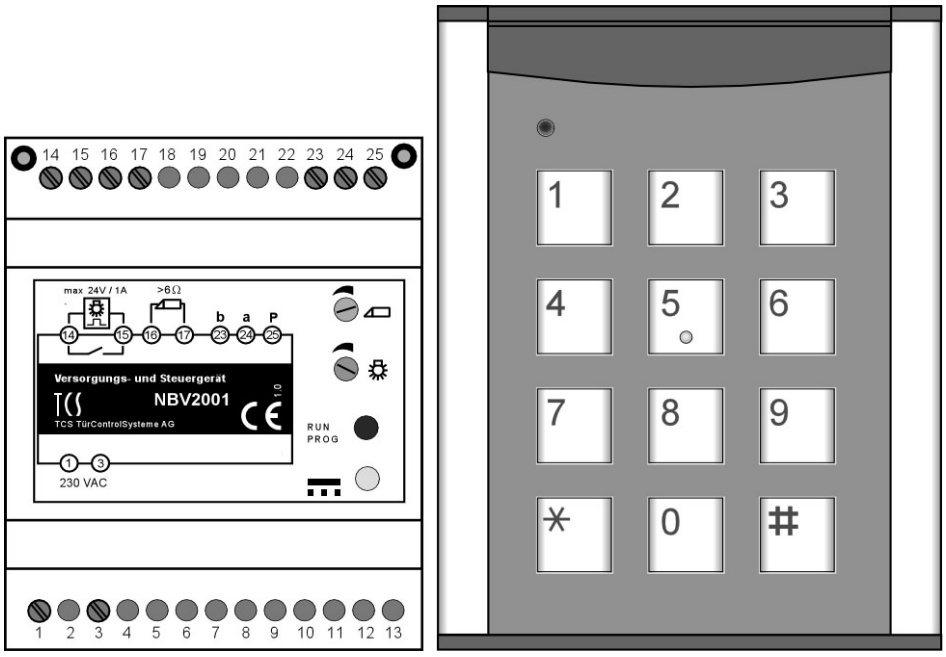
Product information

code:pack – code:pack access controll
codelock12
PZF5000



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Safety notices

! Assembly, installation, and commissioning must only be carried out by a qualified electrician!

For work on systems with 230 V AC mains voltage the safety requirements of DIN VDE 0100 must be observed.

When installing TCS:BUS systems the general safety rules for telecommunication systems in accordance with VDE 0800 must be observed:

- separate cabling for high and low voltage lines,
- minimum distance of 10 cm for joint cabling arrangements,
- use of separators between high and low voltage lines in joint cable ducts,
- use of standard telecommunication cables, e. g. J-Y (St) Y with 0.8 mm cross section,
- existing cables (modernisation) with different cross sections may be used whilst taking account of the loop resistance.

! Suitable lightning protection must ensure that a voltage of 32 V DC will not be exceeded at the TCS:BUS wires a and b.

Terms

Basic mode	The system in normal operation. If changes should be made, the device is to be set to the programming mode.
Programming mode	Operating state, in which input and change of the access codes, the master code and further basic settings are possible (directly on the device).
Master code	Max. six-digit security code for the activation of the programming mode of the device As-delivered condition: 123456.
Access code	Max. six-digit security code for the activation of the code lock (e.g. direct release of the door opener).

Application

The PZF5000 is a pack witch consists of a code lock and a suitable power supply and control unit.

- With a code entry (up to 10 codes) different actions can be triggered.
- It can be operated independently of TCS:BUS systems. In this way, the code lock can also be used for triggering of actuators in the service sector of housing technology (building automation).
- It can be completed with other devices to complex TCS:BUS system (e. g. for door opening or triggering of several actors).

The code lock
- is suitable for surface-mounting indoors and outdoors.
- The following overview indicates the maximum number of AZF50000 devices with exclusive connection to the specified power supply device, i.e. no further devices are powered by the power supply device.

	NBV2001, I(P) = 60mA
Utilisation factor 30 %	3
Utilisation factor 50 %	2
Utilisation factor 70 %	1

Brief description

Basic functions

Code lock	
Door opening or triggering	• Activation of the integrated R-contact, release duration and rest position are adjustable • Transmission of a door opener protocoll with own AS address • Transmission of a general control function • Transmission of a code-linked control function Opening of several doors from one code lock and opening of one door from several code locks possible.
Light switching	• By pressing the #-button without code entry, deactivatable
Codes	• Max. six-digit • Max. 10 codes for operation, 1 master code for maintenance and configuration • Left-hand zeros are ignored.

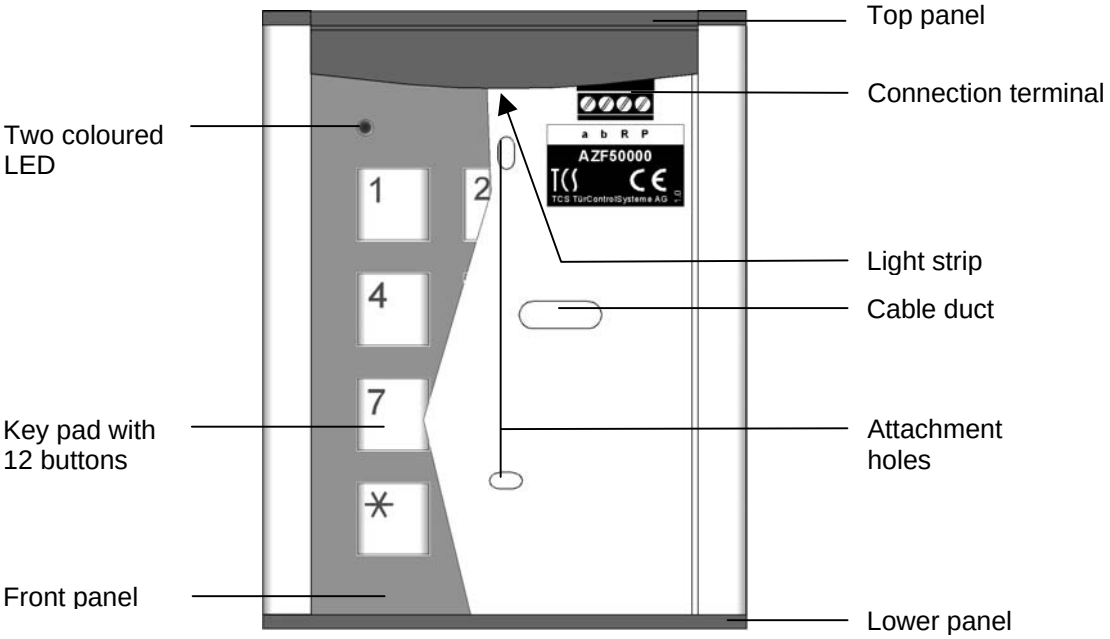
Power supply and control unit	
Power supply	24 V DC (for TCS:BUS)
Switching the system mode	Switching between system operating and programming mode, LED indication
Terminals for a, b and P	Short circuit protected

Additional functions

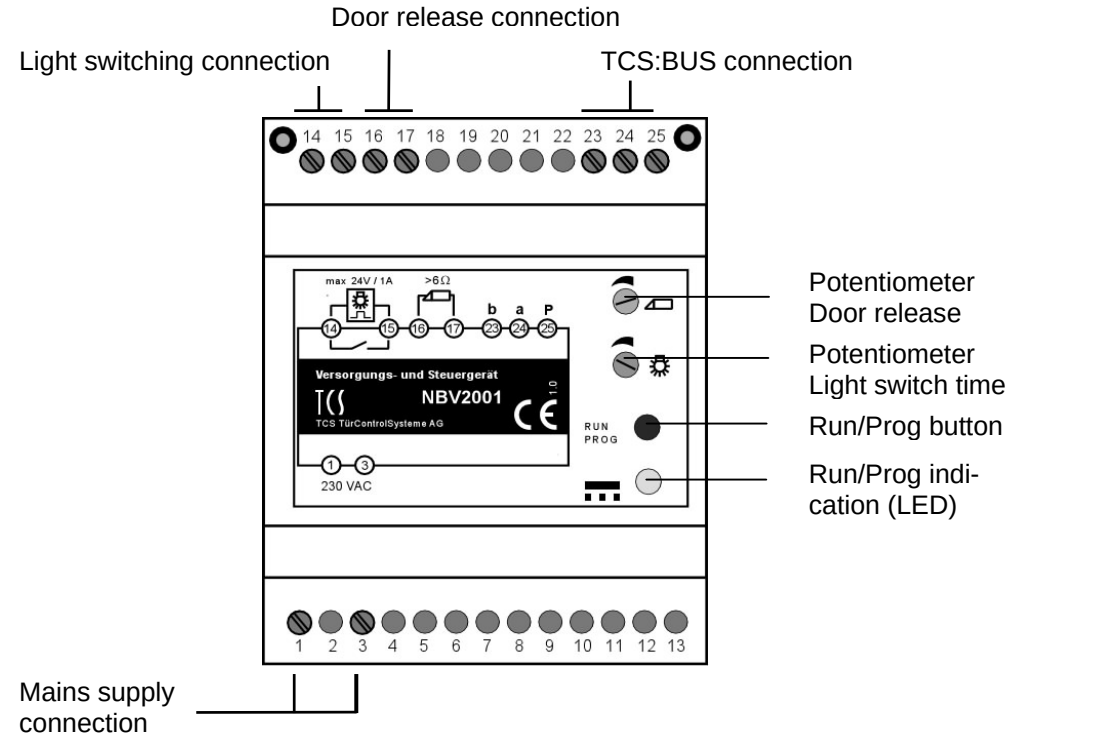
Code lock	
Acoustic signalling of the button actuation	Using integrated piezoelectric buzzer, deactivatable
Acoustic signalling of the code identification	Using integrated piezoelectric buzzer. • Positive acknowledgement tone (acoustic signal, single beep) on acknowledgement of the code number, duration is deactivatable / adjustable • Negative acknowledgement tone (triple beeps) on rejection
Optical signalling of the code identification	Using two-color LED • Lights up green on acknowledgement of the code number (deactivatable, duration adjustable) • Lights up red on rejection • Lights up red on blocking after incorrect entry of code three times (duration approx. 2 min)
Acoustic and optical acknowledge on receiving of a short door opener protocol	By option *Accept door opener protocols* (cp. *Programming,* page 28*, 2f*)
Optical signalling of the programming mode	Two-colored LED flashes green
Illuminated buttons	Indirect, blue
Change of data records and parameters	AS-addresse, R-contact switch time and factory settings manually programmable
EEPROM memory	All programmed data records and parameters are stored in the EEPROM.

Power supply and control unit	
Overload protection for P wire	If the maximum load limit (110 mA) is exceeded the integrated fuse switches the output off. After removal of the overload and cooling down of the fuse the output will automatically be switched back on.
Internal light switch relay	For triggering light control units 24 V / 1 A
Internal door release relay	12 V, 50/60 Hz / 2 A (for door opener not less than 6 ohm)
Door release time	Manually adjustable, from 0.8 sec to 8 sec
Light switch time	Manually adjustable, from 0.8 sec to 5 min
Single voice channel	Communication between front-door and in-house station over more than one subsystem is not possible.

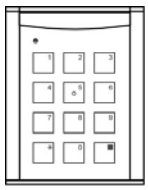
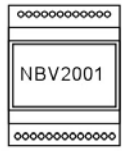
Device overview code lock

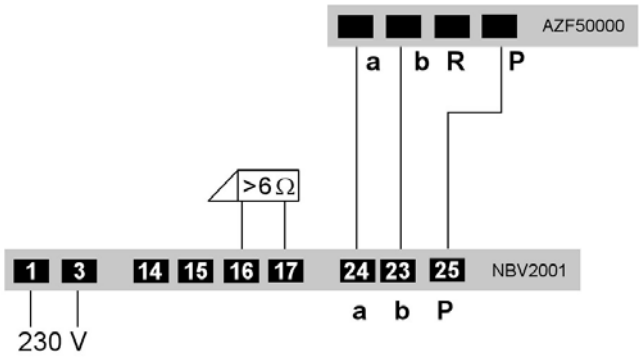


Device overview power supply and control unit



Installation overview– connection diagram

Code lock	AZF50000	
Power supply and control unit	NBV2001	



Door opener is not included in the scope of delivery.

A FAA1100 can be connected optionally at the termals R and P at AZF50000.

! To ensure the manipulation security prefer a connection of a door opener with the NBV2001 in accordance with the installation overview– connection diagram.

Technical data

	Front-door station AZF50000	Power supply and control unit
Case	aluminium anodised nature; front panel anodised nature or grey	plastic
Dimensions (in mm)	H 114 x W 88 x D 12 (19)	H 90 x W 70 x D 70 (4 TE)
Assembly	flush-mounting	DIN EN 50022 (DIN-RAIL Cabinet)
Weight	200 g	475 g
Operating temperature range	-20 °C ... 50 °C	0 °C ... + 40 °C
Input current	I(a) = 0,4 mA, I(P) = 14 mA	
Maximum input current	I(Pmax) = 59 mA	
Output current		I(a) = 40 mA I(P) = 60 mA
Maximum Output current		I(Pmax) = 700 mA (for:1 min Last/10 min break between 2 maximum loads)
Electromagnetic compatibility (EMC); Radio interference suppression		in accordance with EN 50081 and EN 50082-2; in accordance with EN 55011
Supply voltage		230 V, 50 Hz

3-wire technology required.

Assembly code lock

Opening the case

1. The lower panel is connected with the aluminum profile section by two screws. Remove both screws with the aid of a suitable screwdriver.
Slide the front panel down and remove it.
2. Feed the cables through the cable duct.
3. Securely mount the device on the wall with suitable bolts using the attachment holes (see overview).

!	The screw head height may be max. 3 mm!

!	Take care not to pinch the cables.

Closing the casing

1. Slide front panel upwards under the light strip.

!	During the insertion of the front panel, ensure that the contact pins are guided into the sockets and are not damaged.

2. Attach the lower panel again with both belonging screws.

Cable connection

Line diameter

We suggest a wire diameter of minimum 0.8 mm for :BUS-lines and power supply. (Code lock, screwed terminal: Connection diameter 0.3 -1.4 mm possible).

Notes

!	Use the small screwdriver supplied to connect the lines and prevent damage to the device.

!	ATTENTION! The internal resistance of the door opener must not be lower then 6 ohm!

Connection

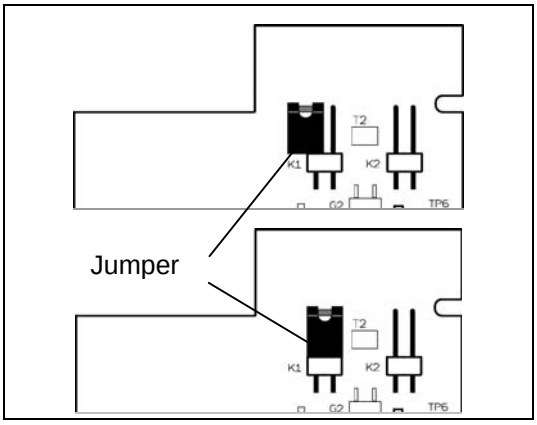
1. Strip the insulation from the line ends.
2. Connect the lines in accordance with the installation overview / connection diagram.

Adjustment for system with long lines

For using a loop resistence up to 60 ohms, the AZF50000 must be adjusted.
P-wire required!

- Remove the front panel. At the back is the board with a jumper which is put on one contact (delivery includes).

- Put the jumper on both contacts.



Commissioning

- Fully install the devices of the system.
- Check the a and b wires for short circuits.
- Switch on the mains supply.

Setup

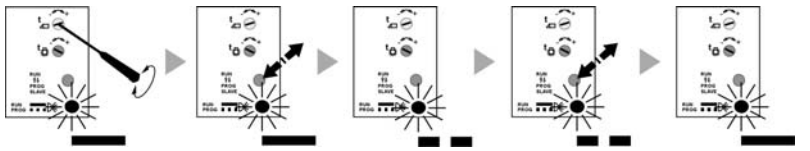
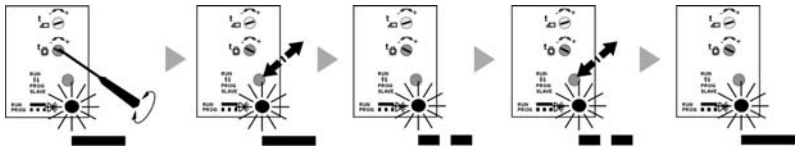
Factory settings code lock

The code lock AZF50000 has an EEPROM, in which the following factory settings are stored:

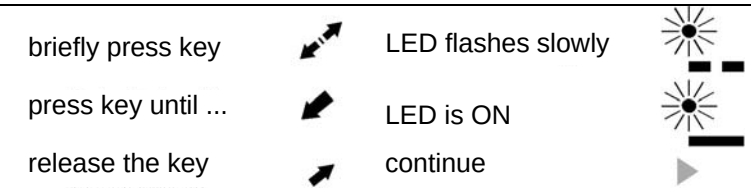
AS address for door opener function	0
R-contact switch time	Approx. 3 sec (= 24 x 128 msec)
LED lighting duration	Transfer R-contact switch time approx. 3 sec (= 255)
Duration of acoustic signalling	Transfer R-contact switch time approx. 3 sec (= 255)
Programming lock	OFF (= 0)
On receiving of door opener protocol switch R-contact	active (= 1)
Programming mode activation on the bus control unit only	OFF (= 0)
Acoustic signalling of the button actuation	active (= 1)

Transmit light switching protocol	active (= 1)
Rest position of the R-contact	OFF (= 0)
Central mode	OFF (= 0)
1st access code (at memory location number 1)	111
1st access code / parameter (at memory location number 1)	Transmits door opener protocoll with AS address, R-contact switches and data record active
2nd - 10th access code (at memory location number 2 to 10)	Not assigned
2nd - 10th access code / parameter (at memory location number 2 to 10)	Transmits door opener protocoll with AS address, R-contact switches and data record inactive
Master code	123456

Setup power supply and control unit

Setup **door release time**: LED goes ON Setup time Enable/disable system programming mode	 –: min. 0,8 sec +: max. 8 sec Biefly press key RUN/PROG LED flashes slowly Biefly press key RUN/PROG LED illuminates
Setup **light switch time**: LED illuminates Setup time Enable/disable system programming mode	 –: min. 0,8 sec +: max. 5 min Biefly press key RUN/PROG LED flashes slowly Biefly press key RUN/PROG LED illuminates

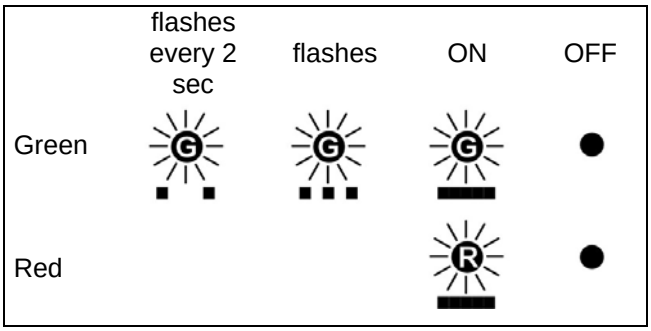
Legend for settings, programming, operation



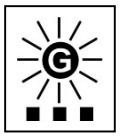
Programming code lock

Notes

- Confirm with the #-button, cancel with the *-button.
- Non-confirmed entries expire after 10 sec.
- Factory settings of the 10 code memory locations are represented in brackets (WE = 0 or WE = 1).
- SpNr = Memory location number
- Legend of LED indication modes:



Initiation of the programming

0	*Only if the function 2f, option 4 is programmmed:* **Switch on programming mode of the system and switch off again**	(WE = 0) On power supply and control unit: • Briefly press RUN/PROG button, LED flashes. • Briefly press RUN/PROG button, LED comes ON. On AZF50000: Two-colored LED flashes green for 2 min 
1	**Move the device into the programming mode** Enter master code (Begin the programming within **2 min**!)	Entry: * **Mastercode** #. (WE = 123456)
	Correct entry	A positive acknowledgement tone (single beep) sounds for 3 sec, flashes LED green (2 min). The device is ready for programming. 
	Incorrect entry, unknown master code	*A negative acknowledgement tone (triple beep) sounds on activation of the #-button.* *If code is 3 x incorrect: code entry is blickes for 2 mint.* *Start again from the beginning.*
	No entry	*For 2 min no command: programming mode ends.* 

Programming

2a **Access code define or change**

First access code
Second access code
etc.

Entry: *** 0 # SpNr1 # access code # access code #**
Entry: *** 0 # SpNr2 # access code # access code #**

SpNr = 1 to 10
Max. access code six-digit

Changing the old code by overwriting with the new code.

2b **Activate or deactivate R-contact for a code**

Entry: *** 1 # SpNr # R #** R – R-contact function

SpNr = 1 to 10
(WE = 1 for SpNr 1 to 10)

R = 1 ON
0 OFF (R-contact without function)

2c **Define transmission protocol at code entry**

Entry: *** 2 # SpNr # P #** P – Protocol selection

SpNr = 1 to 10
(WE = 0 for SpNr 1 to 10)

P = 0 (door opener protocol with own AS address)
1 (Control Function 1 with own serial number)

6 (Control Function SpNr with own serial number)
7 (Do not transmit any protocol)

2d **Delete data record** for a predetermined memory location

Entry: *** 3 # SpNr #**

SpNr = 1 to 10
(Transmits door opener protocol with AS address, R-contact switches and data record inactive)

2e **Enter AS address**

Entry: *** 4 # AS-Adresse #**

AS address = 0 bis 63
(WE = 0)

2f **Define options**

Entry: *** 5 # option # value #**

Option:		Value:	
0	Transmit light switching protocol	0 = No, 1 = Yes	(WE = 1)
1	Accept door opener protocols	0 = No, 1 = Yes	(WE = 1)
2	Rest position R-contact	0 = Off, 1 = switched	(WE = 0)
3	Acoustic feedback buttons	0 = Off, 1 = On	(WE = 1)
4	Programming mode possible only after programming mode of the system has been switched on at the power supply and control unit.	0 = No, 1 = Yes	(WE = 0)

! ATTENTION: Factory settings apply for standalone operation. In order to increase the security, option 4 should be activated in BUS operation (i.e. set value = 1), so that the programming requires access to the power supply and control unit.

2g **LED lighting duration**

Entry: *** 6 # value #**

Value = Duration adjustable in 128 msec steps, 0 to 250 times
(WE = 255, use value of the R-contact!)

2h	**Duration of acoustic signalling**	Entry: *** 7 # value #** Value = Duration adjustable in 128 msec steps, 0 to 250 times (WE = 255, use value of the R-contact!)
2i	**R-contact switch time**	Entry: *** 8 # value #** Value = Duration adjustable in 128 msec steps, 0 to 250 times 0 = deaktiviert (WE = 24; corresponds approx. 3 sec)
2j	**Activate programming lock**	Entry: *** 10 # master code #** Master code max. six-digit **!** ATTENTION: The lock cannot be deactivated manually; unlocking possible through TCS specialist personnel fee required only!
2k	**Change master code**	Entry: *** 98 # old master code # New master code #** **New master code #** Master code max. six-digit **!** ATTENTION: For security reasons, the factory set master code should be changed during the commissioning!
2l	**Download factory settings**	Entry: *** 99 # master code # master code #** Master code max. six-digit **!** ATTENTION: Arranged access codes are deleted.

Switch off programming mode

2m	**Leave programming mode**	Entry: *** 9 #**

Operation

Operation code lock

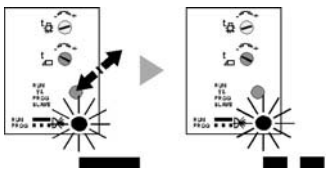
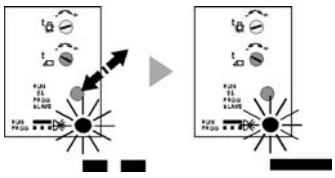
Door release

	Basic mode		
1	**Enter access code**	• Enter access code. • Confirm with #-button.	
	Correct entry	A positive acknowledgement tone sounds, LED lights up green. The door opener is released.	
	Incorrect entry, unknown access code	*A negative acknowledgement tone (triple beeps) sounds at activation of the #-button, LED lights up red.*	
		The code can be entered only 3 times incorrectly, then the code entry is blocked for 2 min. *Start again from the beginning.*	

Light switching

	Basic mode	
1	**Press #-button**	• Press #-button without previous code entry. *Prerequisite is that the function has been activated (see Programming and Define options)*

Operation power supply and control unit

Enable <u>system</u> programming mode	Disable <u>system</u> programming mode
	

Cleaning

! Avoid water entering the device!
Do not use any aggressive or abrasive cleaning agents!

Clean the device using a dry or slightly moist cloth.
More persistent dirt can be removed using a mild household cleaner.

Service

Contact your local sales representative or

www.tcs-germany.com