Loco-Motor V2.2

MCU

Controler

Atmega 328-P

VCC

RST — 100n C8 — DTR

R2 10k

RST

PC6(/RESET) 29

GND 21
AREF 20
AVCC 18

PB6(XTAL1/TOSC1) 7
PB7(XTAL2/TOSC2) 8

22p C3
22p C4
16MHz Q2
GND

GND 3
GND 5
VCC 4
VCC 6

100n C5

Pin	Signal
PC0(ADC0)	23 A0
PC1(ADC1)	24 A1
PC2(ADC2)	25 A2
PC3(ADC3)	26 A3
PC4(ADC4/SDA)	27
PC5(ADC5/SCL)	28
ADC6	19
ADC7	22
PD0(RXD)	30 TX
PD1(TXD)	31 RX
PD2(INT0)	32 D2
PD3(INT1)	1 D3
PD4(XCK/T0)	2
PD5(T1)	9
PD6(AIN0)	10 D6
PD7(AIN1)	11 D7
PB0(ICP)	12 D8
PB1(OC1A)	13 D9
PB2(SS/OC1B)	14 CS
PB3(MOSI/OC2)	15 MO
PB4(MISO)	16 MI
PB5(SCK)	17 SCK

IC1

VCC
CAN-CS
CS-0R

R7 220R — RX
R12 220R — TX
D5 D4
GND

JSP-INTERFACE

FTDI-Interface

Pin	Signal
DTR	1
RX	2
TX	3
VCC	4
GND	5

PROG

ICP

SCK — SC
MI — SI
MO — SO
RST — RS

CAN-CONTROLER

CAN-Interface

VCC

R1 10k
CAN-CS
MI
MO
SCK

MCP2515

Pin		Signal
VDD	20	TXCAN 1
RST	19	RXCAN 3
CS	18	CLKOUT/SOF 2
SO	17	TX0RTS 4
SI	16	TX1RTS 5
NC'	15	NC 6
SCK	14	TX2RTS 7
INT	13	OSC2 8
RX0BF	12	OSC1 9
RX1BF	11	VSS 10

C6 100n

DA1

Q1 8MHz
C1 22p
C2 22p
GND

MCP2551

Pin	Signal
TXD 1	RS 8
VSS 2	CANH 7
VDD 3	CANL 6
RXD 4	VREF 5

+12V

3-794618-4
CAN-1
GND 1 2
3 4 +12V
CAN-H
CAN-L

3-794618-4

1 2
3 4
CAN-2

GND

POWER

+12V

IC3 LM340MP-05
VI VO
GND

100n C11
16uF C13
1n C12
100n C15
16uF C16
1n C14
+5V

R15 220R
GND

VCC

SPANNUNGSMESSUNG

A0 — R3 47K — MOTOR+
D1 5,1V — R4 10k
GND

A1 — R5 47K — MOTOR-
D2 5,1V — R6 10k
GND

A2 — R8 47K — BATT-1
D4 5,1V — R9 10k
GND

P1
1
2

A3 — R10 47K — BATT-2
D5 5,1V — R11 10k
GND

CONTROLER-PORT

+12V

D3 5A
DRIVE-PWM D9 —
BREAK-PWM D6 —
FORW-REL D7 —
REVERS-REL D8 —

Pin		Signal
	1 2	D2 LIGHT
	3 4	D3 HORN
	5 6	MOTOR+
	7 8	MOTOR-
	9 10	

4-794620-0
DRIVER
GND