ELEVATORS & ESCALATORS

Fact Sheet

Elevators & Escalators Defined

- Elevators & escalators are mechanisms that move both people and goods as an integral part of an interconnected building.
- Typically operated 24 hours a day, seven days a week, these building systems demand high reliability and easy serviceability.
- The elevator & escalator marketplace is divided into three categories: new equipment, maintenance, and modernization.
- The new equipment market is consolidated at the global level, while the maintenance and modernization markets are supported through local channels.

Target Customers

- Elevator & Escalator system manufacturers
- Architects and Building engineers
- Service companies
- Motor manufacturers
- Control system manufacturers

Elevator & Escalator Subsystems

- Machine, drive and power systems
- Control systems
- Dispatch systems
- Safety systems
- Cab and door systems

TE's featured products include:

- Relays
- Contactors
- Filters
- Resistors
- NECTOR Power Systems
- Switches
- Dynamic Series Connectors
- Terminal Blocks
- Board to Board Interconnect

In-the-Know

- In an average week, elevators around the globe carry the equivalent of the world's population.
- There are approximately 12 million elevator and escalator systems in use worldwide. Leaders include: 47% in EMEA, 21% in China and 10% in North America.
- Approximately 750,000 new elevator and escalator units were installed in past year with more than 67% of the installations in China.
- The elevator and escalator total available market is estimated at $9.5 billion.
- The repair and maintenance of these systems is the fastest growing segment in the market with over 19,000 technicians registered in North America alone. This segment is growing at an annual rate in excess of the job market at over 25%.
- Modernization is taking priority in mature markets in lieu of installing new systems. These modernization efforts include replacing subsystems and components that rely on LED and electrical interconnects, relays, switches and filters.

Design Navigator

TE Connectivity (TE) is positioned as a leader in the design and development of products supporting elevator and escalator applications making us your solutions provider for offering high-performance components to keep people moving.

We offer an array of electromechanical and electronic products to help solve many design challenges. Our development capabilities range from simple modifications to unique custom designed solutions.

With our customer focused product development, engineering support and easy access to additional online information, TE can help you take your elevator and escalator project to the next level.

Key Questions to Ask Your Customers

- What are the voltage and current requirements for your application?
- Does your current solution need improvement in terms of ease of service or replacement?
- How are you currently servicing or modernizing your equipment?
- Are you interested in reducing the time it takes to install or retrofit elevator or escalator systems?
- Does your design have critical safety requirements?
- Does your application have environmental requirements?
- Does your application have high vibration performance requirements?

DESIGN NAVIGATOR

	ELEVATOR	ESCALATOR	MACHINE/ DRIVE/ POWER SYSTEMS (1)	CONTROL SYSTEMS (2)	DISPATCH SYSTEMS (3)	SAFETY SYSTEMS (4)	CAB / DOOR SYSTEMS (5)	Max Current Rating (A)[1]	Max Voltage Rating (V)[1]	Operating Temperature Range (°C)	Wire Range (AWG)	High Vibration Performance	SMT Compatible	Standards
					Subsystems									
AMP-LATCH Ribbon Cable Connectors	•	•		•			•	1	250 AC	-65 to +105	28			UL
Antennas[2]	•				•								•	
Cable Identification for harnesses, wire and cable (CSL, SP, KMT, SBP, PVF)	•	•	•	•	•	•	•			-30 to +150				UL
Circuit Protection	•	•		•		•		15	240 AC	-40 to +85		•	•	UL, CSA, TUV
CLOUDSPLITTER Connector System	•	•		•	•		•	1.5 signal 5.0 power	150 AC 20 DC	-40 to +85	26-24		•	UL, cUL
Controlling Signal Relays	•	•		•				5	250 AC/220 DC	-55 to +125			•	UL, CSA, VDE, IEC
Custom Cable Assemblies	•	•	•	•	•	•	•	varies*	varies*	varies*		•		UL, CSA, VDE
DIP Switches	•	•	•	•			•	0.1	50 DC	-30 to +85			•	
Dynamic Series Connectors	•	•	•	•			•	65	630 AC	-55 to +105	30-6	•	•	UL, RU, CSA, TUV
ELECTRO-TAP Connectors	•						•		300 AC/DC	+105 Max	20–14			UL
Eurostyle Terminal Blocks	•	•	•	•				10	300 AC/DC	-30 to +105	30-12	•		UL, cUL
Industrial Ethernet	•	•		•	•		•	0.5	24 AC	-40 to +70	26-22	•	•	UL, CSA
Industrial USB	•			•	•			2	30 AC	-40 to +85	24-18	•	•	UL, CSA, USB 2.0
Flexible Printed Circuit (FPC)/ Flexible Flex Circuit	•			•			•	1.0	250 AC	-40 to +85		•	•	
Free Height Board-to-Board Connectors		•		•				0.5	100 AC	-40Cto +85			•	
Hermaphroditic Connectors	•						•	6	125 AC/DC	-30 to +105	22-18		•	UL
Heavy Duty Connectors (HDC)	•	•	•					350	3000 AC	-40 to +125	26-300 MCM	•	•	UL, IEC
LUMAWISE LED Holders	•	•					•	5	300 DC	-40 to +105	22-18			UL, IEC, Zhaga
MAG-MATE Terminals	•	•	•						240 AC	- 65 to + 125	34-12			UL
Micro/Standard Poke-In Connectors	•						•	5	250 AC/DC	-25 to +130	26-18	•	•	UL
Mini Universal MATE-N-LOK Connectors	•	•	•	•			•	9.5	600 AC	-55 to +105	30-16			UL, CSA, VDE
Modular Jacks	•	•		•	•		•	1.5	150AC	-40 to +85	26-22			UL
Mass Termination Assembly (MTA) & SL Connectors	•	•	•	•				12.5	600 AC	-55 to +105	26-18			UL, CSA
MULTILOCK Connectors	•	•		•				10	12 DC	-30 to +105	20-16	•		
NECTOR Power Systems	•	•				•	•	20	400 AC	-20 to +85	18, 4.0-1.5	•	•	UL, IEC
Releasable Poke-In Wire Connectors	•						•	6	400 AC/DC	-30 to +105	22-18	•	•	UL, IEC
Resistors[3]	•	•	•	•				Refer to table below for product details						
Power Relays & Contactors	•	•	•	•				120	600 AC	-55 to + 65				UL, CSA, VDE, SEMKO, IEC
Safety (Force Guided) Relays	•	•		•		•		16	250 AC	-40 to +85				UL, VDE, TUV, CQC, Ind
Single Phase EMI/RFI Power Filters	•	•	•	•	•			60	250 AC	-10 to +40	26-8			UL, CSA, VDE
Tactile Switches	•	•		•	•		•	0.05	24 DC	-35 to +105			•	
Three Phase EMI/RFI Power Filters	•	•	•	•				200	480 AC/277 AC	-10 to +40	12-0			UL, CSA, VDE
Universal MATE-N-LOK Connectors	•	•	•	•			•	19	600 AC	-55 to +125	30-16	•		UL, CSA, VDE

Resistors[3]

Family	Technology	Key Features	Control Circuitry	Capacitor Precharge / Discharge	Braking	Balancing	Snubber	Current Sense
C / ER	Wirewound	2.5 to 14W, C=Vitreous / ER=Silicone	•	•		•		
CBT/CCR	Carbon / Ceramic	1/4 to 2W Pulse Withstand	•					
CJT	Wirewound	175 to 1000W Mineral Filled			•			
HS / THS	Wirewound	5W to 300W Aluminium Housed	•	•	•			
Load Bank	Wirewound	Customized Load Bank			•			
RGP	Thick Film	0.25W High Ohmic	•			•	•	
RL73	Thick Film	SMD Current Sense	•					•
RN73 / RP73 / CPF	Thin Film	SMD Precision Chip	•				•	
RR / ROX	Metal Film/Oxide	1 to 7W High Power	•	•		•	•	
SBC	Wirewound	4 to 40W Ceramic Cased	•	•				
SL / SBL	Foil	0.25W to 2.5W Current Sense	•					•
SM	Wirewound/Oxide	1 to 5W Moulded Power Chip	•	•				•
SQ	Wirewound/Oxide	2 to 40W Ceramic Cased	•	•	•			
TLR / HL	Foil	0.5 to 3W Current Sense	•				•	•
TE	Wirewound	10 to 2500W Tubular		•				

CQC – China Quality Certification
CSA – Canadian Standard Association
cUL – Tested to Canadian Standards by Underwriters' Laboratories
IEC – International Electrotechnical Commission
Ind – Meets product specific industry standards (details on product page at te.com)
RU – Recognized Under
SEMKO – Svenska Elektriska Materielkontrollanstalten
TUV – Technischer Überwachungs-Verein
UL – Underwriters' Laboratories
VDE – Verband Deutscher Elektroingenieure
Zhaga – Standard for Interchangeable LED Light Sources