

AIRTRONIC M2 D4R WIRING DIAGRAMS



The technical description and installation instructions are valid for the following engine-independent air heaters:

Air heaters for diesel fuel

	Order No.
Airtronic S2, D2L, 12 V	25.2721.05.0000
Airtronic S2, D2L, 24 V	25.2726.05.0000
Airtronic M2, D4L, 12 V	25.2720.05.0000
Airtronic M2, D4L, 24 V	25.2729.05.0000
Airtronic M2, D4R, 12 V	25.2746.05.0000

Air heaters for petrol

	Order No.
Airtronic M2, B4L, 12 V	20.1987.05.0000

5 Electrics

5.1 Heater wiring

The electronic control box is integrated in the heater, which makes wiring during installation much easier.

Caution

Safety instructions

The heater is to be connected up electrically according to the EMC directives.

EMC can be affected if the heater is not connected up correctly. For this reason, comply with the following instructions:

- Ensure that the insulation of electrical cables is not damaged. Avoid: Chafing, kinking, jamming or exposure to heat.
- In waterproof connectors, seal any connector chambers not in use with filler plugs to ensure they are dirt-proof and water-proof.
- Electrical connections and ground connections must be free of corrosion and firmly connected.
- Lubricate connections and ground connections outside the heater interior with contact grease.

Note

Comply with the following when wiring the heater and the control unit:

- Electrical leads, switch and control boxes must be positioned in the vehicle so that they can function perfectly under normal operating conditions without impairment (e.g. due to heat exposure, moisture, etc.).

- The following cable cross-sections are to be used between the battery and heater. This ensures that the max. permissible voltage drop in the cables does not exceed 0.5 V for 12 V or 1 V for 24 V rated voltage.

Cable cross-sections for a cable length (plus cable + minus cable) of:

- up to 5 m = cable cross-section 4 mm²
- 12 V: from 5 m to 8 m = cable cross-section 6 mm²
- 24 V: from 5 m to 8 m = cable cross-section 4 mm²
- If the positive cable is to be connected to the fuse box (e.g. terminal 30), the vehicle's cable from the battery to the fuse box must also be included in the calculation for the total cable length and re-dimensioned if necessary.
- Insulate unused cable ends.

5.2 Parts list for the Airtronic S2 and Airtronic M2 circuit diagrams

- A1 Airtronic Ax2 control box
- A30 Fuse holder, 3 pin
- B1 Air inlet sensor, internal (LEF1)
- B6 Flame and air outlet sensor
- R1 Terminating resistor I
- R2 Terminating resistor 120 Ω
- R3 Terminating resistor, stub line 9.2 kΩ
- F1 Heater fuse: 12 V = 20 A / 24 V = 10 A
- HG Heater
- R1 Glow plug
- M4 Burner motor
- Y1 Fuel metering pump
- p Switch output, see on page 26
- XB6/1 EasyScan bush housing
- XS6/1 Mating connector with terminating resistor
- XB6/4 Bush housing, EasyStart Pro
- d to the ADR acknowledgement button, see on page 26
- n Generator input D+
- o Secondary drive input NA+

Note

- It must be ensured that if the battery isolating switch is pressed due to EMERGENCY STOP, all the heater's electric circuits are disconnected from the battery immediately (without any consideration of the heater's status).
- If the battery isolating switch is pressed to disconnect the battery from all electric circuits, the heater must be switched off first and if applicable you must wait until the heater's afterrun has finished.

- a to the heater
- c1 to the control unit CAN
- c2 to the control unit LIN / S+
- g to the external temperature sensor / mini controller
- x insulate and tie back any cables that are not needed

Note

Circuit diagram for Airtronic S2 / Airtronic M2 from page 29.

Circuit diagrams for control units, e.g. EasyStart Pro etc. see from page 32.

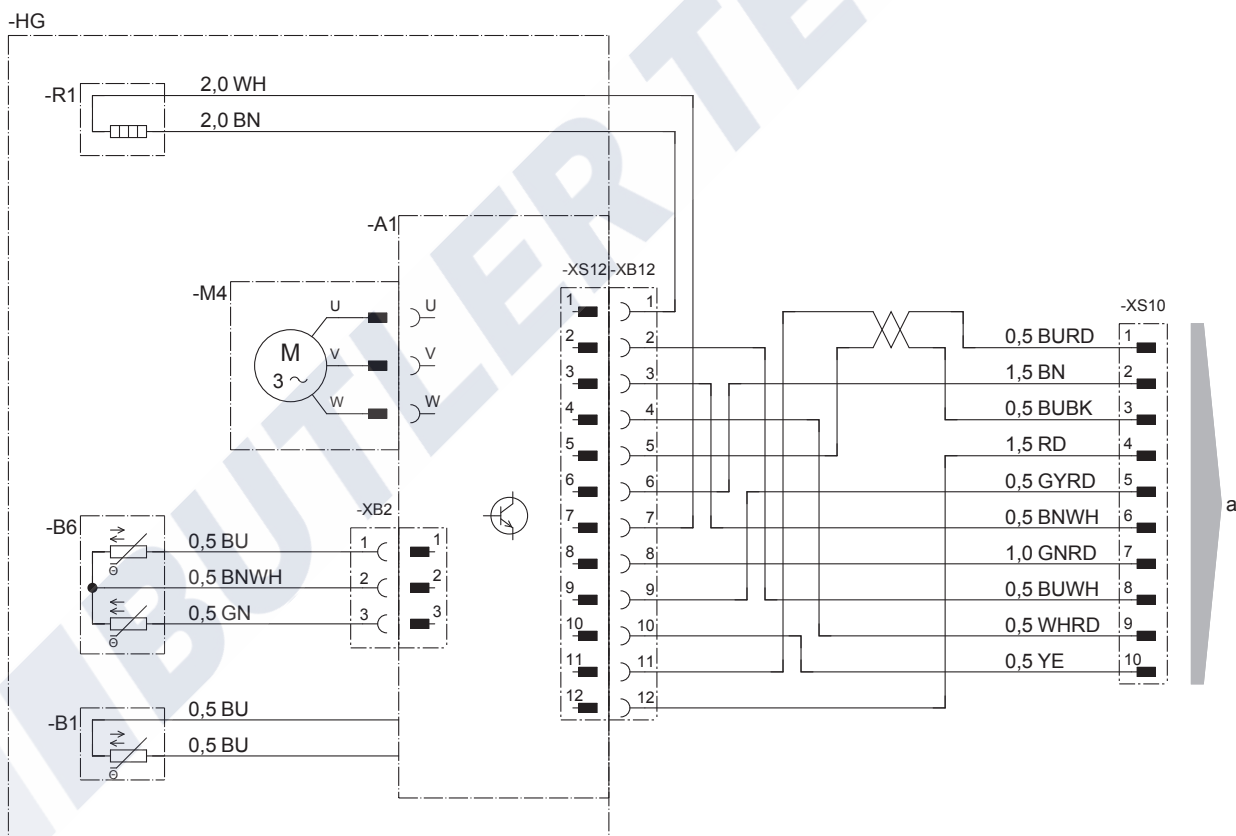
Cable colours

bk = black	og = orange
bn = brown	rd = red
bu = blue	vt = violet
gn = green	wh = white
gy = grey	ye = yellow

5.3 Circuit diagrams for Airtronic

5.3.1 Heater

- X:15 ○ Ign (+)
- X:58 ○ Light (+)
- X:30 ○ Bat (+)
- X:31 ○ Bat (-)



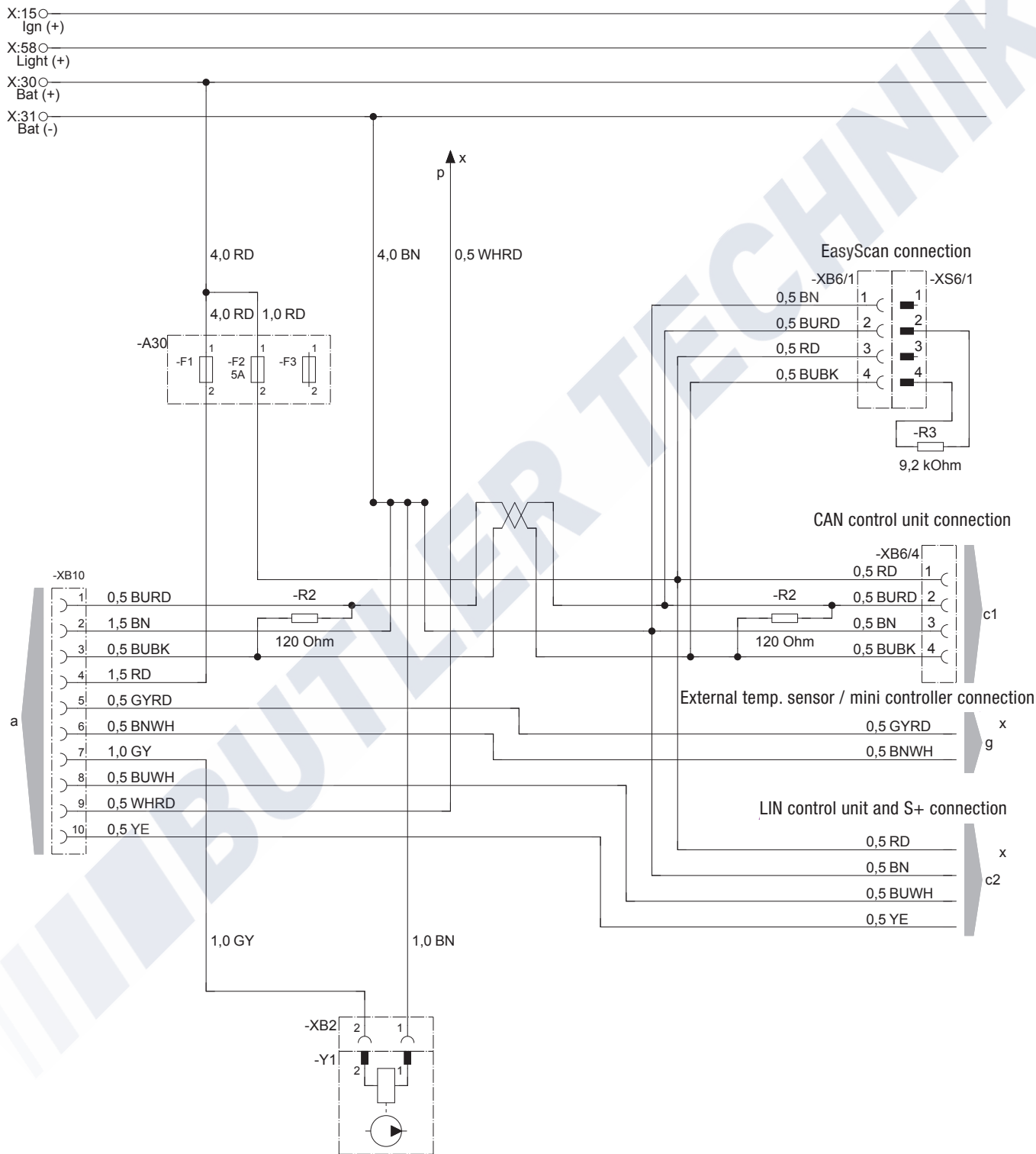
Parts list on page 28

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5.3.2 Cable harness 12 V / 24 V

Note

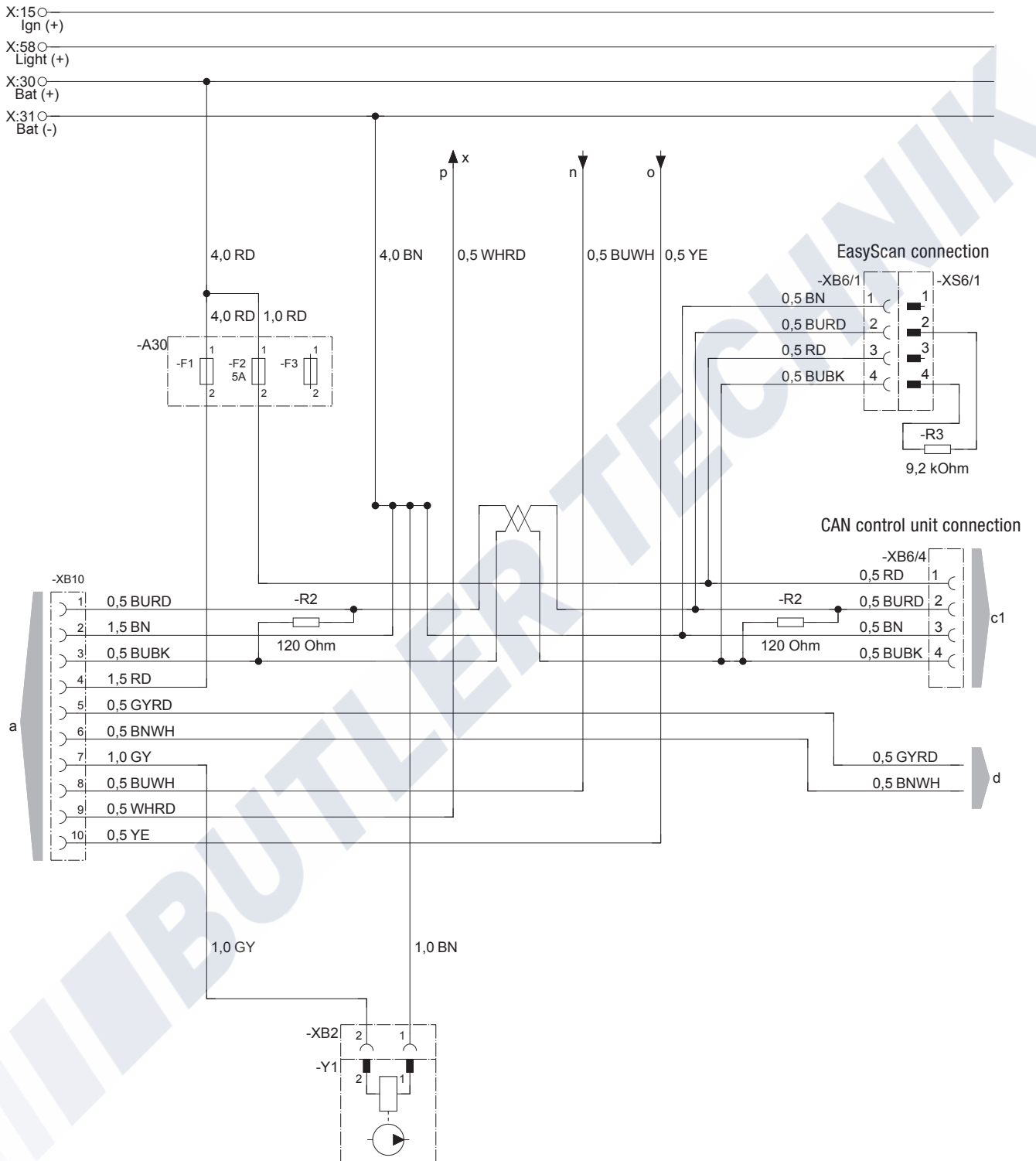
Operation via LIN only for Airtronic 2 12 V



Parts list on page 28

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5.3.3 Cable harness 24 V with ADR

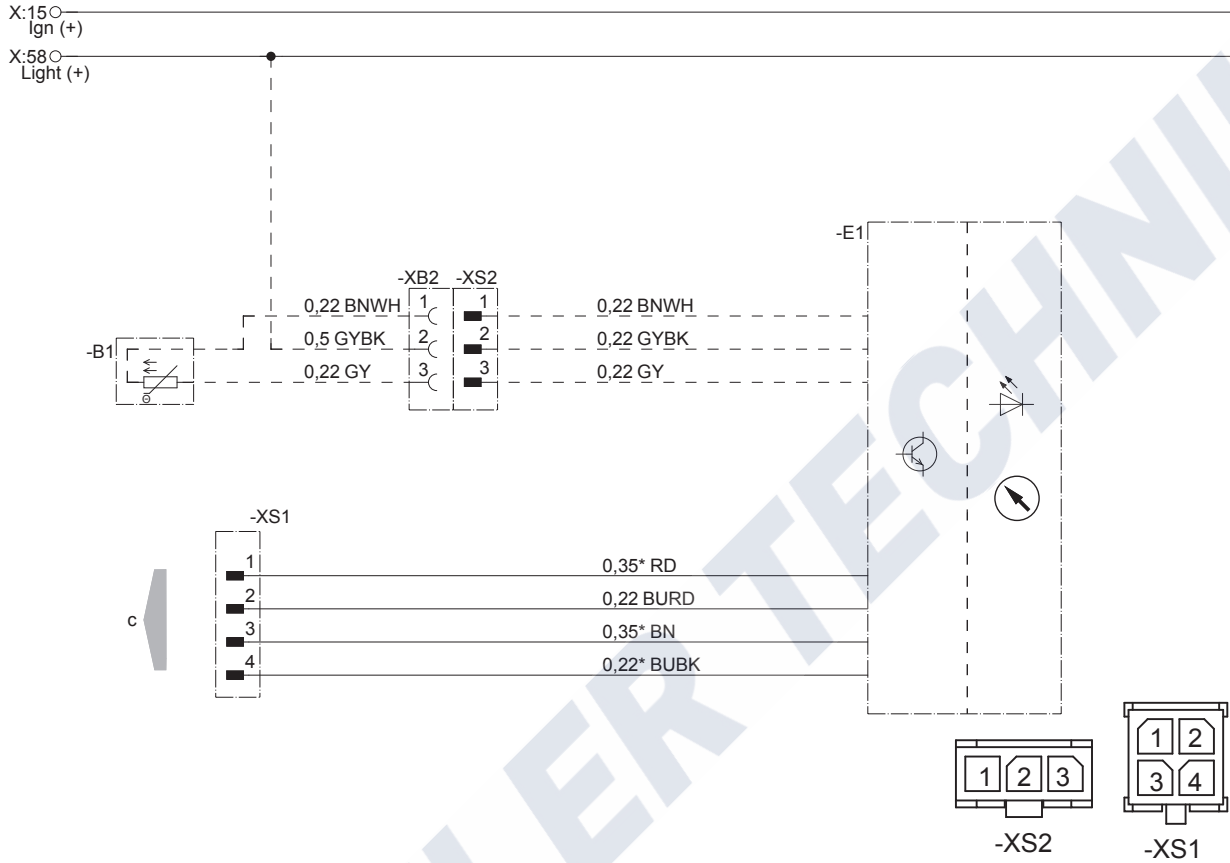


Parts list on page 28

25.2720.00.9603.0A

5.4 Circuit diagrams for control units

5.4.1 EasyStart Pro



22.1000.35.2210

- B1 Room temperature sensor (optional)
- E1 EasyStart Pro
- c to the heater

Note

- Heater circuit diagrams, from page 29.
- Further circuit diagrams for the EasyStart Pro are printed in the Installation Instructions Plus, these are available to view and download from the Service Portal.

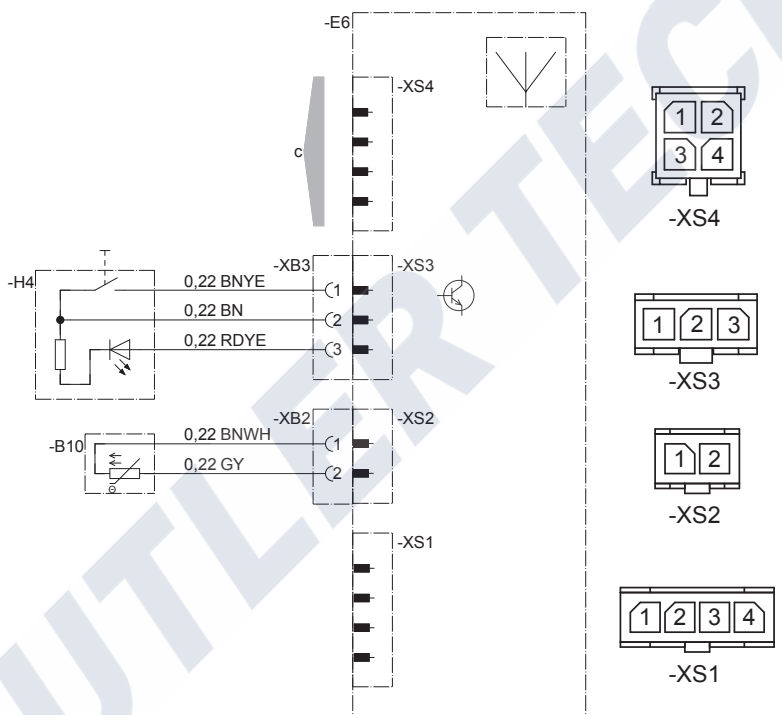
5.4.2 EasyStart Web



Note

These installation instructions describe the standard configuration. For details of enhanced configuration of the EasyStart Web with control units and for special functions, the “Installation Instructions PLUS – Easy Start / Altitude Kit / Special Functions and Diagnosis” are available to view and download from the partner portal.

X:15 Ign (+)
 X:58 Light (+)



Parts list

- B10 EasyStart Web interior temperature sensor
- E6 EasyStart Web radio remote control
- H4 EasyStart Web button

- c to the heater
- g to the heater
- y Connect cables and insulate

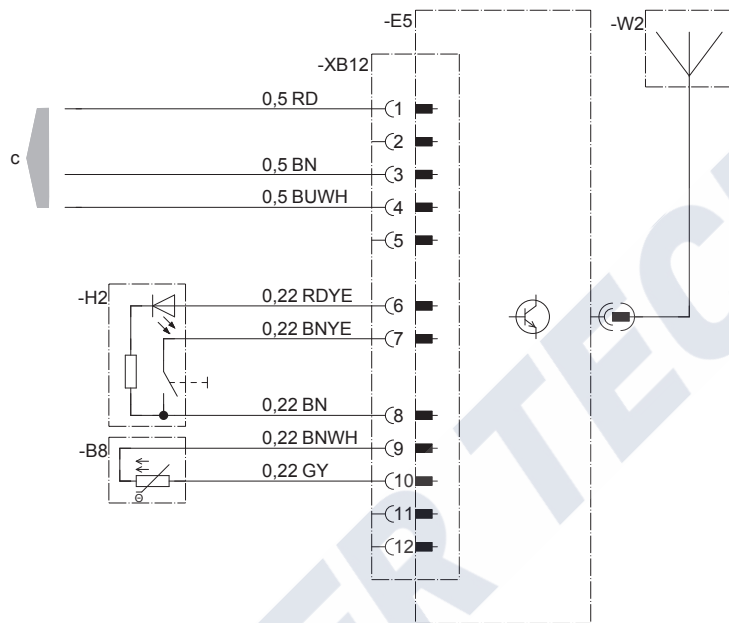
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Cable colours

RD	red	GR	grey	BK	black	WH	white	VT	violet
BU	blue	YE	yellow	GN	green	OR	orange	BN	brown

5.4.3 EasyStart Remote+

X:15 ○ Ign (+)
 X:58 ○ Light (+)



- B8 Room temperature sensor
- E5 Stationary unit, EasyStart Remote+
- H2 Button
- W2 Antenna
- c to the heater

i Note

- EasyStart Remote+ only for Airtronic 2 12 V
- Heater circuit diagrams, from page 29.

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