FUB-HIL-HI-610017-K15 Terminal control, Parking-Residing-Driving

ISTA system version	**3.52.13.15304I**	Data version	**R3.52**	Programming data	**-**
VIN	**XXXXXXX**	Vehicle	**7'/G12/Sedan/750LiX/N63/AUT/USA/left-hand drive/2015/10**		
Integration level factory	-	Integration level (current)	-	Integration level (target	-
Mileage	**0 km**				

Terminal control, Parking-Residing-Driving (PWF)

The logical terminal control is different compared to previous vehicles.From the point of view of the customer, the vehicle is always in the correct condition.Customer-oriented management of the vehicle condition is used to control the logical terminals.

Motivation:

Only functions which are activated or needed require energy.

In the "Residing" condition, all customer functions should be directly available without pressing the START-STOP button beforehand (exception:purely driving function).The activation and deactivation is carried out directly on the corresponding operating element.

This terminal control means:**Parking-Residing-Driving**

Parking

- Customer not in the vehicle.
- Vehicle is secured or has not been used for a certain time.
- Vehicle functions cannot be operated.

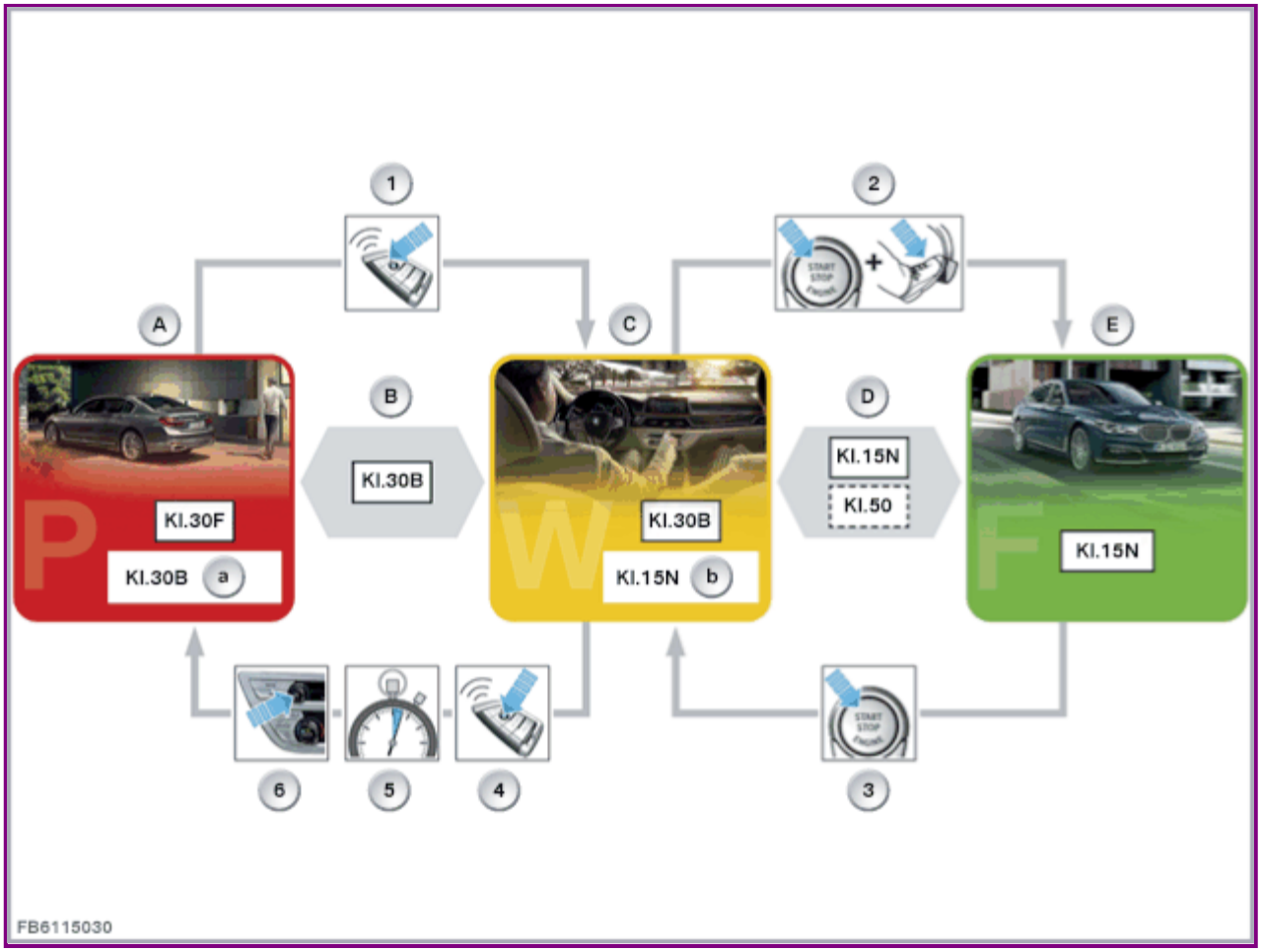
Residing

- Customer in motor vehicle.
- No driving readiness.
- Functions which are useful when the vehicle is stationary can be operated.

Driving

- Customer in motor vehicle.
- Driving readiness established.
- All vehicle functions are available.

The vehicle condition is changed on account of the customer's behaviour.



Item	Explanation	Item	Explanation
A	Vehicle condition: Parking	B	Transition condition, stationary functions
C	Vehicle condition: Living	D	Transition condition establish driving readiness, end driving readiness, or testing-analysis-diagnosis (PAD)
E	Vehicle condition: Driving		
1	Unlock vehicle	2	Press the start/stop button and brake pedal
3	Press the start/stop button	4	Locking the vehicle.
5	No user activity observable for 10 minutes	6	Press and hold
a	After-run 3 minutes	b	After-run 5 seconds

Testing-analysis-diagnosis (PAD)

The PAD mode is the vehicle condition between "Residing" and "Driving".The PAD mode corresponds to the physical "terminal 15 on".
In the PAD mode, all the control units as well as all physical terminals are on.
The PAD mode is activated as follows:

- Press the START-STOP button three times within 0.8 seconds.
- Via a diagnosis order.

Note!
During vehicle diagnosis, a vehicle with Parking-Residing-Driving is automatically placed in the pad mode.This is also displayed in ISTA in the top right.This ensures that a diagnosis can be performed with all control units.

Display of the PWF status in the instrument cluster

The present Parking-Residing-Driving (PWF status) condition can be recognised from the engine speed display in the instrument cluster.

Revolution counter	PWF status
	**Parking** (with time delay if necessary)
	**Residing**
	**Driving (driving readiness)** or **Testing-analysis-diagnosis (PAD mode)**

Selective partial network operation

In vehicles today, there are up to 70 control units which are networked with each other.Depending on the current vehicle condition or the user's wishes, not all of the comfort systems and assistance systems are always required.
By specifically switching off and activating the control units that aren't required, so-called selective partial network operation, energy can be saved, the battery relieved and due to this its life increased.
For vehicles with a combustion engine, the electrical energy consumption is indirectly coupled to the fuel consumption through the alternator. Here, the selective switching off of control units that are not required can contribute to the reduction of the fuel consumption and therefore the CO_2 emissions.

The master for the selective partial network operation is the Body Domain Controller (BDC).The control units which are not required are switched off via a corresponding bus signal.
In order to realise partial network operation for control units, other transmit/receive systems are used.The transmit/receive

systems are able to evaluate and interpret messages.As long there is bus communication and no valid wake-up signal for the corresponding control unit, this control unit remains switched off.If a valid wake-up signal for the corresponding control unit is sent on the bus, the transmit/receive system can activate the voltage regulator of the microcontroller and the control unit starts.The control unit is switched off by the deactivation of the voltage regulator.

Note!
The individual partial networks can be activated and deactivated via diagnosis orders.
All partial networks are active in PAD mode.

General notes

Note!
As before, physical terminals are available for the power supply:

- **Terminal 15N**
  Terminal 15N supplies control units which are only required during the journey and, if necessary, for the safe ending of the journey.During the transition from "Driving" to "Residing", an after-run of 5 seconds starts.
- **Terminal 30B**
  Terminal 30B supplies control units which are needed in the stationary mode condition "Residing" and for stationary functions for which the customer is not present in the vehicle.During the transition from "Residing" to "Parking", an after-run of 6 minutes starts.Terminal 30B is subsequently switched off.
- **Terminal 30F**
  Terminal 30F supplies control units which have to carry out functions in the condition "Parking".Terminal 30F is generally switched on in the condition "Parking".Terminal 30F may be switched off due to faults in the vehicle electrical system.If a fault is detected, it is switched off with an after-running period of 1 minute.
- **Terminal 30**
  Certain control units (e.g. alarm system) are always supplied with voltage and are not switched off for a fault.

Diagnosis instructions

Note!
During vehicle diagnosis, a vehicle with Parking-Residing-Driving is automatically placed in the pad mode.This is also displayed in ISTA in the top right.This ensures that a diagnosis can be performed with all control units.