

## Installation instruction for USMS 1 /USMS 2

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## Installation instruction for USMS 1 /USMS 2



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## Installation instruction for USMS 1 /USMS 2

### General data of the units:

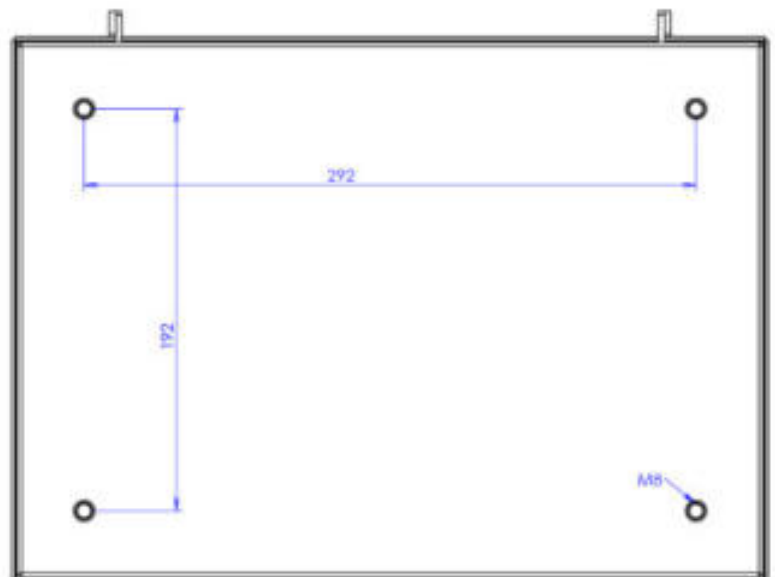
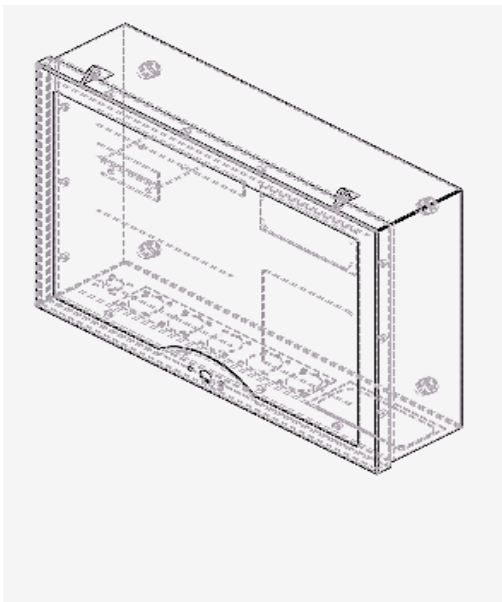
The USMS is an efficient unit. It is resistant to light, noise, dust, water, sun or other atmospheric influences.

The installation is very simple and the band conveyors have not to be rebuilt. The USMS 1 and the USMS 2 consists each of: The evaluation unit, the card reader, the printer, the keyboard, the display and of one or – concerning the USMS 2 - up to 5 measurement units.

The installation of the evaluation unit should be fixed to the frame of the constructions, so that the unit is not exposed to any superfluous vibration. The unit has a robust aluminium casing and is protected from dust and water. But we give the advice, not to clean the unit with a high pressure cleaner, the printer and the chip card could be damaged.

### Fixing of the unit (evaluation unit)

The unit is fixed with four 8mm screws on its backside.



**292X192mm** housing dimensions

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### Power supply of the units:

**Voltage supply evaluation unit:**  
**Voltage supply 24 V direct current**

The three conductors have to be connected according to the following colours:

- 1) Brown            voltage supply +
- 2) Blue            voltage supply -
- 3) Yellow/blue    earth (should be fixed to the frame of the construction)

In the installation set there is a power supply cable of 5 m length. This should be fixed on the plug side with a bayonet joint. It guarantees a reliable mechanical connection of the cable.

**The evaluation unit has to be connected with a relay directly to the battery, to avoid interferences of the unit and voltage variations.**

All the units are **secure from short-circuits and protected against polarity reversal.**



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### Connection between evaluation unit and measurement unit:

The connection cable between evaluation unit and measurement unit is 10 m long and **must not be longer for the USMS 1**. The connection cable has two plugs, which are secured with a bayonet joint.

Also concerning the USMS 2 the standard length is 10 m, but can have – if you wish – a length of 9950 m .The connecting cable has two plugs which are secured with a bayonet joint.



### Laying of the connection cable:



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The laying of the cable has to be in accordance with the necessities of the unit and can be done according to the wishes of the customer as far as it is possible.

The cable is shielded from electro-magnetic fields. It should not be cracked and during the installation or the running not be damaged.

A defect of the cable can cause false measurements or take influence on the precision of the unit. The cables are each equipped with two plugs and shielded hermetically with a screwed joint, so that dust, water or dampness. Cannot soak in. If one of the plugs is not tight, troubles can be caused.



**Important hint: The plugs must not be removed during the installation.**

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### Fixing of the unit (measurement unit)



### Installation of the measurement unit:

The measurement unit has to be adjusted to the material width on the band conveyor and not to belt width. The length of the measurement unit is adjusted to the material width.

For example for a 1050 mm wide band which material is about 700 mm wide, a head with the length of 970 mm with 5 ultrasonic sensors is supplied.

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### Installation of the holding device:

The installation of the holding device has to be installed on the front return pulley.

The holding frame of the measurement unit should be fixed to the holding of the return pulley to resonate with the vibrations of the unit. When the vibration of the measuring head is different to the one of the return pulley, a correct 0-reference is not possible, because even minimal changes of the distance of the sensors to the band material can cause measurement errors.

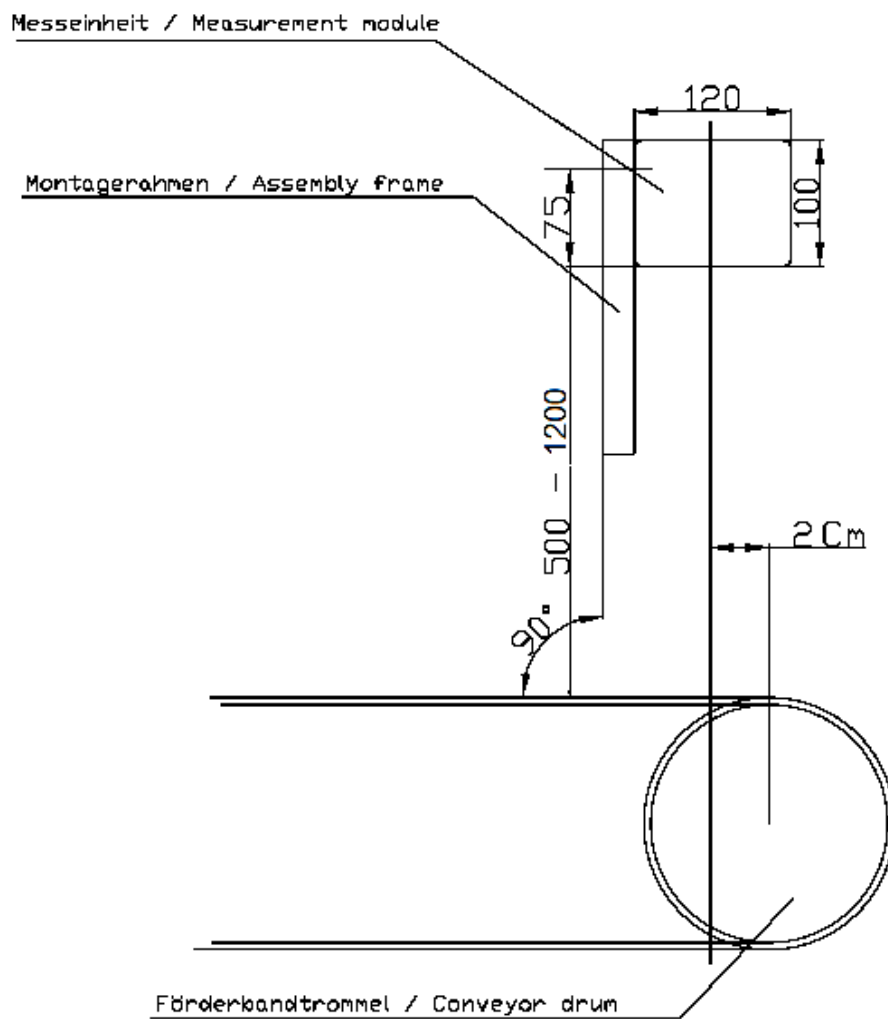
The measuring head shall be installed in a height of round 40 cm bottom edge of the measuring head, the angle to the band conveyor should be 90 degrees.

The maximal measurement distance of the sensors is 600 mm. The minimum distance of the sensors is 200 mm, the sensors are not suitable for a distance below 200 mm. The measuring head has to be fixed to a solid frame – round 40X40X4 profiled pipe – so that the measurement unit has the same vibrations as the return pulley.





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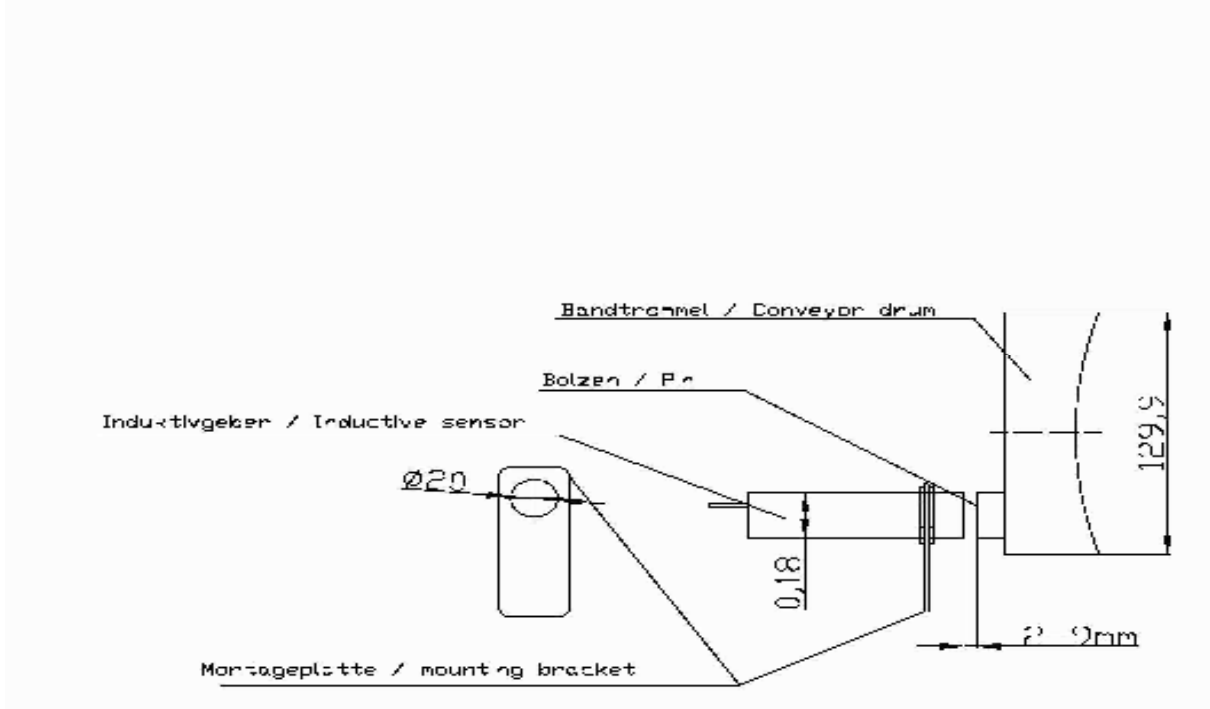
### Connection of the measurement unit:

The measurement unit has two sockets. The connection cable of the evaluation unit is connected to the big socket. The inductive sensor which counts the rotations of the band conveyor and transmits them to the evaluation unit, is connected to the small socket.



### Installation of the inductive sensor (rotary position transducer):

The inductive sensor is fixed with a black cylinder on the frame of the return pulley, where as an analog a screw is fixed to the return pulley. The distance between sensor and screw should not be more than 8 mm, the minimum distance is 2 mm. When all connectors are connected and the unit gets power supply, there is a light signal on the backside of the inductive sensor (rotary position transducer).





## Warranty for USMS 1 /USMS 2

**We issue an one year guarantee for all units valid from date of purchase.**

**It is important that your demand is addressed directly to the manufacturers! The manufacturer decides if the unit has to be exchanged or can be repaired. If the unit is not payed already we cannot accept any demands of guarantee.**

***In the following cases the company GTI GASSER CHRISTIAN issues no guarantee:***

- Defects caused by improper using/handling or unauthorised interference.
- By using different resp. elements which are not delivered from us (e.g. cabling, electric cable, data cable, connectors, chip cards, reader unit, etc. or unlicensed software).

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The accountable technician

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