

# **Functional description User Manual**

**5WK4 9510**

Proprietary data, company confidential. All rights reserved.  
Compte à titre de secret d'entreprise. Tous droits réservés.  
Comunicado como secreto empresarial. Reservados todos os direitos.  
Comunicado como secreto industrial. Nos reservamos todos los derechos.

we reserve all our rights in this work. All rights reserved.  
Wir behalten uns alle Rechte in diesem Werk vorbehalten.  
We reserve all our rights in this work. All rights reserved.  
Wir behalten uns alle Rechte in diesem Werk vorbehalten.  
We reserve all our rights in this work. All rights reserved.  
Wir behalten uns alle Rechte in diesem Werk vorbehalten.

# Information required for tests during homologation of the CAS3

Homologation Information for CAS3		
Project: CAS3	2006-05-08	Page 1 of 5
Author: Peter Walter	SV C BC S52 SE	
Franz Plattner	SV C BC S52 SE	

Proprietary data, company confidential. All rights reserved.  
Compte a titre de secret d'entreprise. Tous droits réservés.  
Comunicado como segredo empresarial. Reservados todos os direitos.  
Comunicado como secreto industrial. Nos reservamos todos los derechos.

we reserve all our rights in this document, in particular the right of patent.  
Wir behalten uns alle Rechte an diesem Dokument, insbesondere das Patentrecht, vorbehalten.  
We reserve all our rights in this document, in particular the right of patent.  
Wir behalten uns alle Rechte an diesem Dokument, insbesondere das Patentrecht, vorbehalten.

**Table of Contents:**

1 GENERAL INFORMATION ..... 3

2 VARIANTS ..... 3

3 TECHNICAL DATA ..... 3

4 TEST EQUIPMENT AND SETUP..... 4

4.1 GENERAL ..... 4

5 LABEL ..... 5

**Table of Figures:**

Figure 1: Components involved in the immobiliser function..... 4

<b>Homologation Information for CAS3</b>		
Project: CAS3	2006-05-08	
Author: Peter Walter	SV C BC S52 SE	
Franz Plattner	SV C BC S52 SE	Page 2 of 5

Proprietary data, company confidential. All rights reserved.  
 Contiene datos de secreto empresarial. Todos los derechos reservados.  
 Comunicado como secreto industrial. Reservados todos los derechos.  
 Comunicato como segreto industriale. Tutti i diritti sono riservati.

Proprietäre Daten, Unternehmensgeheimnis. Alle Rechte vorbehalten.  
 Contine date de secret comercial. Toate drepturile rezervate.  
 Comunicado como secreto industrial. Reservados todos los derechos.  
 Comunicato como segreto industriale. Tutti i diritti sono riservati.

## 1 General Information

Purpose of this document is to give a survey of the test equipment and test setup.

## 2 Variants

The CAS3 has two variants. The PCB is identical for both variants. The SW differs between both variants.

<u>Siemens part number</u>	<u>difference</u>
5WK4 9510	with ELV-Master SW
5WK4 7997	without ELV-Master SW

The homologation shall be reached for both variants.

## 3 Technical Data

CAS voltage range:	6.0V...16.0V
BaseStationIC rated voltage:	5V
CAS quiescent current:	max. 1.3 mA
BaseStationIC quiescent current:	max. 20 µA
Coil charge current:	max. 63 mA
Operating temperature:	-40°C...+85°C
Type of modulation:	ASK
HF level pre-oscillation time:	max. 10 ms
Transmission frequency:	125 kHz
Output power:	55 dBµV (conducted)
Number of coil turns:	145
Coil wire diameter:	≤ 0,15 mm <sup>2</sup>
Coil DC resistance:	20,7 Ohm
Coil inductivity:	1.32 mH (at lock)
Coil quality (f = 125 kHz):	33,5 (at lock)

Homologation Information for CAS3		
Project: CAS3	2006-05-08	Page 3 of 5
Author: Peter Walter	SV C BC S52 SE	
Franz Plattner	SV C BC S52 SE	

Proprietary data, company confidential. All rights reserved.  
 Compañía de datos, información confidencial. Todos los derechos reservados.  
 Compañía de datos, información confidencial. Reservados todos los derechos.  
 Compañía de datos, información confidencial. Reservados todos los derechos.

Alle Rechte vorbehalten. Alle Rechte vorbehalten. Alle Rechte vorbehalten.  
 All rights reserved. All rights reserved. All rights reserved.  
 Alle Rechte vorbehalten. Alle Rechte vorbehalten. Alle Rechte vorbehalten.  
 All rights reserved. All rights reserved. All rights reserved.

## 4 Test equipment and setup

### 4.1 General

The transponder software of the CAS3 tries to authenticate a key permanently via the LF transponder antenna as soon as the ECU's power supply is available.

The key shall be inserted to the FSE. The Start Stop button shall be pressed.  
 If the key is authenticated via the LF transponder antenna, the key will be held in the FSE.  
 Pressing the plugged key in the FSE again, the key will be released and ejected.

The supplied keys is learned to the CAS, so the key can be authenticated.  
 The CAS tries permanently tries to authenticate the key.

Homologation Information for CAS3		
Project: CAS3	2006-05-08	Page 4 of 5
Author: Peter Walter	SV C BC S52 SE	
Franz Plattner	SV C BC S52 SE	

Proprietary data, company confidential. All rights reserved.  
Contit. a titre de secret d'entreprise. Tous droits réservés.  
Comunicado como secreto empresarial. Reservados todos os direitos.  
Comidado como secreto industrial. Nos reservamos todos los derechos.

Versteuerte, streng vertraulich, wertvoll und nicht castigt, soweit  
Werbung und Witterung in Bezug auf nicht castigt, soweit  
nicht ausdrücklich zugestanden. Zuwiderhandlungen ver-  
pflichten zu Schadenersatz. Alle Rechte vorbehalten, insbe-  
sondere für den Fall der Patentierung oder G.M.-Entragung

### Functional description of the measurement system

The components are

- CAS3 ecu
- FSE with slot for the key, connected to the CAS via 14pin flat cable
- Start Stop Button, connected with FSE and CAS via 14pin flat cable
- One Key which is learned to the CAS

The components are supplied via the two banana jacks connected to the CAS  
Banana Jack , black, KL31: GND ( ground )  
Banana Jack , red, KL30: +12V DC

### Functional test, activating the transponder authentication

1. Connect GND to KL31
2. Connect 12 V to KL30
3. The CAS permanently tries to authenticate a key
4. Press the Start Stop button
5. Insert the learned key to the FSE
6. After the successful authentication, the key is held in the FSE ( plugged )
7. The key is authenticated permanently.
8. Pressing the plugged key again releases the key and the key is ejected.

## 5 Label

Siemens VDO



FCC ID:KR5CAS3  
IC:267T-CAS3

### owner manual USA, Canda : warning statement

This device complies with part 15 of the FCC Rules and RSS-210. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept interference received, including interference that may cause undesired operation.

#### Note:

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Homologation Information for CAS3		
Project: CAS3	2006-05-08	Page 5 of 5
Author: Peter Walter	SV C BC S52 SE	
Franz Plattner	SV C BC S52 SE	