Guide to BMW CIP Programming with MaxiSys Pro

1. BMW Programming Notes

- Connect an Autel or BMW approved battery charger to the vehicle, and ensure battery voltage is between 13V and 14V.
- Turn off all the electrical equipment, such as air conditioner, headlamps, turn signal lamps, wipers, etc. Unstable current will abort programming.
- Turn off wipers or cleaning system. Wipers may be active during programming, so please make sure there is enough space.
- Please check all the control units are installed and function properly before programming.
- Troubleshoot or clear DTCs of the vehicle before programming.
- Please set the correct date first. It will be recorded into the control units during programming and coding.
- Do not turn the ignition off during programming and coding unless specifically instructed to do so by MaxiSys Pro.
- Do not activate or move any part of the vehicle, such as windows, doors, the steering wheel, seats, buttons and other adjusting knobs. Failure to do so may abort programming.

Note: This document is built up based on BMW V3.00. It only applies to BMW V3.00 or later versions.

2. Entering CIP Main Interface

Tap 'CIP (Coding, Individualisation, Programming)', as shown in figure 2.1.

BMW v2.01.02			Ö	ł	0	1]	_
			Se	lect Applicat	ion		VCL	 + 14.57∨
Diagnosis		Service		CIP(Coding, Individualisation, Programming)				
								M
VIN:LBVVA96027SB16 Car: bmw/3'/320i_N46		N_LL		•				ESC

Figure 2.1

For vehicles performed CIP function with MaxiSys Pro for the first time, please refer to **2.1 Initial Entering CIP**.

For vehicles performed CIP function with MaxiSys Pro before, MaxiSys Pro will save the previous session automatically, and a prompt message will pop up to confirm whether to use the saved session. Please refer to **2.2 Re-entering CIP** for additional information.

Note: MaxiSys Pro can only store up to 5 vehicle sessions. It will prompt you to remove some unnecessary ones if there are more than 5 sessions. Please refer to **2.2 Re-entering CIP**, as shown in figure 2.10.

2.1 Initial Entering CIP

MaxiSys Pro will read the current vehicle configuration information from CAS and LM/FRM when entering CIP for the first time, so CAS and LM/FRM cannot be replaced at the same time. Vehicle information will be shown as figure 2.2. You can

BMW V1.30.21	🔅 🖶 🞯 🔒 🖊
	Information VCC 🖽 14.46V
Chassis	SB16197
Model series	E90
Type destination code	VA96
Time criterion	0906
Paint code	0A22
Upholstery code	LCSW
	Edit Ok ESC

scroll through the list by sweeping your finger up and down to see more information.

Figure 2.2

Tap 'Edit' to revise vehicle configuration information and the related interface will be shown as figure 2.3. You can scroll through the list by sweeping your finger up and down to see more information.

Note: To avoid the issue that the vehicle cannot work properly after revising the configuration information, it's recommended to note down the current configuration information.

BMW V1.30.21	
	VC6 🖽 14.46V
SA:	
205	Automatic transmission
240	Leather-steering wheel
249	Multifunction steering wheel
2ВН	Light alloy wheels double-spoke style 156
302	Alarm system
	Add Remove ESC

Figure 2.3

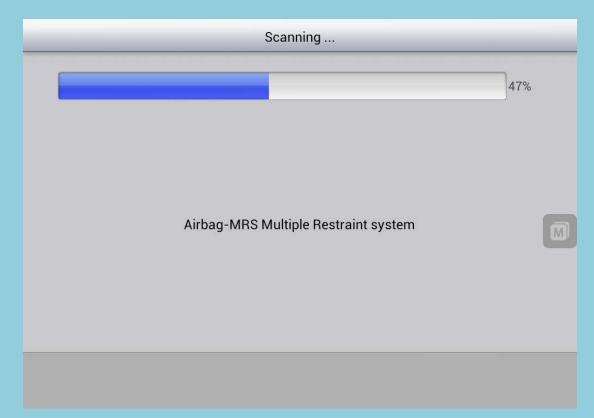
Tap 'Add' or 'Remove' to do the corresponding operation, and then tap 'ESC'.

You will be prompted to confirm the revised configuration information, as shown in figure 2.4.

Information	_
Do you want to save the revised following configuration information: Added the following information: SA: 216,230 Deleted the following information: SA: 205 The above revised configuration information will be valid only after performin corresponding programming or coding.	g
Yes	No

Tap 'Yes' to save the information, or tap 'No' to cancel the changes. The above revised configuration information will be valid only after performing corresponding programming or coding.

Then MaxiSys Pro will communicate with all control units. This step will take several minutes, which is based upon vehicle specifications, as shown in figure 2.5.



MaxiSys Pro will ask whether the control units have been replaced, as shown in figure 2.6. If the control units have been replaced, tap 'Yes' to select the replaced control units. Alternatively, tap 'No'.

Information
Were control units replaced?
Before starting vehicle programming, ensure that the basic requirements for error-free programming are satisfied. See MaxiSys user documentation 'Preparation and follow-up of vehicle programming'.
If control units have been replaced, select the replaced control units in the dialogue boxin displayed in the following. Alternatively, click in the control unit tree on the replaced control units and select 'Replacement follow-up' there.
Yes No
Figure 2.6

MaxiSys Pro will read integration level (I-level) from vehicle after performing all the above procedures. If the integration level could not be read from vehicle, manual input is required, as shown in figure 2.7.

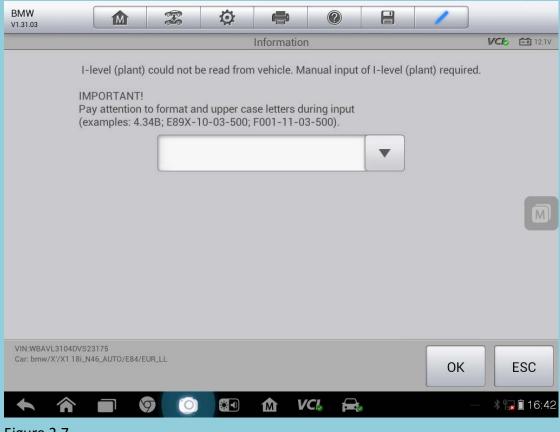


Figure 2.7

If the vehicle integration level is very new, the following message in figure 2.8 may appear on the screen.

Information
The connected vehicle has an unknown data status (E89X-13-07-505, E89X-12-07-508). This cannot be handled with MaxiSys. Ensure that the current version of MaxiSys has been loaded or contact technical support.Programming no longer possible
Possible causes of fault: Integr. level (actual) not correct or too new.(E89X-12-07-508)
ОК

This shows that the vehicle integration level is newer than the one stored in MaxiSys Pro, and programming function is not recommended.

MaxiSys Pro will then read related information from each control unit to confirm whether it needs to be replaced or upgraded. After that CIP Main Interface will be shown. Please refer to **2.3 CIP Main Interface** for detailed information.

2.2 Re-entering CIP

If CIP function has been performed before on the vehicle, MaxiSys Pro can save the previous session which records the configuration information. When MaxiSys Pro re-enters CIP, a prompt message will pop up to confirm whether to use the saved session, as shown in figure 2.9.

Information
A session for the connected vehicle has been found that was saved at an earlier point in time. Should this session be resumed? Click 'Yes' to continue the saved session. 'No' rejects the saved session and you continue with context determination. In the latter case, the saved session is deleted.
Yes No

Tap 'Yes' to continue the saved session without establishing communication with vehicle again. This will realize fast access to CIP. Tap 'No' to reject the saved session, and MaxiSys Pro will establish communication with vehicle just as the procedure in initial entering CIP. Please refer to **2.1 Initial Entering CIP** for additional information. It is recommended not to use the session saved long time ago for the actual information of the vehicle may have changed.

MaxiSys Pro is set to only store up to 5 vehicle sessions. It will prompt you to remove some unnecessary ones if there are more than 5 sessions, as shown in figure 2.10.

Information	_
5 sessions are already stored. Please remove a session.	
	ОК

Tap 'OK' and a list of vehicle record will display. You can select the sessions to be removed, as shown in figure 2.11.

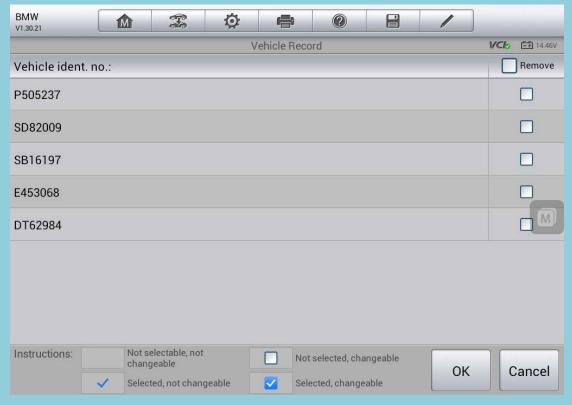


Figure 2.11

Select the sessions to be removed and tap 'OK'. The message below will display on the screen, as shown in figure 2.12.

Information
Please note. Removing the session will also remove any programming files/cip ordered files that are installed for this vehicle.
OK Cancel

Figure 2.12

Tap 'OK' to remove the selected sessions. Then re-entering CIP is required.

2.3 CIP Main Interface

CIP Main Interface typically includes the following items, as shown in figure 2.13.

BMW V1.31.07	Ø 🖶 Ø		
CIP(Coding,Individualisation,Programming) VCb 🖽 15.27V			
Initial Report	Vehicle Details	Programming/Coding	
CAR/KEY Memory	Programming follow-up routine		
VIN:LBVVA96027SB16197 Car: bmw/3'/320i_N46_AUTO/E90/CHN_LL ESC			

- Initial Report

Displays the information of control units to be replaced or upgraded and the estimated upgrade time.

- Vehicle Details

Displays vehicle configuration information.

- Programming/Coding

Performs programming and coding. Please refer to **3. Programming/Coding** for additional information.

- CAR/KEY Memory

Performs personalized setting.

Programming Follow-up Routine

Displays a list of special functions to be performed after programming and coding.

3. Programming/Coding

figure 3.1.

Programming/Coding interface typically includes the following items, as shown in

BMW V1.30.21	Image: Constraint of the second sec		
Programming / coding VCIo 🖼 14.6V			
Determine Measures Plan	Complete Update	Selective Update	
Control Unit List			
VIN:LBVVA96027SB16197 Car: bmw/3'/320i_N46_AUTO/E90/CHN_LL	•	ESC	

Figure 3.1

- Determine Measures Plan

Lists the upgrade plan automatically calculated by MaxiSys Pro.

Please refer to **3.1 Determine Measures Plan** for additional information.

- Complete Update

All the ECUs available to programming/coding are checked by default.

Please refer to **3.2 Complete Update** for additional information.

- Selective Update

Manually selects the ECUs you want to perform programming/coding.

Please refer to **3.3 Selective Update** for additional information.

- Control Unit List

Displays all the control units, and you can perform diagnosis, programming,

coding, and special functions to the specific ECU. Please refer to **3.4 Control Unit** List for additional information.

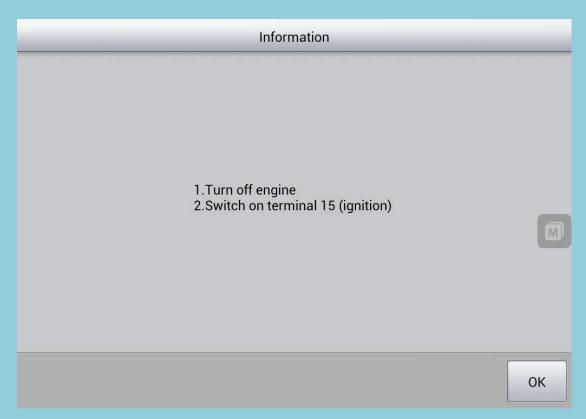
3.1 Determine Measures Plan

Determine Measures Plan shows a list of tasks for the current vehicle set by MaxiSys Pro, as shown in figure 3.2. You can scroll through the list by sweeping your finger up and down to see more information.

BMW V1.30.21	; 🌣 🖶 Ø	
	Measures Plan	VC6 📑 14.46V
Information Vehicle details		۵
Model series: E90	Type/Description:	E90 Saloon N46B20 OL LHD China
Odometer: 138417	VIN: LBVVA96027SB16197	
Integration Level(Plant)	Integration Level(Old)	Integration Level(New)
E89X-06-09-530	E89X-06-09-530	E89X-12-07-508
Time criterion: 0906	Paint code: 0A22	Upholstery code: LCSW
E-Wort:	B090,EHHS	
HO-Wort:		M
SA:	205,240,249,2BH,302,321,354,403,423, 428,441,459,493,4AG,507,520,521,534, 548,5AB,640,663,7RP,825,853,858,876, 892,8SD,8SM,925,988,993	
Total estimated programming time:	32 minutes	
Programming		8
		Execute measures plan

Figure 3.2

Tap 'Execute measures plan', and a prompt message of turning off engine and switching on ignition will pop up on the screen, as shown in figure 3.3.



After confirming that engine is turned off and ignition is switched on, tap 'OK'. If MaxiSys Pro needs to be connected to the Internet to download configuration file, the following message will display.

Information
Note: - Please connect MaxiFlashPro to MaxiSYS with USB cable or ethernet cable. -Please make sure MaxiSYS is connected to the network before connection.
OK Cancel

Disconnect MaxiSys Pro from vehicle (not a must), take MaxiSys Pro to the place with Internet connection, tap 'OK' after the network is connected, and then MaxiSys Pro can download configuration file from server, as shown in figure 3.5.

Information	
Cancel Download File	
Current progress:25%	ס

When download is complete, the following message will display.

Information	_
Download completed. After connecting vehicle, use the OK button to continue the session.	
ОК	Cancel



Please check MaxiSys Pro is connected with vehicle first, and then tap 'OK' to execute the plan. If there are programming tasks, the control units in programming will show the progress in percentage, as shown in figure 3.7 and figure 3.8.

	Action li	on list VC		
Action		Short name	Progress	
Programm		CAS	50%	
Programm	2	DWA	0%	
Programm	5	KLIMA	0%	
Code C		DWA		
Code C		KLIMA		
Code C		CAS		
Initialisation by termi	nal change			

Figure 3.7

BMW v1.30.21		P	Ö	1	h ()		1	
			Actio	n list			VCC 14.46V	
	Acti	on			S	Short name		Progress
	Progra	mm P				CAS		100%
	Progra	mm P				DWA		100%
	Progra	mm P			KLIMA			100%
	Cod	e C			DWA		coded	
	Code C					KLIMA		Coding
	Code C					CAS		
In	itialisation by t	erminal cha	ange					

A prompt message of turning off ignition and removing the key from key slot will pop up when performing CAS programming, as shown in figure 3.9.

Warning

Turn off ignition and remove key with remote control from key slot (if provided).

M

ОК

Turn off ignition and remove the key, and then tap 'OK' to start CAS programming.

After CAS programming is complete, switching on ignition is required, as shown in

figure 3.10.

Warning
Insert key with remote key in key slot (if provided) and switch on ignition. If the key fails to engage, proceed as follows: All the following initialisation instructions are to be confirmed until the final report appears. If programming was not successful, repeat this up to 2 times. * The session can be closed once CAS Programming has been successfully completed Then perform omitted initialisations.
ок

Figure 3.10

Switch on ignition, and tap 'OK' to complete CAS programming.

MaxiSys Pro will generate a final report after executing the plan. You can scroll through the list by sweeping your finger up and down to see more information, as shown in figure 3.11, figure 3.12 and figure 3.13.

BMW v1.30.21	1	1	F	Ō	÷	?			/		(0	2
					Final report		<u>.</u>			V	Clo	 14.4
Informat Vehicle deta												
viso la lista d	500		т		1		500.0.1					
Model seri				be/Descript	ion: 027SB16197		E90 Sal	oon N4	6B20 O	LLHL) Chir	ia
Odometer:					and exert		for the second					
	n Level(Plant)			egration Lev					vel(New))		
E89X-06-0				9X-06-09-5			E89X-1					
	rion: 0906			int code: 0A	22		Uphoisi	ery coc	de: LCSV	V		
E-Wort: HO-Wort:			BUS	90,EHHS								
SA:			428 548	8,441,459,4 8,5AB,640,6	BH,302,321,3 93,4AG,507,5 63,7RP,825,8 925,988,993	20,521,534,						N
Program	nming											
Control	Action	Status	Туре	Hardware	Part n	umber proc	ECU old	Pa	rt numb	er pro	n FC	Unew
	Addion	otatao	., 164	index	- ruirin	uniber prog	. 200 ord		Terrarito	er pre	,g, L0	onen
									Continu sessio			End ssior
igure 3	3.11											
igure 3 BMW v1.30.21	3.11	1	R	Ø	÷	0					(
BMW		1 6	F.		Final report	Ø						ł
BMW	tion	1 ¢	F			0				V		
BMW v1.30.21	tion	2 C	r.			0				V		1
BMW v1.30.21 Informat Vehicle deta Program Control	tion aits nming	Status			Final report	(Q) umber proç			rt numb		Clo	t 63 14/
BMW v1.30.21 Informat Vehicle deta Program Control unit	tion aits nming			Hardware	Final report	umber proç		Pa			Clo	t 63 14/
BMW V1.30.21 Informat Vehicle deta Program Control unit CAS	tion ails aming Action	Status	Туре	Hardware	Final report	umber prog		Pa 914	rt numb		Clo	
BMW v1.30.21 Informat Vehicle deta Program Control unit CAS DWA	tion ails aming Action Program P	Status	Type Sys	Hardware index C3	Final report Part n 91472	umber prog 225 34		Par 914 924	rt numb 47225		Clo	t 63 14/
BMW v1.30.21 Informat Vehicle deta Program Control unit CAS DWA	tion ails nming Action Program P Program P	Status Success Success	Type Sys Sys	Hardware index C3 03	Final report Part n 91472 92441	umber prog 225 34		Par 914 924	rt numb 47225 44134		Clo	2 14.4 V U new
BMW V1.30.21 Informat Vehicle deta Program Control unit CAS DWA KLIMA Coding Control	tion ails nming Action Program P Program P	Status Success Success	Type Sys Sys	Hardware index C3 03 04	Part n 91472 92441 91992	umber prog 225 34). ECU old	Pai 914 924 919	rt numb 47225 44134	er pro	cíb	2 14.4 U new
BMW V1.30.21 Informat Vehicle deta Program Control unit CAS DWA KLIMA Coding Control unit	tion ails aming Action Program P Program P Program P	Status Success Success Success	Type Sys Sys Sys	Hardware index C3 03 04 Hardware	Part n 91472 92441 91992	umber prog 225 34 260 umber prog). ECU old	Pai 914 924 919	rt numb 47225 44134 99260	er pro	cíb	2 14.4 U new
BMW v1.30.21 Informat Vehicle deta Program Control unit CAS DWA KLIMA Coding Control unit CAS	tion ails nming Action Program P Program P Program P	Status Success Success Success Success	Type Sys Sys Sys Type	Hardware index C3 03 04 Hardware index	e Part n 91472 92441 91992 e Part n	umber proc 225 34 260 umber proc). ECU old	Pai 914 924 919 919 914	rt numb 47225 44134 99260 rt numb	er pro	cíb	2 14.4 U new
BMW V1.30.21 Informat Vehicle deta Program Control Juit CAS Control Linit CAS Control Linit CAS	tion ails arming Action Program P Program P Program P Action Action	Status Success Success Success Status Status	Type Sys Sys Sys Type Sys	Hardware index C3 03 04 Hardware index C3	e Part n 91472 92441 91992 e Part n 91472	umber proc 225 34 260 umber proc 225 34). ECU old	Pai 914 924 919 919 914 914 914 914	rt numb 47225 44134 99260 rt numb 47225	er pro	cíb	2 14.4 U new
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BMW V1.30.21 Informat Vehicle deta Program Control unit CAS DWA KLIMA Coding Control unit CAS DWA KLIMA	tion ails Action Program P Program P Program P Action Code C	Status Success Success Success Success Status Success Success	Type Sys Sys Sys Type Sys Sys	Hardware index C3 03 04 Hardware index C3 03	e Part n 91472 92441 91992 e Part n 91472 92441	umber proc 225 34 260 umber proc 225 34). ECU old	Pai 914 924 919 Pai 919 919	rt numb 47225 44134 99260 rt numb 47225 44134	er pro	og. EC	2 14. U new



BMW v1.30.21	1		R	Ö		
1560003	. rogram i	0000000	0,0	Fina	al report	VC6 14.46V
Coding						۵
Control unit	Action	Status	Туре	Hardware index	Part number prog. ECU old	Part number prog. ECU new
CAS	Code C	Success	Sys	C3	9147225	9147225
DWA	Code C	Success	Sys	03	9244134	9244134
KLIMA	Code C	Success	Sys	04	9199260	9199260
Service	functions				Control unit	Status M
Read CKM	1 settings					Success
Initialisat	ion by terminal	change				Success
Deactivat	e compressor r	unning-in pro	tection		KLIMA	Success
Update ve	hicle order					Success
Write CKN	1 settings					Success
Update in	tegration level					Success
						Continue End session session

The information after executing the plan is available in this report, including the status of a single task, which can be viewed in the Status column.

Tap 'End session' to exit CIP, or tap 'Continue session' to continue programming. After tapping 'Continue session', MaxiSys Pro will read configuration information from vehicle again and communicate with each control unit. It will take several minutes, which is based upon vehicle specifications.

3.2 Complete Update

Complete Update shows a list of control units, as shown in figure 3.14

BMW V1.31.07		F	Ö	e	?		/	_
	Process Control Modu							VCI2 15.22V
System Descrip	otion					V Program	Encode	Replace
CAS Car access	s system							
JBE Junction-b	ox electro	nics						
RAD2-GW Gate	way							
Airbag-MRS Mu	ultiple Res	traint syst	em					
Engine-DME M	otor Electr	onics						
EGS 6HPTU trar	nsmission	control						
ABS-DSC Dyna	ABS-DSC Dynamic Stability Control							
DWA anti-theft alarm system								
Instructions:	chang	electable, not geable ted, not chang	geable			, changeable angeable	ОК	Cancel

Figure 3.14

All the control units available to programming or coding are checked by default. You can manually select the corresponding items of each control unit to make any change. If the selected control unit must be programming or coding as part of a group, MaxiSys Pro will automatically select the related control units and display their names, as shown in figure 3.15.

BMW VI 31.07	2 0	-	0	8		
			Modules			VCI ED IN
System Description				Program	Encode	Replace
CAS Car access system					2	
JBE Junction-box electro	onics				. 58	
RAD2-GW Gateway	_	Alert		ок		
Airbag-MRS Multiple Re	This control unit m	ust be upda	ated as par	t of a group.		
Engine-DME Motor Elect	1. CAS Car access 2. IHKA Integrated		heating/air	conditioning		
EGS 6HPTU transmission		_	_			
ABS-DSC Dynamic Stabi	lity Control					
DWA anti-theft alarm sys	stem					
			lot selected.			
🖌 Sele	sted, not changeable	2 8			ок	Cancel
	9 🖄 🖬	ŵ	VCI I	-	- 🕫	@ 🖬 🖬 11:14

Some items may not be selectable, and the possible causes are as below,

- Programming or coding is not available for the control unit
- The control unit has error or needs to be replaced. Please refer to **Initial Report** in CIP Main Interface for detailed information.

Tap 'OK' after making your selection and MaxiSys Pro will determine a plan. Please refer to **3.1 Determine Measures Plan** for additional information.

3.3 Selective Update

Please refer to **3.2 Complete Update** for additional information about Selective Update. Programming and coding items only for control units needing to be updated are selected by default for Selective Update, which is the difference from Complete

Update.

3.4 Control Unit List

Control Unit List displays all the control units, as shown in figure 3.16. You can scroll through the list by sweeping your finger left and right to see more information.

BMW V1.30.21	Ö 🖶 📀	
	Control Unit List	VC6 14.46V
CAS Car access system	JBE Junction-box electronics	RAD2-GW Gateway
Airbag-MRS Multiple Restraint system	Engine-DME Motor Electronics	EGS 6HPTU transmission control
ABS-DSC Dynamic Stability Control	DWA anti-theft alarm system	FZD Function centre,roof
PDC Park Distance Control	SMFA Seat module, driver	FRM Footwell module
VIN:LBVVA96027SB16197 Car: bmw/3'/320i_N46_AUTO/E90/CHN_LL	••	ESC

Figure 3.16

Tap the corresponding control unit to view the diagnostic information, control unit information, and the last programming information; to perform programming or coding; or to perform some related special functions.

BMW V1.31.07	Ø 🖶 Ø	
	ABS-DSC Dynamic Stability Control	VCL 🔂 15.22V
Diagnosis	Control unit information	Last Programming Information
Coding	Program	Initialisation, RDC warning
Initialisation of DSC unit for 4-cylinder engines	Adjustment of transverse acceleration sensor without active steering	Adjustment, steering angle sensor
VIN:LBVVA96027SB16197 Car: bmw/3'/320i_N46_AUT0/E90/CHN_LL	•	ESC