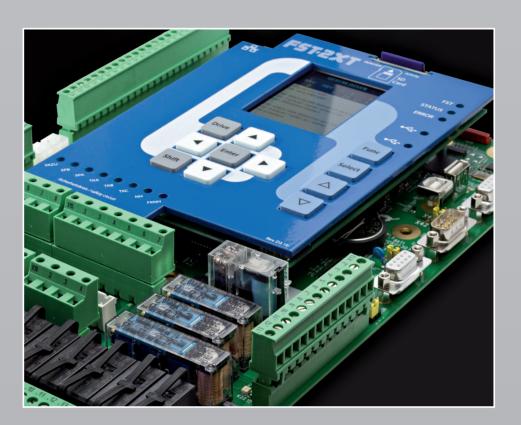


# **Lift Control System**



#### Main features

- » Compact design: Pre-selection module and safety bypass circuit integrated on the FST-2XT circuit board
- » Plug and Play: prefabricated trailing cable and bus cables with plug-in connections on both ends
- » Automatic calibration and learn drives
- » Cost efficient layout guarantees superb cost-performance ratio
- » Integrated UCM-A3 monitoring: Detection\*, Activation, System Control and Test Function according to EN81-1/2:1998 + A3:2009



## One controller - unlimited applications

## **Universal application**

The FST-2XT is designed for use in hydraulic and traction lifts and can handle the different challanges covering the entire range of installations from small to very large. Thanks to its modular design, the FST-2XT is the perfect choice for standard lifts, but also ideally suited for those special applications requiring customized solutions

## **Compatibility**

The FST-2XT is mechanically und electrically compatible to the previous FST-2 controller.

## Integrated help system

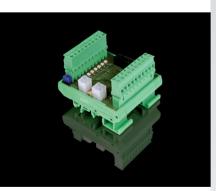
Amongst other things, the FST-2XT's guide shows important information about the selected menu point on the colour TFT-Display.



ADM - hall station module



LCS - load control system



RIO-2 - module

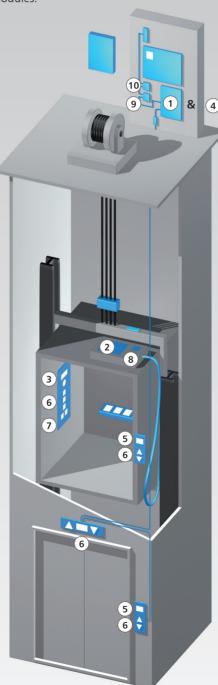
The FST-2XT is the result of the continuous development of the well-proven, innovative NEW *LIFT* FST control concept.

The combination of predefined and automatic functions as well as individually adjustable functions make the FST-2XT the most flexible lift controller for systems with elite performance requirements.

## **FST System**

The FST-2XT (1) is based on the FST-LON bus, a field bus system. The consequent application of LON bus technology for all components ensures the system's flexibility, simplifies commissioning and allows for effortless expansion.

The FST system includes the following LON modules:



#### FSM-2\*\* – car control module 2

The FSM-2 car control module has a compact design that improves organization of inspection box components and facilitates an even quicker car installation.

#### FPM and FPM-2\*\* – car panel modules

The FPM is the interface between the car panel and FST-2 controller.

## GST-XT – group circuit board 4

Two or more FST-2XT controllers can be easily combined to form a lift group, by simply adding a GST-XT circuit board to one of the FST-2XT motherboards.

#### ADM – hall station module (5)

The ADM is the interface between the landing panel and FST-2XT controller.

### EAZ – position indicators 6

NEW *LIFT* offers a variety of position indicators for all applications:

- » EAZ-256: Cost efficient dot matrix display
- » EAZ-LCD: High resolution liquid crystal display
- » EAZ-TFT: The display for elite requirements

#### SAM – speech output module (7)

The SAM includes an extensive sound library in studio quality. If you wish, you can create and use your own recordings.

### LCS – load control system 8

The linear calibration function of the LCS allows for commissioning with a reference measurement which can be carried out by a single technician.

#### CUS – module for special functions (9)

The CUS module is the key to your individual lift system. Many hundreds of special functions have been implemented with this module.

## RIO-2 – expansion module 10

With the RIO-2 remote I/O expansion module, the FST-2XT can be expanded with up to 48 additional inputs and outputs.

- \* With active door zone circuit.
- \*\* These modules are included in the basic package of the FST-2XT controller.

#### Flexible application

The design and modular construction allow for the universal application of the FST-2XT.

For standard lifts, the FST-2XT can be used with economical shaft positioning options and conventional wired landing calls. It is equally at home in high performance grouped systems with multiple bussed risers.

You can control both hydraulic and traction lifts – the FST-2XT does it all.

#### Compact design and clear arrangement

The pre-selection module and safety bypass circuit are already integrated on the FST-2XT circuit board. This facilitates installation in situations with limited space.

For installation in situations with extremely limited space, the controller is also available as a slim version FST-2s. The FST-2s has been specially developed for installation in the door frame of the lift.

#### Plug&Play and easy installation

The flat trailing cable and LON bus cables are all prefabricated, complete with pluggable connectors at both ends. Thanks to the variable use of spare lines in the trailing cables, no additional trailling cables are normally required for most popular emergency telephone systems.

In addition, the automatic calibration and learn drives of the FST-2XT guarantee an unmatched ease of installation.

#### **Intelligent diagnosis**

Efficient troubleshooting is one of the biggest strengths of the FST-2XT. For this purpose, the on-board software provides many diagnostic menues and self test funcions.

The extensive and detailed logs of LON bus traffic, drive curves and group statistics can easily be transferred via the SD card, USB-stick or modem. This makes troubleshooting a breeze – onsite or from a remote location.

#### **FST-2XT** Group

The GST-XT group circuit board is a powerful computer especially developed for the FST-2XT lift control system. A FST-2XT *Group* with a GST-XT can effortlessly control groups with up to eight lifts.

With the LON field bus connection to the FST-2XT controller, the GST-XT can detect all activities in the group directly and can apply and process this information thanks to its 32-bit processor.

For systems requiring the highest state of availability, a multiple redundant group control option can be integrated by installing at least two GST-XT circuit boards in a group. In the case of a primary GST-XT circuit board system failure, one of the secondary GST-XT boards seamlessly takes over the control functions.

#### **Additional PC programs**

The intelligent FSTEditor PC program facilitates comfortable programming of the lift system on your computer. Once all settings have been made, they can be transferred directly to the controller with a serial cable.

NEW *LIFT* provides the LON Module Center PC-tool for programming and configuring the ADM hall station modules.

#### **Lift Monitoring Systems**

NEW *LIFT* offers three different lift monitoring systems:

#### **LMS***EleVision*

With the LMS*EleVision* visualization program, a real-time overview of all lift systems is available at a glance. In addition, the system can be controlled remotely from the control center and intelligent diagnostics can be performed.

#### LMS24/7.T

The phone-based LMS24/7.7 lift monitor system only requires an outside phone line for 24 hour remote monitoring, emergency phone and electronic lift attendant functions.

#### LMS24/7.E

The LMS24/7.E combines lift monitor functions with 24 hour remote monitoring. Connected via Ethernet, the system can easily be integrated in an existing building control system.

#### **Helpsystem Guide**

The coloured TFT-Display on the front is devided into two parts: The upper part is the familiar FST-screen, the lower part is the new guide.

The guide offers support and help to each menupoint, as well as a general help, call list and event list.

The guide is controlled by using four seperate keys, also located on the front of the controller.



FPM - car panel module



FPM-2 – car panel module



FSM-2 – car control module





- » LON bus technology used for all components flexible systems and simple commissioning
- » Up to 64 floors with two buttons
- » Up to 8 lifts per group with the GST-XT circuit board
- » Control up to 3 car doors
- » Three separate microprocessors for lift management, drive control and bus
- » Digital shaft positioning with absolute value or incremental encoders
- » Micro SD slot and USB port for extensive and detailed logging of LON bus traffic, drive curves and group statistics
- » Serial for PC or Modem / Fax interface
- » DCP inverter interface
- » CAN interface
- » Ethernet interface with 100/10 Mbps
- » Lift monitoring interface for LMS24/7 and third-party solutions
- » FST-2XT controller menu in English, French, German, Polish and Swedish
- » completely compatible to FST-2 and all according modules



- » Up to 80 programmable inputs and outputs
- » Fire recall and fireman service according to various standards
- » Evacuation control
- » Error storage, drive and door call statistics
- » Operating hour, drive and door cycle counter
- » Brake, motor and contactor monitoring
- » Automatic measuring of approach and braking distances by means of the calibration drive mode
- » Anti nuisance
- » Emergency call suppression
- » Password protection
- » Park drive (3 programs / weekday)
- » Car light monitoring

- » Installation mode
- » Car fan control
- » Various call modes
- » More than 35 drive control interfaces selectable
- » Controller menu also available remotely via HHT handheld terminal, HHT-IRT infrared remote control as well as LMS*EleVision* and LMS*24/7* lift monitoring systems

#### **Selection of integrated special functions**

- » Energy saving mode
- » Various VIP modes
- » Various car loading modes
- » Visitor control for penthouse suites
- » Lobby stop for hotels
- » Lift attendant mode
- » Disabled call control
- » Loading ramp control
- » Bank control (up to 32 user groups)
- » Folding or telescopic apron control
- » Up to 8 blind or pseudo floors programmable
- » Priority drive for car and landing
- » Safety curtain operations
- » Various front desk security options

#### Selection of supported special functions

- » Remote monitoring and control via LMS*EleVision* , LMS*24/7* , modem , fax , GSM , etc.
- » Interfaces for automatic transport systems such as "Swisslog" or "Transcar"
- » Emergency mode for hospitals
- » Dangerous goods transport mode
- » Car lift with traffic lights
- » Loading barrier control
- » Sabbath service
- » Electric and hydraulic pawl control
- » Wireless car control
- » Interface to REM / TM4 / Teleservice / KRM / Rekoba Systems

Specifications	
Dimensions L x W x H	200 x 310 x 50 mm
Supply voltage	24V DC
Power consumption	300 mA

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