TÜV Österreich, zugelassene Prüfstelle für Aufzüge
TÜV Austria, notified body for lifts

Zertifikat - Certificate

Nr.: TÜV-A-AT-1/06/009 CEES

Type examination
according EN81-1/2: 08.1998

Name of the approved body	TÜV Österreich Krugerstraße 16 A-1015 Wien ID-NR.: 0408
Type-examination No	TÜV-A-AT-1/06/009 CEES

1. **Category, type and make or trade name:** Expander as an electric device, collecting information from a lifts safety chain for control purposes.

   Type: CEBx

2. **Name and address of manufacturer:** CITO
   Szolc-Rogozińskiego 8/12
   02-777 Warsaw
   POLAND

3. **Name and address of certificate holder:** CITO
   Szolc-Rogozińskiego 8/12
   02-777 Warsaw
   POLAND

4. **Date of submission for examination:** 27.02.2006

5. **Certificate issued on the basis of the following requirement(s):** EN 81-1/2:1998
   CEN/TS 81-29:10.2004 N° 510
   CEN/TS 81-29:10.2004 N° 548
   Lift Directive 95/16/EC

6. **Test laboratory:** TÜV Österreich
   Krugerstraße 16
   A-1015 Wien

7. **Date and number of laboratory report** Date: 09.11.2006, N°: 2006-AT-EP/0011/1

8. Date of examination: 09.11.2006

9. Documents, annexed to this certificate: Sketch: Diag_ac
Diag_dc
PCB_no

10. Additional information and preconditions for use:

10.1 Information, given by the designer and manufacturer of the device (mentioned sketches, diagrams and drawings are not completely enclosed).

Expander CEBx – general information:
Expander, designated as CEBx, is a printed board containing electronic and electro technical elements. Mark „x" specifies the working voltage of the safety circuit, the expander can cooperate with. This may be 48 VDC, 48VAC, 110VAC, 115VAC or 230VAC. The value „x", identifying the expander, is marked by the manufacturer in the upper left corner of the board, beneath the inscription CEB.

Expander CEB, which is connected by internal link to the lift controller CSD, manufactured by the company cito, allows to take information from max 4 points of the safety circuit of the lift controller type "CSD". For this purpose the inputs N° I61, I62, I63, I64 are used. CEBx also enables the possibility of direct control of main contactors with the four built-in auxiliary relays N° Q61, Q62, Q63, Q64, which break contacts lead to the terminal stripe as N° Q61A, Q61B, Q62A, Q62B, Q63A, Q63B, Q64A, Q64B.
Additionally, up to eight inputs in standard 24VDC N° I53…I60 and eight relay outputs: N° Q53…Q60 can be placed on the board CEB, which are intended for controls, not directly connected with safety circuit – e.g. service of orders, calls, lighting, ventilation in the car,etc.

Expander CEBx – general information about the part under type examination.
After connection of the expander to the safety circuit (according to drawings DIAG_dc, DIAG_ac) closing of particular safety switches cause flow of small current (few mA) through the emitter of the transoptor and steer it. This information passes the optoelectronic link of the transoptor and low-pass filter to the controller microprocessor. Closing of all safety circuit connectors enable switching on main contactor coils through the relay outputs Q61 to Q64 of the expander.

10.2 The environmental requirements must accord to EN81-1/2: 08.1998 with exception of the accepted range of temperature 0°C-65°C and range of relative humidity 15%-85%.

10.3 The examined device must be installed in a cabinet with an international protecting code IP2X or higher.

10.4 The maximum nominal value of the upstream fuse in the safety circuit is 4A.

10.5 Device CEBx must be used together with CITO Lift Control CSD and consideration of all its safety and working instructions according its related manual only.

10.6 The common conductors of the external contactors (e.g. for control of car movement, hydraulic valves, brake release, …) are connected to the clamp indicated "N2" on the PCB CEBx only.

10.7 This type examination covers just the “cross hatched indicated” circuits on the PCB as shown on annexed drawing N° PCB-overlay.
This circuits are indicated as well directly on the PCB in white.

10.8 All requirements, classifications and functions to the external main contactors, which are controlled via the relays Q61-Q64, must be provided in accordance with EN81-1/2:1998. Furthermore, the coils power supply must be provided according to enclosed drawing DIAG-ac, DIAG_dc, ensuring that they are powered at the end of the safety circuit only in case that all safety contacts are closed.

10.9 Spread of this type examination certificate is only permitted with documents mentioned in point 9.

10.10 Monitoring circuits with connections to different points of the electric safety chain for gathering information are not safety circuits in the sense of the
Lift Directive 95/16/EC, Annex IV.
Therefore a Type Examination Certificate instead of an EC-Type Examination Certificate is issued.

09.11.2006	Ing. A. Marschall	08.11.2011
Datum Ausstellung	Leiter der Zertifizierungsstelle	Gültig bis
Date of issue	*Head of certification*	*Valid until*