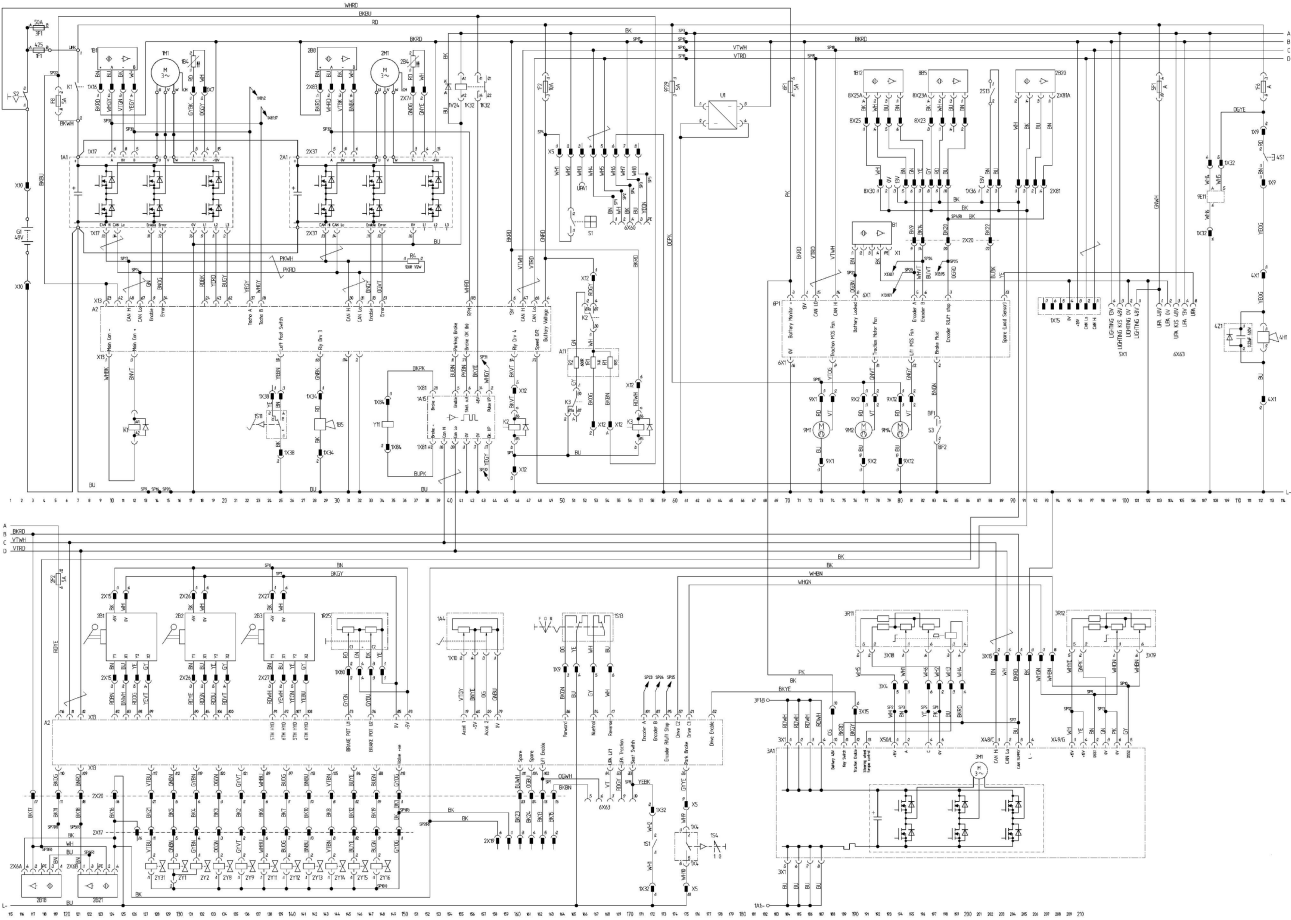




Linde Service Guide

Circuit diagram - GEN1 steering (Variable electric brake) 115 802 60 09
Up to serial number H2X115B03082



Code	Explanation of function
A2	Module – Control, 9-49
	:1 - Main contactor -ve
	:3 - Main contactor +ve
	:4 - Battery voltage
	:6 - 13 volt
	:8 - Parking brake
	:9 - Enable
	:13 - Enable
	:17 - Reverse
	:18 - Tacho B
	:19 - Accelerator 1
	:20 - Accelerator 2
	:21 - Drive C1
	:30 - CAN Hi
	:31 - CAN Lo
	:33 - Seat switch
	:34 - Error

Code	Explanation of function
	:35 - Parking brake
	:36 - Forward
	:37 - Tacho A
	:47 - CAN Hi
	:48 - CAN Hi
	:51 - Error
	:52 - Drive enable
	:53 - UPA Traction
	:54 - Footbrake switch
	:55 - Left foot switch
	:57 - Drive C2
	:60 - +5 volt
	:63 - Relay driver 3
	:64 - Relay driver 4
	:66 - CAN Lo
	:67 - CAN Lo
	:72 - Speed Override
	:73 - Brake potentiometer U1
	:74 - Neutral
	:76 - Brake potentiometer U2
	:79 - 0 volt
	:85 - 0 volt
	:87 - Encoder B
	:91 - 5th hydraulic
	:92 - 6th hydraulic
	:93 - +5 volt
	:94 - UPA lift
	:95 - Encoder reach/lift stop
	:101 - Encoder A
	:102 - Lift enable
	:103 - RMP
	:104 - Spare
	:107 - 5th hydraulic
	:108 - 6th hydraulic
	:111 - Spare
	:118 - Valve +ve
A11	Module – Charge resistor, 50-55
1A1	Module – Traction power block LAC1, 6-22
	:11 - Enable
	:12 - Error
	:13 - CAN Hi
	:14 - CAN Lo
1A4	Accelerator, 155-159
1A15	Module – Variable electric brake, 38-44
	:1 - 0 volt
	:2 - Pulse input
	:5 - Enable
	:6 - Status out
	:7 - 0 volt
	:14 - 48 volt
	:16 - CAN Hi
	:17 - Direction input
	:28 - Brake +

Code	Explanation of function
2A1	:30 - CAN Lo
	:42 - Brake -ve
	Module – Hydraulic power block LAC1, 26-41
	:11 - Enable
	:12 - Error
	:13 - CAN Hi
3A1	:14 - CAN Lo
	Module – Steering, 183-210
B1	Sensor – Battery lock, 71-75
1B1	Sensor – Traction motor tachometer, 9-12
1B4	Sensor – Traction motor temperature, 17-18
1B5	Alarm – Reverse, 28-29
1B12	Sensor – Height encoder, 78-81
2B1	Joystick – Lift and reach, 123-128
2B2	Joystick – Tilt and sideshift, 130-135
2B3	Joystick – 5th and 6th hydraulics, 137-142
2B4	Sensor – Lift motor temperature, 37
2B8	Sensor – Lift motor tachometer, 29-32
2B18	Sensor – Reach out, 116-119
2B20	Sensor – Lift stop, 91-94
2B21	Sensor – Reach back, 121-124
8B5	Sensor – Reference, 78-82
9E11	Seat heater and lumbar control, 108-109
F8	Fuse – Control circuit, 5
1F1	Fuse – Main circuit, 4
1F2	Fuse – Control circuit, 48-49
1F6	Fuse – Horn, 108
2F2	Fuse – Hydraulic valves, 119
3F1	Fuse – Power steering, 4
5F1	Fuse – Lighting circuit, 104
6F1	Fuse – Battery monitor, 66
9F29	Fuse – Cooling fans, 60
G1	Battery, 2-3
4H1	Horn, 113
K1	Contactor – Main, 7,12
K2	Relay – Charge resistor, 46,53
K3	Relay – Charge resistor, 51,57
1M1	Motor – Traction, 14-16
2M1	Motor – Hydraulic, 34-36
9M1	Motor – Traction MOS fan, 74
9M2	Motor – Traction motor fan, 78
9M4	Motor – Hydraulic MOS fan, 76
6P1	Module – display, 65-85
	:1 - 13 volt
	:2 - Brake fluid
	:3 - Battery monitor +ve
	:5 - Encoder A
	:6 - Encoder B
	:7 - Encoder reach/lift stop
	:8 - Battery locked
	:9 - Traction MOS fan
	:11 - Traction motor fan
	:12 - Hydraulic MOS fan

Code	Explanation of function
	:13 - Spare (load sensor)
	:14 - CAN Hi
	:15 - CAN Lo
	:16 - 0 volt
R3	Resistor – CAN bus, 8
R4	Resistor – CAN bus, 40
1R25	Resistor – Brake, 144
3R11	Potentiometer – Steering wheel, 190
3R12	Potentiometer – Steering drive, 209
6R1	Resistor – CAN bus, 69
S1	Keyswitch, 51
S2	Switch – Emergency isolator, 2-3
S3	Switch – Brake fluid level, 79
1S1	Switch – Seat, 172
1S4	Switch – Parking brake, 175
1S5	Switch – Footbrake, 20
1S11	Switch – Left foot, 25
1S13	Switch – Direction, 156-160
2S13	Switch – 8.5 metre, 89
4S1	Switch – Horn push, 113
U1	Converter – 48 V / 13 V, 60-64
1V23	Diode – Electromagnetic brake, 36
X1	Connector – Battery lock (5 way), 72-75
X5	Connector – Binnacle (10 way), 50-57, 175
X8	Connector – Converter (6 way), 60,64
X10	Connector – Battery, 2-3
X12	Connector – Charge resistor (6 way), 46, 53-57
X13	Connector – Control module (121 way), 10-49, 119-177
X48/C	Connector – Steering CAN bus (5 way), 203-206
X49/G	Connector – Wheel position input (8 way), 210+
X50/L	Connector – Steering wheel input (8 way), 193-198
1X4	Connector – Brake switch (8 way), 175
1X7	Connector – Traction motor temperature(2 way), 17-18
1X9	Connector – Direction/horn switch (6 way), 112, 164-169
1X10	Connector – Accelerator (4 way), 155-159
1X14	Connector – Footbrake (3 way), 19-20
1X15	Connector – Diagnostic (7 way), 93-98
1X16	Connector – Traction tachometer (4 way),9-12
1X17	Connector – Traction power block (16 way), 9-21
1X32	Connector – Seat (6 way), 108-109, 175
1X34	Connector – Travel alarm (2 way), 28-29
1X36	Connector – 8.5 metre switch (4 way), 88-90
1X38	Connector – Left foot switch (3 way), 24-25
1X78	Connector – Electromagnetic brake (2 way), 41
1X80	Connector – Brake potentiometer (4 way), 145-149
1X81	Connector – Variable electric brake module, 38-43
2X6A	Connector – Reach out sensor (5 way), 116-119
2X6B	Connector – Reach back sensor (5 way), 121-124
2X7	Connector – Hydraulic motor temperature sensor (2 way), 37-38
2X15	Connector – Lift/reach lever (6 way), 124-127
2X17	Connector – Reach carriage (16 way), 126-150
2X19	Connector – 5th/6th hydraulics UPA (6 way), 158-163
2X20	Connector – Reach carriage (24 way), 77-84, 117-163

Code	Explanation of function
2X26	Connector – Tilt/side shift lever (6 way), 131-134
2X27	Connector – 5th/6th hydraulics UPA (6 way), 138-141
2X37	Connector – Hydraulic power block (16 way), 28-41
2X81	Connector – Lift stop/slow sensor (4 way), 91-94
2X81A	Connector – Lift stop sensor (4 way), 91-94
2X83	Connector – Lift tachometer (4 way), 28-32
3X1	Connector – Steer unit (16 way), 184-191
3X4	Connector – Steering potentiometer feed (6 way), 192-200
3X15	Connector – Steering interface (10 way), 188-210+
3X18	Connector – Steering potentiometer (10 way), 190-200
3X19	Connector – Steering drive (6 way), 209-214
4X1	Connector – Horn (2 way), 113
5X1	Connector – Lighting supplies (4 way), 94-97
6X1	Connector – Display (16 way), 66-85
6X60	Connector – Datalogger/keypad (5 way), 55-58
6X63	Connector – Option supplies (10 way), 99-102, 166-170
8X23	Connector – Reference sensor (4 way), 78-81
8X23A	Connector – 8B5 (4 way), 83-86
8X25	Connector – Height encoder (6 way), 83-86
8X25A	Connector – 1B12 (4 way), 78-81
8X30	Connector – Height encoder (10 way), 74-80
9X1	Connector – Traction MOS fan (2 way), 74
9X2	Connector – Traction motor fan (2 way), 77-78
9X12	Connector – Hydraulic MOS fan (2 way), 79
Y1	Solenoid – Traction motor brake, 34
2Y1	Valve – Lift, 130
2Y2	Valve – Lower, 132
2Y8	Valve – Reach out, 134
2Y9	Valve – Reach back, 136
2Y11	Valve – Tilt forward, 138
2Y12	Valve – Tilt back, 140
2Y13	Valve – Side shift left, 142
2Y14	Valve – Side shift right, 144
2Y15	Valve – Auxiliary 1, 146
2Y16	Valve – Auxiliary 2, 148
2Y31	Valve – Lock, 128
4Z1	Suppression – Horn, 109-111

Colour abbreviations	
BK	Black
BN	Brown
BU	Blue
GN	Green
GY	Grey
OG	Orange
RD	Red
VT	Violet
WH	White
YE	Yellow