Serial Encoder Unit
Type CX-Basic

Publication Number PB180/0517

Application
The Serial Encoder Card CX-Basic is designed to be used in conjunction with serial controlled display units. The protocol used in the communication link between the display card and the encoder units are proprietary and subject to change without prior warning or notice.

The encoder has serial communication ports, SER1, SER2 and USB port and is installed in the lift machine room, next to the lift controller. It accepts signals like floor position code, directional arrows as well as lift status signals like MAINTENANCE, OVERLOAD, OUT OF ORDER etc. through 24 optoisolated inputs. The signals are then transmitted through SER1, which is a 4-wire serial communication link, to all the display units connected to it.

SER1 is normally used to transmit floor position, direction arrow and message data to the display units located at lift entrances, lift lobbies and other locations around the building. The display unit uses the data received to update the information on the display screen.

SER2 port on the other hand is normally supplied as an RS232C port to allow easy programming of system via a computer. Alternatively, you can use the USB port for programming.

The data sent by the transmitter is categorised accordingly under the following groups:

Floor position/Direction Arrow: This is real time data indicating the position and direction of travel of the lift.

Fixed messages: are permanently programmed into the onboard firmware located in the EPROM and will be displayed when a corresponding trigger signal is activated to the CX-Basic. Examples of these messages are lift status signals like "MAINTENANCE", "OVERLOAD", "FIRE, DO NOT USE LIFT", "RESERVED FOR VIP", "OUT OF ORDER", etc.

Specification
Power supply requirement for the encoder card is on absolute maximum at 10V to 30V d.c. or 10V to 27V a.c. Higher voltages are not recommended due to the high power dissipation which reduces the operating life of the components.

24 optocoupled trigger inputs with one common return. Signals can be an absolute maximum of 10V to 30V d.c. or 10V to 27V a.c. @ 20mA each. Typical input voltage allowed is 18V ± 6V a.c./d.c. Bar LED's next to inputs, indicate status of inputs.

Floor position code. Programmable to accept any form of floor position code. Example, binary code, gray code, seven segments code etc.

To add 16 additional opto-isolated inputs or real time clock for LCD displays (with time synchronisation), or LCD display for on-site configuration, the CX-Synchro card is available which plugs into the CX-Basic (refer to PB179).

Customised software is used for creating, editing and sending variable messages to the CX-Basic transmitter cards which then download the received data to the display units at an appropriate time. The RS32 port or USB port can be used to make the change at the lift machine room using a computer.

To add speech option, add a CX-Speech MP3 module (refer to PB194) which plugs into the CX-Basic.

EEC Directives
This component has been designed with due consideration to both BSEN81 parts 1 & 2 and the EMC Regulation BSEN12015 and BSEN12016 for incorporation in a lift application.

Fixed messages are permanently stored in the EPROM, these messages can still be changed at a later date by running a special program. Changes made to fixed messages are written to a non-volatile RAM (NVRAM) located on the CX-Basic so that it can be retained even when power to the card is removed. The RS232 port can be used to make the change at the lift machine room using a computer.

Encoder Capabilities

Subject to the capability of the associated Series Controlled Position Indicator Units, the table below details the maximum number of arrows, floor and text message features that can be programmed and triggered into the encoder and transmitted to the displays.

FEATURES AVAILABLE		TERMINAL ALLOCATION (14 AVAILABLE)
Floors: Encoded	1- 3	2
	1- 7	3
	1-15	4
	1-31	5
Floors: Discrete	1-14	1 each
Message Triggers:		1 each

FEATURES AVAILABLE	TERMINAL ALLOCATION (10 DEDICATED INPUTS)
Up and Down Arrows	UA, DA (PAR4)
Scrolling Arrow	SA (PAR 4)
Up and Down Gongs	UG, DG (PAR5)
Up and Down Lanterns	UL, DL (PAR6)
Slow Down	SL (PAR7)
Door Close	DC (PAR7)
Door Open	DO (PAR7)