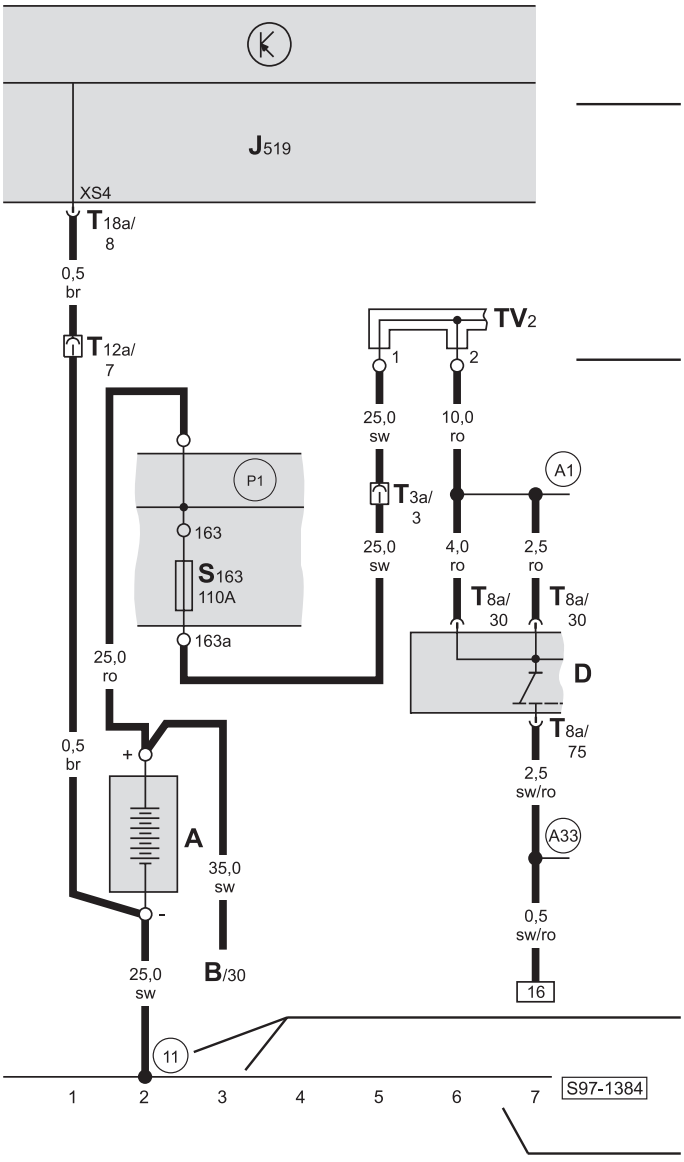
Circuit complex (function-oriented with consecutive No.)

No.1/2

Battery, Ignition/starter switch, Fuse holder on battery

Designation of the circuit shown on this page



J519 - Onboard supply control unit marked by a grey field (furthermore this control unit is no longer shown in the Current Flow Diagrams)

Load circuits with cable guide
All switches and contacts are marked in mechanical rest position.

Key to cable colours

ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange

Vehicle mass
Numbers in chalk mark the fitting location (see Legends).

Current path No.
In order to easily find the combinations.

Legend
The same part designations are used in all the current flow diagrams for the same components, e.g. always A for battery.

A - Battery
B - Starter
D - Ignition/starter switch
J519 - Onboard supply control unit
T3a - 3-pin connector, at left of bulkhead (grey)
T18a - 18-pin connector, at electrical system control unit (brown)

(11) - Earth point, left in engine compartment

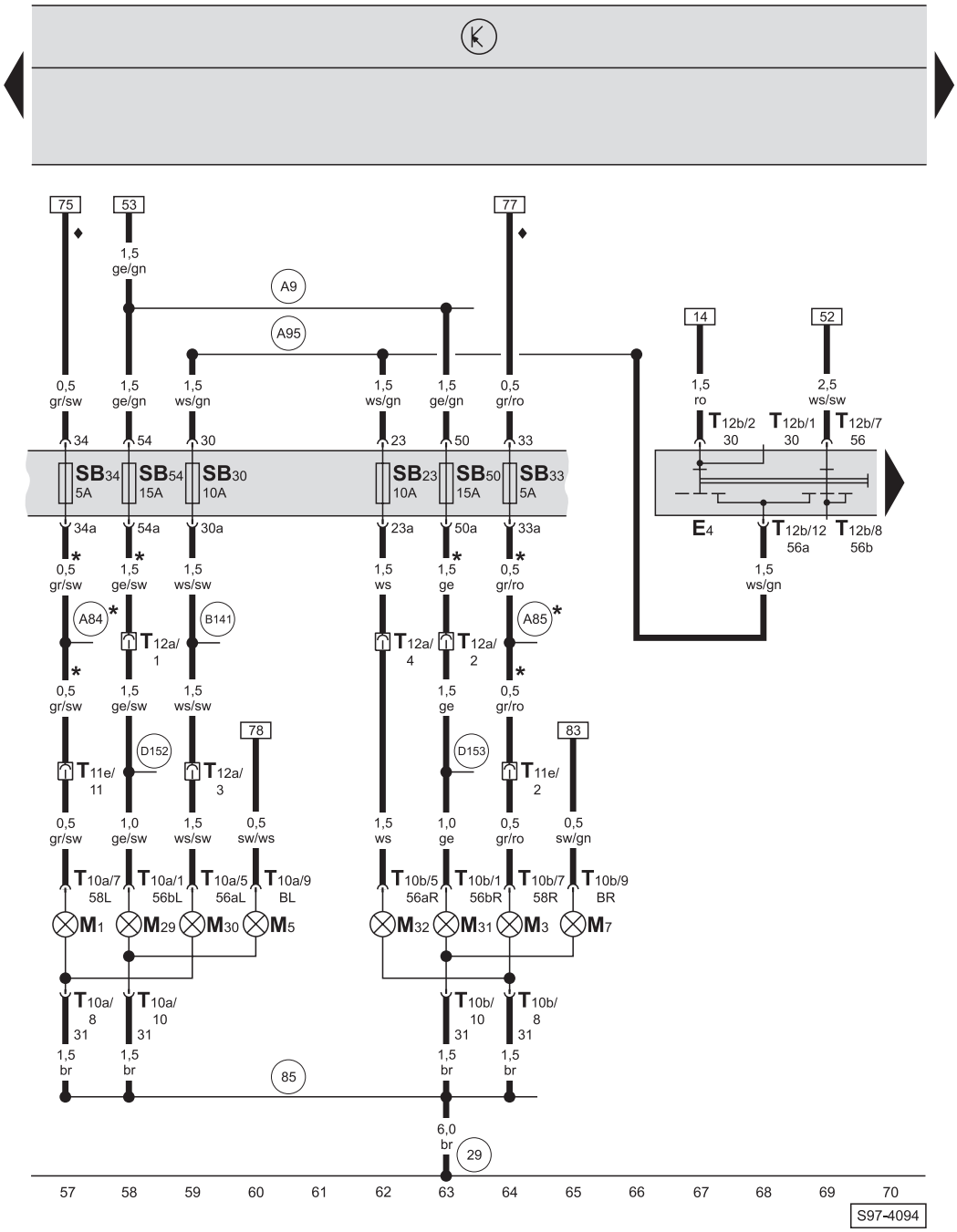
(A1) - Positive connection (30a), in wiring loom behind dash panel

(P1) - Positive connection (30), in fuse holder on battery

Terminal designations

Terminal	Meaning
15	Switched positive behind battery (output contact from ignition/starter switch)
15a	Switched positive from ignition/starter switch (behind fuse)
30	Output directly from battery positive
30a	Output directly from battery positive (behind fuse)
30al	Positive of onboard supply control unit for interior lights switched off
31	Battery negative, or vehicle earth
50	Output contact from ignition/starter switch for starter
53c	Wash system with automatic wipe
54	Brake lights
56a	Main beam
56aL	Left main beam
56b	Dipped beam
56bL	Left dipped beam
56bR	Right dipped beam
57L	Left side and tail light or parking light
57R	Right side and tail light or parking light
58	Side and tail light, licence plate light
58b	Illumination of switches and dash panel insert (set illumination intensity)
58L	Left side light, tail light and parking light
58R	Right side light, tail light and parking light
71	Input for horn
75	Output contact from ignition/starter switch for switching off consumers to relieve battery when starting
75al	Positive switched off via heater switch or ignition/starter switch when starting engine
75x	Switched-off positive behind relief relay of battery when starting (relay controlled via ignition/ starter switch)
86s	Switched-off positive by ignition/starter switch when key removed completely from ignition/ starter switch
87	Output contact from fuel pump relay or from diesel direct injection system relay
87a	Output contact from fuel pump relay or from diesel direct injection system relay behind fuse
CAN - H CAN - L	Data bus between drive control units (engine, automatic gearbox, ABS, dash panel insert, on-board supply control unit, …)
CAN - H, komfort CAN - L, komfort	Convenience data bus between convenience system control units (door control units, air conditioning, dash panel insert, on-board supply control unit, …)
K	Diagnostic cable between control units

Low beam and headlight flasher switch, headlights, fuse holder, (does not apply to models with gas discharge lights)



ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange

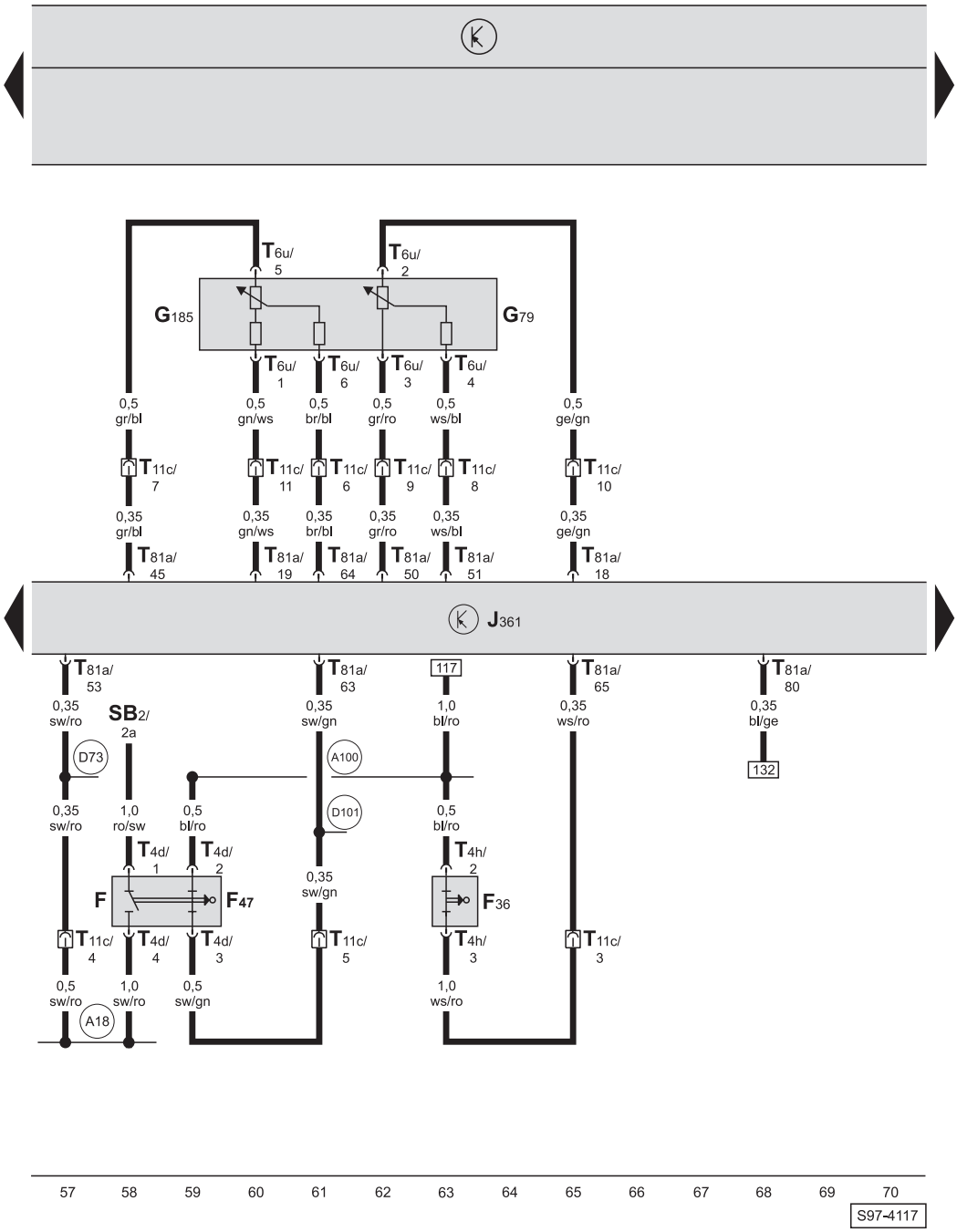
E4 - Headlight dipper/flasher switch
M1 - Side light bulb, left
M3 - Side light bulb, right
M5 - Turn signal bulb, front left
M7 - Turn signal bulb, front right
M29 - Headlight dipped beam bulb, left
M30 - Headlight main beam bulb, left
M31 - Headlight dipped beam bulb, right
M32 - Headlight main beam bulb, right
T10a - 10-pin connector, at left headlight
T10b - 10-pin connector, at right headlight
T11e - 11-pin connector, at left of bulkhead (green)
T12a - 12-pin connector, at left of bulkhead (white)
T12b - 12-pin connector, at headlight dipper/flasher switch

(29) - Earth point, in left of engine compartment, behind battery (at suspension strut mounting)

(85) - Earth connection -1-, in wiring loom in left of engine compartment
(A9) - Connection (56b), in wiring loom behind dash panel
(A84) - Connection (58L), in wiring loom behind dash panel
(A85) - Connection (58R), in wiring loom behind dash panel
(A95) - Connection (56a), in wiring loom behind dash panel
(B141) - Connection (56aL), in wiring loom behind dash panel
(D152) - Positive connection (56bL), in left engine compartment wiring loom
(D153) - Positive connection (56bR), in right engine compartment wiring loom

* - Does not apply to models with bulb failure indicator
♦ - Does not apply to models with daytime running lights

Simos control unit, accelerator pedal position sender, brake pedal switch, clutch pedal switch

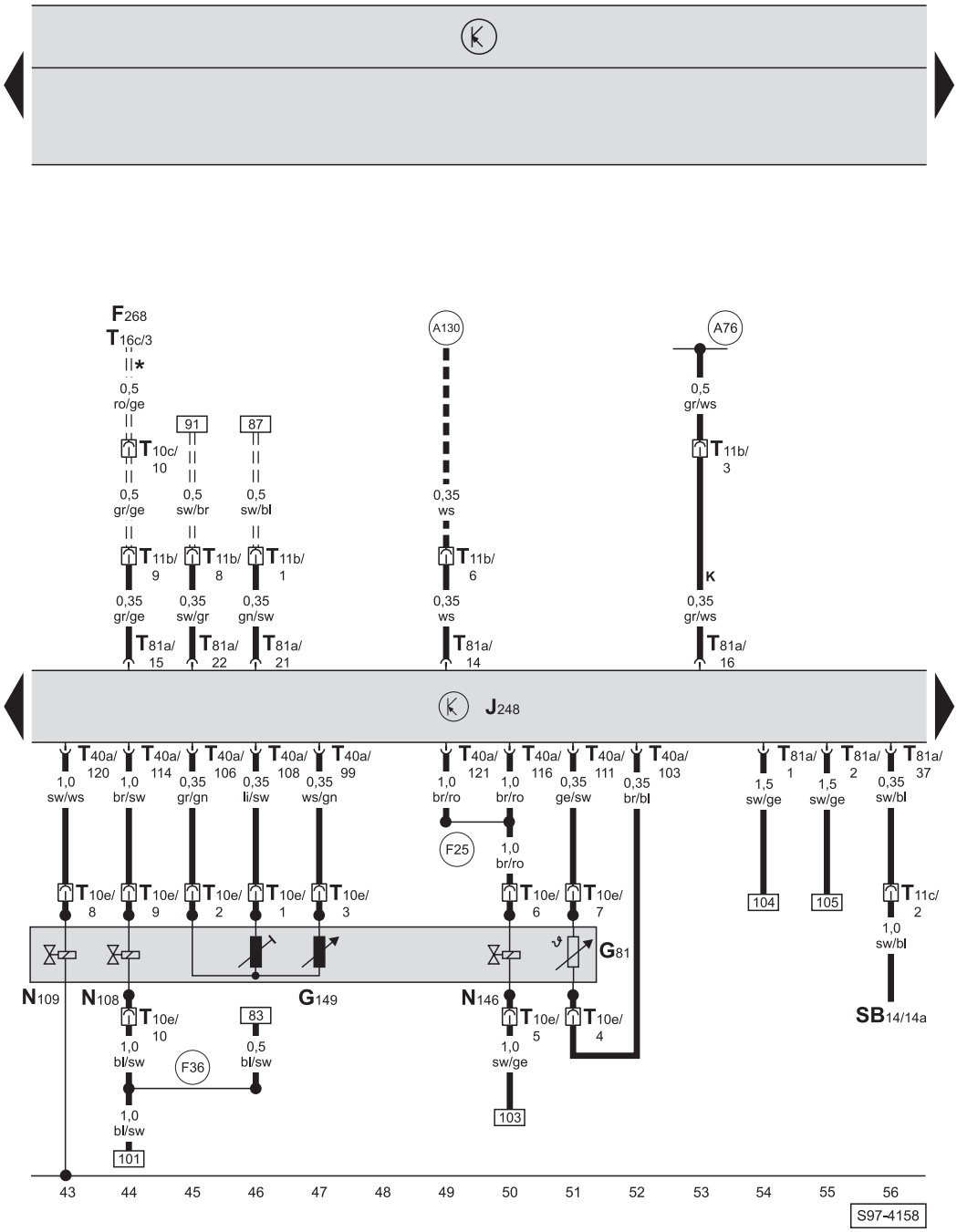


ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange

F - Brake light switch
F36 - Clutch pedal switch
F47 - Brake pedal switch
G79 - Accelerator position sender
G185 - Accelerator pedal position sender -2-
J361 - Simos control unit
SB2 - Fuse, in fuse holder
T4d - 4-pin connector, at brake pedal switch
T4h - 4-pin connector, at clutch pedal switch
T6u - 6-pin connector, at accelerator pedal position sender
T11c - 11-pin connector, at left of bulkhead (blue)
T81a - 81-pin connector, at engine control unit

A18 - Connection (54), in wiring loom behind dash panel
A100 - Connection (87a), in wiring loom behind dash panel
D73 - Connection (54), in left of engine compartment wiring loom
D101 - Connection (brake pedal switch), in engine compartment wiring loom

Diesel direct injection system control unit, fuel temperature sender, modulating piston movement sender, quantity adjuster



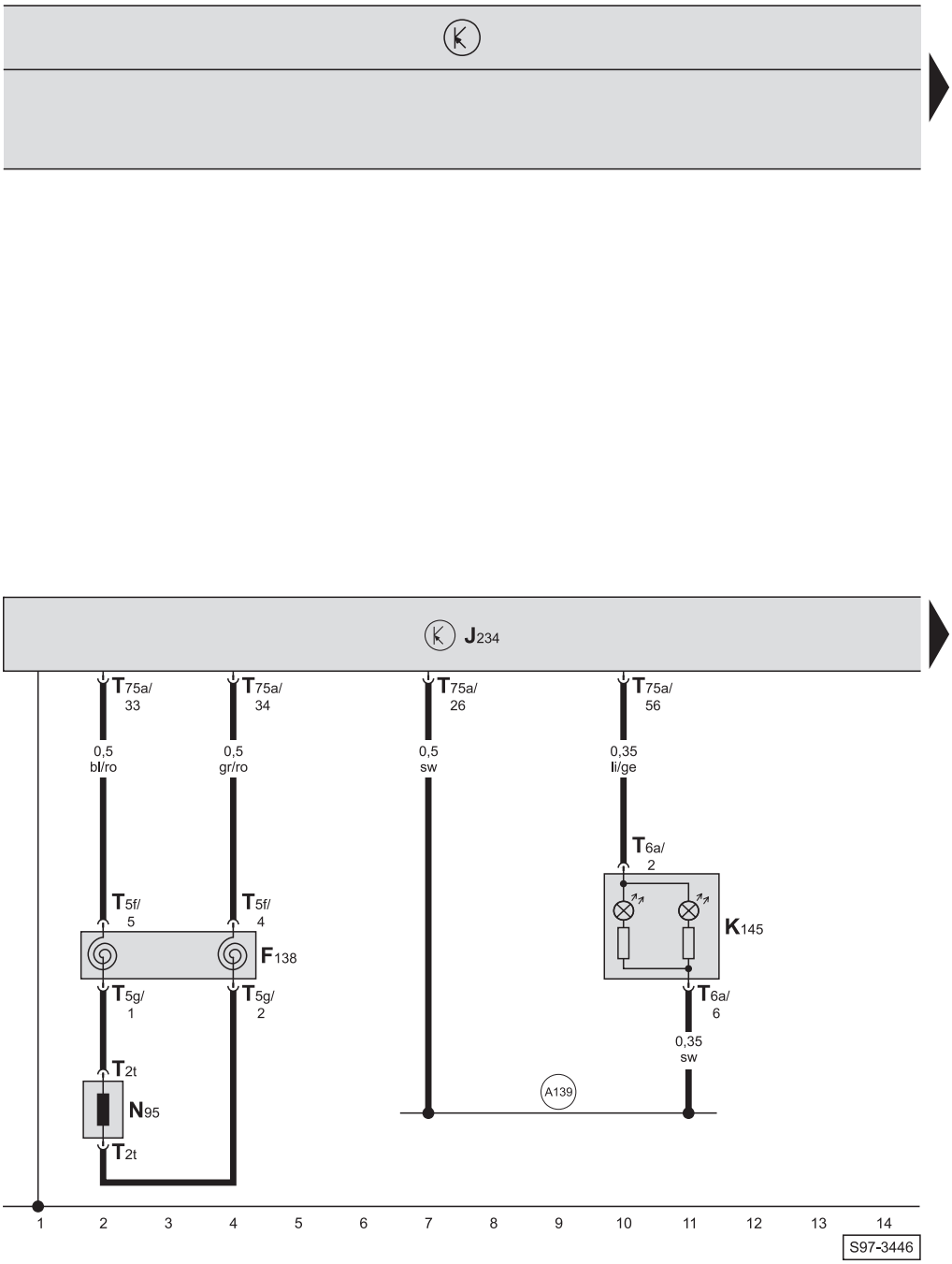
ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange

F268 - Heater element contact switch (PTC)
G81 - Fuel temperature sender
G149 - Modulating piston movement sender
J248 - Diesel direct injection system control unit
N108 - Commencement of injection valve
N109 - Fuel cut off valve
N146 - Quantity (metering) adjuster
SB14 - Fuse, in fuse holder
T10c - 10-pin connector, behind dash panel on right
T10e - 10-pin connector, at injection pump
T11b - 11-pin connector, at left of bulkhead (red)
T11c - 11-pin connector, at left of bulkhead (blue)
T16c - 16-pin connector, at fresh air controls
T40a - 40-pin connector, at engine control unit
T81a - 81-pin connector, at engine control unit

A76 - Connection (K diagnosis wire), in wiring loom behind dash panel on left
A130 - Connection (CCS), in wiring loom behind dash panel on left
F25 - Connection -1-, in engine preassembly wiring loom
F36 - Connection (87a), in engine preassembly wiring loom

* - Does not apply to models with air conditioning
■ ■ ■ - Applies only to models with CCS
= = = - Applies only to models with heating element (PTC)

Airbag control unit, Steering wheel coil connector, Driver side airbag igniter, Front passenger side airbag deactivated warning lamp

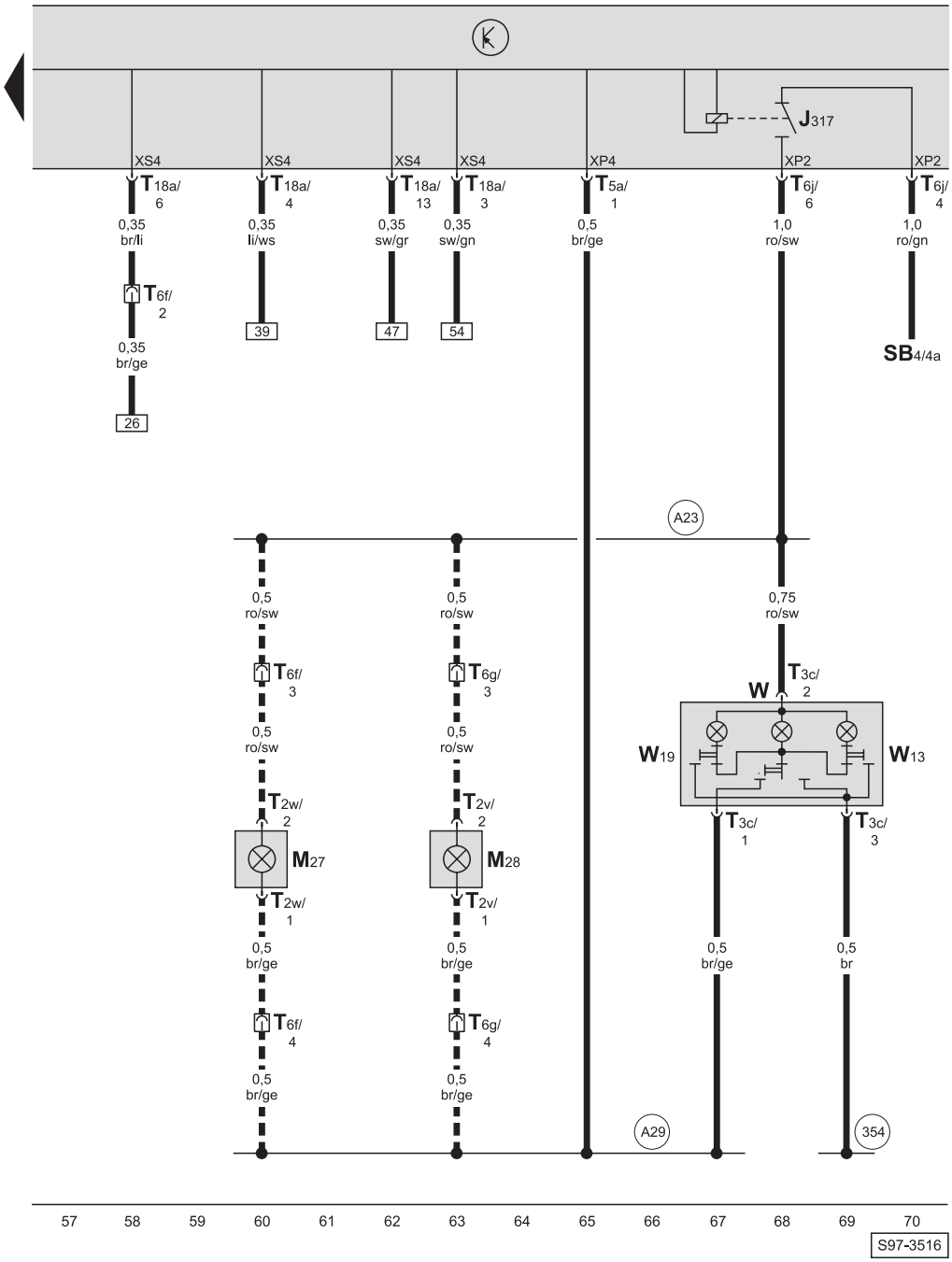


ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange

F138 - Airbag coil connector
J234 - Airbag control unit
K145 - Front passenger side airbag deactivated warning lamp
N95 - Airbag igniter (driver side)
T2t - 2-pin connector, at airbag unit, driver side
T5f - 5-pin connector, at airbag coil connector in steering wheel
T5g - 5-pin connector, in steering wheel
T6a - 6-pin connector at the driver side airbag deactivated warning lamp
T75a - 75-pin connector, at airbag control unit

A139 - Positive connection (15), in wiring loom behind dash panel

Front interior light, Left door warning light, Right door warning light



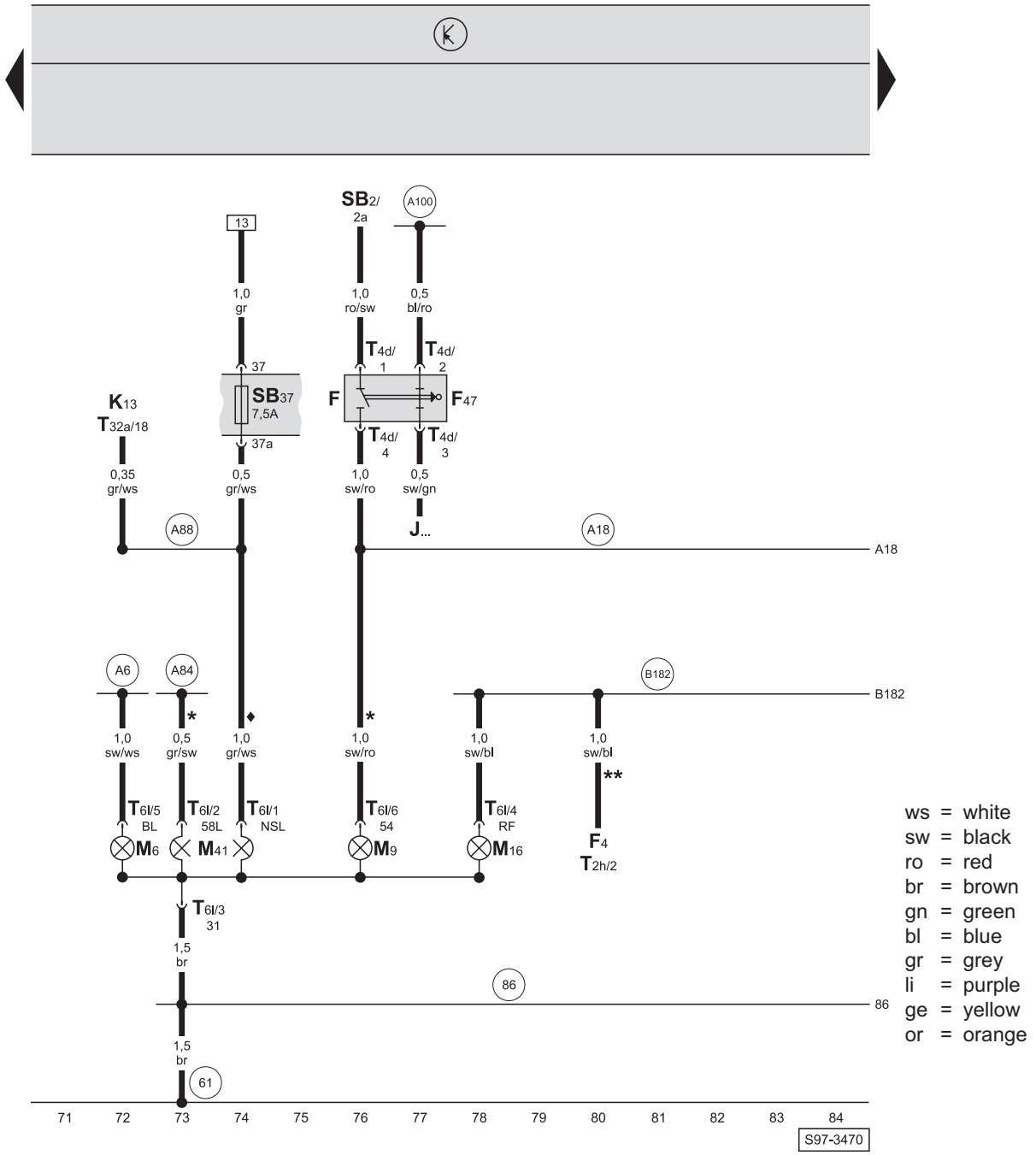
ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange

J317 - Terminal 30 voltage supply relay
M27 - Left door warning light
M28 - Right door warning light
SB4 - Fuse, in fuse holder
T2v - Connector, 2-pin, at right door warning light
T2w - Connector, 2-pin, at left door warning light
T3c - 3-pin connector, at front interior light bulb
T5a - 5-pin connector, at electrical system control unit (black)
T6f - 6-pin connector, at left A pillar (brown)
T6g - 6-pin connector, at right A pillar (brown)
T6j - 6-pin connector, at electrical system control unit (brown)
T18a - 18-pin connector, at electrical system control unit (brown)
W - Interior light, front
W13 - Front passenger's reading light
W19 - Driver-side reading light

(354) - Earth connection, in wiring harness behind dash panel
(A23) - Positive connection (30al), in wiring loom behind dash panel
(A29) - Connection (interior light 31), in wiring loom behind dash panel

■ ■ ■ - Applies only to models with door warning lights

Brake light switch, left tail light, fuse holder

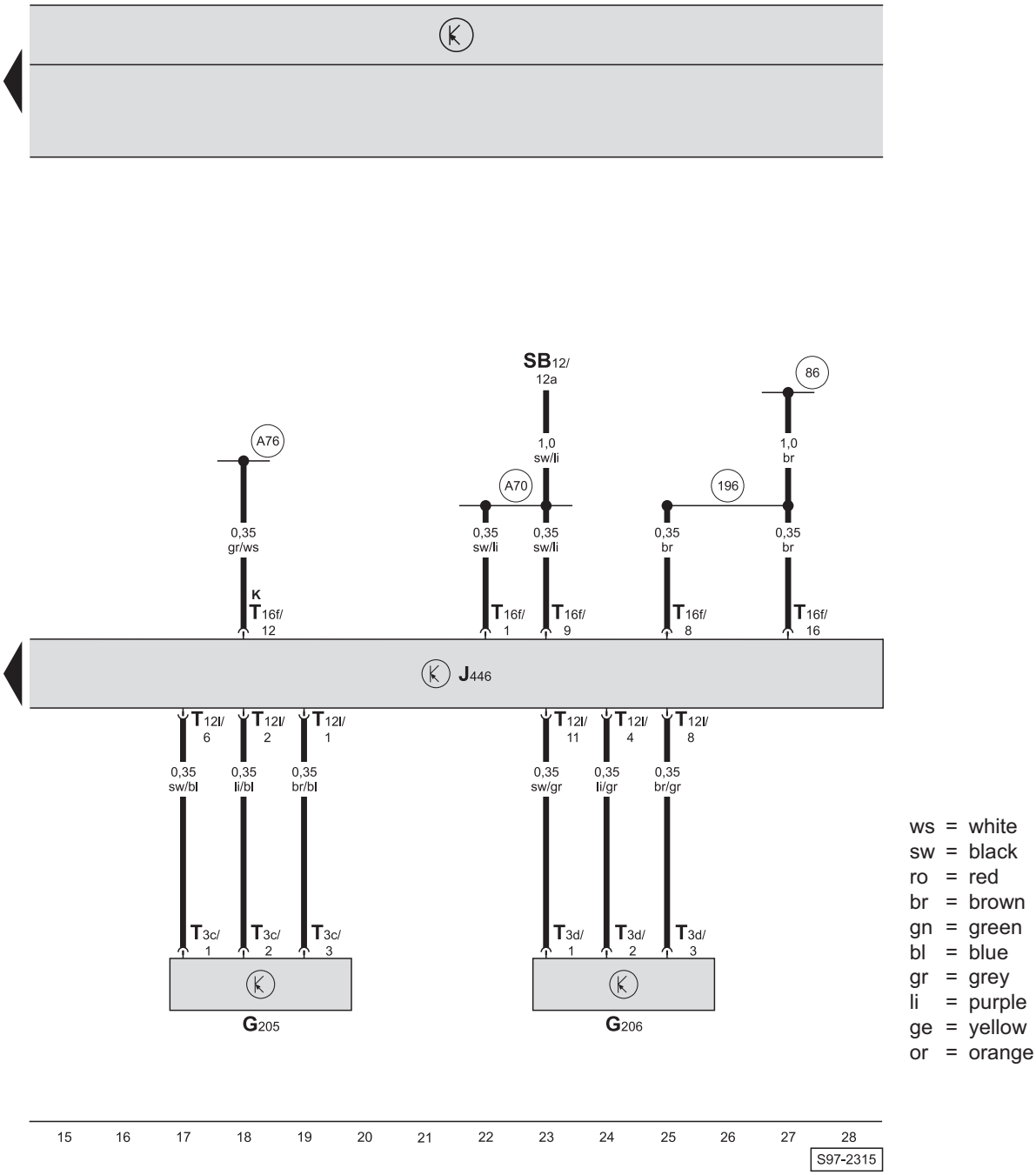


F - Brake light switch
F4 - Reversing light switch
F47 - Brake pedal switch
J... - Engine control units
K13 - Rear fog light warning lamp
M6 - Turn signal bulb, rear left
M9 - Brake light bulb, left
M16 - Reversing light bulb left
M41 - Left tail light and rear fog light bulb
T2h - 2-pin connector, at reversing light switch
T4d - 4-pin connector, at brake pedal switch
T6l - 6-pin connector, at left tail light
T32a - 32-pin connector, at dash panel insert

61 - Earth point, C-pillar left
86 - Earth connection -1-, in rear interior wiring loom
A6 - Positive connection (left turn signal light), in wiring loom behind dash panel
A18 - Connection (54), in wiring loom behind dash panel
A84 - Connection (58L), in wiring loom behind dash panel
A88 - Connection (NSL), in wiring loom behind dash panel
A100 - Connection (87a), in wiring loom behind dash panel
B182 - Connection (RF), in interior wiring loom

* - Does not apply to models with bulb failure indicator
** - Does not apply to models with automatic gearbox
♦ - Does not apply to models with trailer coupling

Parking aid

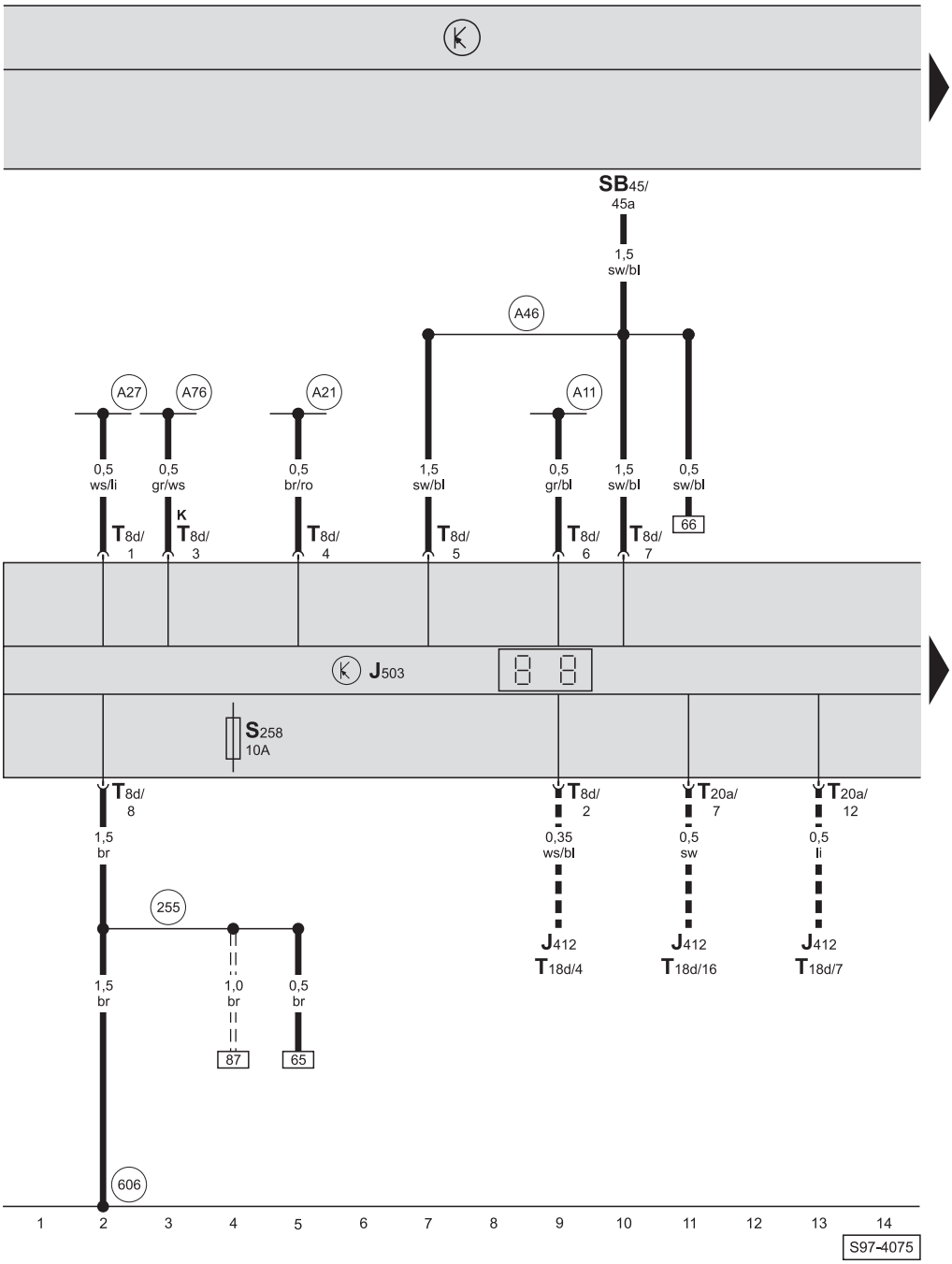


ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange

G205 - Rear right, centre, parking aid sender
G206 - Rear right parking aid sender
J446 - Control unit for parking aid
SB12 - Fuse, in fuse holder
T3c - Connector, 3-pin, at parking aid sender, rear right, middle
T3d - Connector, 3-pin, at parking aid sender, rear right
T12l - Connector, 12-pin, at parking aid control unit
T16f - Connector, 16-pin, at parking aid control unit

(86) - Earth connection -1-, in rear interior wiring loom
(196) - Earth connection -3-, in rear interior wiring loom
(A70) - Positive connection (15a), in wiring loom behind dash panel
(A76) - Connection (K diagnosis wire), in wiring loom behind dash panel on left

Navigation system control unit



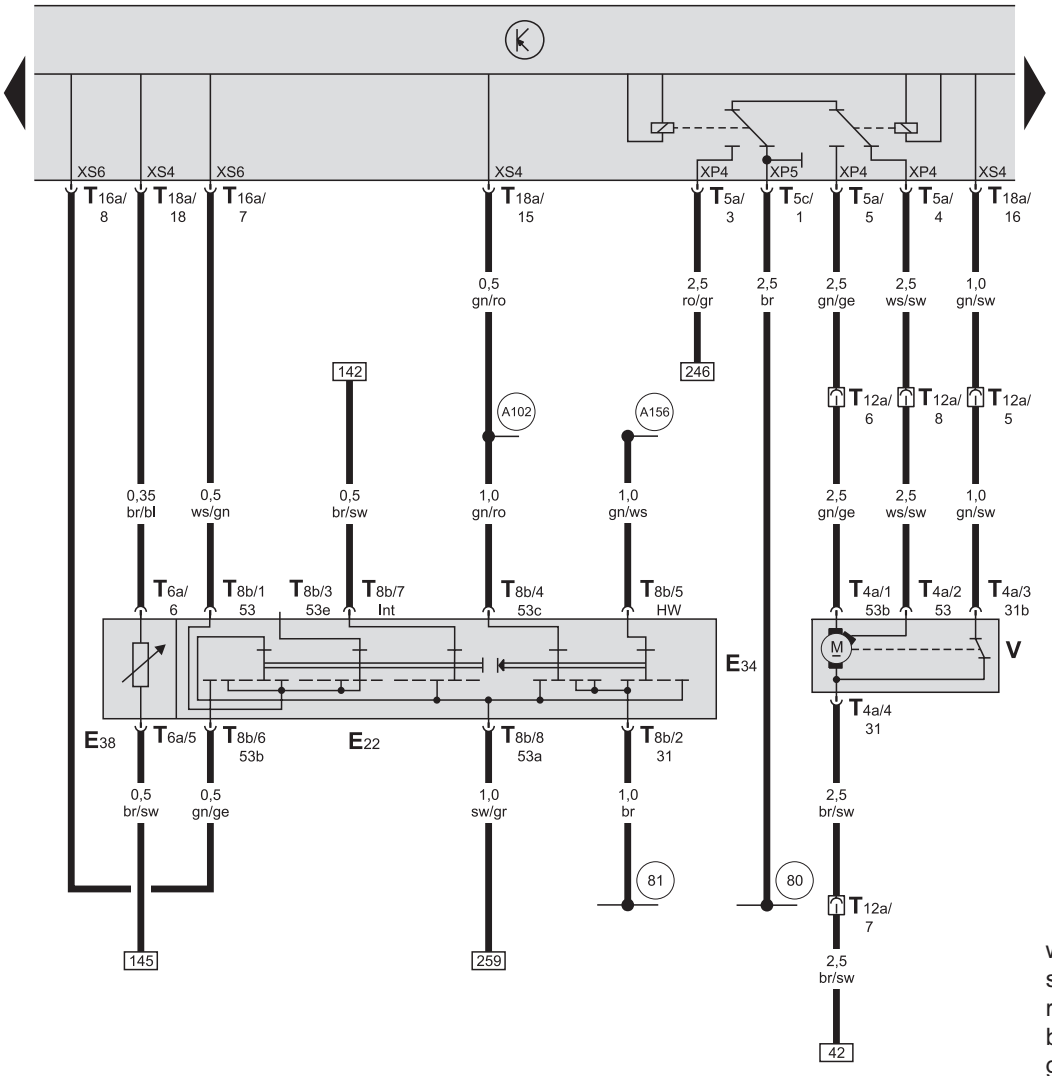
ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange

J412 - Control unit for telephone operating electronics (interface box)
J503 - Navigation system control unit
S258 - Fuse for navigation system
SB45 - Fuse, in fuse holder
T8d - 8-pin connector, at navigation system control unit (black)
T18d - 18-pin connector, at control unit for telephone operating electronics (interface box)
T20a - 20-pin connector, at navigation system control unit

(255) - Earth connection -1-, in wiring loom behind dash panel
(606) - Earth point, under the centre console, near gear stick
(A11) - Positive connection (58b), in wiring loom behind dash panel
(A21) - Positive connection (86s), in wiring loom behind dash panel
(A27) - Connection (vehicle speed signal), in wiring loom behind dash panel
(A46) - Positive connection (30 - from radio), in wiring loom behind dash panel
(A76) - Connection (K diagnosis wire), in wiring loom behind dash panel on left

= = = - Applies only to models with CD changer
■ ■ ■ - Applies only to models with mobile phone preinstallation 2-Cullmann

Windshield wiper and rear window wiper switch, windshield wiper motor, (does not apply to Notchback models)



ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange

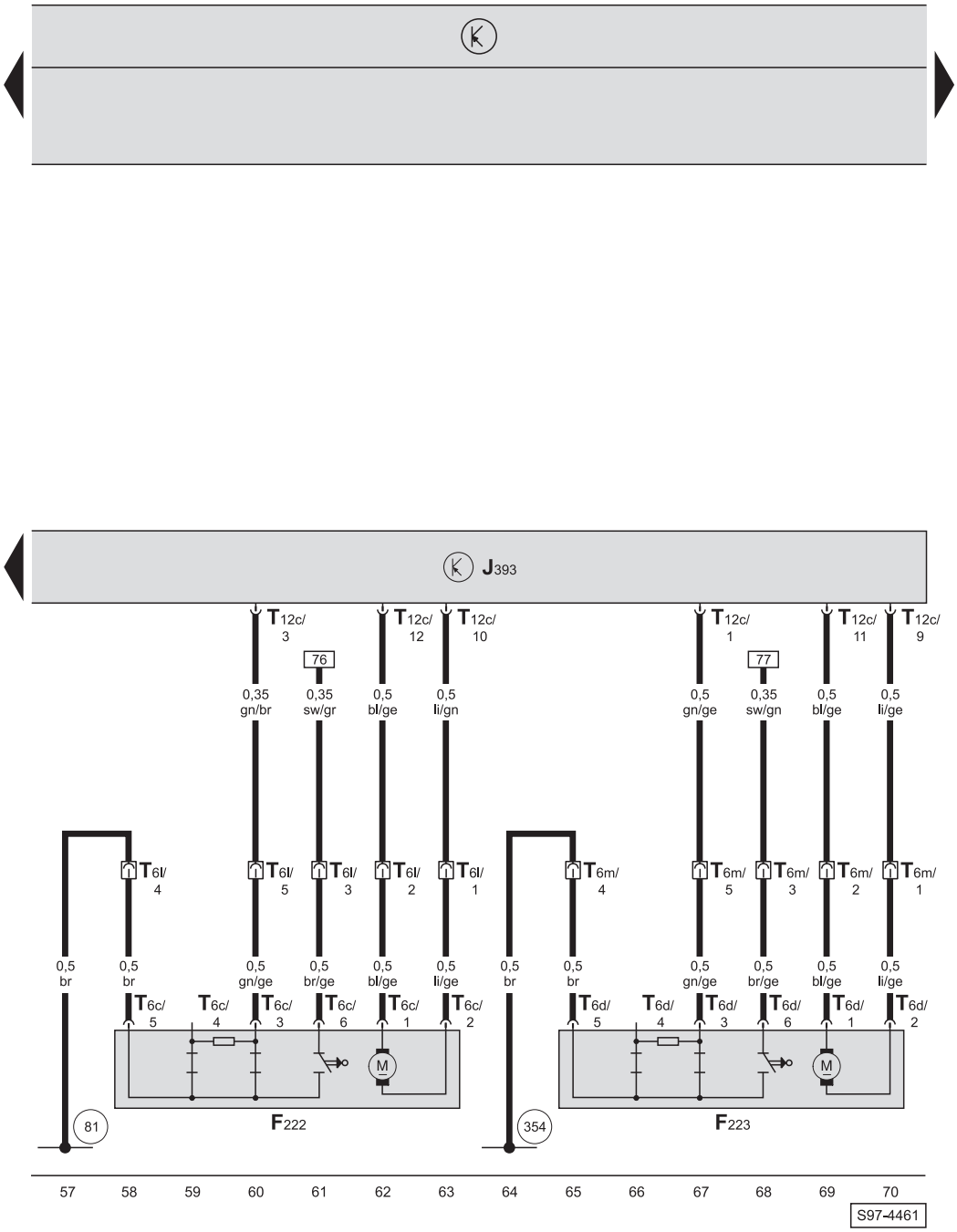
141 142 143 144 145 146 147 148 149 150 151 152 153 154

S97-4442

E22 - Intermittent wiper switch
E34 - Rear wiper switch
E38 - Intermittent wiper control
T4a - 4-pin connector, at windscreen wiper motor
T5a - 5-pin connector, at electrical system control unit (black)
T5c - 5-pin connector, at electrical system control unit (brown)
T6a - 6-pin connector, at windscreen wiper intermittent switch
T8b - 8-pin connector, at windscreen wiper intermittent switch
T12a - 12-pin connector, at left of bulkhead (white)
T16a - 16-pin connector, at electrical system control unit (black)
T18a - 18-pin connector, at electrical system control unit (brown)
V - Windscreen wiper motor

(80) - Earth connection, in wiring harness behind dash panel
(81) - Earth connection, in wiring harness behind dash panel
(A102) - Connection (wiper), in wiring loom behind dash panel
(A156) - Connection (53c), in wiring loom behind dash panel

Convenience electrics central control unit, central locking locking unit - rear left, central locking locking unit - rear right

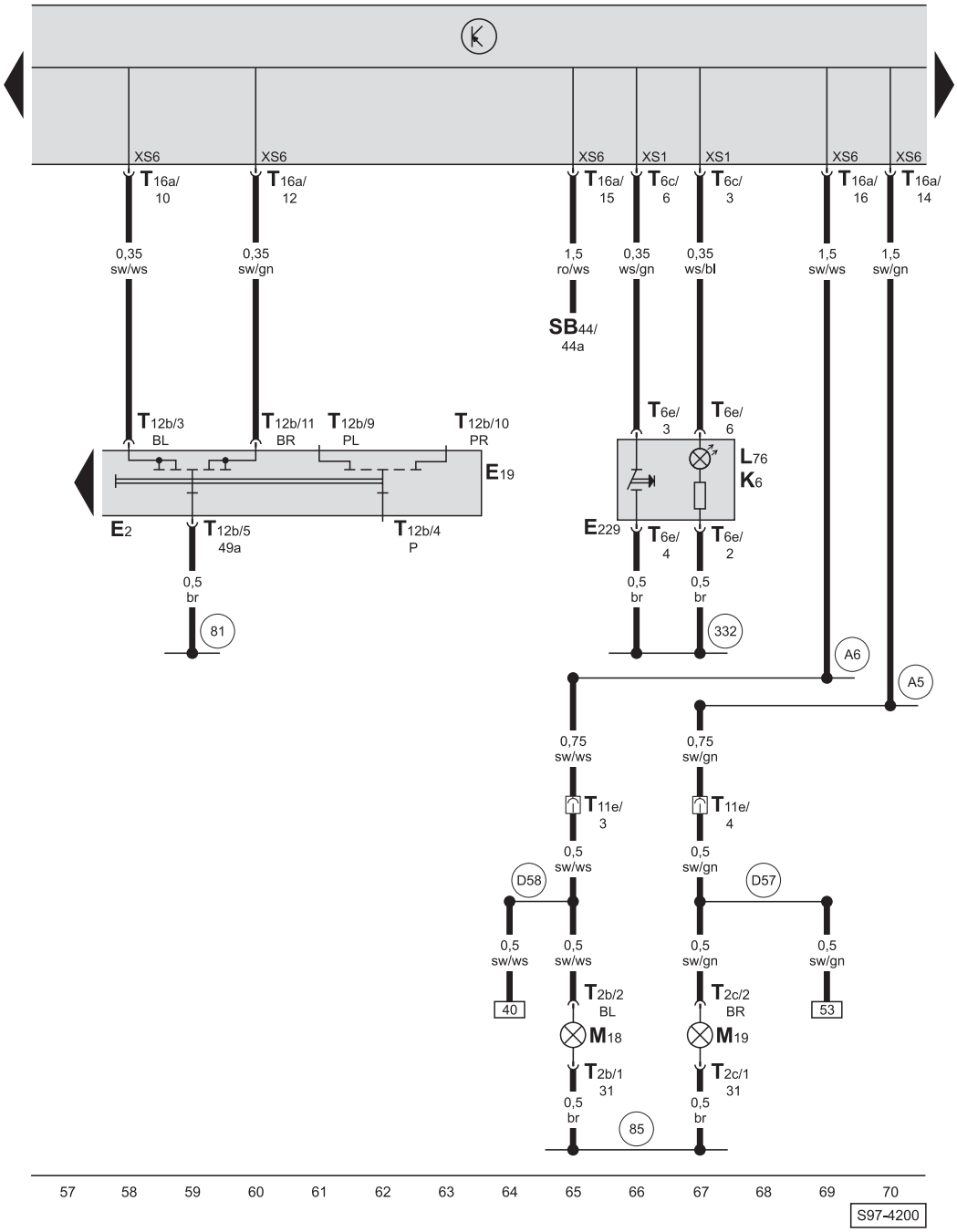


ws = white
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gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange

F222 - Central locking lock unit, rear left (switch position - released, door closed)
F223 - Central locking lock unit, rear right (switch position - released, door closed)
J393 - Convenience electrics central control unit
T6c - 6-pin connector, at rear left central locking locking unit
T6d - 6-pin connector, at rear right central locking locking unit
T6l - 6-pin connector, at left B pillar (blue)
T6m - 6-pin connector, at right B pillar (blue)
T12c - Connector, 12-pin, at convenience electrics central control unit (black)

(81) - Earth connection, in wiring harness behind dash panel
(354) - Earth connection, in wiring harness behind dash panel

Turn signal light switch, parking light switch, hazard warning light pushbutton, side turn signal light



ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = purple
ge = yellow
or = orange

E2 - Turn signal switch
E19 - Parking light switch
E229 - Button for hazard warning lights
K6 - Hazard warning light system warning lamp
L76 - Switch/button illumination
M18 - Side turn signal bulb, left
M19 - Side turn signal bulb, right
SB44 - Fuse, in fuse holder
T2b - 2-pin connector, at left side turn signal light
T2c - 2-pin connector, at right side turn signal light
T6c - 6-pin connector, at electrical system control unit (black)
T6e - 6-pin connector, at hazard warning light pushbutton
T11e - 11-pin connector, at left of bulkhead (green)
T12b - 12-pin connector, at turn signal light switch
T16a - 16-pin connector, at electrical system control unit (black)

(81) - Earth connection, in wiring harness behind dash panel
(85) - Earth connection -1-, in wiring loom in left of engine compartment
(332) - Earth connection, in wiring harness behind dash panel
(A5) - Positive connection (right turn signal light), in wiring loom behind dash panel
(A6) - Positive connection (left turn signal light), in wiring loom behind dash panel
(D57) - Connection (right turn signal light), in right engine compartment wiring loom
(D58) - Connection (left turn signal light), in left engine compartment wiring loom

A

Check intermittent wiper switch -E22-

- Switch off ignition.
- Place -T8b- connector on windscreen wiper switch.
- Switch lever of windscreen wiper switch into wiper stage 1.
- Connect red measuring tip to contact 1/53 of T8b connector.
- Switch on ignition.

Voltage not available or smaller than 8 V.	Readout approx. battery voltage.

Windscreen wiper switch defective, replace.

- Switch lever of windscreen wiper switch into wiper stage 2.
- Connect red measuring tip to contact 6/53b of T8b connector.

Voltage not available or smaller than 8 V.	Readout approx. battery voltage.

Windscreen wiper switch defective, replace.

Check the castor of the windscreen -V- wiper motor

- Switch off ignition.
- Set measuring range selector switch of handheld multimeter e.g. V.A.G 1526 A, electrical continuity test
- Put the windscreen wiper in end position by briefly actuating the windscreen wiper switch.
- Lever of windscreen wiper switch in position “switch off“.
- Connect red measuring tip to contact 3/31b of T4a connector.
- Connect black measuring tip to contact 4/31 of T4a connector.

No continuity.	Continuity.

Windscreen wiper motor -V- defective, replace.

Wiring from windscreen wiper motor to onboard supply control unit defective, repair according to current flow diagram.

END

Signal description on onboard supply control unit

Plug connection		Signal
XS1	T6c/1	Input of light switch (for headlight washer system)
	T6c/2	Input of regulator for lighting - switches and instruments (58b)
	T6c/3	Output of warning lamp + hazard warning light button illumination
	T6c/4	Input of heated rear window button (31)
	T6c/5	Output for heated rear window warning lamp
	T6c/6	Input of hazard warning light button (31)
XS2	T18b/1	Output for selector level lock
	T18b/2	Output (release) for sliding sunroof adjustment control unit (15)
	T18b/3	Output (lock) for control unit for heated front passenger seat (until 01.05) Output (lock) for control unit for heated front seats (as of 01.05)
	T18b/4	
	T18b/5	
	T18b/6	
	T18b/7	
	T18b/8	
	T18b/9	CAN-L, comfort
	T18b/10	Output (lock) for control unit for heated front passenger seat (until 01.05)
	T18b/11	
	T18b/12	CAN-H, comfort
	T18b/13	Input of multi-function switch for automatic gearbox (31)
	T18b/14	Output for headlight washer system relay
	T18b/15	
	T18b/16	
	T18b/17	Output for start interlock relay
	T18b/18	
XS3	T6Y/1	
	T6Y/2	Input of CCS switch (Off)
	T6Y/3	Input of CCS switch (On/Off)
	T6Y/4	
	T6Y/5	Input of CCS switch (support/accelerate)
	T6Y/6	Input of CCS switch (set)

Continued on next page!