















change to	ECE (A)	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89	
	US Models	Version	ECE - Models with Mechanical transmission					
	Japanese Models	Model	628 CS i	630 CS	633 CS i	635 CS i	M 6	
Technical Data		- Electrical System	Unit					
12 11 ... Distributor								
Make			Bosch					
Code No.				0 231 309 005				
> Chassis No. 4 361 303				0 231 309 006				
With indicator sensor (breakerless)								
Caution! Stop engine and switch off ignition für any work on the breakerless transistorized coil ignition system.								
High Voltage - Danger!			0 237 302 019	-	0 237 302 001	0 237 302 008	-	
> model ' 80			-	-	0 237 302 014	0 237 302 008	-	
			-	-	0 237 302 013	-	-	
> 9 / 80			-	-	-	Digital Motor Electronics (DME)		
> 4 / 81			0 237 302 029	-	-	-	-	
> 9 / 84			0 237 304 028	-	-	-	-	
Coil resistance			kΩ	0,6 ± 10%				
> 4 / 81			kΩ	1,1 ± 10%				
Clearance between stator and rotor teeth			0,3 ... 0,7					
12 11 ... Distributor Rotor								
Shield resistor			kΩ	5				
with Transistor Coil Ignition (TCI)			kΩ	5 +20%				
with Digital Motor Elektronik (DME)			kΩ	5 -10%				
Crankshaft cut-out speed			1/min	-	6600 ± 150	6200 ± 150	-	
Camshaft cut-out speed			1/min	-	3300 ± 75	3100 ± 75	-	
12 11 ... Resistors in SecondaryCircuit								
Shielded plug			kΩ	1 ± 20%				
Angled plug			kΩ	1 ± 20%				
Spark plug connector			kΩ	1 ± 20%				
12 11 ... Position Transmitter								
Make			Bosch					
Code No.			-	0 335 541 002			-	
Coil resistance			Ω	80 ± 10				
at			°C	25				
Insulation resistance			kΩ	= 60				
12 12 ... Spark Plugs								
Bosch Type				W 8 DC			X 5 DC	
with catalytic converter			-	-	-	W 9 LC	-	
Electrode gap			mm	0,7 + 0,1			0,6 + 0,1	




change to	 ECE (A)	Year	79 - 87					75 - 79	75 - 81	77 - 89	83 - 89
	 US Models	Version	ECE - Models with Mechanical transmission								
	 Japanese Models	Model	628 CS i	630 CS	633 CS i	635 CS i	M 6				
Technical Data - Electrical System		Unit									
12 13 ... Ignition Coil											
Make			Bosch								
operate this ignition coil only in conjunction with a 0,9 ± 0,05 Ω resistor (resistor wire in engine's wire harness)			-	0 221 119 017	-	-	-				
			0 221 122 010		0 221 122 010	0 221 122 010	0 221 122 010	0 221 118 335			
> 9 / 80			0 221 122 319		0 221 122 032	0 221 122 032					
> 1 / 84						0 221 118 335					
			Data Survey in Reference to Ignition Coil Type								
			0 221 119 017	0 221 122 010	0 221 122 032	0 221 122 319	0 221 118 335				
Color of label			-	yellow	light blue	light grey	yellow				
Primary coil resistance			O	0,4	1,7 ... 2,1	0,5	0,82	0,5			
Sekundary coil resistance			kΩ	9,5	-	6,0	8,25	6,0			
Primary inductance			mH	3,0	-	3,7	5,6	3,7			
Sekundary inductance			H	60	-	31	31	31			
12 13 ... Ballast Resistor for Ignition Coil											
Make			Bosch								
Rated resistance			O	0,4 and 0,6	-	0,4 and 0,6		-			
12 14 ... Control Unit for Transistor Coil Ignition (TCI)											
Code No.			0 227 100 025	-	0 227 100 008	0 227 100 025	DME				
> model ' 81			0 227 100 111		0 227 100 111						
> 1 / 84						DME					
DME (Digitale Motor Electronics)			see Group 13 61 ...								
12 14 ... Control Unit for TCI - R											
Code No.			0 227 920 001	-	-	-	-				
12 14 ... Pulse Transmitters (Reference Mark and Speed Sensors)											
Resistance of coil			O	960 ± 10%							
Insulating resistance			kΩ	= 100							
12 31 ... Alternator											
Make			Bosch								
< model ' 80			-	0 120 489 650	0 120 489 619	-	-				
Voltage			V	14							
Max. Current			- max.	A	65 / 80	55	65 / 80				
Max. Power			- max.	A	910 / 1120	770	910 / 1120				
Speed			- max.	1/min	1500						
12 31 ... Shielded Capacitor											
Capacitance			µF	2,2 ± 20%							




change to	 ECE (A)	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89
	 US Models	Version	ECE - Models with Mechanical transmission				
	 Japanese Models	Model	628 CS i	630 CS	633 CS i	635 CS i	M 6
Technical Data - Electrical System		Unit					
12 31 ... Drive Belt							
Narrow belt	(open flank)		12,5 x 1055				
	or (< model ' 80)		12,5 x 1060 LA				
12 32 ... Voltage Regulator							
Code No.			EL 14 V 4 B/C				
	< model ' 80		EE 14 V3				
Regulating Voltage at 1500 rpm engine speed		V	13,5 ... 14,7				
12 41 ... Starter							
Make			Bosch				
Direction of rotation			clockwise				
Armature axial play		mm	0,1 ... 0,2				
	< model ' 80	mm	0,01 ... 0,3				
Carbon brush length	min.	mm	13				
Operating voltage		V	6 ... 12				
Testing voltage		V	12,5 ± 0,3				
Nominal rating		kW	1,1	1,3	1,5		
	< model ' 80		-	-	1,3	-	-
No. of pinion teeth			9				
12 41 ... Solenoid Switch							
Power consumption on term. 50 (with rated voltage)							
Activating and holding coil		A	40				
	< model ' 80	A	46				
Holding coil		A	7,5				
	< model ' 80	A	11				
12 61 ... Oil Pressure Switch							
Switching-on pressure		bar	0,2 ... 0,5				
12 61 ... Dynamic Oil Level Switch							
Resistance (measured on disconnected plug against ground)							
Dynamic on conn. 2 (White wire)							
	Level correct	kO	1 ± 1%				
	Level too low	O	0 ... 0,2				
Static on conn. 1 (blue violet wire)							
	Level correct	O	0 ... 0,2				
	Level too low	O	8				




change to	ECE		Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89	
	US Models		Version	ECE - Models with Automatic transmission					
	Japanese Models		Model	628 CS i A	630 CS A	633 CS i A	633 CS i A (S)	635 CS i A	
Technical Data		- Electrical System		Unit					
12 11 ... Distributor									
Make				Bosch					
Code No.					0 231 309 005				
> chassis no. 4 365 614					0 231 309 006				
With indicator sensor (breakerless)									
Caution! Stop engine and switch off ignition für any work on the breakerless transistorized coil ignition system.									
High Voltage - Danger!				0 237 302 019	-	0 237 302 001	0 237 302 008		
> model ' 80				-	-	0 237 302 014	0 237 302 013	0 237 302 008	
> 9 / 80				-	-	-	Digital Motor Electronics (DME)		
> 4 / 81				0 237 302 029	-	-	-		
> 9 / 84				0 237 304 028	-	-	-		
Coil resistance				kΩ	0,6 ± 10%				
> 4 / 81				kΩ	1,1 ± 10%				
Clearance between stator and rotor teeth				0,3 ... 0,7					
12 11 ... Distributor Rotor									
Shield resistor				kΩ	5				
with Transistor Coil Ignition (TCI)				kΩ	5 ^{+20%} -10%				
with Digital Motor Electronic (DME)				kΩ	1 ± 20%				
Crankshaft cut-out speed				1/min	-	6600 ± 150	6200 ± 150		
Camshaft cut-out speed				1/min	-	3300 ± 75	3100 ± 75		
12 11 ... Resistors in SecondaryCircuit									
Shielded plug				kΩ	1 ± 20%				
Angled plug				kΩ	1 ± 20%				
Spark plug connector				kΩ	1 ± 20%				
12 11 ... Position Transmitter									
Make				Bosch					
Code No.				-	0 335 541 002				
Coil resistance				Ω	80 ± 10				
at				°C	25				
Insulation resistance				kΩ	= 60				
12 12 ... Spark Plugs									
Bosch Type				W 8 DC					
with catalytic converter				-	-	-	W 9 LC		
Electrode gap				mm	0,7 + 0,1				


change to	 ECE	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89
	 US Models	Version	ECE - Models with Automatic transmission				
	 Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A (S)	635 CS i A
Technical Data - Electrical System		Unit					
12 13 ... Ignition Coil			Bosch				
Make			Bosch				
operate this ignition coil only in conjunction with a 0,9 ± 0,05 Ω resistor (resistor wire in engine's wire harness)			-	0 221 119 017	-	-	
			0 221 122 010		0 221 122 010	0 221 122 010	
	> 9 / 80		0 221 122 319		0 221 122 032	0 221 122 032	
	> 1 / 84					0 221 118 335	
			Data Survey in Reference to Ignition Coil Type				
			0 221 119 017	0 221 122 010	0 221 122 032	0 221 122 319	0 221 118 335
	Color of label		-	yellow	light blue	light grey	yellow
	Primary coil resistance	Ω	0,4	1,7 ... 2,1	0,5	0,82	0,5
	Sekundary coil resistance	kΩ	9,5	-	6,0	8,25	6,0
	Primary inductance	mH	3,0	-	3,7	5,6	3,7
	Secondary inductance	H	60	-	31	31	31
12 13 ... Ballast Resistor for Ignition Coil			Bosch				
Make			Bosch				
	Rated resistance	Ω	0,4 and 0,6	-	0,4 and 0,6		
12 14 ... Control Unit for Transistor Coil Ignition (TCI)			0 227 100 025				
Code No.			0 227 100 025	-	0 227 100 008	0 227 100 025	
	> model ' 81		0 227 100 111		0 227 100 111		
	> 1 / 84				DME		
	DME (Digitale Motor Electronics)		see Group 13 61 ...				
12 14 ... Control Unit for TCI - R			0 227 920 001				
Code No.			0 227 920 001	-	-	-	
12 14 ... Pulse Transmitters (Reference Mark and Speed Sensors)			960 ± 10%				
	Resistance of coil	Ω	960 ± 10%				
	Insulating resistance	kΩ	= 100				
12 31 ... Alternator			Bosch				
Make			Bosch				
	< model ' 80		-	0 120 489 621	0 120 489 619	-	
	Voltage	V	14				
	Max. Current	A	65 / 80	65	65 / 80		
	Max. Power	A	910 / 1120	910	910 / 1120		
	Speed	1/min	1500				
12 31 ... Shielded Capacitor			2,2 ± 20%				
	Capacitance	µF	2,2 ± 20%				


change to	 ECE	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89
	 US Models	Version	ECE - Models with Automatic transmission				
	 Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A 	635 CS i A
Technical Data	- Electrical System	Unit					
12 31 ... Drive Belt							
Narrow belt	(open flank)		12,5 x 1055				
	or (< model ' 80)		12,5 x 1060 LA				
12 32 ... Voltage Regulator							
Code No.			EL 14 V 4 B/C				
	< model ' 80		EE 14 V3				
Regulating Voltage at 1500 rpm engine speed		V	13,5 ... 14,7				
12 41 ... Starter							
Make			Bosch				
Direction of rotation			clockwise				
Armature axial play		mm	0,1 ... 0,2				
	< model ' 80	mm	0,01 ... 0,3				
Carbon brush length	min.	mm	13				
Operating voltage		V	6 ... 12				
Testing voltage		V	12,5 ± 0,3				
Nominal rating		kW	1,1	1,3	1,5		
	< model ' 80		-	-	1,3	-	
No. of pinion teeth			9				
12 41 ... Solenoid Switch							
Power consumption on term. 50 (with rated voltage)							
Activating and holding coil		A	40				
	< model ' 80	A	46				
Holding coil		A	7,5				
	< model ' 80	A	11				
12 61 ... Oil Pressure Switch							
Switching-on pressure		bar	0,2 ... 0,5				
12 61 ... Dynamic Oil Level Switch							
Resistance (measured on disconnected plug against ground)							
Dynamic on conn. 2 (White wire)							
	Level correct	kO	1 ± 1%				
	Level too low	O	0 ... 0,2				
Static on conn. 1 (blue violet wire)							
	Level correct	O	0 ... 0,2				
	Level too low	O	8				




change to	 ECE  ECE (A)  Japanese Models	Year	76 - 77	77 - 84	77 - 84	84 - 89	84 - 89	86 - 88
		Version	US Models					
		Model	630 CS i	633 CS i	633 CS i A	635 CS i	635 CS i A	M 6
Technical Data - Electrical System		Unit						
12 11 ... Distributor								
Make			Bosch					
Code No.			0 231 309 005					
	> Chassis No. 4 361 303		0 231 309 006					
With indicator sensor (breakerless) Caution! Stop engine and switch off ignition für any work on the breakerless transistorized coil ignition system. High Voltage - Danger!								
			-	0 237 302 001		0 237 302 008		-
	> model ' 80		-	0 237 302 014		0 237 302 008		-
	> 9 / 80		-	-		Digital Motor Electronics (DME)		
Coil resistance		kΩ	0,6 ± 10%					
	> 4 / 81	kΩ	1,1 ± 10%					
Clearance between stator and rotor teeth			0,3 ... 0,7					
12 11 ... Distributor Rotor								
Shield resistor		kΩ	5					
	with Transistor Coil Ignition (TCI)	kΩ	5 ^{+20%} -10%					
	with Digital Motor Electronic (DME)	kΩ	1 ± 20%					
Crankshaft cut-out speed		1/min	6600 ± 150			6200 ± 150		-
Camshaft cut-out speed		1/min	3300 ± 75			3100 ± 75		-
12 11 ... Resistors in SecondaryCircuit								
Shielded plug		kΩ	1 ± 20%					
Angled plug		kΩ	1 ± 20%					
Spark plug connector		kΩ	1 ± 20%					
12 11 ... Position Transmitter								
Make			Bosch					
Code No.			0 335 541 002					-
Coil resistance		Ω	80 ± 10					
	at	°C	25					
Insulation resistance		kΩ	= 60					
12 12 ... Spark Plugs								
Bosch Type			W 8 DC					X 5 DC
	with catalytic converter		-	-	W 9 LC		-	
Electrode gap		mm	0,7 + 0,1					0,6 + 0,1

change to	 ECE  ECE (A)  Japanese Models	Year	76 - 77	77 - 84	77 - 84	84 - 89	84 - 89	86 - 88
		Version	US Models					
		Model	630 CS i	633 CS i	633 CS i A	635 CS i	635 CS i A	M 6
Technical Data - Electrical System		Unit						
12 13 ... Ignition Coil								
Make			Bosch					
operate this ignition coil only in conjunction with a 0,9 ± 0,05 Ω resistor (resistor wire in engine's wire harness)			0 221 119 017	-		-		-
				0 221 122 010		0 221 122 010		0 221 118 335
> 9 / 80				0 221 122 032		0 221 122 032		
> 1 / 84						0 221 118 335		
			Data Survey in Reference to Ignition Coil Type					
			0 221 119 017	0 221 122 010	0 221 122 032		0 221 118 335	
Color of label			-	yellow	light blue		yellow	
Primary coil resistance	Ω		0,4	1,7 ... 2,1	0,5		0,5	
Sekundary coil resistance	kΩ		9,5	-	6,0		6,0	
Primary inductance	mH		3	-	3,7		3,7	
Secondary inductance	H		60	-	31		31	
12 13 ... Ballast Resistor for Ignition Coil								
Make			Bosch					
Rated resistance	Ω		-	0,4 and 0,6				-
12 14 ... Control Unit for Transistor Coil Ignition (TCI)								
Code No.			-	0 227 100 008	0 227 100 025		DME	
> model ' 81				0 227 100 111				
> 1 / 84					DME			
DME (Digitale Motor Electronics)			see Group 13 61 ...					
12 14 ... Control Unit for TCI - R								
Code No.			-	-		-		-
12 14 ... Pulse Transmitters (Reference Mark and Speed Sensors)								
Resistance of coil	Ω		960 ± 10%					
Insulating resistance	kΩ		= 100					
12 31 ... Alternator								
Make			Bosch					
< model ' 80			0 120 489 650	0 120 489 619		-		-
Voltage	V		14					
Max. Current	A		55	65 / 80				
Max. Power	A		770	910 / 1120				
Speed	1/min		1500					
12 31 ... Shielded Capacitor								
Capacitance	μF		2,2 ± 20%					

change to	 ECE  ECE (A)  Japanese Models	Year	76 - 77	77 - 84	77 - 84	84 - 89	84 - 89	86 - 88
		Version	US Models					
		Model	630 CS i	633 CS i	633 CS i A	635 CS i	635 CS i A	M 6
Technical Data - Electrical System		Unit						
12 31 ... Drive Belt								
Narrow belt	(open flank)		12,5 x 1055					
	or (< model ' 80)		12,5 x 1060 LA					
12 32 ... Voltage Regulator								
Code No.			EL 14 V 4 B/C					
	< model ' 80		EE 14 V3					
Regulating Voltage at 1500 rpm engine speed		V	13,5 ... 14,7					
12 41 ... Starter								
Make			Bosch					
Direction of rotation			clockwise					
Armature axial play		mm	0,1 ... 0,2					
	< model ' 80	mm	0,01 ... 0,3					
Carbon brush length	min.	mm	13					
Operating voltage		V	6 ... 12					
Testing voltage		V	12,5 ± 0,3					
Nominal rating		kW	1,3	1,5				
	< model ' 80		-	1,3	-		-	
No. of pinion teeth			9					
12 41 ... Solenoid Switch								
Power consumption on term. 50 (with rated voltage)								
Activating and holding coil		A	40					
	< model ' 80	A	46					
Holding coil		A	7,5					
	< model ' 80	A	11					
12 61 ... Oil Pressure Switch								
Switching-on pressure		bar	0,2 ... 0,5					
12 61 ... Dynamic Oil Level Switch								
Resistance (measured on disconnected plug against ground)								
Dynamic on conn. 2 (White wire)								
	Level correct	kO	1 ± 1%					
	Level too low	O	0 ... 0,2					
Static on conn. 1 (blue violet wire)								
	Level correct	O	0 ... 0,2					
	Level too low	O	8					

change to		ECE	Year	78 - 84	78 - 84	84 - 88	84 - 88	86 - 88	
		ECE (A)	Version	Japanese Models					
		US Models	Model	633 CS i	633 CS i A	635 CS i	635 CS i A	M 6	
Technical Data		- Electrical System		Unit					
12 11 ... Distributor									
Make				Bosch					
With indicator sensor (breakerless)									
Caution! Stop engine and switch off ignition für any work on the breakerless transistorized coil ignition system.									
High Voltage - Danger!				0 237 302 001		0 237 302 008		-	
> model ' 80				0 237 302 014		0 237 302 008		-	
> 9 / 80				-		Digital Motor Electronics (DME)			
Coil resistance		kΩ		0,6 ± 10%					
> 4 / 81		kΩ		1,1 ± 10%					
Clearance between stator and rotor teeth				0,3 ... 0,7					
12 11 ... Distributor Rotor									
Shield resistor		kΩ		5					
with Transistor Coil Ignition (TCI)		kΩ		5 +20%					
with Digital Motor Electronic (DME)		kΩ		-10%					
Crankshaft cut-out speed		1/min		6600 ± 150		6200 ± 150		-	
Camshaft cut-out speed		1/min		3300 ± 75		3100 ± 75		-	
12 11 ... Resistors in SecondaryCircuit									
Shielded plug		kΩ		1 ± 20%					
Angled plug		kΩ		1 ± 20%					
Spark plug connector		kΩ		1 ± 20%					
12 11 ... Position Transmitter									
Make				Bosch					
Code No.				0 335 541 002				-	
Coil resistance		Ω		80 ± 10					
at		°C		25					
Insulation resistance				= 60					
12 12 ... Spark Plugs									
Bosch Type				W 8 DC				X 5 DC	
with catalytic converter				-		W 9 LC		-	
Electrode gap		mm		0,7 + 0,1				0,6 + 0,1	

change to	 ECE ECE (A) US Models	Year	78 - 84	78 - 84	84 - 88	84 - 88	86 - 88	
		Version	Japanese Models					
		Model	633 CS i	633 CS i A	635 CS i	635 CS i A	M 6	
Technical Data		Unit						
12 13 ... Ignition Coil								
Make			Bosch					
operate this ignition coil only in conjunction with a $0,9 \pm 0,05 \Omega$ resistor (resistor wire in engine (wide handle)) <small>einige (wide handle) Leistung im Kabelbaum Motor)</small>					-		-	
			0 221 122 010		0 221 122 010		0 221 118 335	
> 9 / 80			0 221 122 032		0 221 122 032			
> 1 / 84					0 221 118 335			
			Data Survey in Reference to Ignition Coil Type					
			0 221 122 010		0 221 122 032		0 221 118 335	
Color of label			yellow		light blue		yellow	
Primary coil resistance		O	1,7 ... 2,1		0,5		0,5	
Sekundary coil resistance		kO	-		6,0		6,0	
Primary inductance		mH	-		3,7		3,7	
Secondary inductance		H	-		31		31	
12 13 ... Ballast Resistor for Ignition Coil								
Make			Bosch					
Rated resistance		O	0,4 and 0,6					-
12 14 ... Control Unit for Transistor Coil Ignition (TCI)								
Code No.			0 227 100 008		0 227 100 025		DME	
> model ' 81			0 227 100 111					
> 1 / 84					DME			
DME (Digitale Motor Electronics)			see Group 13 61 ...					
12 14 ... Control Unit for TCI - R								
Code No.			-		-		-	
12 14 ... Pulse Transmitters (Reference Mark and Speed Sensors)								
Resistance of coil		O	$960 \pm 10\%$					
Insulating resistance		kO	= 100					
12 31 ... Alternator								
Make			Bosch					
< model ' 80			0 120 489 619		-		-	
Voltage		V	14					
Max. Current		A	65 / 80					
Max. Power		A	910 / 1120					
Speed		1/min	1500					
12 31 ... Shielded Capacitor								
Capacitance		μF	$2,2 \pm 20\%$					

change to	 ECE  ECE (A)  US Models	Year	78 - 84	78 - 84	84 - 88	84 - 88	86 - 88	
		Version	Japanese Models					
		Model	633 CS i	633 CS i A	635 CS i	635 CS i A	M 6	
Technical Data		- Electrical System	Unit					
12 31 ... Drive Belt								
Narrow belt	(open flank)			12,5 x 1055				
	or (< model ' 80)			12,5 x 1060 LA				
12 32 ... Voltage Regulator								
Code No.				EL 14 V 4 B/C				
	< model ' 80			EE 14 V3				
Regulating Voltage at 1500 rpm engine speed		V	13,5 ... 14,7					
12 41 ... Starter								
Make				Bosch				
Direction of rotation				clockwise				
Armature axial play		mm	0,1 ... 0,2					
	< model ' 80	mm	0,01 ... 0,3					
Carbon brush length	min.	mm	13					
Operating voltage		V	6 ... 12					
Testing voltage		V	12,5 ± 0,3					
Nominal rating		kW	1,5					
No. of pinion teeth			9					
12 41 ... Solenoid Switch								
Power consumption on term. 50 (with rated voltage)								
Activating and holding coil		A	40					
	< model ' 80	A	46					
Holding coil		A	7,5					
	< model ' 80	A	11					
12 61 ... Oil Pressure Switch								
Switching-on pressure		bar	0,2 ... 0,5					
12 61 ... Dynamic Oil Level Switch								
Resistance (measured on disconnected plug against ground)								
Dynamic on conn. 2 (White wire)								
	Level correct	kO	1 ± 1%					
	Level too low	O	0 ... 0,2					
Static on conn. 1 (blue violet wire)								
	Level correct	O	0 ... 0,2					
	Level too low	O	8					



Service-Information BMW Automobile



Service-Information BMW Automobile



Service-Information BMW Automobile

All Service Informations are saved in german language, please find them in the german manual.