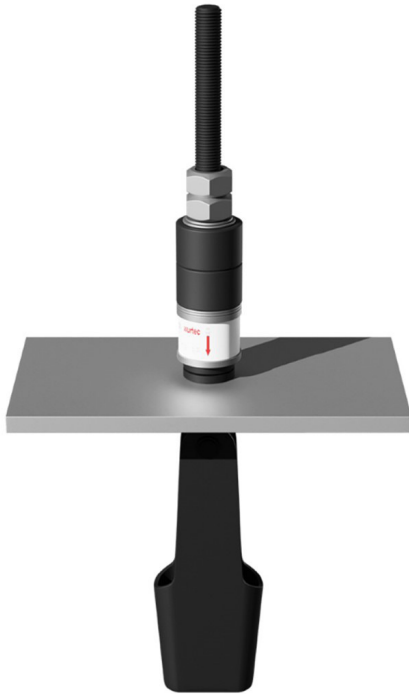


PERMANENT OVERLOAD “DONUT” SENSORS



RC Donut Sensor in Context



AE12 Unit

PRODUCT DESCRIPTION

The RC-Series Donut Load Sensors by Henning provide precise, real-time measurement of elevator load directly at each suspension rope or belt. Installed at the hitch point beneath the spring or bushing assembly, these compact sensors monitor individual rope loads to ensure accurate load distribution and reliable overload detection.

Paired with the AE12 evaluation unit, the system offers integrated Wi-Fi for fast, wireless configuration and monitoring. Installers can access the built-in web interface from any mobile device—no app required—making setup and diagnostics simple and efficient.

Supporting Relay, Analog, and CANopen variants, the AE12wifi processes data from up to 12 measuring channels and features programmable alarm relays for overload detection, slack rope monitoring, and load distribution control.

With a plug-and-play design, RC-Series sensors eliminate the need for calibration using test weights. Once connected, the system automatically calibrates and delivers accurate measurements immediately.

By continuously monitoring rope load in real time, the RC-Series system provides insight into rope tension conditions, helping technicians verify proper rope equalization, improve elevator performance, and support compliance with A17 and EN81 safety standards

KEY FEATURES

- Permanent load measurement for suspension systems
- Absolute load measurement at each rope/belt
- Plug-and-play with auto calibration
- No test weights required during setup
- Continuous real-time load monitoring
- Meets A17 and EN81 requirements for overload and equalization
- Compact design for hitch point installation
- Diagonal pull compensation (5°–10°) with included wobble plates
- Wi-Fi access via mobile browser—no app needed

SPECIFICATIONS_DONUTSENSORS

PERMANENT OVERLOAD “DONUT” SENSORS

ACCESSORIES AND SYSTEM COMPONENTS



Donut Sensor Spacer



MSM12 Adapter

Donut Sensor Spacers

Spacer tubes are used when the available space on a hitch plate is too limited to allow multiple donut sensors to sit side-by-side. The spacers raise adjacent sensors to different heights, allowing them to be staggered vertically so they can fit within tight installation spaces.

Using spacers makes it possible to install multiple sensors without interfering with surrounding components while maintaining accurate load measurement. Installation layouts are typically determined using system diagrams and ordering guides to ensure proper spacing and configuration.

MSM12 Adapter

The MSM12 Adapter allows permanently installed donut sensors to connect to an MSM12 mobile load sensor display, providing additional flexibility for maintenance and testing.

With this adapter, technicians can use the installed sensors for ELVI2 alternative testing instead of relying on LSM1/XL mobile sensors, which can help reduce setup time during CAT5 testing procedures.

The MSM12 display can also simplify rope tension adjustments because it can be positioned closer to the hitch point than the AE12 controller. Additionally, the MSM12 display provides expanded system visibility, allowing technicians to view more sensor data simultaneously during diagnostics and adjustments.

Evaluation Unit AE12

The AE12 evaluation unit collects load measurements from the RC-Series donut sensors and communicates with the elevator control system.

The AE12 controller processes data from up to 12 measuring channels, enabling continuous monitoring of rope loads and overload conditions.

The AE12 is available in multiple interface configurations to support different system requirements, including relay outputs, analog outputs, and CANopen communication. Integrated Wi-Fi connectivity allows technicians and operators to access system data through a standard web browser on any mobile device—no app required. This wireless capability enables convenient monitoring, adjustment, and diagnostics directly at the installation site.

SPECIFICATIONS_DONUTSENSORS

PERMANENT OVERLOAD “DONUT” SENSORS

AE12 EVALUATION UNIT – ELECTRICAL SPECIFICATIONS

Specification	Analog (455002)	CANopen (455005)
Power Supply Voltage	8–30 V DC	8–30 V DC
Power Consumption	Max 1.5 W	Max 1.5 W
Fuse	1 A	1 A
Sampling Frequency	100 Hz	100 Hz
HOLD Input	12–240 V AC/DC	N/A
Analog Output	0–10 V DC / 0–20 mA	N/A
CANopen	N/A	CANopen DSP417
Relay Maximums	250 V AC / 2 A	N/A
WiFi	802.11 b/g/n, 2.4 GHz, Rx min. -97 dBm	802.11 b/g/n, 2.4 GHz, Rx min. -97 dBm
# of Relay Outputs	4	N/A
# of Measuring Channels	12	12

ORDERING INFORMATION

Donut Sensors				
Part No.	455250	455255	455260	455265
	RC300	RC500	RC1000	RC3500
Description	RC300 Donut Sensor, 0-300 kg	RC500 Donut Sensor, 0-500 kg	RC1000 Donut Sensor, 0-1000 kg	RC3500 Donut Sensor, 0-3500 kg
App Range	Load 0-300 kg (660 lb)	Load 0-500 kg (1100 lb)	Load 0-1000 kg (2200 lb)	Load 0-3500 kg (7700 lb)
Max Eye Bolt	12.5 mm (M12)	16.5 mm (M16)	24.5 mm (M24)	31 mm (M30)
Max Rope Size	~4-8 mm*	~6-14 mm*	~12-17 mm*	~16-25.5 mm*
Max Load/ Brkg Load	600kg / 1200kg	1000kg / 2000kg	2000kg / 4000kg	4550kg / 5250kg
Deflection Comp	10	7	5	5
Sensor Ht.	52.4mm	53.8mm	68.0mm	92.0mm
Sensor Ø	40 mm	49 mm	65 mm	72.4 mm
Sensor Spacers	RC300-SPACER	RC500-SPACER	RC1000-SPACER	RC3500-SPACER
Min Spacing with Spacer Tubes (in)	1.313	1.625	2.125	2.500

Donut Sensor Accessories							
Part No.	455002	455005	RC300-SPACER	RC500-SPACER	RC1000-SPACER	RC3500-SPACER	455111
Description	AE12 Unit, Analog	AE12 Unit, CANopen	Spacer for RC300	Spacer for RC500	Spacer for RC1000	Spacer for RC3500	MSM12 Adapter

SPECIFICATIONS_DONUTSENSORS