Serial Encoder Unit
Type CH024

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Application

The Serial Encoder Card CH024 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 port, SER1 and SER2 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 on the other hand is normally supplied as an RS232C port to allow easy programming of system via a computer.

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 CH024. 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.

A serial I/O ports SER2. One RS232C ports (factory default) is provided unless specially requested. One port is for interface to all the text displays and indicators (RS485/RS422 port). The other port is for interface to the PC computer (RS232C port). For a long distance line to a remote computer, RS485 is the preferred choice.

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 CH024 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 Trigger	SL (PAR7)
Door Close	DC (PAR7)
Door Open	DO (PAR7)

SM018 Speech Board plugged in here,
refer to Publication No: PB131