ABB motion control products
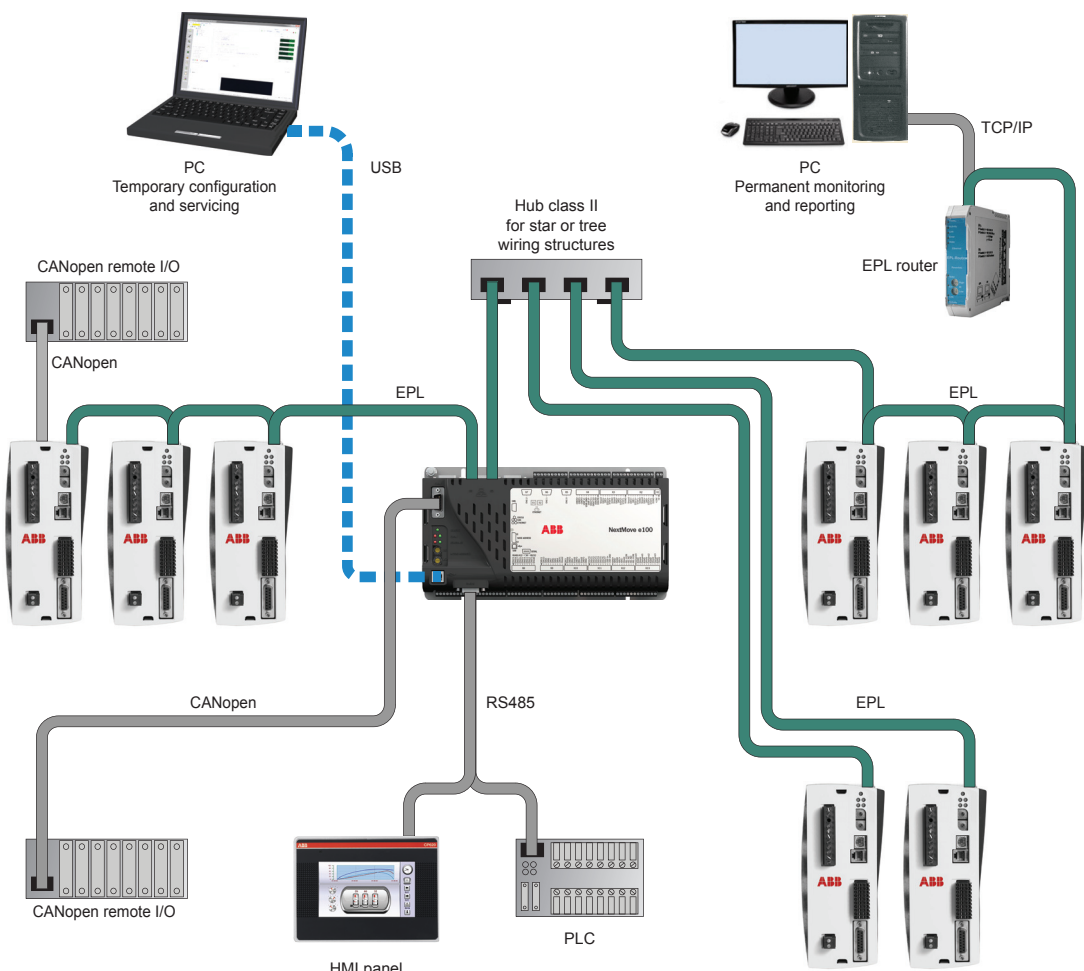
Wall chart
NextMove e100

Part numbers

NXE100-1608DB

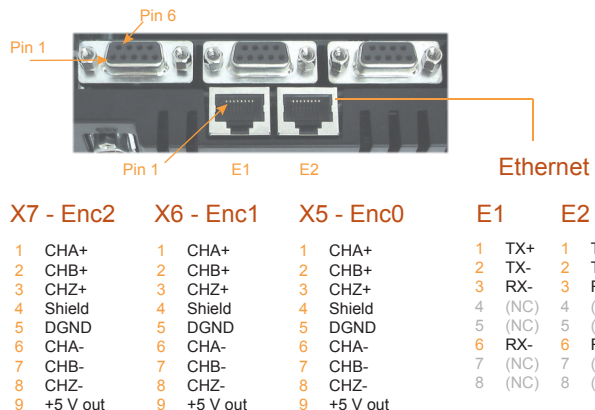|	
NXE	NXE = NextMove family
08	08 = Number of axes
D	D = Differential stepper outputs. S = Open collector (single-ended) stepper outputs.
B	B = Hardware revision

Node ID (address) selection

HI

Example shows 0xF0 = node 240

IP address = 192 . 168 . 100 . 240
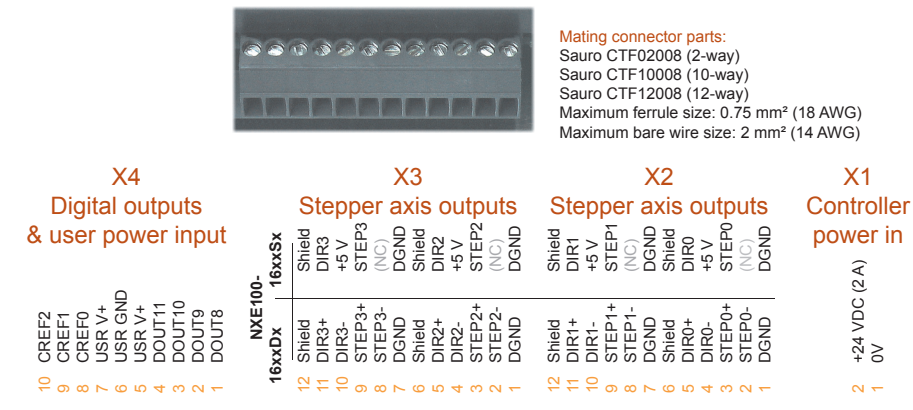
LO

Node 0xF0 / 240 = manager node.

Encoders

Pin 6
Pin 1
Pin 1
E1   E2

Ethernet

	X7 - Enc2		X6 - Enc1		X5 - Enc0		E1		E2
1	CHA+	1	CHA+	1	CHA+	1	TX+	1	TX+
2	CHB+	2	CHB+	2	CHB+	2	TX-	2	TX-
3	CHZ+	3	CHZ+	3	CHZ+	3	RX-	3	RX-
4	Shield	4	Shield	4	Shield	4	(NC)	4	(NC)
5	DGND	5	DGND	5	DGND	5	(NC)	5	(NC)
6	CHA-	6	CHA-	6	CHA-	6	RX-	6	RX-
7	CHB-	7	CHB-	7	CHB-	7	(NC)	7	(NC)
8	CHZ-	8	CHZ-	8	CHZ-	8	(NC)	8	(NC)
9	+5 V out	9	+5 V out	9	+5 V out				

CAN

Pin 6   Pin 1

1	(NC)
2	CAN_L
3	CAN GND
4	(NC)
5	Shield
6	CAN GND
7	CAN_H
8	(NC)
9	CAN V+ (12-24V)

Standard CANopen pinout 120 ohm termination must be fitted at both ends

Outputs

Mating connector parts:
Sauro CTF02008 (2-way)
Sauro CTF10008 (10-way)
Sauro CTF12008 (12-way)
Maximum ferrule size: 0.75 mm² (18 AWG)
Maximum bare wire size: 2 mm² (14 AWG)

X4 Digital outputs & user power input

NXE100-16xxDx / 16xxSx

10	CREF2
9	CREF1
8	CREF0
7	USR V+
6	USR GND
5	USR V+
4	DOUT11
3	DOUT10
2	DOUT9
1	DOUT8

X3 Stepper axis outputs

12	Shield
11	DIR3+
10	DIR3-
9	STEP3+
8	STEP3-
7	DGND
6	Shield
5	DIR2+
4	DIR2-
3	STEP2+
2	STEP2-
1	DGND

(DIR3 / +5 V / STEP3 / DIR2 / +5 V / STEP2 for Sx variant)

X2 Stepper axis outputs

12	Shield
11	DIR1+
10	DIR1-
9	STEP1+
8	STEP1-
7	DGND
6	Shield
5	DIR0+
4	DIR0-
3	STEP0+
2	STEP0-
1	DGND

(DIR1 / +5 V / STEP1 / DIR0 / +5 V / STEP0 for Sx variant)

X1 Controller power in

2	+24 VDC (2 A)
1	0V

Earth stud

170 mm (6.69 in). Use M4 screws.

170 mm (6.69 in). Use M4 screws.

ABB   NextMove e100

X7 X6 X5 X4 X3 X2 X1
STATUS
CAN
ETHERNET
HI NODE ADDRESS
LO
USB
RS485/422 — RS232
X8 X9 X10 X11 X12 X13

System configuration example

PC
Temporary configuration and servicing

USB

CANopen remote I/O

CANopen

EPL

Hub class II for star or tree wiring structures

PC
Permanent monitoring and reporting

TCP/IP

EPL router

EPL

EPL

CANopen

RS485

EPL

CANopen remote I/O

HMI panel

PLC

USB port

1	(NC)
2	Data-
3	Data+
4	GND

X6 - RS232/RS485

Pin 1
Pin 6

	RS232	RS485/RS422
1	Shield	(NC)
2	RXD	RXB (input)
3	TXD	TXB (output)
4	(NC)	(NC)
5	DGND	0V DGND
6	(NC)	(NC)
7	RTS	TXA (output)
8	CTS	RXA (input)
9	DGND	(NC)

RS485/422   RS232
Selector switch

Inputs / outputs

Mating connector parts:
Sauro CTF10008 (10-way)
Sauro CTF12008 (12-way)
Maximum ferrule size: 0.75 mm² (18 AWG)
Maximum bare wire size: 2 mm² (14 AWG)

X8 Digital inputs

1	DIN19
2	DIN18
3	DIN17
4	DIN16
5	DIN15
6	DIN14
7	DIN13
8	DIN12
9	CREF2
10	Shield

X9 Digital inputs

1	DIN11
2	DIN10
3	DIN9
4	DIN8
5	DIN7
6	DIN6
7	DIN5
8	DIN4
9	CREF1
10	Shield

X10 Digital inputs (fast inputs)

1	DIN3
2	Shield
3	CREF0
4	DIN2
5	DIN1
6	CREF0
7	DIN0
8	CREF0
9	Shield

X11 Digital outputs

1	DOUT0
2	DOUT1
3	DOUT2
4	DOUT3
5	DOUT4
6	DOUT5
7	DOUT6
8	DOUT7
9	USR V+
10	USR GND

X12 Analog inputs & relay

1	AIN0+
2	AIN0-
3	AGND
4	AIN1+
5	AIN1-
6	Shield
7	REL COM
8	REL NC
9	REL NO
10	REL COM

X13 Analog outputs (demands)

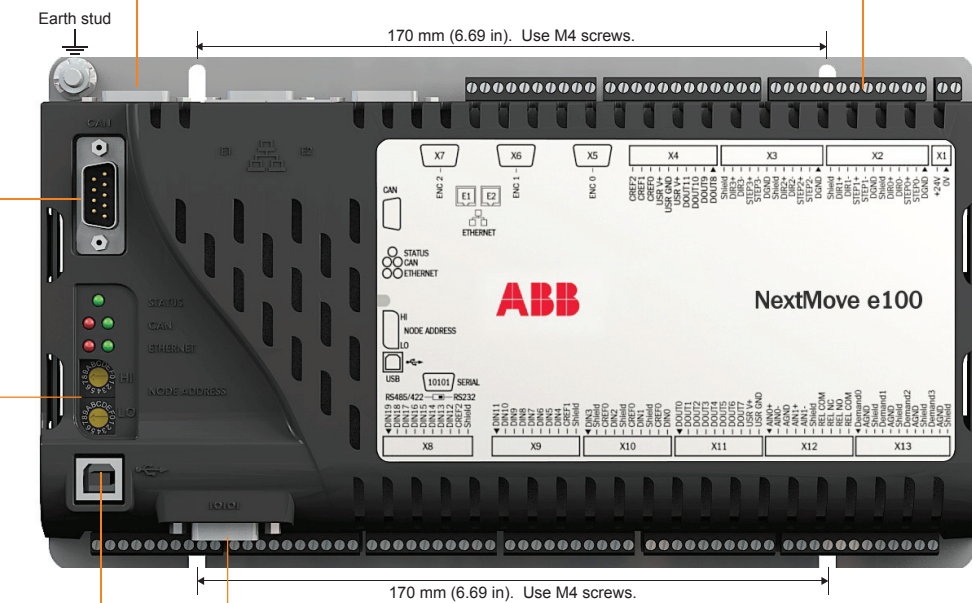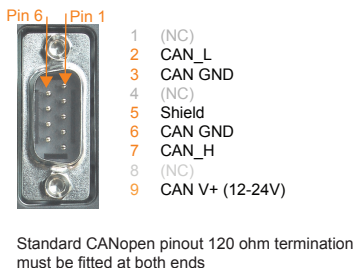| 1	Demand0
2	AGND
3	Shield
4	Demand1
5	AGND
6	Demand2
7	Shield
8	Demand2
9	AGND
10	Demand3
11	AGND
12	Shield

Status LED

Green: Initialization OK, controller enabled, normal operation.

Green flickering: Firmware download in progress.

Red: Initialization in progress.

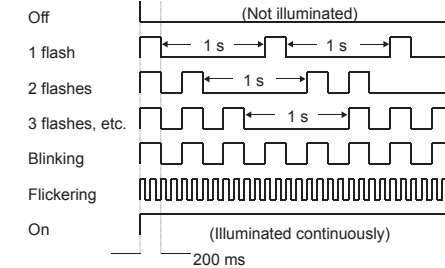Red flashing: The NextMove e100 has detected a serious hardware or firmware error and cannot be used.

CAN LEDs

Code	Meaning
Off	Node initializing or not powered.
1 flash	Node in STOPPED state.
3 flashes	Firmware being downloaded.
Blinking	Node in PREOPERATIONAL state.
On	Node in OPERATIONAL state.
Flickering	Auto-baudrate detection or LSS services in progress.

Code	Meaning
Off	No error.
1 flash	Warning: too many error frames.
2 flashes	Guard event or heartbeat event.
3 flashes	Sync error: SYNC message not received.
On	Node in bus-off state (removed from network).
Flickering	Auto-baudrate detection or LSS services in progress.

Ethernet LEDs

Code	Meaning
Off	Node in NOT ACTIVE state, waiting to be triggered by the manager node.
1 flash	Node in PRE-OPERATIONAL1 state. EPL starting.
2 flashes	Node in PRE-OPERATIONAL2 state. EPL starting.
3 flashes	Node in READY TO OPERATE state. The node is signalling its readiness to operate.
Blinking	Node in STOPPED state. The node has beend eactivated.
On	Node in OPERATIONAL state. EPL is operating normally.
Flickering	Node in BASIC ETHERNET state. EPL is not operating, but other Ethernet protocols may be used.

Code	Meaning
Off	EPL is working correctly.
On	An error has occurred.

LED definitions

Off	(Not illuminated)
1 flash	1 s — 1 s
2 flashes	1 s
3 flashes, etc.	1 s
Blinking	
Flickering	
On	(Illuminated continuously)

200 ms

LT0230A05