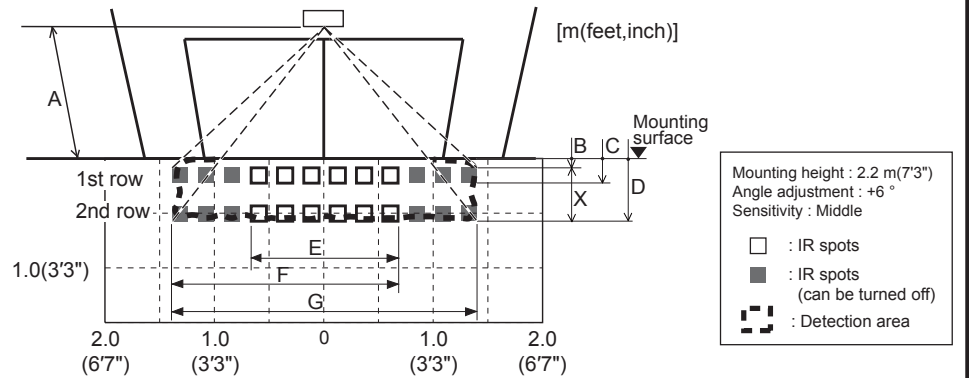
**OUTER DIMENSIONS AND PART NAMES**



**COMPLIED STANDARDS AND EXTRACT FROM EC DECLARATION OF CONFORMITY**

EMC Directive 2004/108/EC	EN 12978:2003 +A1:2009	Machinery Directive 2006/42/EC
EN 61496-3:2001 clause 4. 3. 5 and 5. 4. 7. 3	EN ISO 13849-1:2008	EN ISO 13849-2:2012
EN 61000-6-2:2005		EN 61000-6-3:2007 +A1:2011
EN 16005:2012		
DIN 18650-1:2010		

**DETECTION AREA**



**Emitting area**

The chart shows the values at depth angle +6 °

	[m (feet,inch)]					
A	2.00 (6'7")	2.20 (7'3")	2.50 (8'2")	2.70 (8'10")	3.00 (9'10")	3.50 (11'6")
B	0.23 (9")	0.25 (10")	0.28 (11")	0.31 (1')	0.34 (1'1")	0.39 (1'3")
C	0.35 (1'2")	0.39 (1'3")	0.44 (1'5")	0.48 (1'7")	0.53 (1'9")	0.61 (2')
D	0.59 (1'11")	0.65 (2'2")	0.74 (2'5")	0.80 (2'7")	0.89 (2'11")	1.03 (3'5")
E	1.21 (3'12")	1.33 (4'4")	1.51 (4'11")	1.63 (5'4")	1.81 (5'11")	2.11 (6'11")
F	1.86 (6'1")	2.05 (6'9")	2.32 (7'7")	2.51 (8'3")	2.79 (9'2")	3.25 (10'8")
G	2.52 (8'3")	2.78 (9'1")	3.15 (10'4")	3.40 (11'2")	3.79 (12'5")	4.42 (14'6")

**Detection area**

To comply with EN 16005 and DIN 18650, make sure that the detection area is within the values of the chart below.

	[m (feet,inch)]		
A	2.00 (6'7")	2.20 (7'3")	3.00 (9'10")
X	0.23 (9")	0.25 (10")	0.34 (1'1")
E	1.02 (3'4")	1.12 (3'8")	1.53 (5')
G*	2.41 (7'11")	2.65 (8'8")	3.60 (11'10")

Test conditions required by EN 16005 and DIN 18650  
 Floor : Grey paper  
 Detection object : EN 16005 and DIN 18650 CA reference body  
 Sensitivity : Middle  
 Speed of detection object : 50 mm / s

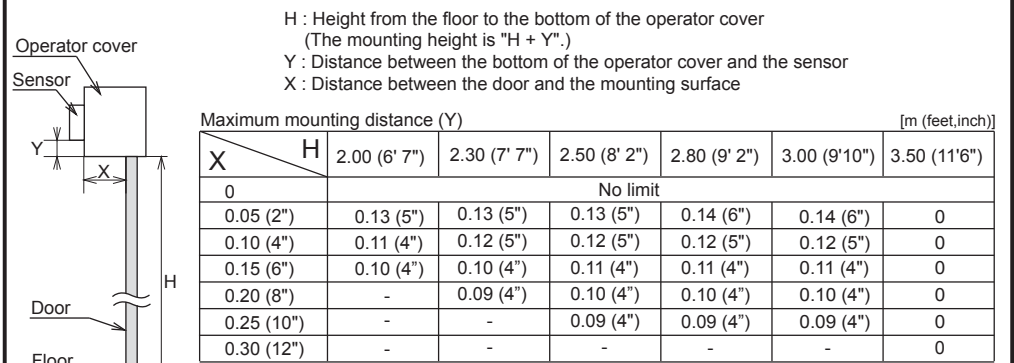
The values above are those of the **Detection area** when tested referring to the test conditions of EN 16005 and DIN 18650. (The area is as shown in **Emitting area** above.)

\*: When installed at higher than 3.0 m (9'10"), EN 16005 and DIN 18650 requirements are fulfilled only within the area width "G" of 3.6 m (11'10").

**NOTE** The actual detection area may become smaller depending on the ambient light, the color / material of the object or the floor as well as the entry speed of the object. The sensor may not be activated when the entering speed of the object or a person is slower than 50 mm / s or faster than 1500 mm / s

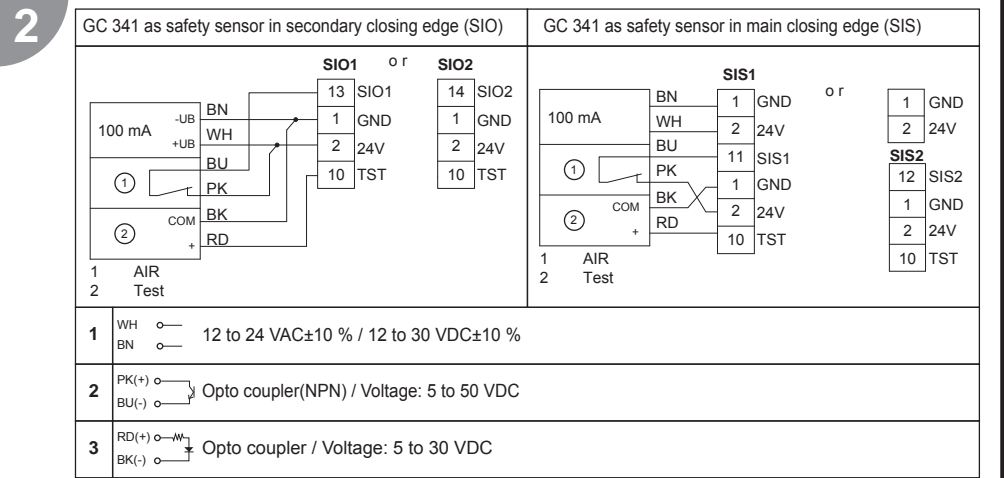
**INSTALLATION**

- Affix the mounting template at the desired mounting position. (When setting the detection area close to the door, mount the sensor according to the chart below.)
- Drill two mounting holes of ø3.4 mm (ø1/8").
- To pass the cable through the operator cover, drill a wiring hole of ø8 mm (ø5/16").
- Remove the mounting template.
- Remove the housing cover. Fix the sensor to the mounting surface with the two mounting screws.



**NOTE** Make sure not to mount the sensor lower than the bottom of operator cover.

	<b>CAUTION</b>	Make sure to affix the mounting template as described in the above chart, otherwise it can be dangerous since there may be no detection area around the threshold. Install the sensor as low as possible on the operator cover.
<b>Risk of getting caught</b>		



	<b>WARNING</b>	Before starting the procedure, make sure that the power is turned OFF. When passing the cable through the hole, do not tear the shield otherwise it may cause electric shock or breakdown of the sensor.
<b>Danger of electric shock</b>		

- Plug the connector.
- Supply power to the sensor. Adjust the detection area and set the DIP-switches. (See **ADJUSTMENTS 3. DIP-switch settings**)

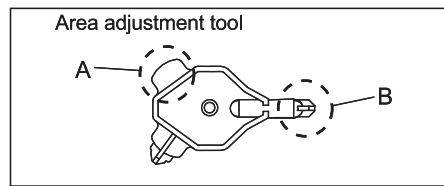
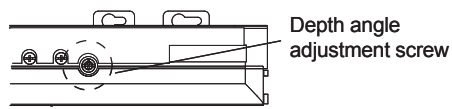
**NOTE** Make sure to connect the cable correctly to the door controller before turning the power ON. When turning the power ON or after adjusting the settings, do not enter the detection area for more than 10 seconds in order to enable the presence detection. Do not touch the DIP-switches before turning the power ON, otherwise an error occurs. After changing the DIP-switch settings, make sure to push the function switch for 2 seconds.

- Place the housing cover. If wiring is to be exposed, break the knockout.

	<b>WARNING</b>	Do not use the sensor without the cover. When using the cable knockout, install the sensor indoors or use the rain cover (Separately available) otherwise electric shock or breakdown of the sensor may occur.
<b>Danger of electric shock</b>		

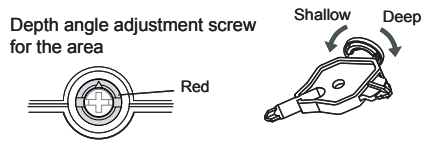
## ADJUSTMENTS

### 1 Area depth angle adjustment

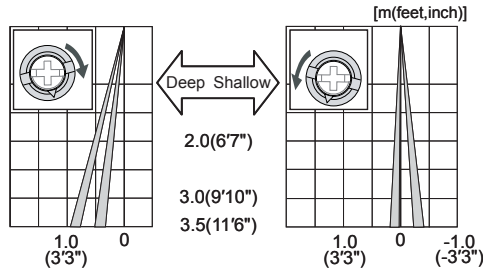


When adjusting the 1st row close to the door, see **Table 2** DIP-switch 16 for the easier adjustment.

**NOTE** Make sure that the detection area does not overlap with the door/operator cover, and there is no highly reflecting object near the detection area otherwise ghosting/signal saturation may occur.

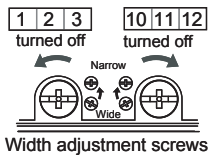


Use the area adjustment tool (A) as shown above to change the area depth angle.



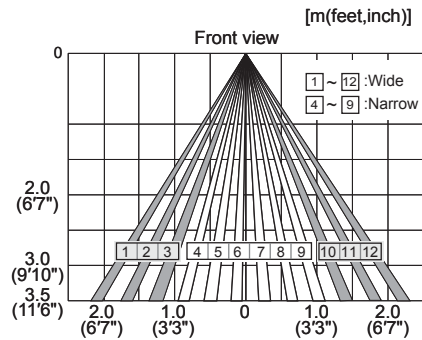
### 2 Area width adjustment

To adjust the detection area width, use the adjustment screws as shown below.



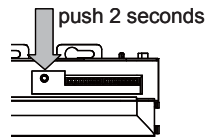
Please adjust by using the tool (B)

**NOTE** When setting the detection area width, make sure to turn the adjustment screws until it clicks. 1 2 3 resp. 10 11 12 can only be turned off as a group.



### 3 DIP-switch settings

After changing the DIP-switch settings, make sure to push the function switch for 2 seconds.

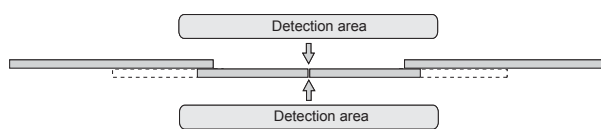


**Table 2**

DIP-switch	Function	Setting				Comment
		Low	Middle	High	S-High	
DIP-switch 1	Sensitivity	Low 1 2	Middle 1 2	High 1 2	S-High 1 2	Set the sensitivity according to the mounting height.
DIP-switch 2		2.0 to 3.0 m	2.0 to 3.0 m	2.5 to 3.2 m	3.0 to 3.5 m	
DIP-switch 3	Presence timer	30 s 3 4	60 s 3 4	180 s 3 4	600 s 3 4	To enable the presence detection, do not enter the detection area for 10 seconds after setting the timer.
DIP-switch 4		EN 16005	DIN 18650			
DIP-switch 5	Frequency	Setting1 5 6	Setting2 5 6	Setting3 5 6	Setting4 5 6	When using more than one sensor close to each other, set the frequency different for each sensor.
DIP-switch 6						
DIP-switch 7	Safety output	High 7	Low 7			
DIP-switch 8	Test input	High 8	Low 8			
DIP-switch 14	Self monitoring	Enable 14	Disable 14			To comply with EN 16005 and DIN 18650, the self-monitoring has to be enabled (position OFF).
DIP-switch 16	Installation mode	OFF 16	ON 16			Set DIP-switch 16 to "ON" to adjust the 1st row. During the installation mode only the 1st row remains active and the operation indicator shows yellow. After setting the row set DIP-switch 16 "OFF".

### Area depth adjustment with INFRARED FINDER (separately available)

- Set the DIP-switch 16 "Installation mode" to ON and confirm by pushing the function switch for 2 seconds
- Turn the depth angle adjustment screw to the right (deep) to place the detection area away from the door.
- Place the INFRARED FINDER on the floor until it detects the infrared curtain.
- Slide the INFRARED FINDER as close as possible towards the door
- Turn the depth angle adjustment screw to the left (shallow) until the INFRARED FINDER lights up.
- Set the DIP-switch 16 to OFF and confirm by pushing the function switch for 2 seconds.



## INFORM BUILDING OWNER / OPERATOR OF THE FOLLOWING ITEMS

### WARNING

- Always keep the detection window clean. If dirty, wipe the window with a damp cloth. Do not use any cleaner / solvent.
- Do not wash the sensor with water.
- Do not disassemble, rebuild or repair the sensor yourself, otherwise an electric shock may occur.
- When the operation indicator blinks green, contact your installer or service engineer.
- Only the service engineer is allowed to change the settings.
- Do not paint the detection window.

### NOTE

- When turning the power ON, always walk-test the detection area to ensure the proper operation.
- Do not place any objects that move or emit light in the detection area. (e.g. plant, illumination, etc.)

## TROUBLESHOOTING

Door operation	Operation indicator	Possible cause	Possible countermeasures
Door does not open or doesn't react in case of side screen safety, when a person enters the detection area.	None	Wrong power supply voltage. Wrong wiring or connection failure.	Set to the stated voltage. Check the wires and connector.
	Unstable	Wrong detection area positioning. Sensitivity is too low. Short presence timer. Dirty detection window.	Check <b>ADJUSTMENTS 1, 2</b> . Set the sensitivity higher. (*) Set the presence timer longer. (*) Wipe the detection window with a damp cloth. Do not use any cleaner or solvent.
	Proper	Wrong wiring or connection failure.	Check the wires and connector.
Door opens or doesn't react in case of side screen safety, when no one is in the detection area (ghosting).	Unstable	Objects that move or emit light in the detection area.	Remove the objects.
		The detection area overlaps with that of another sensor. Waterdrops on the detection window.	Check <b>Table 2</b> DIP-switch 5, 6. (*) Use the rain-cover. (Separately available) Or wipe the detection window with a damp cloth. Do not use any cleaner or solvent. Or install in a place keeping the waterdrops off.
		The detection area overlaps with the door/operator cover. Sensitivity is too high.	Adjust the detection area to "Deep" (Outside). Set the sensitivity lower. (*)
Door remains open or react always without sensor detection in case of side screen safety.	Proper	Wrong setting of DIP-switches.	Check <b>Table 2</b> DIP-switch 7, 8. (*)
	Yellow	Sudden change in the detection area. Wrong wiring or connection failure.	Check <b>Table 2</b> DIP-switch 1 to 4. (*) If the problem still persists, hard-reset the sensor. (Turn the power OFF and ON again) Check the wires and connector.
		Installation mode is set to "ON".	Set DIP-switch 16 to "OFF". (*)
Fast Green Blinking	Yellow	Sensitivity is too low. Dirty detection window.	Set the sensitivity higher. (*) Wipe the detection window with a damp cloth. Do not use any cleaner or solvent.
		Sensor failure.	Contact your installer or service engineer.
		Signal saturation. The detection area overlaps with the door/operator cover.	Remove highly reflecting objects from the detection area. Or lower the sensitivity. (*) Or change the area depth angle. Adjust the detection area to "Deep" (Outside).
Red & Green Blinking	Yellow	Setting error.	After changing the DIP-switch settings, make sure to push the function switch for 2 seconds.

\*After changing the DIP-switch settings, make sure to push the function switch for 2 seconds.

GEZE GmbH

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Material number 160278-00



# Konformitätserklärung

## Declaration of Conformity Déclaration de conformité

Hersteller: GEZE GmbH  
Manufacturer: Reinhold-Vöster-Str. 21 – 29  
Fabricant: D-71229 Leonberg

Produktbezeichnung: GEZE-Absicherungssensor  
Product identifier: Typ: GC 341  
Désignation du produit:

### Erklärung (Declaration, Déclaration):

Der GEZE-Anwesenheitssensor entspricht bei bestimmungsgemäßer Verwendung den grundlegenden Anforderungen der nachfolgend genannten Richtlinien.

The GEZE- combined radar-opening and active infrared safety sensor is, by the directed application, in accordance with the essential requirements of the following directives.

Le détecteur de combines d'ouverture et sécurisation de GEZE correspondent en cas d'utilisation appropriée aux exigences de la directives suivante.

- Maschinenrichtlinie (Machines Directive, Directive relative aux machines) 2006/42/EG  
Benannte Stelle (Notified Body): TÜV NORD CERT GmbH & Co. KG, Kennnummer 0044,  
Langemarckstraße 20, 45141 Essen  
EG-Baumusterprüfbescheinigung (EC Type Certificate) Nr. 44 205 13099214  
Bevollmächtigt zur Zusammenstellung der technischen Unterlagen: GEZE GmbH, Anschrift s.o.
- EMV-Richtlinie (EMV Directive, Directive CEM) 2004/108/EG
- RoHS-Richtlinie (RoHS Directive, Directive RoHS) 2011/65/EU

### Folgende europäische Normen sind angewandt

(the following European standards have been applied, les normes européennes suivantes sont appliquées):

- EN 61000-6-2:2005
- EN 61000-6-3:2007/A1:2011
- EN 61508-1:2010
- EN 16005:2012
- EN 61496-3 :2008
- EN 12978:2003+A1:2009
- EN ISO 13849-1:2008

### Folgende nationale Normen sind angewandt

(the following national standards have been applied. Sont appliquées les norms nationaux)

- DIN 18650-1:2010
- DIN 18650-2:2010
- AutSchR :1997

### Dokumentation und Betriebsanleitung

(Documentation and Operating Instructions, Documentation et instructions de service):

Die Konformitätserklärung und die Betriebsanleitung sind dem Produkt beigelegt.

Produkt- und Konformitätsdokumentation sind bei GEZE GmbH archiviert.

The declaration of conformity and operating instructions are included with the product.

The product and conformity documentations have been archived at GEZE GmbH.

La déclaration de conformité et les instructions de service sont jointes au produit.

Les documents relatifs au produit et à son conformité sont archivés chez GEZE GmbH.

Dokumentationsverantwortlicher war: Peter Igl / NM, Tel.: +49(0)7152/203-0

The following party was responsible for the documentation: Peter Igl / NM, Tel.: +49(0)7152/203-0

Responsable de la documentation : Peter Igl / NM, Tél. : +49(0)7152/203-0.)

### Bedienungsanleitung (User instructions, Mode d'emploi):

Die Bedienungsanleitung in den europäischen Amtssprachen liegt vor und ist in der Betriebsanleitung abgelegt.

The user instructions are available in the European official languages have been deposited in the operating instruction.

Le mode d'emploi est disponible dans les langues officielles européennes et est joint aux instructions de service.



Hermann Alber  
Geschäftsführer

Leonberg, den 24.November 2014