

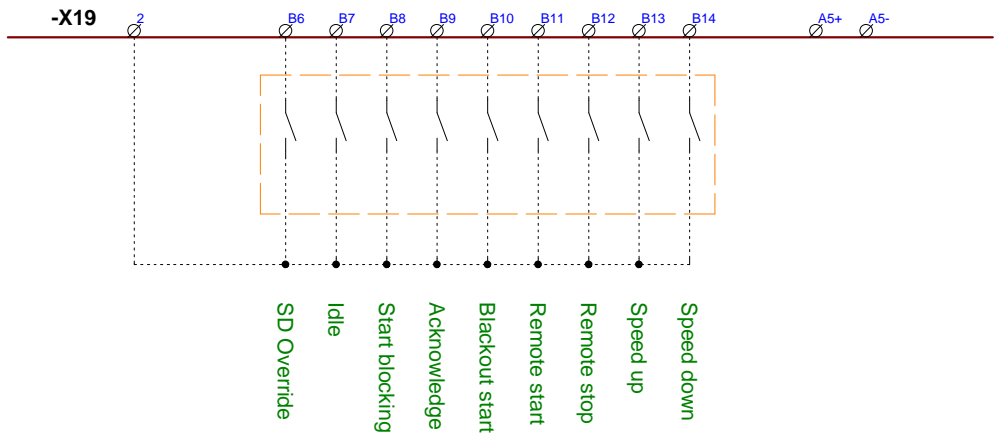
	Customer/Shipyard:	File Name: SEM-051114-01C	Drawing no.
	Hull No:	Drawn by: RJ	<b>SEM-051114-01C</b>
	Engine: D9 AUX HE/KC Electrical Starter	Based on software: 21654483_P01	Project no.
	Page Title: Single line diagram - System layout	Date For Last Change: 2008-12-09 10:57:14	Page 1 of 8

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38

# Inputs

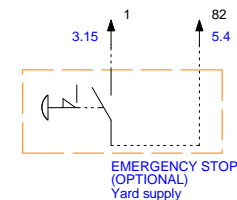
# Customer Interface

All terminals X1 through X19 are located in the system connection box mounted on a bracket at the rear of the genset.



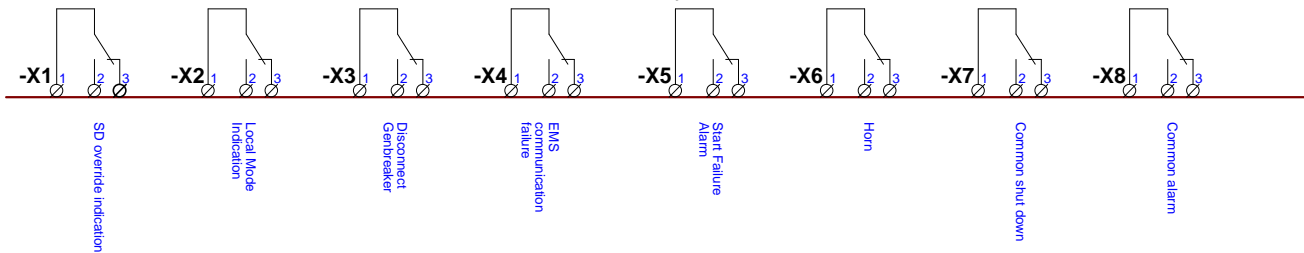
Optional rpm signals from load sharing and synchr. units. Implemented by Volvo Penta on request

Contacts for speed up and down (default)  
Voltage:  $\pm 1V$   
Resistance: 0-250 Ohm, 0-2.4 kOhm  
Current:  $\pm 20\text{ mA}$



# Outputs

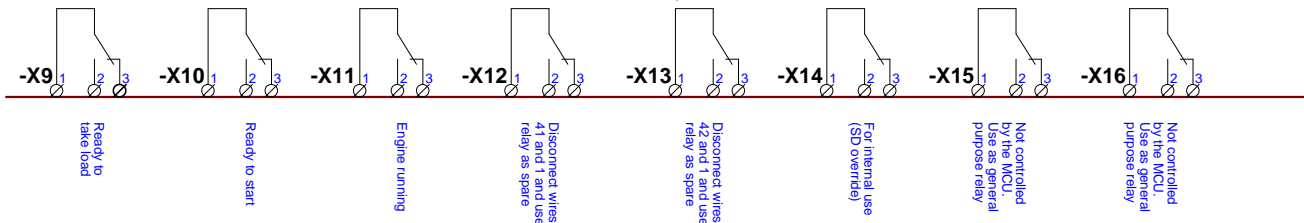
## Potential free relay contacts



**Shutdown override function**  
All shutdown's (SDU input's S1-S5) possible to override except overspeed shutdown, which are not possible to override

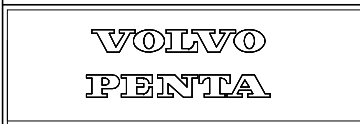
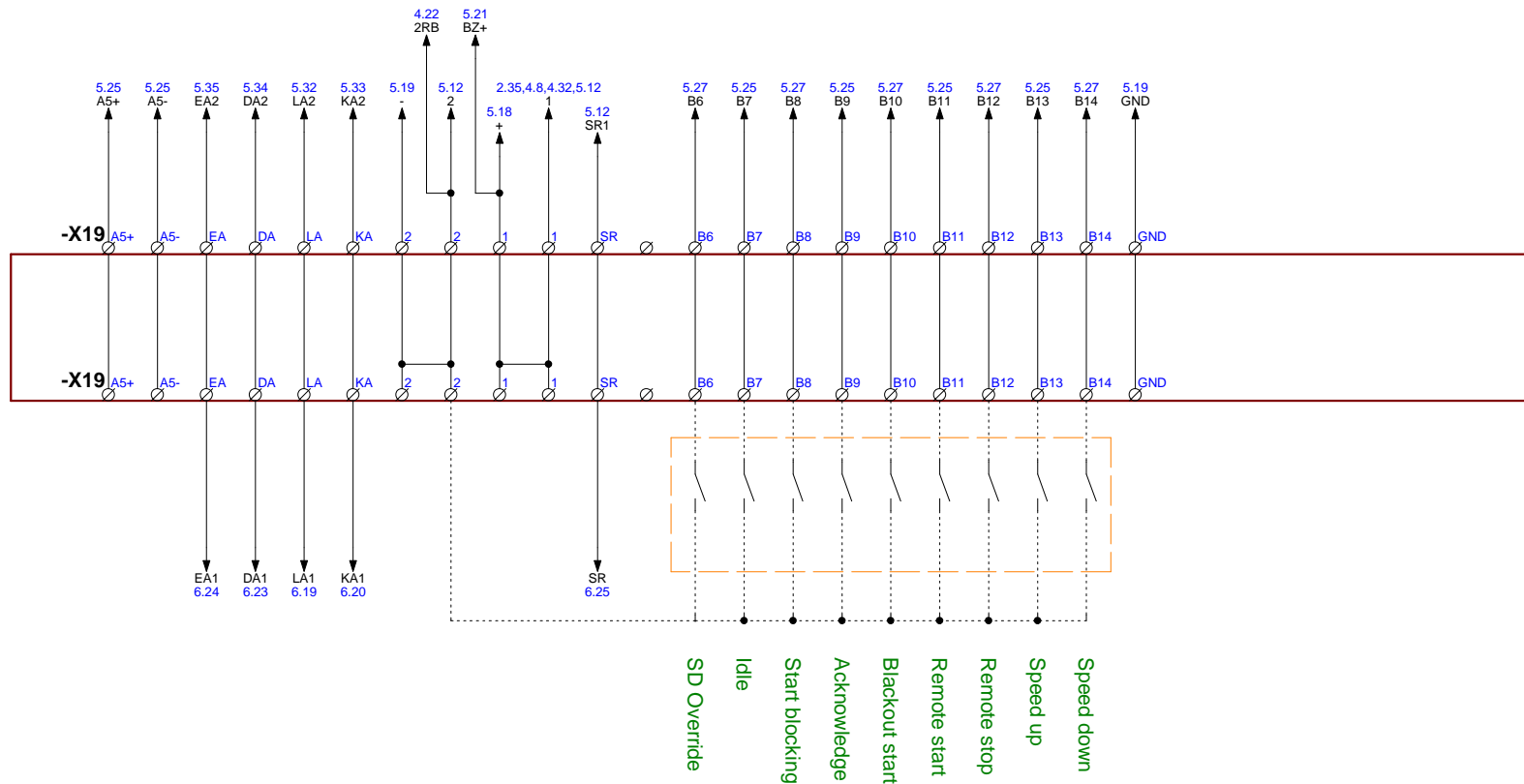
**Max 24VDC, 230VAC not allowed, on relay contacts**

## Potential free relay contacts



Customer/Shipyard:	File Name: SEM-051114-01C	Drawing no.
Hull No:	Drawn by: RJ	<b>SEM-051114-01C</b>
Engine: D9 AUX HE/KC Electrical Starter	Based on software: 21654483_P01	Project no.
Page Title: Customer Interface	Date For Last Change: 2013-03-21 17:01:34	Page 2 of 8

# System Connection Box

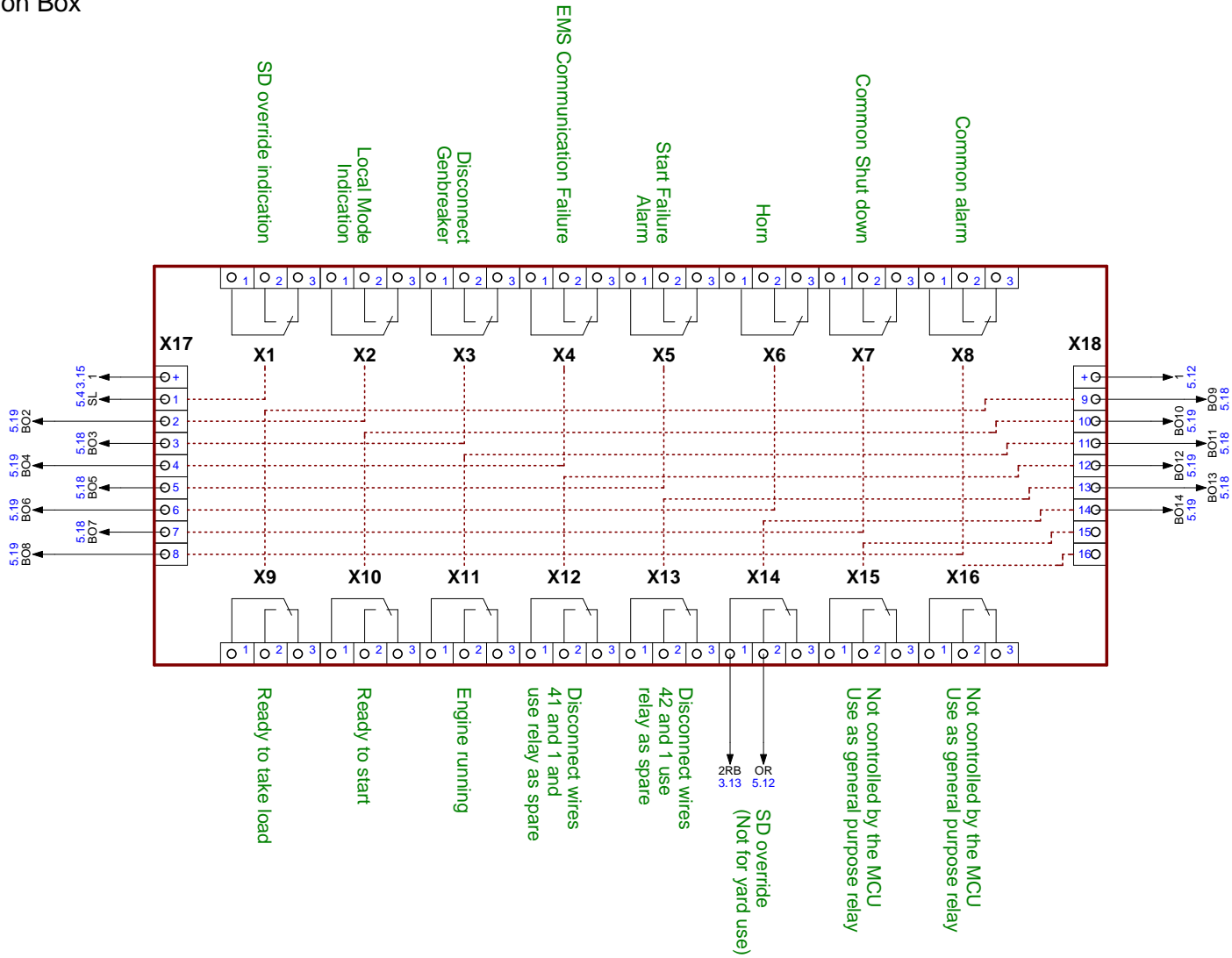


Customer/Shipyard:  
 Hull No:  
 Engine: D9 AUX HE/KC Electrical Starter  
 Page Title: User inputs , -X19 terminals

File Name: SEM-051114-01C  
 Drawn by: RJ  
 Based on software: 21654483\_P01  
 Date For Last Change: 2012-12-19 08:28:04

Drawing no.  
**SEM-051114-01C**  
 Project no.  
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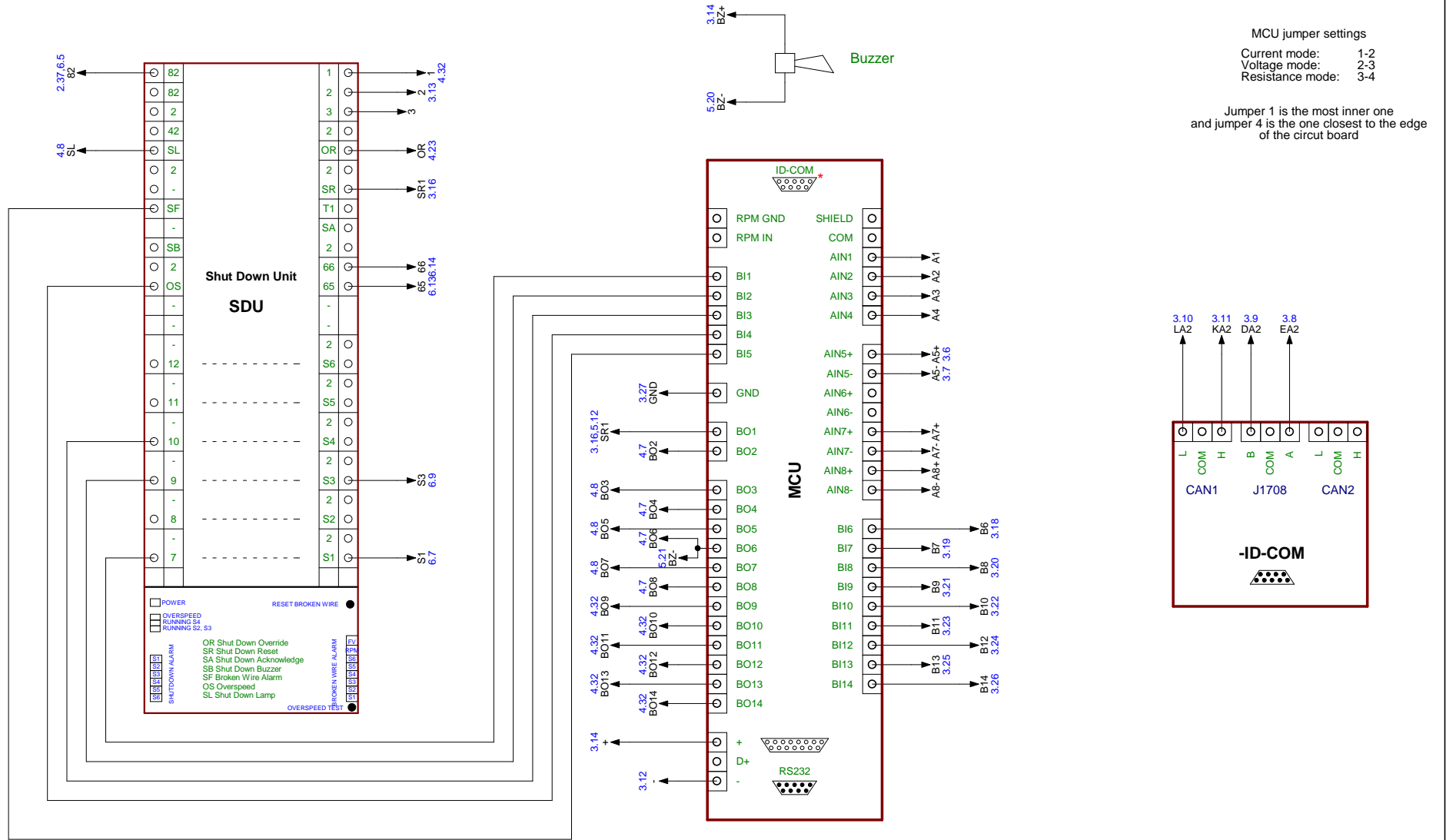
# System Connection Box



Customer/Shipyard:	File Name: SEM-051114-01C	Drawing no. <b>SEM-051114-01C</b>
Hull No:	Drawn by: RJ	Project no.
Engine: D9 AUX HE/KC Electrical Starter	Based on software: 21654483_P01	Page 4 of 8
Page Title: Potential free contacts	Date For Last Change: 2012-12-19 08:20:22	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38

# System Connection Box

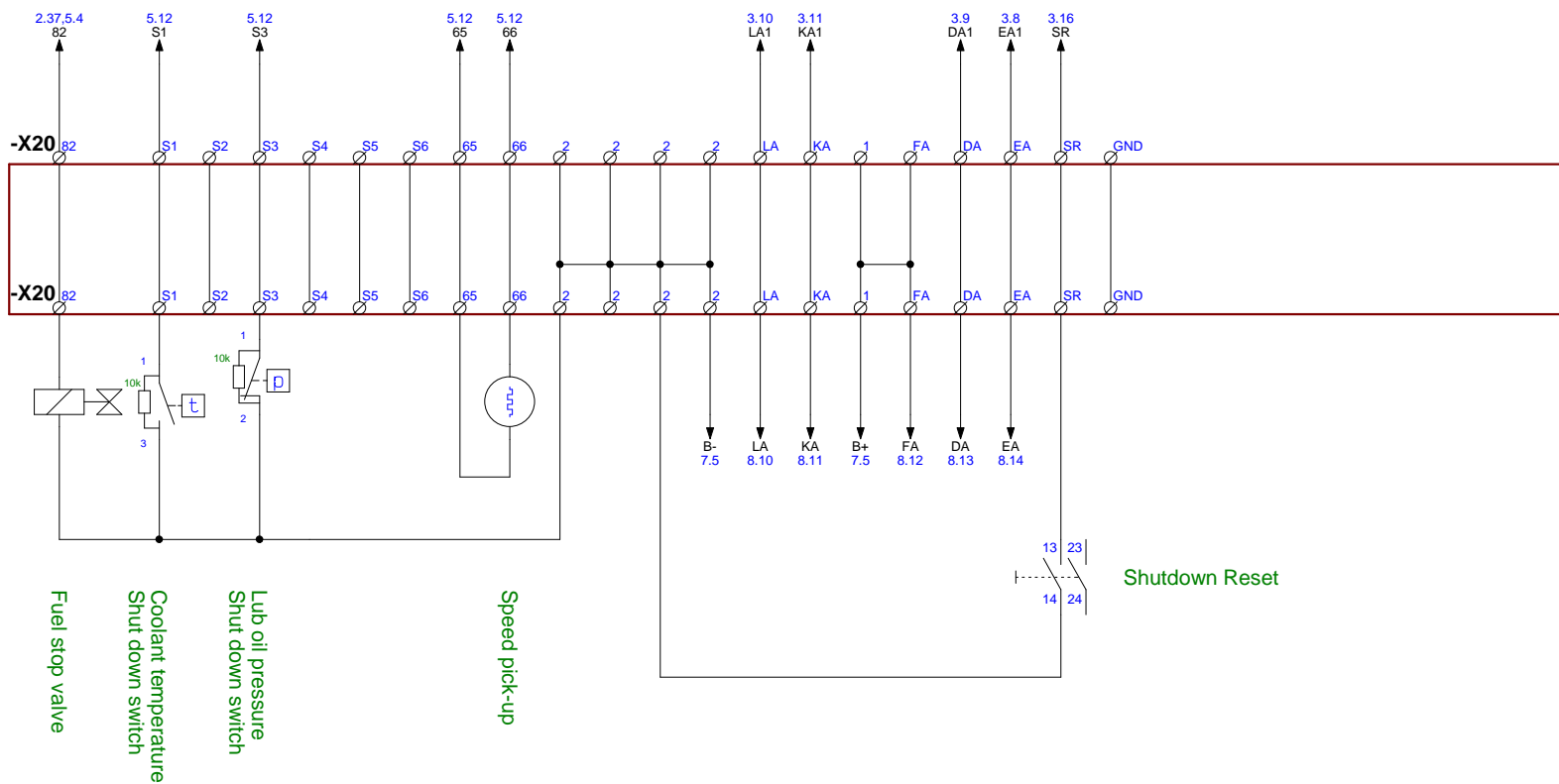


Customer/Shipyard:  
 Hull No:  
 Engine: D9 AUX HE/KC Electrical Starter  
 Page Title: MCU, SDU and ID-COM

File Name: SEM-051114-01C  
 Drawn by: RJ  
 Based on software: 21654483\_P01  
 Date For Last Change: 2012-12-20 10:25:44

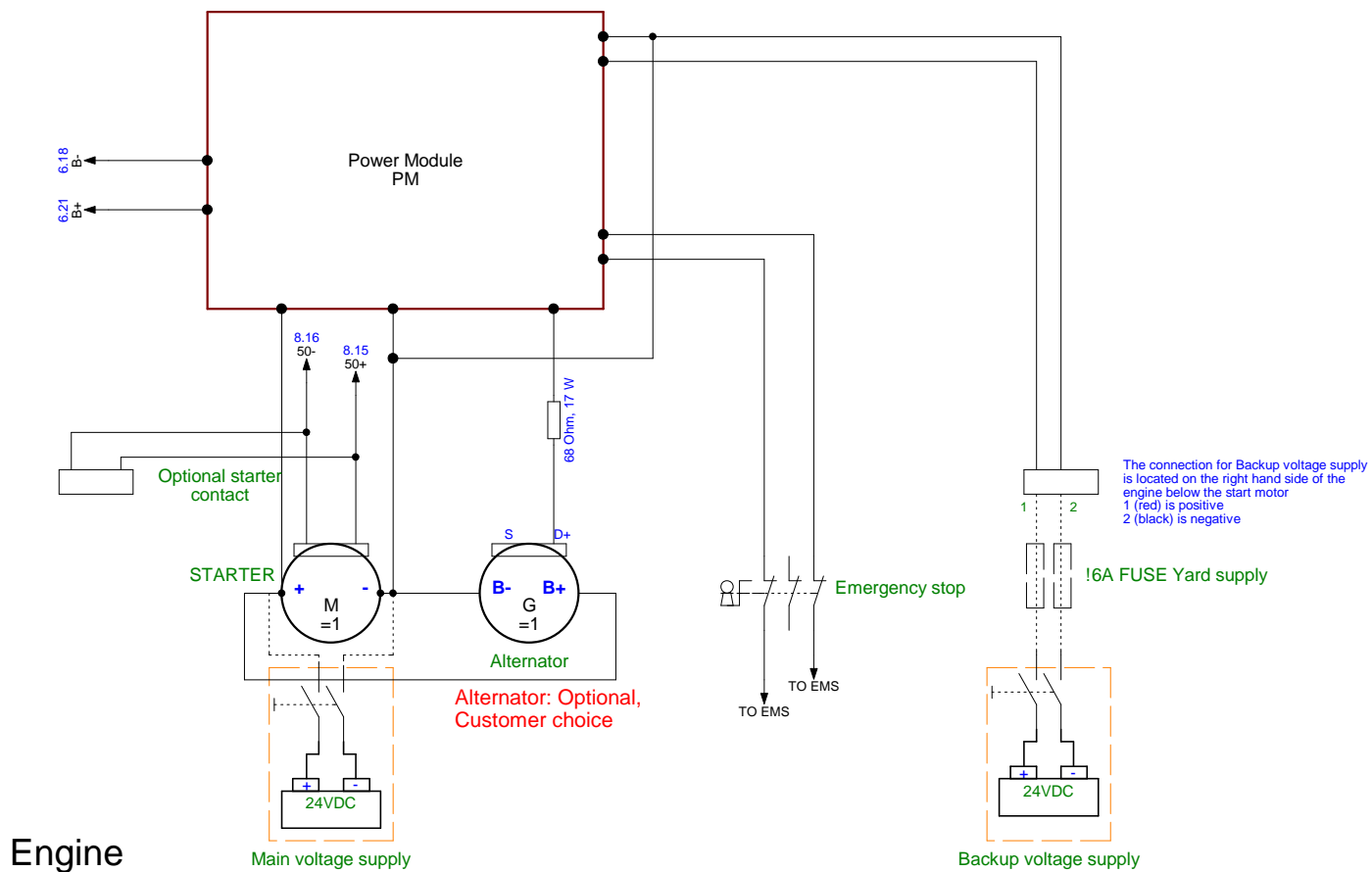
Drawing no. **SEM-051114-01C**  
 Project no.  
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# Engine Connection Box



Customer/Shipyard:	File Name: SEM-051114-01C	Drawing no.
Hull No:	Drawn by: RJ	<b>SEM-051114-01C</b>
Engine: D9 AUX HE/KC Electrical Starter	Based on software: 21654483_P01	Project no.
Page Title: Terminals -X20	Date For Last Change: 2012-12-05 09:26:02	Page 6 of 8

# Electric Starter



The connection for Backup voltage supply is located on the right hand side of the engine below the start motor  
1 (red) is positive  
2 (black) is negative

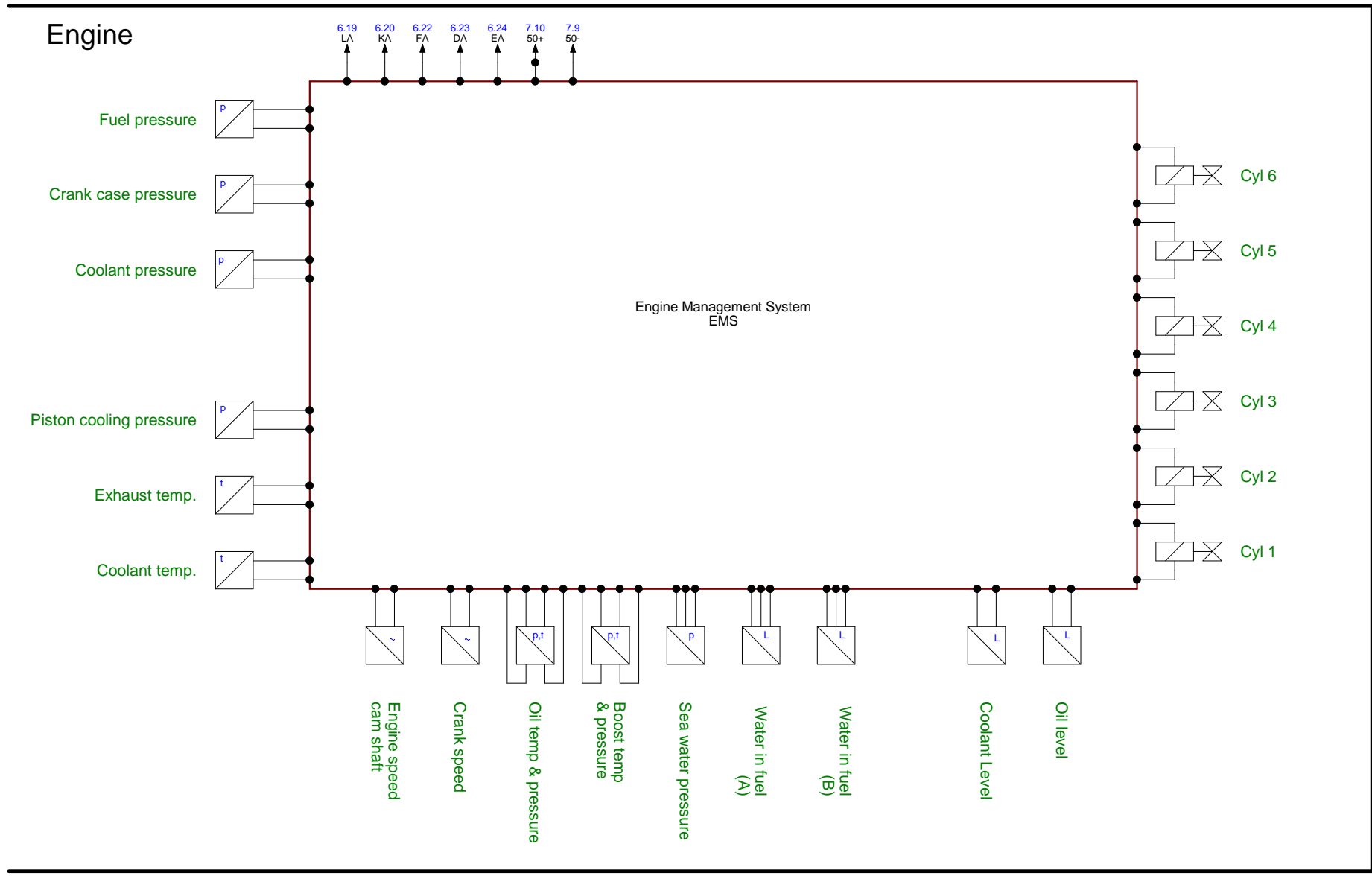
Alternator: Optional, Customer choice

**VOLVO**  
**PENTA**

Customer/Shipyard:  
Hull No:  
Engine: D9 AUX HE/KC Electrical Starter  
Page Title: Voltage supply, Electric Starter

File Name: SEM-051114-01C  
Drawn by: RJ  
Based on software: 21654483\_P01  
Date For Last Change: 2012-12-20 10:22:06

Drawing no.  
**SEM-051114-01C**  
Project no.  
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Customer/Shipyard:  
 Hull No:  
 Engine: D9 AUX HE/KC Electrical Starter  
 Page Title: Engine sensors and EMS

File Name: SEM-051114-01C  
 Drawn by: RJ  
 Based on software: 21654483\_P01  
 Date For Last Change: 2013-03-21 17:06:00

Drawing no.  
**SEM-051114-01C**  
 Project no.  
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