

## Audi > A8/A8L > 2004-2008

### Heating Air Conditioning

#### 01 - Diagnosis and Testing

.

### Measured Value Block, Reading

- ⇒ [Climatronic Control Module, Measured Value Block, Reading](#)
- ⇒ [Display Group Numbers 001, 001 to 019](#)
- ⇒ [Display Group Numbers 001, 020 to 039](#)
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- ⇒ [Climatronic Control Module, Display Groups Front, Not Currently Intended for Service Use](#)
- ⇒ [Rear A/C Control Head, Climatronic, Measured Value Block, Reading](#)
- ⇒ [Display Group Numbers 001 to 007, 008](#)

#### Note:

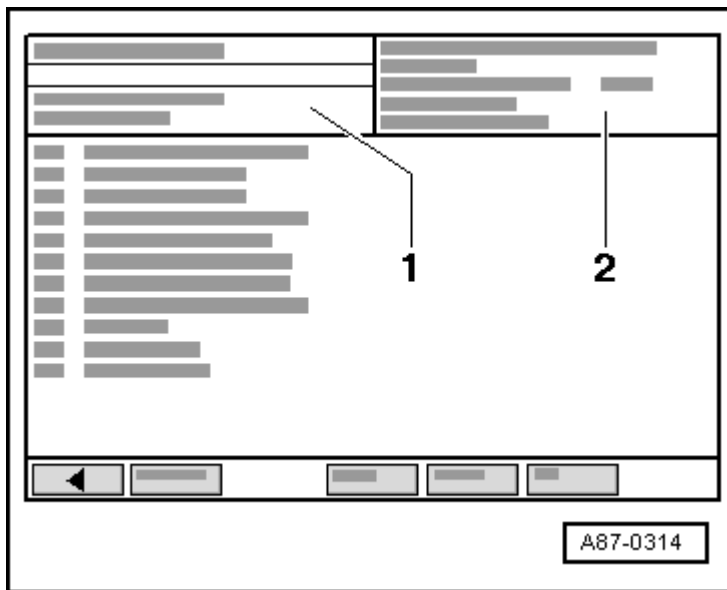
- ♦ *This Workshop Manual lists the various measured value blocks for information purposes only. Perform the function "Read measuring value block" in Guided Fault Finding, here is also found a clarification of the corresponding measured values and notes on the function of various components. ⇒ Vehicle Diagnosis, Testing and Information System VAS 5051 in "Guided Fault Finding" function.*
- ♦ *Component locations of activated components ⇒ [A/C Control Components Outside Passenger Compartment](#) and ⇒ [A/C Control Components Inside Passenger Compartment](#) .*
- ♦ *Depending on the position of the actuator, the various flaps are closed and opened over the adjustment range of the actuator via the installed cam disk. ⇒ Vehicle Diagnosis, Testing and Information System VAS 5051 in "Guided Fault Finding" function.*
- ♦ *If a value greater than "250" (open circuit or fault in Ground (GND) connection) or less than "5" (open circuit, fault in 5 V voltage supply or short circuit to GND connection) is displayed for one (or more) potentiometer(s) in one (or more) control motor(s), this indicates a malfunction in wire connection to control motor or in potentiometer of the or a control motor (same B+ supply or GND connection).*
- ♦ *If displayed value of actuator is outside permitted range, check allocation of levers and*

cam disks which connect actuator shaft to flap(s) ⇒ [Heating and A/C Unit](#) .

- ♦ If no permissible value can be determined for a potentiometer in a control motor during the function "Basic Setting" , display group corresponding to this control module displays a substitute value and stores a DTC in DTC memory. By using this substitute value (approx. average value in permissible tolerance range), the front Climatronic Control Module J255 (or Rear A/C Control Head (Climatronic) E265 ) controls the flap position when in emergency running mode.
- ♦ Depending on version of Climatronic Control Module J255 and Rear A/C Control Head (Climatronic) E265 , "On" or "1" and "Off" or "0" may be displayed in measuring value block.

## Climatronic Control Module, Measured Value Block, Reading

- With ignition switched off, connect diagnostic operation system VAS 5051 A with diagnostic cable VAS 5051/5A to 16-pin Data Link Connector (DLC) in vehicle ⇒ [Vehicle Diagnostic, Testing and Information System VAS 5051 A , connecting and selecting functions](#) .
- Switch on ignition or start engine.
- Set operating mode "Auto" on , Climatronic Control Module J255 .
- Select Address word "08" for A/C heater/electronics ⇒ [Vehicle Diagnostic, Testing and Information System VAS 5051 A , connecting and selecting functions](#) .



Indication on display of diagnostic operation system VAS 5051 A :

- Check DTC memory ⇒ [DTC Memory, Checking](#) .
- Select function "08 - Read Measuring Value Block" .

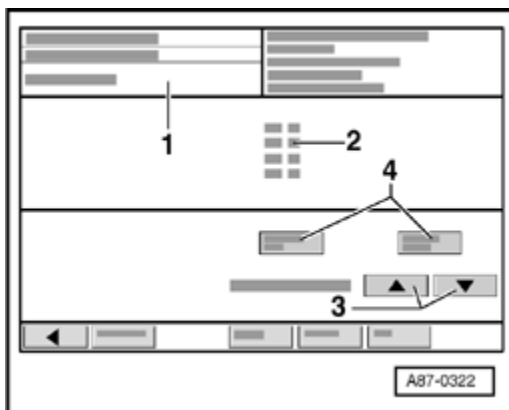


Indication on display of diagnostic operation system VAS 5051 A :

- ♦ Display field - 1 - indicates request to input display group.
  - ♦ Display field - 2 - shows input keyboard.
- Enter the desired display group (e.g. "01" or "001" display group number "001" ) via the input keyboard in display field - 2 - , and confirm by pressing the Q button.

List of available display group numbers:

- ♦ Display group "001" to "019" ⇒ [Display Group Numbers 001, 001 to 019](#)
- ♦ Display group "020" to "039" ⇒ [Display Group Numbers 001, 020 to 039](#)
- ♦ Display group "040" to "050" ⇒ [Display Group Numbers 001, 040 to 050](#)



Indication on display of diagnostic operation system VAS 5051 A :

- ♦ Display field - **1** - shows the display group selected.
- ♦ Display field - **2** - displays the values of the four display fields:
  - Value for display field "1" is displayed in the first row.
  - Values for respective display zones appear on second, third and fourth lines.
  - If no display appears in this row, a display field is not assigned.
- ♦ Pressing button - **3** - changes to a different display group.
- ♦ Press button - **4** - to change to a different function (e.g. from "Read Measuring Value Block" to "Basic Setting" and back again).
  - Enter desired display group number.

### Display Group Numbers 001, 001 to 019

Display group number	Display zone	Designation
001	1	Control current to activate A/C Compressor Regulator Valve N280 in amps. Current flowing via A/C Compressor Regulator Valve N280 Display = less than 0.050 A Compressor shut off Display = 0.300 A to 0.650 A (0.850 A) Compressor in control mode; control current is governed by cooling output required Maximum control current is dependent on version of Climatronic Control Module J255
	2	Activation of A/C Compressor Regulator Valve N280 in % Duty cycle of actuation signal Display = 0% Compressor shut off Display = 30....40% to 100% Compressor in regulated mode If compressor is activated even with A/C switched off (display = 0%, A/C provides cooling), check both connectors for interchange (to electric engine mount and to A/C compressor regulator valve N280 ).

Display group number	Display zone	Designation	Note:
001	3	Signal of High Pressure Sensor G65 in % Duty cycle as a function of pressure in refrigerant circuit Display = 0....5% or 90....100% No or faulty signal from High Pressure Sensor G65 Display = 5% to 12 % or 87.5 to 90% Pressure in refrigerant circuit too low (system empty) or too high Display = 12 % to 87.5% Pressure in refrigerant circuit in	

		permissible range	♦ If a compresso
	4	Pressure in refrigerant circuit in bar Calculated by Climatronic Control Module J255 via duty cycle of signal from High Pressure Sensor G65 Display = less than 2.6 bar or greater than 29 bar (even briefly) Pressure in refrigerant circuit too low (system empty) or too high High Pressure Sensor G65 malfunctioning Display = 2.6 bar to 29 bar Pressure in refrigerant circuit in permissible range	switch-off condition exists for the compresso (□ display group

002) the A/C Compressor Regulator Valve N280 cannot be activated, nor during output Diagnostic Test Mode (DTM) ( ⇒ [Output Diagnostic Test Mode](#) ).

- ♦ If no pressure signal is detected by High Pressure Sensor G65 , A/C Compressor Regulator Valve N280 must not be activated.
- ♦ Climatronic Control Module J255 calculates pressure in refrigerant circuit via duty cycle (display field 3).
- ♦ If refrigerant circuit has been correctly filled, pressure will be 2.6 bar at a temperature of -3 C degree . To avoid malfunction entries at low temperatures, Climatronic Control Module J255 recognizes a malfunction in the refrigerant circuit first at pressure less than 1.8 bar (attained at -12 C degree ). However, at this temperature the High Pressure Sensor G65 is no longer checked.
- ♦ Permissible specified values are found in the table which is located in the "Guided Fault Finding" function. ⇒ Vehicle Diagnosis, Testing and Information System VAS 5051 in "Guided Fault Finding" function.

Display group number	Display zone	Designation	Note:
002	1	Currently valid compressor shutoff criterion Explanatory notes ⇒ <a href="#">Explanatory notes for compressor shut-off conditions in display group</a>	
	2	Last compressor shutoff criterion Explanatory notes ⇒ <a href="#">Explanatory notes for compressor shut-off conditions in display group</a>	
	3	Last but one compressor shutoff criterion Explanatory notes ⇒ <a href="#">Explanatory notes for compressor shut-off conditions in display group</a>	
	4	Third last compressor shutoff criterion Explanatory notes ⇒ <a href="#">Explanatory notes for compressor shut-off conditions in display group</a>	

- ♦ Further notes for designated compressor shut-off conditions are found in the table which is located in the "Guided Fault Finding" function. ⇒ Vehicle Diagnosis, Testing and Information System VAS 5051 in "Guided Fault Finding" function.

**Explanatory notes for compressor shut-off conditions in display group "002" :**

Display group number	Display zone	Compressor shutoff criterion
002	1 - 4	Display 0 Compressor on (no compressor shutoff criterion detected) Display 1 Compressor off (pressure in refrigerant circuit has been or is too high) Display 2 Compressor off (basic setting was not performed) Display 3 Compressor off (pressure in refrigerant circuit too low) Display 4 Compressor off (engine running for less than 5 sec.) Display 5 Compressor off (engine speed less than 300 RPM) Display 6 Compressor off (compressor switched off via Econ function) Display 7 Compressor off (compressor switched off via OFF function) Display 8 Compressor off (measured outside temperature was less than 2 °C and is still less than 5 °C, no request for recirculated-air mode) Display 9 Compressor off (display not used at present)

Display group number	Display zone	Compressor shutoff criterion
002	1 - 4	Display 10 Compressor off (vehicle voltage supply is less than 9.5 V) Display 11 Compressor off (coolant temperature too high) Display 12 Compressor off (due to request by Engine Control Module -ECM-) Display 13 Compressor off (due to incorrect signal from High pressure sensor G65 ) Display 14 Compressor off (due to fault in data bus system) Display 15 Compressor off (pressure in refrigerant circuit too high at least 30 times in a given driving cycle) Display 16 Compressor off (measured temperature downstream of evaporator less than 0 °C for more than one minute) Display 17 Compressor off (measured temperature behind evaporator less than -5 °C)

Display group number	Display zone	Compressor shutoff criterion
002	1 - 4	Display 18 Compressor off (no valid outside temperature measured value, e.g. both sensors faulty) Display 19 Compressor off (engine not running and , Climatronic Control Module J255 in auxiliary heating mode) Display 20 Compressor off (display not used at present) Display 21 Compressor off ( Automatic recirculated air mode function set, measured outside temperature between -8 °C and 5 °C, no request for recirculated air mode) Display 22 Compressor off (measured outside temperature between -8 °C and 5 °C, no request for recirculated air mode, however measured temperature in passenger compartment less than 8 °C)

	Display 23 Compressor off (radiator fan activation faulty)	<b>Note:</b>
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- ♦ *On right-hand drive vehicles, front footwell flap is open rather than rear footwell flap (different air routing in footwell vent air duct).*

Display group number	Display zone	Designation	Note:
009	1 - 4	Right Footwell Flap Motor V109 Display field 1 Actual feedback value of Right Center Vent Motor Position Sensor G140 Display field 2 Specified feedback value of Right Center Vent Motor Position Sensor G140 Display field 3 Learned feedback value of Right Footwell Flap Motor Position Sensor G140 at lower stop (footwell flaps closed, specified value 6 to 45 ) Display field 4 Learned feedback value of Right Footwell Flap Motor Position Sensor G140 at upper stop (front footwell flap open, specified value 210 to 249 )	

- ♦ *On right-hand drive vehicles, rear footwell flap is open rather than front footwell flap (different air routing in footwell vent air duct).*

Display group number	Display zone	Designation
010	1 - 4	Temperature Regulator Flap Motor V68 (for warm-air flap) Display field 1 Actual feedback value of Right Center Vent Motor Position Sensor G92 Display field 2 Specified feedback value of Right Center Vent Motor Position Sensor G92 Display field 3 Learned feedback value of Temperature Regulator Flap Motor Position Sensor G92 at lower stop (flap closed, specified value 80 to 120 ) Display field 4 Learned feedback value of Temperature Regulator Flap Motor Position Sensor G92 at upper stop (flap open, warm air to center instrument panel vent outlets, specified value 140 to 180 )
011	1 - 4	Center Vent Adjustment Motor V102 (for cold-air flap) Display field 1 Actual feedback value of Right Center Vent Motor Position Sensor G138 Display field 2 Specified feedback value of Right Center Vent Motor Position Sensor G138 Display field 3 Learned feedback value of Center Vent Motor Position Sensor G138 at lower stop (flap closed, specified value 65 to 105 ) Display field 4 Learned feedback value of Center Vent Motor Position Sensor G138 at upper stop (flap open, non-heated air to center instrument panel vent outlets, specified value 155 to 195 )

Display group number	Display zone	Designation

012	1 - 4	Left Rear Warm/Cold Flap Air Outlet Motor V220 also activates flaps for right side on vehicles without E265 Display field 1 Actual feedback value of Right Center Vent Motor Position Sensor G351 Display field 2 Specified feedback value of Right Center Vent Motor Position Sensor G351 Display field 3 Learned feedback value of Left Rear Cold/Warm Air Outlet Motor Position Sensor G351 at lower stop (flaps closed), specified value 6 to 45 on vehicles with Rear A/C Control Head (Climatronic) E265 , or 35 to 80 on vehicles without Rear A/C Control Head (Climatronic) E265 e.g. at setting Hi Display field 4 Learned feedback value of Left Rear Cold/Warm Air Outlet Motor Position Sensor G351 at upper stop (flaps closed), specified value 210 to 249 on vehicles with Rear A/C Control Head (Climatronic) E265 , or 180 to 240 on vehicles without Rear A/C Control Head (Climatronic) E265 e.g. at setting Lo
013	1 - 4	Right Rear Warm/Cold Flap Air Outlet Motor V221 installed only on vehicles with Rear A/C Control Head (Climatronic) E265 . Display field 1 Actual feedback value of Right Center Vent Motor Position Sensor G352 Display field 2 Specified feedback value of Right Center Vent Motor Position Sensor G352 Display field 3 Learned feedback value of Right Rear Cold/Warm Air Outlet Motor Position Sensor G352 at lower stop (flap closed), specified value 6 to 45 e.g. at setting Hi Display field 4 Learned feedback value of Right Rear Cold/Warm Air Outlet Motor Position Sensor G352 at upper stop (flaps open), specified value 210 to 249 e.g. at setting Lo

### Display Group Numbers 001, 020 to 039

Display group number	Display zone	Designation
020	1	Current engine speed in RPM received from CAN-Bus system
	2	Vehicle speed in km/h received from CAN-Bus system.
	3	Status of compressor torque transmitted on data bus Display 0 (display shows current value) Display 1 (display shows old value)
	4	Required engine torque in Nm, calculated by Climatronic Control Module J255 for compressor operation, and transmitted on data bus Display= 0 to 1.0 Nm Compressor switched off ( A/C Compressor Regulator Valve N280 is not actuated) Display = 1.0.....XX Nm Compressor switched on (, Climatronic Control Module J255 is actuated)

Display group	Display zone	Designation
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number			
021	1	Information from Drivers Seat Ventilation Control Module J672 received from data bus system Seat ventilation is optional equipment, only heed display on vehicles with this optional equipment This display field is not assigned on front A/C control heads, Climatronic Control Module J255 installed up to November 2002 (gradual conversion) Explanatory notes ⇒ <a href="#">Coding information from control modules for seat ventilation (optional equipment):</a>	<b>Coding informat from control modules for seat ventilati (optiona equipme</b>
	2	Information from Front Passengers Seat Ventilation Control Module J673 received from data bus system Seat ventilation is optional equipment, only heed display on vehicles with this optional equipment This display field is not assigned on front A/C control heads, Climatronic Control Module J255 installed up to November 2002 (gradual conversion) Explanatory notes ⇒ <a href="#">Coding information from control modules for seat ventilation (optional equipment):</a>	

**The following control modules are concerned: Drivers Seat Ventilation Control Module J672 , Front Passenger s Seat Ventilation Control Module J673 , Rear Seat (driver s side) Ventilation Control Module J674 and Rear Seat (front passenger s side) Ventilation Control Module J675 .**

**Note:**

- ♦ *With , Climatronic Control Module J255 , display appears in display fields "1" and "2" of display group "021" , and in display groups "1" and "2" of display group "007" with Rear A/C Control Head (Climatronic) E265 .*
- ♦ *The currently selected front seat ventilation and seat heating level is displayed in measured value blocks "026" , "027" and "028" of , Climatronic Control Module J255 .*
- ♦ *The currently selected level for seat ventilation and seat heater for rear seats is displayed in measured value blocks "004" and "005" of Rear A/C Control Head (Climatronic) E265 .*
- ♦ *Activation of seat ventilation fan is not shown directly, activation of respective fan or respective control module for seat ventilation ccan be checked as follows: - Start engine - switch off electrical consumers with great power input (e.g. rear windshield heater). - Select lowest possible speed for Fresh Air Blower V2 - Set seat ventilation control for appropriate seat to maximum level (in front or rear A/C control head) - Check respective seat, noise of fan operation can be heard in seat. - Set seat heating control for appropriate seat to maximum level (in front or rear A/C control head), activation of seat heater can be seen from measured value block.*
- ♦ **At this time, heed the following when operating seat ventilation:**
  - No seat ventilation possible with seat temperature less than 15 degree C (deactivation due to insufficient seat temperature)

- Depending on seat temperature and selected level of seat ventilation, seat heater can be switched on automatically by control module after approx. 5 min. in seat ventilation mode. If necessary, only seat cushion is heated in seat ventilation mode, seat bolster heating not switched on
- With seat ventilation mode, seat can be heated up to the following seat temperature, depending on selected level of seat ventilation (measuring value of temperature sensor in seat cushion):

Selected level of seat ventilation	Seat temperature
Level 1	33 °C
Level 2	30 °C
Level 3	27 °C
Level 4	25 °C
Level 5	23 °C
Level 6	18 °C

Code	
	Deactivation of seat ventilation
0	No deactivation of seat ventilation due to insufficient seat temperature Measuring value of temperature sensor for seat heater
1	Deactivation of seat ventilation due to insufficient seat temperature Measuring value of temperature sensor for seat heater
0	No deactivation of seat ventilation due to unoccupied seat Switch for occupied seat closed (seat occupied) If a seat is not occupied, deactivation takes place approx. 10 min. after switch-on
1	Deactivation of seat ventilation due to unoccupied seat Switch for occupied seat open (seat not occupied) If a seat is not occupied and more than 10 min. have elapsed since switch-on.

Code	
	Actuation of seat heater
0	Seat heater off (no current flow via seat cushion heating element)
1	Seat heater on (current flow via seat cushion heating element)
	Actuation of seat bolster heater
0	Seat bolster heater off (no current flow via seat bolster heating elements)
1	Seat bolster heater on (current flow via seat bolster heating elements)
	Actuation of seat heater and seat ventilation
000	Seat heater and seat ventilation off Seat ventilation switched off
001	Seat heater and seat ventilation off Fault in seat ventilation or seat heater

Code	Significance
	Actuation of seat heater and seat ventilation

010					Seat and seat bolster heater at approx. 50 % of maximum power, seat ventilation on	<b>Note:</b>
110					Seat and seat bolster heater at up to approx. 100 % of maximum power, seat ventilation on	
100					Seat and seat bolster heater off, seat ventilation on Seat and seat bolster heating control interval (actual seat temperature higher than that set)	
					Request for deactivation of seat heater, seat ventilation from Energy Management Control Module J644	
0					No request for deactivation of seat heater or seat ventilation from Energy Management Control Module J644	
1					Request for deactivation of seat heater or seat ventilation from Energy Management Control Module J644 Seat heater and seat ventilation are deactivated to save power and thus to relieve load on generator	

♦ Specified temperatures for seat heater are different on vehicles with or without seat ventilation (values indicated in the following table are approximate values, exact value depends on control module version) At present, tolerance range  $\pm 4$  degree C ( $\pm 6$  degree C for stage "6" on vehicles with seat ventilation). Since control is effected via characteristic curve, specified temperature of next higher stage is always greater than in lower stage.

Selected level of seat heater	Specified temperature for seat heater without seat ventilation	Specified temperature for seat heater with seat ventilation
Level 1	19 ° C	29 ° C
Level 2	25 ° C	32 ° C
Level 3	31 ° C	36 ° C
Level 4	38 ° C	40 ° C
Level 5	48 ° C	43 ° C
Level 6	60 ° C	46 ° C

Display group number	Display zone	Designation
029	1	Signal received from data bus system for switching on auxiliary heater Auxiliary heater and remote control are optional equipment Display off or on
	2	Signal received from data bus system for switching off auxiliary heater Auxiliary heater and remote control are optional equipment Display off or on
	3	Signal for activating fuel-driven additional heater (auxiliary heater), sent on CAN-Bus system by front Climatronic Control Module J255 Only provided on vehicles with Diesel engine Display off or on Not applicable to North American Market
	4	Shut-off conditions for fuel-driven additional heater Only provided on vehicles with Diesel engine Display 00 (no

		shut-off condition active) Display 5 , 6 , 7 , 8 , 11 or 20 (shut-off condition active, additional heater not actuated, e.g. with display 5 engine not running) Not applicable to North American Market
030	1	Display field not assigned (provided for switch-on signal of retrofitted auxiliary heater) Display 0 or off (no voltage and thus no signal at input) Display 1 or on (no voltage)

### Display Group Numbers 001, 040 to 050

Display group number	Display zone	Designation
040	1	Display zone not used at present
	2	Opening time calculated by Climatronic Control Module J255 for Left Heat Regulating Valve N175 in % Display 0% (valve permanently closed, e.g. when Lo temperature for drivers side is selected)
	3	Opening time calculated by Climatronic Control Module J255 for Right Heat Regulating Valve N176 in % Display 0% (valve permanently closed, e.g. when Lo temperature for front passengers side is selected)
	4	Activation of Coolant Pump V50 by , Climatronic Control Module J255 Display Off (pump is not activated, e.g. when temperature Lo is selected for drivers and front passengers side)
041	1	Specified temperature in left rear footwell vent in ° C calculated by Climatronic Control Module J255 Only to be heeded for vehicles with Rear A/C Control Head (Climatronic) E265 (optional equipment) Display e.g. -40 ° C, if actuation is not necessary

Display group number	Display zone	Designation
041	2	Temperature measured in ° C by temperature sensor in Left Rear Footwell Heater Z42 Only installed on vehicles with Rear A/C Control Head (Climatronic) E265 (optional equipment)
	3	Current in A (amps) calculated by Climatronic Control Module J255 for heating of Left Rear Footwell Heater Z42 Only to be heeded for vehicles with Rear A/C Control Head (Climatronic) E265 (optional equipment)
	4	Actuation of Left Rear Footwell Heater Z42 Only to be heeded for vehicles with Rear A/C Control Head (Climatronic) E265 (optional equipment) Display 00000000 (no shut-off condition, heating element can be actuated) As

		soon as 1 is indicated at any position, heating element is not actuated Vehicle Diagnosis, Testing and Information System VAS 5051 in "Guided Fault Finding" function	<b>Note:</b>
042	1	Specified temperature in right rear footwell vent in °C calculated by Climatronic Control Module J255 Only to be heeded for vehicles with Rear A/C Control Head (Climatronic) E265 (optional equipment) Display e.g. -40 °C, if actuation is not necessary	

♦ If value calculated by , Climatronic Control Module J255 and displayed in display field "3" is greater than 2.4 ohms or less than 1.5 ohms, check for short circuit or contact resistance in wiring between Heated Windshield Control Module J505 to Heated Windshield Z2 .

♦ If value calculated by , Climatronic Control Module J255 and displayed in display fields "1" and "2" is greater than 3.4 ohms or less than 1.4 ohms, , Climatronic Control Module J255 does not actuate Heated Windshield Control Module J505 .

Display group number	Display zone	Designation
047	1	Hardware version transmitted by Fresh Air Blower Control Module J126
	2	Software version transmitted by Fresh Air Blower Control Module J126
	3	Hardware version transmitted by Heated Windshield Control Module J505 Only to be heeded on vehicles with heated windshield (optional equipment)
	4	Software version transmitted by Heated Windshield Control Module J505 Only to be heeded on vehicles with heated windshield (optional equipment)
048	1	Hardware version transmitted by control module for Left Rear Footwell Heater Z42 Only installed on vehicles with Rear A/C Control Head (Climatronic) E265 (optional equipment)
	2	Software version transmitted by control module for Left Rear Footwell Heater Z42 Only installed on vehicles with Rear A/C Control Head (Climatronic) E265 (optional equipment)

Display group number	Display zone	Designation
048	3	Hardware version transmitted by control module for Right Rear Footwell Heater Z43 Only installed on vehicles with Rear A/C Control Head (Climatronic) E265 (optional equipment)
	4	Software version transmitted by control module for Right Rear Footwell Heater Z43 Only installed on vehicles with

		Rear A/C Control Head (Climatronic) E265 (optional equipment)	-
049	1	Request transmitted by Climatronic Control Module J255 via data bus system for deactivation of rear left seat heating Only to be heeded for vehicles with Rear A/C Control Head (Climatronic) E265 (optional equipment) On vehicles with no Rear A/C Control Head (Climatronic) E265 , rear seat heating cannot be deactivated by Climatronic Control Module J255 Display 0 (no request transmitted) Display 1 ( Rear A/C Control Head (Climatronic) E265 is requested to deactivate seat heater)	<b>Explanation notes on code "1" (optional equipment)</b>

Code								Note:
128	64	32	16	8	4	2	1	
							1	Characteristic number (for conversion if coding is not performed in Guided Fault Finding function)
							0	No assignment (always 1 )
							1	Vehicle with no auxiliary heater
							0	Vehicle with parking heater
							1	Vehicles without heated front windshield
							0	Vehicles with heated front windshield
							1	Vehicles with standard glass
							0	Vehicles with heat-absorbing glass
							1	Vehicles without Rear A/C Control Head (Climatronic) E265
							0	Vehicles with Rear A/C Control Head (Climatronic) E265
							1	Vehicle without Audi one-touch memory (Fingerprint)
							0	Vehicle with Audi one-touch memory (Fingerprint)
							1	Vehicle without rear window shade
							0	Vehicle with rear window shade
							1	Vehicle without sun roof with solar cells
							0	Vehicle with sun roof with solar cells

- ♦ When performing coding in function "Guided Fault Finding" the system requests the optional equipment installed to enable the Diagnostic operation system VAS 5051 A to calculate the code by means of a stored program ⇒ Vehicle Diagnosis, Testing and Information System in "Guided Fault Finding" function
- ♦ If the , Climatronic Control Module J255 is coded directly via function "07 - Code Control Module" by entering numerical code, characteristic numbers for different versions and 3 codes must be added together. Example: Code "1" (for vehicle with auxiliary heater, rear A/C control head (Climatronic) and rear window shade (1 + 2 + 16 + 64 ),code "2" e.g. 4096, code "3" e.g. 0,total number of codes "1" , "2" and "3" e.g. "0" , total number of codes "1" , "2" and "3" = "4179" (entry in Diagnostic Operation System VAS 5051 A for coding via function "07" )

**Explanatory notes on code "2" ( country version and vehicle model)**

<b>Code</b>								<b>Note:</b>
32768	16384	8192	4096	2048	1024	512	256	Characteristic number (for conversion if coding is not performed in Guided Fault Finding function)
					0	0	0	Vehicle for Germany and Rest of World (except USA and Japan)
					0	0	1	Vehicles for USA (and Canada)
					0	1	0	Vehicle for Japan
					1	0	0	Code not used at present (intended for cold countries, e.g. Scandinavia)
					0	1	1	Code not used at present, intended for hot countries, e.g. Australia and Saudi Arabia (introduction not yet finalized) Control settings largely correspond to those for USA
					1	0	1	Code currently not assigned
					1	1	0	Code currently not assigned
					1	1	1	Code currently not assigned
				0				Vehicle with gasoline engine
		0	1					Vehicle with 8-cyl. engine
		1	0					Vehicle with 10-cyl. engine
		1	1					Vehicle with 12-cyl. engine
	0							Left-hand drive vehicle
0								Climatronic Control Module J255 up to software version X077 Vehicle with standard body Climatronic Control Module J255 from software version X078 Vehicle with diesel engine or gasoline engine with MPI ignition and injection system
1								Climatronic Control Module J255 up to software version X077 Vehicle with long body Climatronic Control Module J255 from software version X078 Vehicle with gasoline engine with FSI ignition and injection system

✦ When performing coding in function "Guided Fault Finding" the system requests the optional equipment installed to enable the Diagnostic operation system VAS 5051 A to calculate the code by means of a stored program ⇒ Vehicle Diagnosis, Testing and Information System in "Guided Fault Finding" function

✦ If the , Climatronic Control Module J255 is coded directly via function "07 - Code Control Module" by entering numerical code, characteristic numbers for different

versions and 3 codes must be added together. Example: Code "1", e.g. "83", code "2" (on vehicle for Germany with 8-cyl. gasoline engine) "4096", code "3", e.g. "0", total number of codes "1", "2" and "3" = 4179 (entry in Diagnostic Operation System VAS 5051 A when coding via function "07" )

- ♦ Body design is no longer coded with Climatronic Control Module J255 from software version "X078"
- ♦ With Climatronic Control Module J255 from software version "X078", engine type is coded (on vehicles with FSI engine, transmission ratio at belt pulleys and thus, torque for driving the compressor is different from other engines).

### Explanatory notes on code "3" (rear seat heating/rear seat ventilation, seat covers and window glass)

Code						Significance
2097152	1048576	524288	262144	131072	65536	Characteristic number (for conversion if coding is not performed in Guided Fault Finding function)
				0	0	Vehicles without Rear A/C Control Head (Climatronic) E265 (with or without heated rear seats)
				0	0	Vehicles with Rear A/C Control Head (Climatronic) E265 without actuation for heated rear seats and without actuation for rear seat ventilation
				0	1	Vehicles with Rear A/C Control Head (Climatronic) E265 with actuation for heated rear seats but without actuation for rear seat ventilation
				1	1	Vehicles with actuation for heated rear seats and with actuation for rear seat ventilation

Code						Significance
2097152	1048576	524288	262144	131072	65536	Characteristic number (for conversion if coding is not performed in Guided Fault Finding function)
		0	0			Type of seats (seat covers on



					vehicles without and with seat heater/seat ventilation) At present, this code is always entered, regardless of seat cover (leather or fabric) and vehicle equipment (with or without seat heater/seat ventilation) Seat covers of type 0 (seat cover without special assignment)	<b>Note:</b>
		0	1		Type of seats (seat covers on vehicles with seat ventilation) Seat cover of type 1 No assignment at present	
		1	0		Type of seats (seat covers on vehicles with seat ventilation) Seat cover of type 2 No assignment at present	
		1	1		Type of seats (seat covers on vehicles with seat ventilation) Seat cover of type 3 No assignment at present	

- ♦ *Rear seat ventilation is only available together with heated rear seats*
- ♦ *When performing coding in function "Guided Fault Finding" the system requests the optional equipment installed to enable the Diagnostic operation system VAS 5051 A to calculate the code by means of a stored program ⇒ Vehicle Diagnosis, Testing and Information System in "Guided Fault Finding" function*
- ♦ *If the , Climatronic Control Module J255 is coded directly via function "07 - Code Control Module" by entering numerical code, characteristic numbers for different versions and 3 codes must be added together. Example: Code "1" e.g. "83" , code "2" e.g. "4096" , code "3" (vehicles without Rear A/C Control Head (Climatronic) E265 ) "0" total number of codes "1" , "2" and "3" = "4179" (entry in Diagnostic Operation System VAS 5051 A when coding via function "07" )*
- ♦ *Display has 8 positions of which the first 2 are however not used and are therefore not shown in this table (display of first 2 positions always "00XXXXXX" )*

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## **Climatronic Control Module, Display Groups Front, Not Currently Intended for Service Use**

### **Note:**

- ♦ *Depending on version of Climatronic Control Module J255 , these measuring value*

*blocks may not indicate any display or the display field is black.*

Display group number	Display zone	Designation
080	1	Manufacturer and factory code
	2	Day of production of Climatronic Control Module J255
	3	Manufacturers update status of Climatronic Control Module J255
	4	Test stand number on which Climatronic Control Module J255 was tested at manufacturer
	5	Manufacturer s serial number
081	1	Vehicle identification number first transmitted by data bus system on initial operation of Climatronic Control Module J255 or after last release of component protection of Climatronic Control Module J255 and stored in Climatronic Control Module J255 If vehicle identification number does not correspond to vehicle identification number transmitted by data bus system, component protection of Climatronic Control Module J255 is activated (certain functions are disabled).

Display group number	Display zone	Designation
081	2	Display zone not used Intended for assemblies or serial number received/transmitted by data bus system
	3 and 4	Display zones not used Intended for type approval number received/transmitted by data bus system
082	1	Display zone not used Designated for flash tool number of data version of Climatronic Control Module J255
	2	Display zone not used Designated for date on which Climatronic Control Module J255 was last flashed (flashing of new data)
	3	Display zone not used Designated for hardware version (electronics) of Climatronic Control Module J255
	4	Display zone not used Designated for software version (electronics data version) of Climatronic Control Module J255

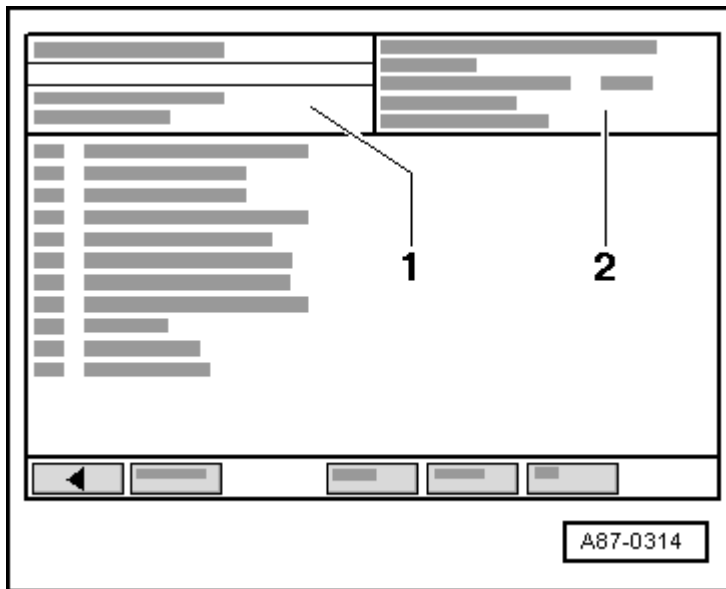
▪

## Rear A/C Control Head, Climatronic, Measured Value Block, Reading

- With ignition switched off, connect diagnostic operation system VAS 5051 A with diagnostic cable VAS 5051/5A to 16-pin Data Link Connector (DLC) in vehicle ⇒ [Vehicle Diagnostic, Testing and Information System VAS 5051 A , connecting and](#)

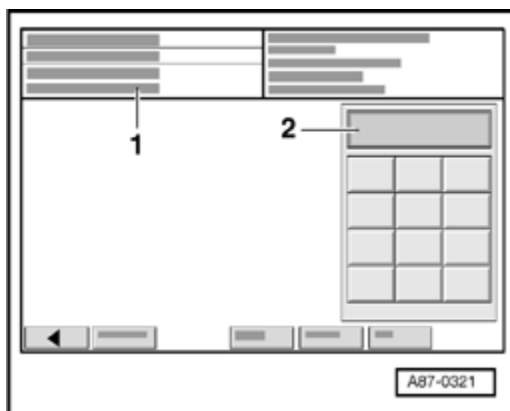
[selecting functions](#) .

- Switch on ignition or start engine.
- Set operating mode "Auto" on , Climatronic Control Module J255 .
- Select address word "28" for rear A/C control head ⇒ [Vehicle Diagnostic, Testing and Information System VAS 5051 A , connecting and selecting functions](#) .



Indication on display of diagnostic operation system VAS 5051 A :

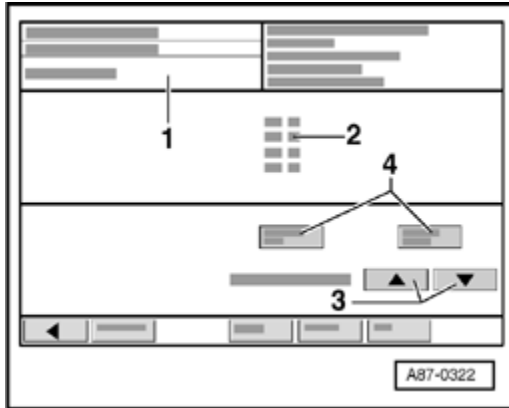
- Check DTC memory ⇒ [DTC Memory, Checking](#) .
- Select function "08 - Read Measuring Value Block" .



Indication on display of diagnostic operation system VAS 5051 A :

- ♦ Display field - 1 - indicates request to input display group.

- ♦ Display field - 2 - shows input keyboard.
- Enter desired display group (e.g. "001" or "01" for display group number "001" ) via input keyboard in display field - 2 - . List of available display group numbers ⇒ [Display Group Numbers 001 to 007, 008](#) and confirm by touching Q button.



Indication on display of diagnostic operation system VAS 5051 A :

- ♦ Display field - 1 - shows the display group selected.
- ♦ Display field - 2 - displays the values of the four display fields:
  - Value for display field "1" is displayed in the first row.
  - Values for respective display zones appear on second, third and fourth lines.
  - Line remains blank if a display zone is not used.
- ♦ Pressing button - 3 - changes to a different display group.
- ♦ Press button - 4 - to change to a different function (e.g. from "Read Measuring Value Block" to "Basic Setting" and back again).
- Enter display group number (list of available display group numbers ⇒ [Display Group Numbers 001 to 007, 008](#) ).

## Display Group Numbers 001 to 007, 008

Display group number	Display zone	Designation
001	1 - 4	Left Rear Air Outlet Motor V218 Specified feedback value is calculated by Climatronic Control Module J255 and

	transmitted via data bus system to Rear A/C Control Head (Climatronic) E265 Display field 1 Actual feedback value of Right Center Vent Motor Position Sensor G349 Display field 2 Specified feedback value of Right Center Vent Motor Position Sensor G349 Display field 3 Learned feedback value of Left Rear Air Outlet Motor Position Sensor G349 at lower stop (flaps closed, specified value 5 to 45 ) Display field 4 Learned feedback value of Left Rear Air Outlet Motor Position Sensor G349 at upper stop (flaps open, specified value 210 to 250 )	Display in display groups "006" to "007" for vehicles
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manufactured as of November 2002 (gradual introduction)

**Note:**

- ♦ The display in display groups "006" and "007" differs depending on whether Rear A/C Control Head (Climatronic) E265 was installed prior to or as of November 2002 ⇒ [Display in display groups 006 to 008 for vehicles manufactured until November 2002 \(gradual conversion\)](#). Furthermore, display group "008" was no longer used in version as of November 2002.
- ♦ At the start of production, Rear A/C Control Head (Climatronic) E265 were installed for which values are displayed in display group "008" ⇒ [Display in display groups 006 to 008 for vehicles manufactured until November 2002 \(gradual conversion\)](#).

Display group number	Display zone	Designation
006	1	Status of seat occupied sensor in rear left seat Display in this display field only applies to vehicles without seat ventilation Seat occupied sensor display only appears in this display field for vehicles with seat heater but without seat ventilation for rear seats (optional equipment) Display 0 (switch open, seat not occupied) Display 1 (switch closed, seat occupied)

Display group number	Display zone	Designation
006	2	Status of seat occupied sensor in rear right seat Display in this display field only applies to vehicles without seat ventilation Seat occupied sensor display only appears in this display field for vehicles with seat heater but without seat ventilation for rear seats (optional equipment) Display 0 (switch open, seat not occupied) Display 1 (switch closed, seat occupied)
	3	Actuation of left rear seat heater from Rear A/C Control Head (Climatronic) E265 Seat heater is optional equipment Display 0 (seat temperature higher than specified) Seat heater switched off Display 1 (seat temperature lower than

		specified) Seat heater is switched on	Display in display groups
	4	Actuation of right rear seat heater from Rear A/C Control Head (Climatronic) E265 Seat heater is optional equipment Display 0 (seat temperature higher than specified) Seat heater switched off Display 1 (seat temperature lower than specified) Seat heater is switched on	

**"006" to "008" for vehicles manufactured until November 2002 (gradual conversion)**

**Note:**

- ♦ The display in display groups "006" and "007" differs depending on whether Rear A/C Control Head (Climatronic) E265 was installed prior to or as of November 2002 ⇒ [Display in display groups 006 to 007 for vehicles manufactured as of November 2002 \(gradual introduction\)](#). Furthermore, display group "008" was no longer used in version as of November 2002.
- ♦ Since November 2002, Rear A/C Control Head (Climatronic) E265 have been installed for which display group "008" is no longer used ⇒ [Display in display groups 006 to 007 for vehicles manufactured as of November 2002 \(gradual introduction\)](#).

Display group number	Display zone	Designation
006	1	Status of seat occupied sensor in rear left seat Seat occupied sensor function is only provided for vehicles with rear seat heater (optional equipment) Display 0 (switch open, seat not occupied) Display 1 (switch closed, seat occupied)
	2	Status of seat occupied sensor in rear right seat Seat occupied sensor function is only provided for vehicles with rear seat heater (optional equipment) Display 0 (switch open, seat not occupied) Display 1 (switch closed, seat occupied)

Display group number	Display zone	Designation
006	3	Deactivation of seat ventilation due to insufficient rear left seat temperature Seat ventilation is optional equipment Display 0 (seat temperature higher than specified, seat ventilation can be switched on) Display 1 (seat temperature too low, seat ventilation must not be switched on)
	4	Deactivation of seat ventilation due to insufficient rear right seat temperature Seat ventilation is optional equipment Display 0 (seat temperature higher than specified, seat ventilation can be switched on) Display 1 (seat temperature too low, seat ventilation must not be switched on)
007	1	Actuation of left rear seat cushion (and seat bolsters)

		heating by Rear A/C Control Head (Climatronic) E265 Seat heater is optional equipment On vehicles without seat ventilation, side bolsters are heated together with seat cushion Display 0 (seat heater switched off) Display 1 (seat heater switched on)	<i>Copyright © 2008 Audi of America, Inc. and Bentley Publishers. All rights reserved. Last processed:</i>
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