GARAN

PRODUCTS AND TECHNICAL DATA

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ELEVATOR LOAD WEIGHING SYSTEMS

Introducing the unique EWS-102 elevator load weighing system exclusively from Garan, designed and manufactured in the UK it provides the ultimate in elevator load weighing.

Our Elevator Weighing System (EWS) series of elevator load weighing instrumentation and sensors, provide a cost effective solution for a wide variety of elevator types. We strive to supply products that meet the traditional market values of Quality and Reliability at a competitive market price providing a 'Complete Solution Without Compromise' for any elevator application.

Our EWS system provides a simple yet powerful range of load weighing instrumentation for cabin, rope and beam applications. They work with a wide range of sensors and can be easily configured using our straightforward, step by step, set up procedure. Calibration is simple and can be achieved with no weight, known weight or full load weight.

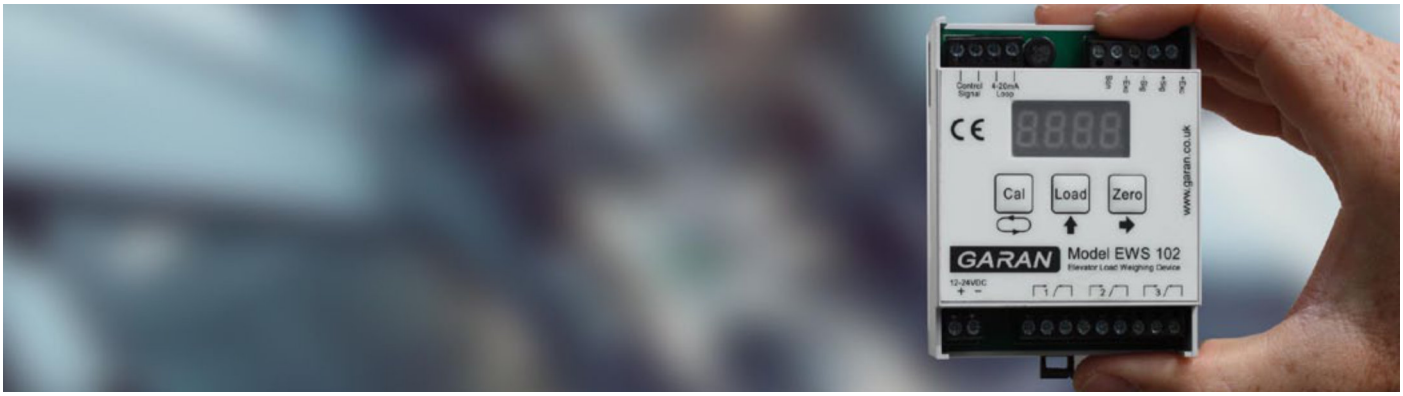
Trusted by industry, our engineering expertise is reflected in our new EWS-102 control unit and sensors for all elevator applications.

From product development to customer service, everything we do and supply is as practical as possible. Our elevator load weighing systems can be seen in many countries worldwide. Our load weighing instrumentation and sensors ensure the safety of numerous elevator passengers daily, not withstanding goods elevators, platform hoists and disabled access lifts. This is why our systems are meticulously designed and manufactured to the highest possible specification.

We put our customers at the heart of our business and are careful to consider their particular circumstances, ensuring that we supply the right product. But that is not the end of it. Our extensive data sheets and user guides should make installation straight-forward and we are always on hand to advise on practical installation measures.

EWS-102 CONTROL UNIT SPECIFICATION

Our EWS system provides a simple yet powerful range of load weighing control instrumentation.



Specifications

Elevator Capacity	Maximum 9000kg net-load
Input	Up to 6 weight sensors (350 Ohm)
Alarm-Set Points	3 independent relays, configurable via system menu
Relay Contacts	1A at 240VAC/30VDC
Internal Buzzer	Configured to relay 1 output
Temperature Range	-10C to 50C
Dimensions	90mm x 70mm x 31mm

Product Description

The EWS 102 Control Unit works with a range of sensors and can be easily configured using our straightforward, step by step set up procedure. Calibration is simple and can be achieved using a known weight or full load weight.

Features

Three independently programmable relays, selectable for either N/O or N/C contacts.

Programmable using interactive menus via the front panel.

Correction software for system errors caused by friction/compensation chain.

Optional analog output - current (4-20mA, 0-20mA) or Combined Current 4-20mA, 0-20mA) & voltage (0-5V, 0-10V, +/-5V or +/-10V) designed for use with pre torque anti rollback drive systems.

Intelligent software which enables the system to auto zero calibrate when the system is inactive.

Internal buzzer.

Non-volatile memory

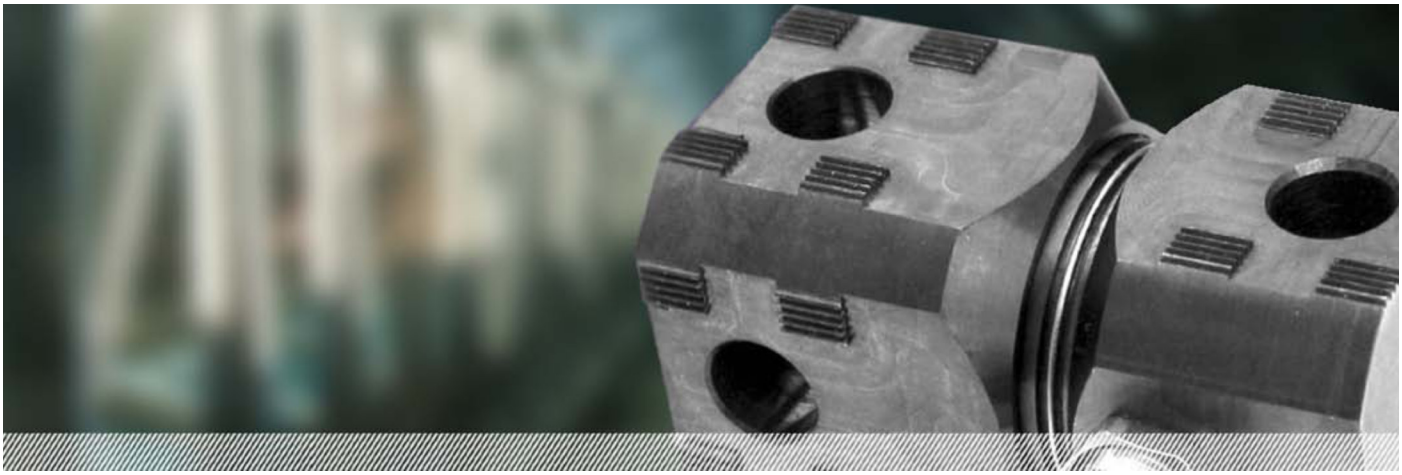
7 segment, 4 digit display for calibration and weight display.

Power supply 12-24Vdc.

CE Approved.

MODEL CBT SPECIFICATION

The beam sensor is designed to be fixed to the elevator's car frame.



Metrology and Electrical Specifications

Rated Output	1.2 +/- 10%	mV/V
Zero Balance	5	+/- mV/V
Total Error	0.25	+/-% of applied
Nominal input voltage	5	load
Maximum input voltage	10	VV
Input resistance	1010 +/- 50	ohms
Output resistance	1000 +/- 2	ohms

Product Description

This sensor is a hermetically sealed bolt-on extensometer. They are based on a full Wheatstone strain gauge bridge and deliver a high-gain output signal proportional to the minimal deformation of the beam it is bolted to. A robust Stainless Steel design.

The CBT can be used in pairs should the application require it

General Specifications

Overload	150	% rated load
Ultimate load	300	% rated load
Temperature range	-30 to +70	C
Protection	IP68	
Material	Stainless Steel	17-4 PH(1.4548)
Cable length	3	Metres

Beam Sensor

- Stainless steel construction
- Environmental Protection IP68 with complete hermetic sealing
- High resolution
- Easy bolt installation (2x M10), no adhesives required
- Shielded cable
- Straightforward installation

MODEL CCT-B SPECIFICATION

These cabin sensors are designed for large passenger and goods elevators

Metrology and Electrical Specifications

Rated Output	2 +/- 0.1%	mV/V
Zero Balance	0.2	+/- mV/V
Total Error	0.25	+/-% of applied
Nominal input voltage	10	load
Maximum input voltage	15	VV
Input resistance	415 +/- 20	ohms
Output resistance	350 +/- 3	ohms

Product Description

The Model CCT-B shear beam sensor is supplied with it own integral rubber mounting arrangement, specifically designed for installation below the elevator car. It is supplied in matched groups of up to six sensors per lift car, dependant on load. It comprises a full Wheatstone bridge allowing for individuals sensors to be swapped out.

General Specifications

Overload	150	% rated load
Ultimate load	300	% rated load
Temperature range	-30 to +70	C
Protection	IP65	
Material	Anodized Aluminum	
Cable length	6	Metres

Cabin Sensor

Anodised aluminium construction
Up to 8000kg load (4 Sensors)
High accuracy
Matched outputs
Individual sensor can be replaced
Perfect for new installations

MODEL CRT-M SPECIFICATION

The rope sensor is designed to be used on the elevator ropes.

Metrology and Electrical Specifications

Rated Output	2 +/- 10%	mV/V
Zero Balance	3	+/- mV/V
Total Error	0.075	+/-% of applied
Nominal input voltage	10	load
Maximum input voltage	15	VV
Input resistance	415 +/- 15	ohms
Output resistance	350 +/- 3	ohms

Product Description

The rope sensor system combines an aluminium sensor and a steel rope fixing clamp, specifically designed for installation on the ropes of the elevator car making them ideal for both new lift and retrofit applications.

The CRT-M is designed to be used in conjunction with the EWS 102 analog output control units

General Specifications

Overload	150	% rated load
Ultimate load	300	% rated load
Temperature range	-20 to +60	C
Protection	IP66	
Material	Anodized Aluminum	
Cable length	9	Metres

Rope Sensor

Aircraft grade aluminium
Suitable for rope sizes 6mm - 13mm
Ease of installation

MODEL CRT-A SPECIFICATION

Single rope sensor designed to be used on the elevator 4-8mm ropes.

Metrology and Electrical Specifications

Rated Output	2 +/- 0.02%	mV/V
Zero Balance	+/- 1%	rated load
Total Error	0.5	rated load
Nominal input voltage	10	load
Maximum input voltage	15	VV
Input resistance	1000 +/- 10	ohms
Output resistance	1000 +/- 2	ohms

Product Description

The rope sensor system combines an alloy steel sensor with three steel pins for fixing to a single elevator rope. Simple installation makes them ideal for both retrofit applications.

General Specifications

Overload	150	% rated load
Ultimate load	200	% rated load
Temperature range	-30 to +70	C
Protection	IP67/68	
Material	Steel Alloy	

Rope Sensor

Alloy steel construction
Suitable for rope sizes 4mm - 8mm
Ease of installation

MODEL CRT-B SPECIFICATION

Single rope sensor designed to be used on the elevator 8-16mm ropes.

Metrology and Electrical Specifications

Rated Output	2 +/- 0.02%	mV/V
Zero Balance	+/- 1%	rated load
Total Error	0.5	rated load
Nominal input voltage	10	load
Maximum input voltage	15	VV
Input resistance	1060 +/- 10	ohms
Output resistance	1000 +/- 2	ohms

Product Description

The rope sensor system combines an alloy steel sensor with three steel pins for fixing to a single elevator rope. Simple installation makes them ideal for both retrofit applications.

General Specifications

Overload	150	% rated load
Ultimate load	200	% rated load
Temperature range	-30 to +70	C
Protection	IP65	
Material	Steel Alloy	

Rope Sensor

Alloy steel construction
Suitable for rope sizes 8mm - 16mm
Ease of installation

MODEL CCT-A SPECIFICATION

The sensors are designed to be used under the elevator cabin.

Metrology and Electrical Specifications

Rated Capacities	800kg	Kg
Rated Output	2 +/- 0.02%	mV/V
Zero Balance	1%	+/- mV/V
Total Error	0.5	+/-% of applied
Nominal input voltage	10	load
Maximum input voltage	15	VV
Input resistance	1030 +/- 10	ohms
Output resistance	1000 +/- 2	ohms

Product Description

The Model CCT-A shear beam sensor is supplied with it own integral rubber mounting arrangement, specifically designed for installation below the elevator car. It is supplied in matched groups of up to six sensors per lift car, dependant on load. It comprises a full Wheatstone bridge allowing for individuals sensors to be swapped out.

General Specifications

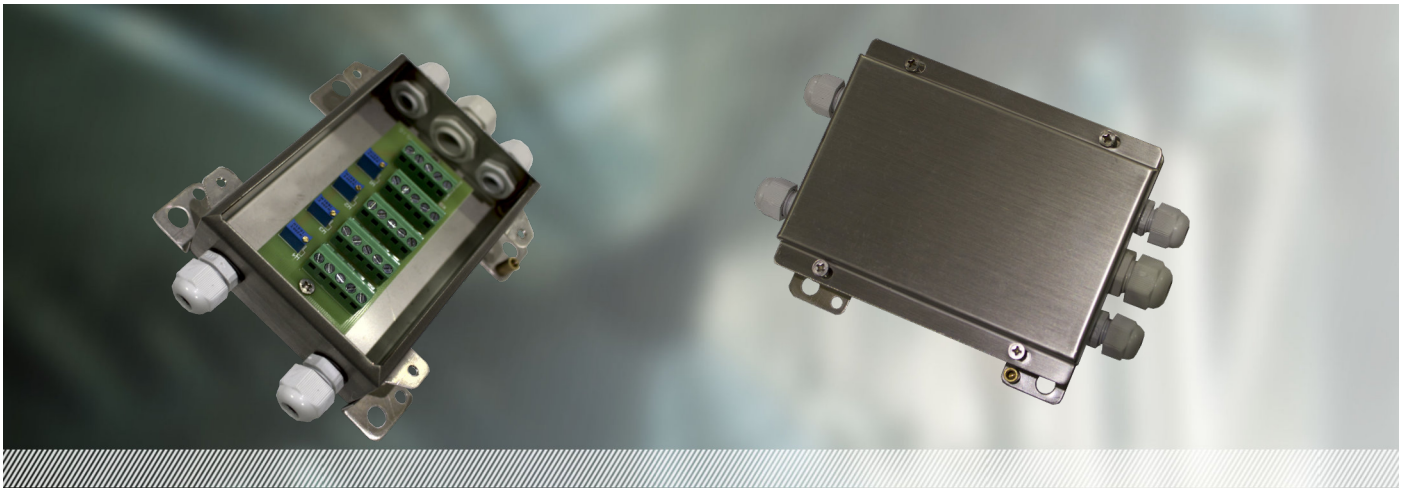
Overload	150	% rated load
Ultimate load	200	% rated load
Temperature range	-30 to +70	C
Protection	IP65	
Material	Anodized Aluminum	
Cable length	5	Metres

Cabin Sensor

Anodised aluminium construction
Up to 3000kg load (4 sensors)
High accuracy
Matched outputs
Individual sensor can be replaced
Perfect for new installations

4 WAY JUNCTION BOX SPECIFICATION

Stainless Steel junction box to combine four sensors to provide one output



Specification

Rugged Industrial Junction Box

Stainless Steel Construction

Operating Temperature -20 - 85 C

4 x M12 input glands

1 x M16 output glands

Product Description

This junction box is designed to connect up to four sensors in parallel, using a sensor with a shielded 4 wire cable.

The output signal can be adjusted using a multi turn trim pot

Key Features

Adjustable output signal

Stainless steel construction

Protection IP65

M12 Input Glands

M16 Output Gland

EWS 102 POWER SUPPLY SPECIFICATION

24V dc Din Panel Mount Power Supply for use our range EWS 102 Control Units

Specification

Input Voltage	90 - 264 VAC
Output Wattage	10 Watts
Output Voltage	24 VDC
Output Current	420mA
Load Regulation	+/-1%

Product Description

The EWS 102 power supply is a low profile AC-DC Din rail mountable power supply, with a universal 90 - 264 VAC input, short circuit protection and an internal input filter.

General Specification

Temperature Range	-41 to +71˚C
Efficiency minimum	76%
Efficiency Typical	80%
Temperature coefficient	+/-0.03 %/˚C
Cooling	free air convection
Protection	IP20

Approvals

UL, cUL, TUV, CE

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