









IMMOBILISER SYSTEM INTRODUCTION

2017

Customer Base

PRODUCT	PICTURES	KAT Part Nr.	CUSTOMER	DATE OF BEGINN SERIAL DELIVERY
Immobiliser Type 1 (with TYCO Connectors)		33223 33241	• Kramer Werke	since 2006
Immobiliser Type 1 (with TYCO Connectors)		33223	• Wacker Neuson	since 2007
Immobiliser Type 1 (with TYCO Connectors)		33243 34454 34281 33225 34231	• Liebherr Group	since 2007
Immobiliser Type 1 (with TYCO Connectors)		33248	• CNH Group	since 2007
Immobiliser Type 1 (with TYCO Connectors)		33248	• Terex Group	since 2006
Immobiliser IP69 (with Deutsch Connectors and CAN-Bus)		34352	• JCB Group	since 2009

PRODUCT	PICTURES	KAT Part Nr.	CUSTOMER	DATE OF BEGINN SERIAL DELIVERY
Immobiliser IP69 (with Deutsch Connectors and CAN-Bus)		34958	• Liebherr Group	since 2011
Immobiliser IP69 (with Deutsch Connectors and CAN-Bus)		35340	* Kramer Werke	Since 2013

Immobiliser System Descriptions

SYSTEM SPECIFICATION

- Up to 4 electro mechanic relay output
- Antenna (below and over dashboard types available)
- Key with Transponder
- 15 transponder key memory
- CAN-Bus SAE J1939 (Optional)



Immobiliser Type-1

Electrical data:

Voltage range:

+6V / +32 V

Nominal voltage:

12V and 24V

Temperature range:

Operational:

-40°C to +85°C

Storage:

-40°C to +100°C

Power Consumptions:

Operational Current consumption :

typ. 50mA @24VDC

Cont. Current for relay:

5A

EMI/ EMC

KBA Approval

e1*74/61*95/56*0501*00

EMC test acc. to

DIN EN ISO 14982:1998

ISO 7637-1

ISO 7637-2

SYSTEM SPECIFICATION

- ❑ CAN-Bus SAE J1939
- ❑ IP52 protection degree
- ❑ Antenna (below and over dashboard types available)
- ❑ Key with Transponder
- ❑ 15 transponder key memory
- ❑ 1 Analog input
- ❑ 1 Analog or Digital output
- ❑ Short Circuit Protection
- ❑ Low Current Consumption in Sleep Mode
- ❑ Easy assembly with KFZ Relay Socket
- ❑ Cheap and safe immobilizer solution



Electrical data:

Voltage range:	+6V / +32 V
Nominal voltage:	12V and 24V
Analog Trig. Channel Clamping Voltage:	+60VDC (Planned)

Temperature range:

Operational:	-40°C to +85°C
Storage:	-40°C to +100°C

Power Consumptions:

Operational Current consumption :	30mA – 35mA
Stand-by current (operation clamp 30):	1 mA -1,5 mA
Analog Trig. Channel Cont. Current:	350- 500mA (Planned)
Analog Trig. Channel Max Peak Current:	1A (Planned)

ESD Susceptibility (HBM):	2.0kV - 4.0kV
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Immobiliser Type-3

The system consists of a mechanical locking system and an independently functioning, electronically coded, immobilizer. The mechanical locking system is a starting switch made by the KAT Company. This switches clamp 15/54 with a mechanically coded key. When the clamp 15/54 is switched on, the key is mechanically locked and can not be removed.

When activated, the electronically coded immobilizer disconnects 3 operating-relevant control devices: for example the starter, the fuel pump and the brake valve. The disconnection takes place potential-free via 3 independent power relays.

The immobilizer control electronic is based on microprocessor technology. The electronic key is based on proximity transponder technology and is securely integrated into the key handle of the starting switch.



Immobiliser Type-3

Electrical data:

Voltage range: 7 – 32 V [Volts]
Nominal voltage: 12V and 24V

Temperature range:

Power consumption relay open: $\leq 50\text{mA}$
Power consumption relay closed: typ. 200-250 [mA]
Stand-by current (operation clamp 30): $\leq 1\text{mA}$

IP Protection:

Water ingress: IP6X
Dust ingress: IPX9K

Relay outputs:

	<u>High (TYCO)</u>	<u>Low (Omron)</u>
Maximum switching voltage:	32V	32V
Maximum switching current:	40A	1A
Continuous current	15A	1A
Voltage drop (15A):	typ. 30mV	
Number of relays:	3	

RF module:

Transmission frequency: typ. 134,2 kHz
Coding scheme: FSK
Range: approx. 6 cm

CAN-Bus (optional)

CAN bus interface: Full CAN 2.0B active SAE J1939
CAN bus speed: from 250 kbit/s up to 1Mb/s

Electrical Transients (Immunity)

- Radiated field (absorber-lined chamber), ISO11452, Part 2
- Bulk current injection, ISO11452, Part 4

Electrical Transients (Emissions)

Tested according to ISO13766:2000 Earth Moving Machinery – Electromagnetic compatibility and the Agricultural Tractor EMC Directive 2000/2/EC

Electrostatic Discharge (ESD)

Tested according to ISO 10605

- +/- 8kV (direct)
- +/- 15kV (air)

Radio Approval

According to EN 300 330-2

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CERTIFICATE OF COMPLIANCE

This is to certify that:

***JCB Compact Products
Immobiliser 2 System***

Has been demonstrated to comply with
The British Insurance Industry's Criteria
for

Plant & Agriculture

Issue 3

and is classified as

***Category P 2
TEP3-20/1009***

**Date Issued:
28/10/09**



Peter Roberts
Chief Executive

www.that Cham.org

In 2009 JCB is certified with That Cham 3 stars