
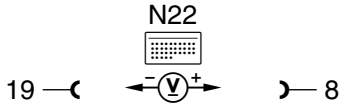

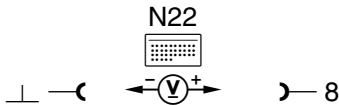
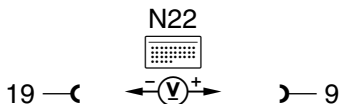

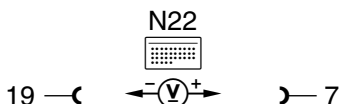







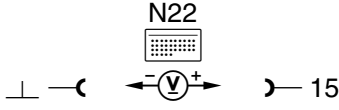

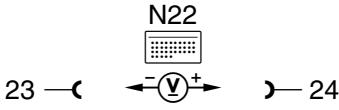

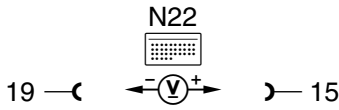

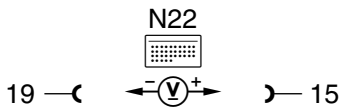

#### Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0		<b>A/C pushbutton control module (N22)</b> Voltage supply Circuit 30		 on right connector see 22	11 – 14 V	Wiring, Circuit 31, ⇒ 1.1
1.1		<b>Circuit 30</b>			11 – 14 V	Wiring.
2.0		<b>Voltage supply</b> <b>Circuit 15</b>		 on right connector see 22 Ignition: <b>ON</b>	11 – 14 V	Wiring.
3.0		<b>Voltage supply</b> <b>Circuit 15x</b>		 on <b>right</b> connector see 22 Ignition: <b>ON</b>	11 – 14 V	Wiring.
4.0		<b>In-car temperature sensor (B10/4) with aspirator</b> Resistance		Ignition: <b>OFF</b>  on left connector see 22 Disconnect N22 from  .	$^{\circ}\text{C} \hat{=} \text{k}\Omega$ 10 $\hat{=}$ 19.0 – 21.0 20 $\hat{=}$ 12.0 – 13.0 30 $\hat{=}$ 7.5 – 8.5 45 $\hat{=}$ 4.0 – 4.5	Wiring, B10/4


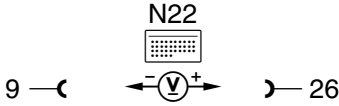

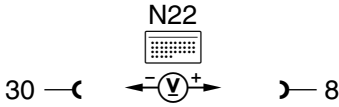

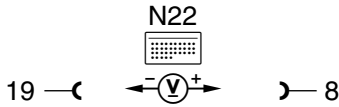

#### Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
5.0	B1230	<b>Evaporator temperature sensor (B10/6)</b> Resistance		Ignition: <b>OFF</b> on left connector see 22 Disconnect N22 from .	$^{\circ}\text{C} \hat{=} \text{k}\Omega$ 10 $\hat{=} 5.2 - 5.8$ 20 $\hat{=} 3.2 - 3.6$ 30 $\hat{=} 2.0 - 2.3$ 45 $\hat{=} 1.1 - 1.25$	Wiring, B10/6
6.0	B1233	<b>Refrigerant temperature sensor (B12/1)</b> Resistance		Ignition: <b>OFF</b> on left connector see 22 Disconnect N22 from .	$^{\circ}\text{C} \hat{=} \text{k}\Omega$ 20 $\hat{=} < 13$ 40 $\hat{=} < 5.5$ 50 $\hat{=} < 3.7$ 60 $\hat{=} < 2.5$ 70 $\hat{=} < 1.8$	Wiring, B10/6
7.0	B1228	<b>Heater core temperature sensor (B10/2), left</b> Resistance		Ignition: <b>OFF</b> on left connector see 22 Disconnect N22 from .	$^{\circ}\text{C} \hat{=} \text{k}\Omega$ 10 $\hat{=} 19.0 - 21.2$ 20 $\hat{=} 11.9 - 13.2$ 30 $\hat{=} 7.7 - 8.4$ 45 $\hat{=} 4.2 - 4.6$	Wiring, B10/2
8.0	B1232	<b>Refrigerant pressure sensor (B12)</b> Voltage supply		on left connector see 22 Ignition: <b>ON</b>	4.75 – 5.25 V	Wiring, B12, N22

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
9.0		<b>Diagnostic output</b> Voltage		 on left connector see 22 Ignition: <b>ON</b>	11 – 14 V	Wiring, N22
10.0	B1422	<b>Serial Interface (K1)</b> Voltage		 on left connector see 22 Ignition: <b>ON</b>	> 4 V	Wiring, See 21
11.0		<b>"Cold" function indicator lamp (LED, blue) (N18/2)</b> Voltage		 on left connector see 22 Ignition: <b>ON</b> <b>Blue LED</b> in button is illuminated	> 3.5 V	Wiring, N18/2
12.0		<b>"Warm" function indicator lamp (LED, red) (N18/2)</b> Voltage		 on left connector see 22 Ignition: <b>ON</b> <b>Red LED</b> in button is illuminated	> 3.5 V	Wiring, N18/2


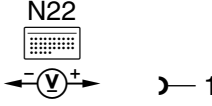


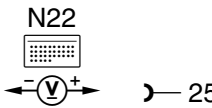



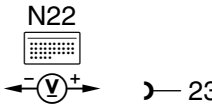

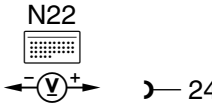

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
13.0		<b>Soft top activation</b> Voltage		 on left connector see 22 Ignition: <b>ON</b>  <b>Soft top closed</b>  <b>Soft top open</b>	   > 0.1 V  > 10 V	Wiring.
14.0		<b>“Cold“ pushbutton (N18/2s1)</b> Voltage		 on left connector see 22 Ignition: <b>ON</b> Press and hold <b>blue</b> pushbutton at center vent	10 V	Wiring, N18/2
15.0		<b>“Warm“ pushbutton (N18/2s1)</b> Voltage		 on left connector see 22 Ignition: <b>ON</b> Press and hold <b>red</b> pushbutton at center vent	8.5 V	Wiring, N18/2


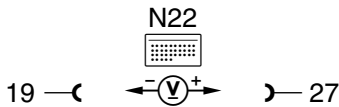

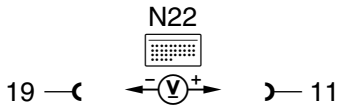

#### Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
16.0	B1421	<b>Auxiliary fan (M4) Activation</b> Voltage		on right connector see 22 Ignition: <b>ON</b> Press <b>AUTO</b> and  > 10 secs. <b>End test:</b> Press <b>AUTO</b> and > 10 secs.	> 2 V Auxiliary fan (M4) runs.	Wiring, N22, N65/1
17.0		<b>A/C Pushbutton control module (N22), 12 V output</b> Voltage		on right connector see 22 Ignition: <b>ON</b>	11 - 14 V	Wiring, N22
18.0	B1416	<b>Coolant circulation pump (M13)</b> Amperes		on right connector see 22 Ignition: <b>OFF</b> Disconnect N22 from .	< 1 A	Wiring, M13
19.0	B1417	<b>Automatic A/C monovalve (Y19)</b> Resistance		Ignition: <b>OFF</b> on right connector see 22 Disconnect N22 from .	8- 15 Ω	Wiring, Y19


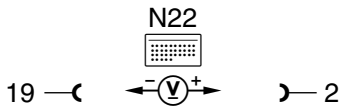
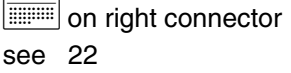
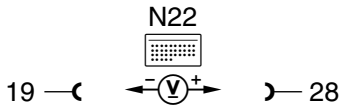
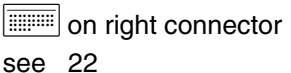
#### Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
20.0		<b>Blower regulator (A32n1) Control</b> Voltage	<p>N22</p> 	<p> on right connector see 22 Ignition: <b>ON</b></p> <p> MIN &gt; 0.7 V MA &gt; 0.5 V</p>		Wiring, A32
21.0	B1419	<b>A/C compressor (A9) activation</b> Voltage	<p>N22</p> 	<p> on right connector see 22 Engine: <b>At Idle</b></p> <p>A/C compressor:  &lt; 1 V A/C compressor:  11 – 14 V</p>		Wiring, N22
22.0	B1423	<b>Switchover valve block (Y11)</b>	<p>N22</p> 	<p> on right connector see 22 Ignition: <b>ON</b></p>	> 8.0 V	Wiring, Y11
23.0		<b>Serial Interface (K2)</b> Voltage	<p>N22</p> 	<p> on right connector see 22 Ignition: <b>ON</b></p>	> 1.5 V	Wiring, see 21

#### Electrical Test Program – Test


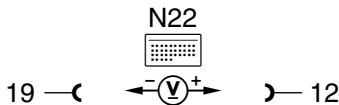

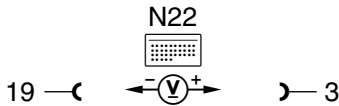

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
24.0	B1452	<b>Left air outlet feedback potentiometer (R23/1)</b> Voltage		 on right connector see 22 Ignition: <b>ON</b> Left adjustment wheel: End stop right (closed) End stop left (open)	0.7 – 1.1 V 3.5 – 4.8 V (infinitely variable)	Wiring, R23/1, Vacuum actuator 46
25.0	B1457	<b>Center air outlet feedback potentiometer (R23/3)</b> Voltage		 on right connector see 22 Ignition: <b>ON</b> Center adjustment wheel: End stop right (closed) End stop left (open)	0.8 – 1.2 V 3.5 – 4.5 V (infinitely variable)	Wiring, R23/3, Vacuum actuator 47

#### Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
26.0	B1458	<b>Right air outlet feedback potentiometer (R23/2)</b> Voltage		 on right connector see 22 Ignition: <b>ON</b> Right adjustment wheel: End stop right (closed) End stop left (open)	0.8 – 1.2 V 3.5 – 4.5 V (infinitely variable)	Wiring, R23/2, Vacuum actuator 48
27.0	B1453	<b>Left air outlet potentiometer</b> Voltage		 on right connector see 22 Ignition: <b>ON</b> Left adjustment wheel: End stop right (closed) End stop left (open)	0.6 – 0.9 V 4.0 – 4.5 V (infinitely variable)	Wiring, N18/2



#### Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
28.0	B1454	<b>Center air outlet potentiometer Voltage</b>		 on right connector see 22 Ignition: <b>ON</b> Center adjustment wheel: End stop right (closed) End stop left (open)	0.6 – 0.9 V 3.5 – 4.5 V (infinitely variable)	Wiring, N18/2
29.0		<b>Right air outlet potentiometer Voltage</b>		 on right connector see 22 Ignition: <b>ON</b> Right adjustment wheel: End stop right (closed) End stop left (open)	0.6 – 0.9 V 4.0 – 4.5 V (infinitely variable)	Wiring, N18/2