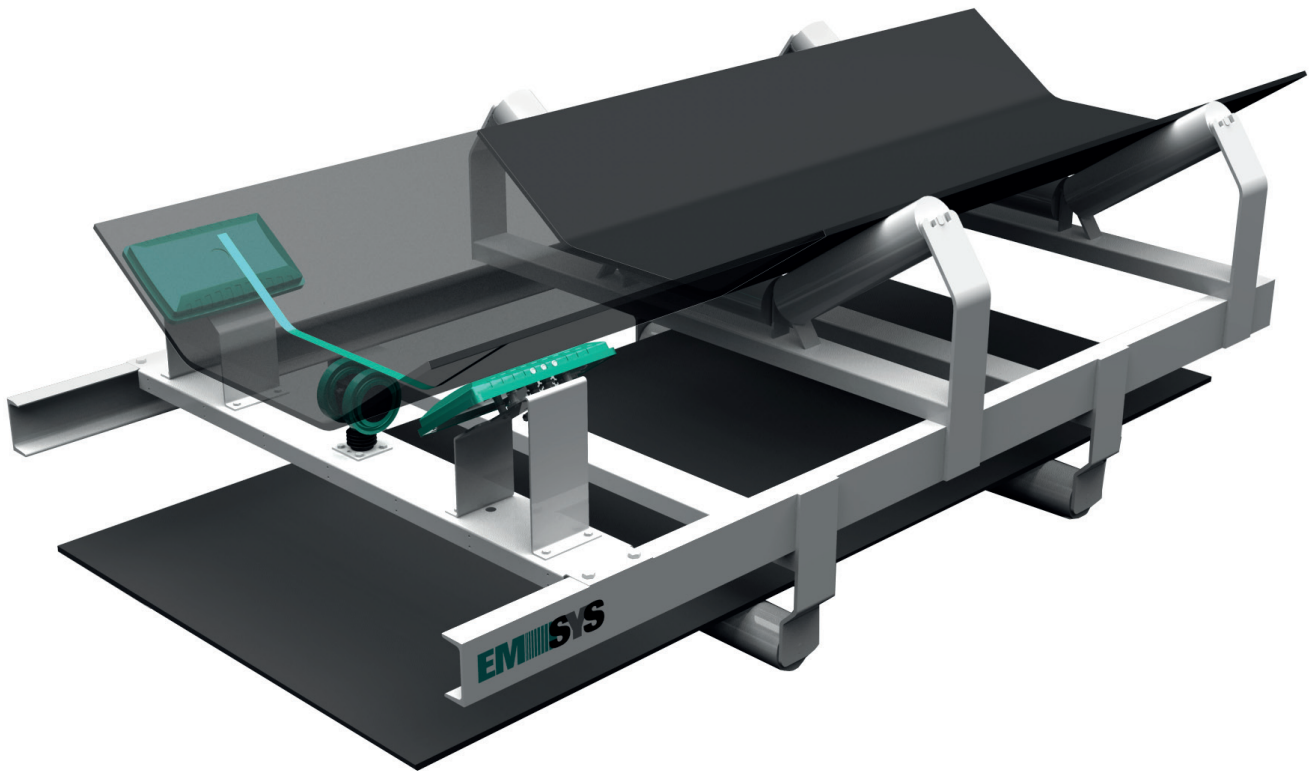


# BRMS-LSRS

*belt rip monitoring with loop sensors + RFID*



## Advantages

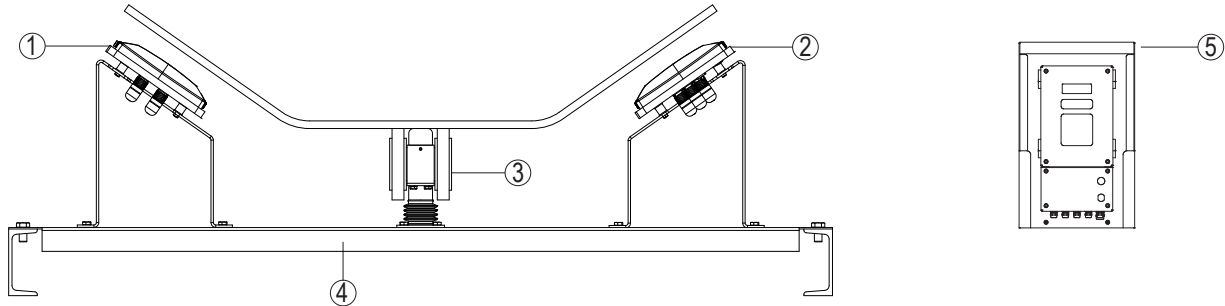
retrofitable • easy operation • compact design • highest reliability • multi-communication options  
maintenance free

## Description

Belt conveyors are subject to damage (longitudinal belt rips) mainly through the impact of foreign objects; the loading and discharging areas being the most commonly endangered points. The BRMS-LSRS allows the monitoring of these areas and the minimizing of belt damage as a function of the Belt Sensor (Inductive loop and/or SmartWire) spacing. The belt rip monitoring system BRMS-LSRS is installed at the endangered points on the conveyor system. The system detects Loops

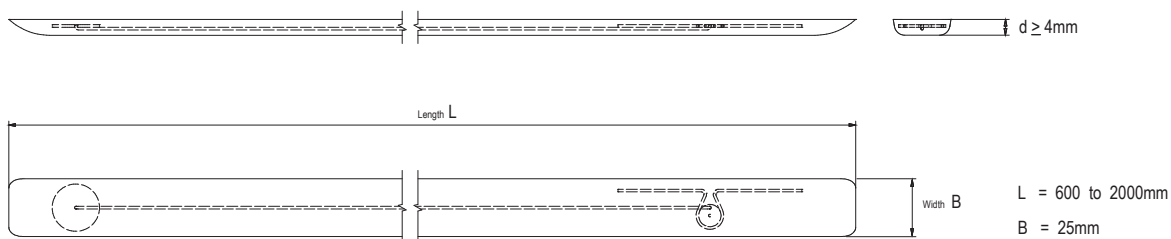
and/or SmartWires embedded in the belt. The intelligent receiver unit is able to capture all different types of inductive loops, SmartWires and RFID-Tags embedded in the belt. The BRMS-LSRS can easily be integrated into the existing System-/ Plant infrastructure. The transmission of the locally analyzed measurement data, settings and system parameters is provided through MODBUS by WiFi and RS485.

## Construction



- ① Transmitter Unit
- ② Receiver-Processing Unit
- ③ Sensor Twin Idler
- ④ Chassis
- ⑤ Display-/Control Unit

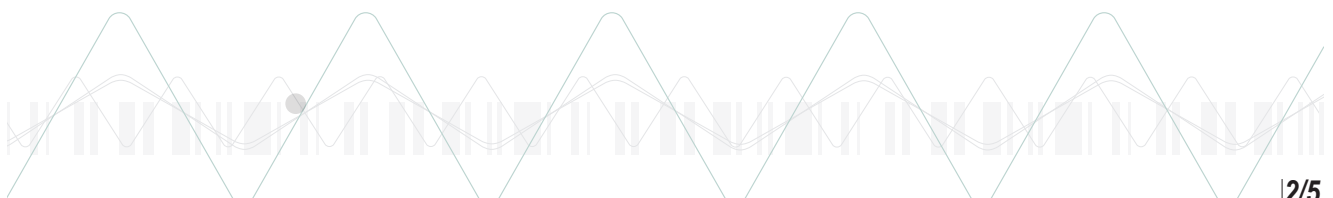
## Smart Wire



## Function

The signal transmitted by the transmitter unit is linked up to the receiver unit via the passing intact conductor loop. A SmartWire passing the Transmitter and Receiver Unit sends a unique identification and status of the SmartWire to the Receiver unit. A combination of an inductive loop and SmartWire is called SmartLoop and provides dissimilar redundancy as both single belt sensors must indicate a rip status.

The embedded Reference Tags provide an explicit point of reference throughout the complete belt. During a learn cycle the system identifies the position of each embedded belt sensor related to the point of reference.

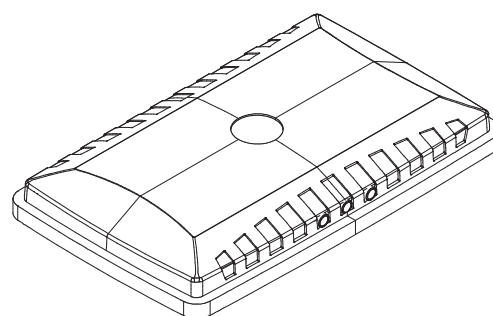
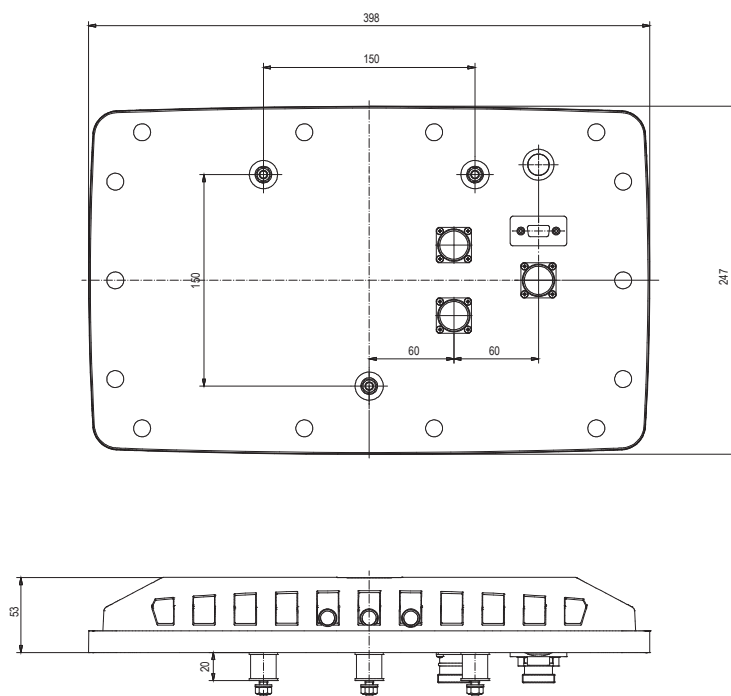


## Technical data

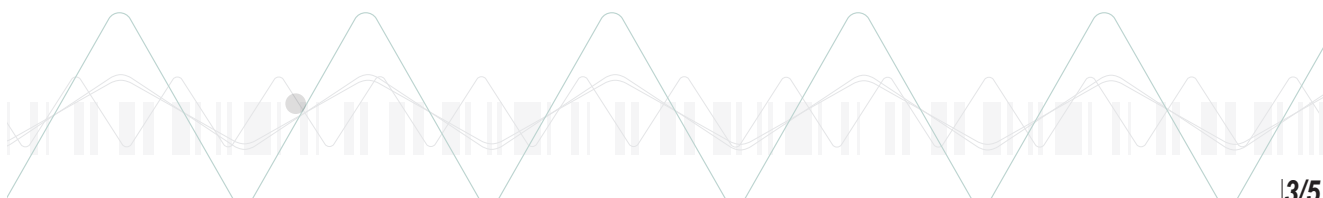
### Unit-specific data

- belt width ..... universal
- Belt conveyor length ..... universal
- Belt type ..... steel-cord; textile
- Belt conveyor velocity .....  $\leq 10,00\text{m/s}$

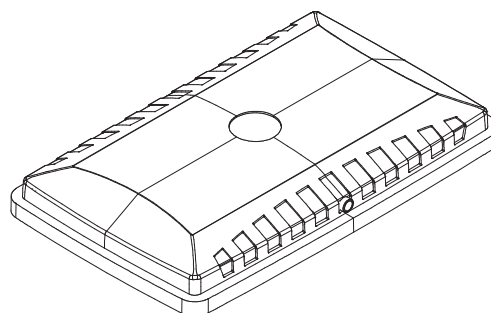
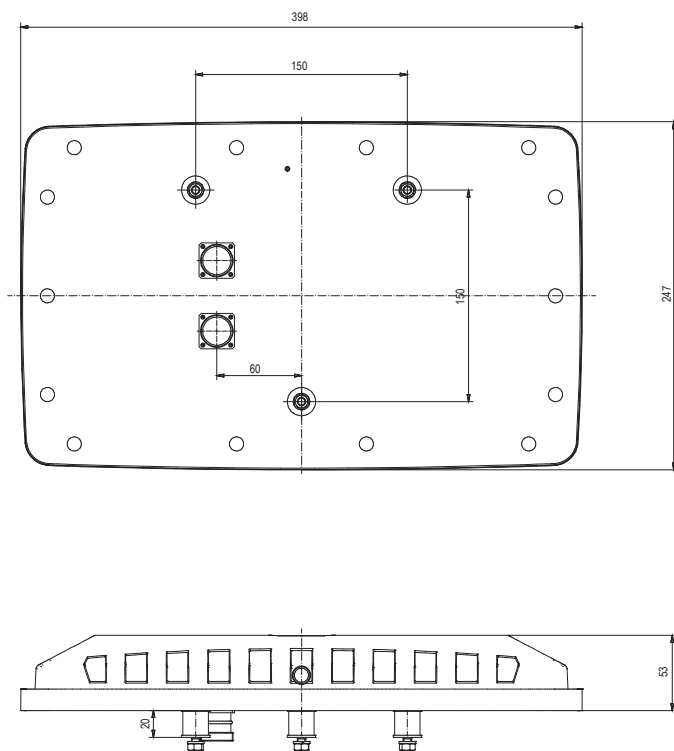
### Receiver-/Processing Unit



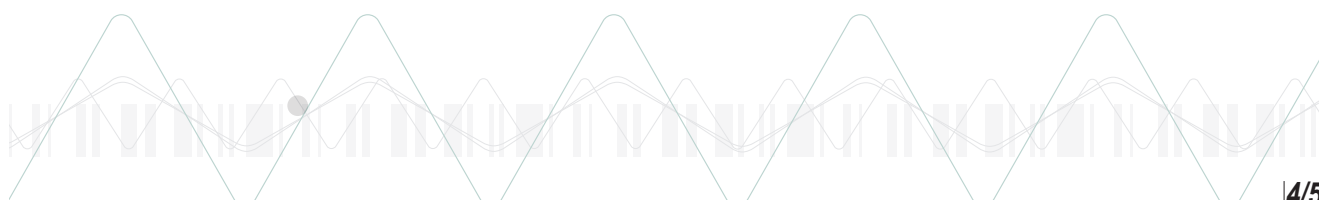
- Frequency range (Loop Detection) ..... 50kHz
- Frequency range (RFID Detection) ..... UHF
- Input voltage ..... 11 - 13,5VDC
- Power consumption .....  $\leq 1.2\text{ A}$
- IP-Code ..... IP 65
- Input/Outputs ..... Connecting system: EMSYS module plug system
- Operating temperature range .....  $-20^{\circ}\text{C} \leq \text{TA} \leq +60^{\circ}\text{C}$
- Dimension (HxWxD) ..... approx. 55 x 400 x 250mm
- Weight ..... approx. 2,5kg



## Transmitter Unit

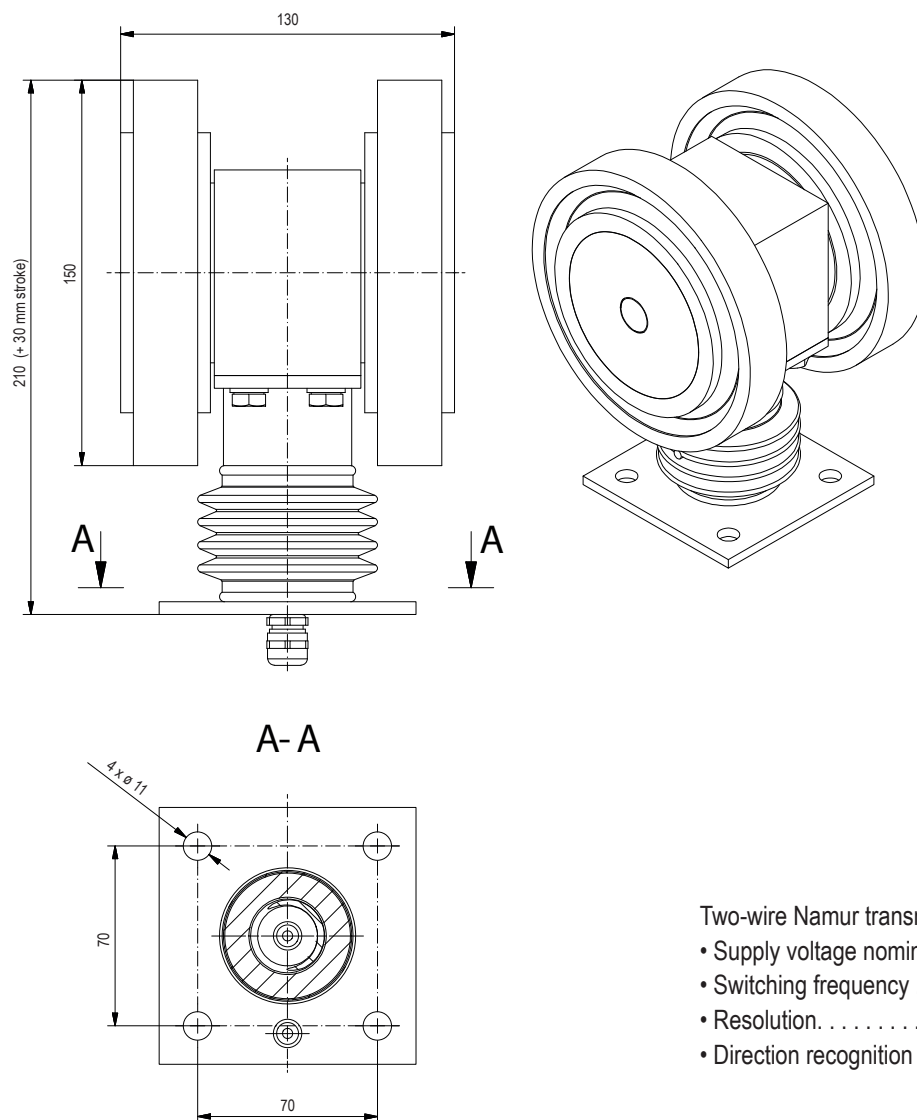


- Frequency range (Loop Detection) ..... 50kHz
- Frequency range (RFID Detection) ..... UHF
- Input voltage ..... 11 - 13,5VDC
- Power consumption. ....  $\leq 1.2 \text{ A}$
- IP-Code ..... IP 65
- Input/Outputs. .... Connecting system: EMSYS module plug system
- Operating temperature range .....  $-20^{\circ}\text{C} \leq T_A \leq +60^{\circ}\text{C}$
- Dimension (H x W x D) ..... approx. 55 x 400 x 250mm
- Weight ..... approx. 2,5kg



## Sensor twin idler

Two-wire Namur transmitter for distance impulses



Two-wire Namur transmitter for distance impulses

- Supply voltage nominal . . . . . 8.2 V DC
- Switching frequency . . . . . 1 kHz
- Resolution . . . . . 0.47m/Impuls
- Direction recognition . . . . . optional

## BRMS-LSRS

- IP-Code . . . . . IP 65
- Operating temperature range . . . . .  $-20^{\circ}\text{C} \leq T_A \leq +60^{\circ}\text{C}$
- Standard design . . . . . CE