

Solectria

Motor Wires

- T - Blue
- S - White
- R - Red

Battery

- B+ - Red
- B- - Black

AMC 300

- * Brake Light Relay - Black white wire
- * Emergency shut down output for fan - Purple

26 pin connectors

1	} delta	configured to delta	14	common	^{to 6, 10}
2	} common	star	15	battery voltage	96mA/V
3			16	battery current	16mA/A
4	forward		17	speed	20V/1000rpm
5	reverse		18		
6	prognose	common	19	battery	
7	cruise	off	20	battery	
8	common		21	battery	
9	cruise	on	22	common	# 6, 10, 24
10	prognose	off when open	23	odometer	1 input/100m
11		common to 6, 10, 22, 24, 25	24	common	# 6, 10, 26
12		power saver	25	H+	power switch
13		(in/off)	26	HSD controller	active when closed

check max current for energy meter
10k R pot

common to # 6, 10, 24, 22, 12

to AMC320
DB25


AMC300 style
26 pin in socket

Connections

- brown 1
- red 2
- orange 3
- pink 4
- yellow 5
- green 6
- light green 7
- blue 8
- purple 9
- gray 10
- white 11
- black 12
- brown 13
- red/white 14
- red/blue 15
- orange 16
- orange/blue 17
- pink/black stripe 18
- yellow/black 19
- gray/white 20
- green/brown 21
- blue/white stripe 22
- purple 23
- gray 24
- black 25

common to #23 | 28, 24, 22, 14, 10, 6
 Delta (select^{always}) connect direct
 direction forward 4

regen on/off 11 ? off when open

disable switch dirt from pot? think it is used
 Pot ~~14~~ center wiper in 
 Pot. breaking red/orange

tie to #25
 → 5k 40 pin pot

main switch 25

direction backward 5

adjust pot economy 13

common to #1

Pot. accelerating brown/green → 5k pin pot

accelerator pot. center wiper → 5k pin pot. yellow/blue

Speed Pot

red #1 NC
#2

#3 one end

#4 } center
#5 }

#6 ~~next~~ other end

red/orange



yellow/blue

brown/green

5K POT

red zero acceleration 0R

yellow

Full throttle 723R

Zero yellow 5.3K
green

Full 4.67K

Fail safe
broken wire
max R at zero
~~resistance accel~~

∴ lower R at max
acceleration

∴ brown green to #24
yellow/blue to 12/25
red/orange to #13

I/F Box 3 junction boards
old - rpm sensor (from motor)
old - potentiometer

Speed Sensor

Pin 1 Red

2

3

4

5

6

7

8

9

10

Speed Sensor

DB9		10 Pin
GND/shield	↔	1 (Red)
1 red		2
6 green		3
2 yellow		4
7 white		5
3 orange		6
8 gray		7
4 purple		8
9 black		9
5 blue		10

DB9	
GND/shield	
1 red	
2 yellow	
3 orange	
4 purple	
5 blue	
6 green	
7 white	
8 gray	
9 black	

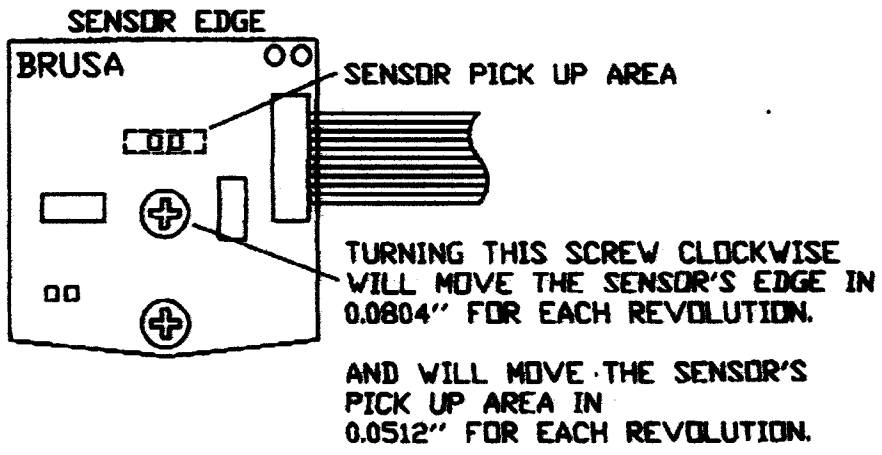
Early Force Motor Speed Sensor (Belt drive)

Unplug Motor Speed Sensor at Motor Controller.

5. Separate the motor cooling fan harness from the *vehicle* harness at the firewall.
6. Remove the (2) Philips machine screws (SAE #8-32) securing the fan housing to the motor and remove the fan and housing.
7. Remove the (3) small M4 (metric) screws from the motor cover plate. Carefully cut the seal between the plate and the motor with a razor blade while gently prying the plate with a small slotted screwdriver. Be extra careful near the sensor cable exit point from motor.
8. Inspect encoder wheel for dirt and sensor wear marks. Replace if damaged.
9. **To adjust:** Carefully remove silicone from inner slotted screw-head at circuit board and adjust as outlined below.
10. **To replace:** Cut the small zip tie securing the gray harness to the holder and remove the small Phillips screw (metric M-3) securing the holder and ground wire to the motor.
11. Remove the silicone from the slotted screws at the circuit board. Loosen the outer screw almost all the way- there is a spacer between the board and the motor under this screw. Loosen the inner screw (metric) all the way while reaching behind the board to catch the small spring. Now, remove the outer screw all the way being careful to catch the spacer/washer behind it. Please do not lose any hardware.
12. Snip the two black temperature sensor wires close to the board (1/8 - 1/4 inch), then undo the harness clamps at the firewall and remove the sensor from the vehicle.

Motor Speed Sensor Installation

1. Install a lock washer and a flat washer on outer shorter screw (metric M-3) and insert through circuit board and 0.025 spacer/washer under board. Hold spacer on back of board while starting screw into motor two turns. Place spring behind board and hold it while inserting inner longer screw (metric M-3) and flat washer through board and spring and into motor. Tighten down outer shorter screw all the way.
2. **To adjust:** Line up the speed sensor plate retaining screws parallel to the inner edge of the circuit board by turning the drive wheels slightly. Using a plastic non-abrasive feeler gauge to avoid damaging the sensor wheel, adjust inner screw so that the gap between the center inner edge of the board itself and the sensor plate is *0.145 inches*. Insert gauge only 1/8 inch from edge of board. Do not lift board with gauge.
3. Put a 1/8 inch dab of silicone sealant on each screw head and along outer edge of board to prevent movement.
4. Re-solder the temperature sensor wires if they were cut upon removal (they are not polarized). Be careful not to overheat the terminals or they may unsolder from the board. Install small harness holder and ground wire against the motor and tie-wrap harness to holder.
5. Run test procedure again before installing cover. (Temporarily plug in gray Anderson connector at motor controller and 9-pin connector.)
6. Apply a narrow bead of silicone sealant around the motor cover plate rim and install the cover plate. Be sure harness is seated in its notch.
7. The rest of the procedure is the reverse of removal. Be sure to install (2) tie-wraps at the red, white and blue connector before reinstalling metal zip-on mesh. Road test the



 This disk contains this READ-ME file and the file AMC for programming the AMC-III with an IBM-compatible PC via a serial port (COM1 or COM2).

INSTALL:

To install, you have to copy all the files in a directory (Ex: C:\AMC\)
 and start with AMC_E.EXE

Language:

Language is selected with parameter D (deutsch) or E (english)

Selection of COM-port:

The default COM port is COM1; additionally the COM-port number may also be given by a parameter.

e.g.: AMC E <CR> programming via COM1 in english
 or AMC E 1 <CR> programming via COM1 in english
 or AMC E 2 <CR> programming via COM2 in english

Preparations:

Connect the AMC to the PC with the special cable.
 This cable contains a RS422 (AMC) <-> RS232 (PC) interface converter.

If your PC has only 9-pole connectors for the COM-ports, you have to use a standard 9 <-> 25 pole converter. If you want to make this converter by yourself, only three wires have to be connected:

9-pole sub.-D (f)		25-pole sub.-D (m)
2	0-----	0 3
3	0-----	0 2
5	0-----	0 7

Make sure that no (mouse-)drivers are active on the used COM-port!

Start the AMC-x program as described above. A screen message will ask you to switch on the AMC. If the AMC is already powered-up at this time, you have to switch the AMC off and on, because the programming request will only be acknowledged in the AMC power-up sequence.

Important note:

If the AMC is in the programming mode, no converter functions will be active. when leaving the programming mode by exiting the AMC-x program, the converter functions will be active immediately (with the new parameters). So make sure, that your car won't run away at this time ... !

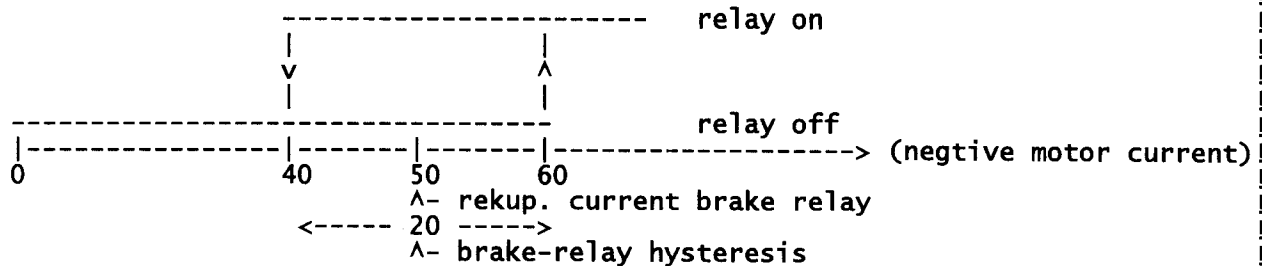
Changing values:

After the AMC is powered up in the programming mode, strike any key on the PC and all parameters will be displayed on the screen. Some of the values are

PRG_E

kickdown-range: don't change from zero (not available)
 otherwise strange things will happen !!!

brake-relay hysteresis: should be set to 20A for AMC-program releases >= 1.6
 will not work with AMC-program-releases < 1.6



Program description of AMCMON E

Version 2.34

The program AMCMON E x is catching and displaying all data, which is transmitted via the serial port of the AMC running in converter mode. It shows the internal values of the AMC-III and can therefore also be used for troubleshooting.

Preparations: connect the AMC-III with the special cable to COM1 or COM2 of the PC and turn on the AMC main switch.

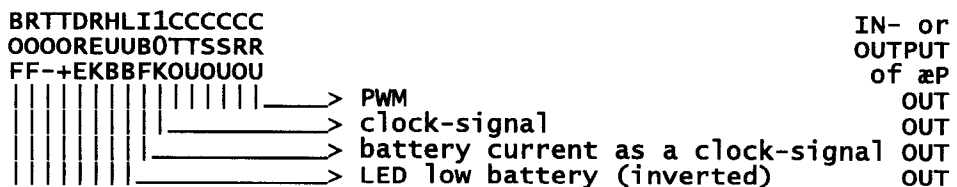
Start of the programs: AMCMON E x , and you will be prompted for the AMC-type or AMCMON E x yyy, where yyy is the AMC-type e.g. 325

x determines the used COM-Port of the PC, that means AMCMON E 1 uses COM1
 AMCMON E 2 uses COM2

On the screen these values will appear:

```
pedal operation ..... Amp
motorcurrent ref. .... Amp
motorcurrent act. .... Amp
economy ..... Amp
battery current ..... Amp
battery voltage ..... Volt
temp. power stage (min.40°C) °C
rotor speed ..... upm
rotor speed ..... upm
slip frequency ..... mHz
slip integral ..... mHz
max.slip integral ..... mHz
```

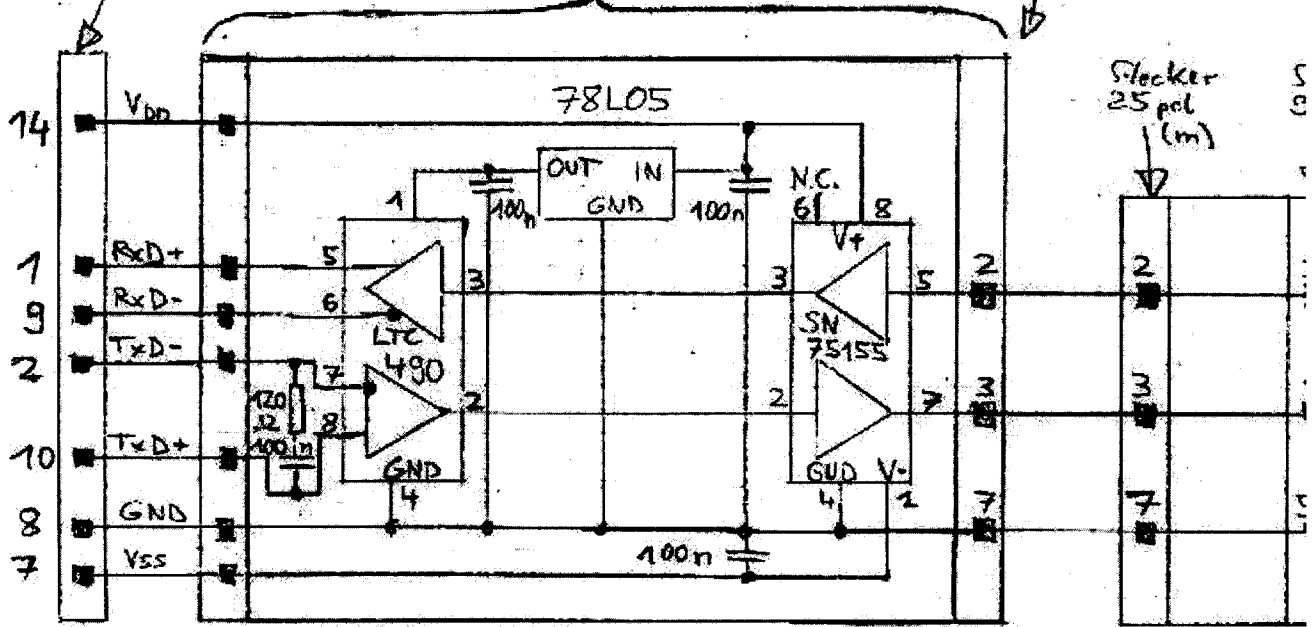
PROCESSOR PORT 2 16-bit binary



Stecker AMC-III
15 pol (m)

PC-Interface
Stecker

Stecker COMx
PC / 25 pol (f)



Anschluß-
Kabel
max. 2m

30F-Adapter
25 p. →

AMC-Interface Kabel

LTC490 = SN75179