

- Increase productivity
- Reduce power consumption per ton of product
- Reduce wear of grinding media
- Improve the uniformity of the product
- High performance
- Compatible SOUND 1



- ✓ Automatic calibration
- ✓ Adaptation according to the quality of the material to be crushed
- ✓ Remote control
- ✓ Digital processing of the Sound
- ✓ Compatible with Sound 1

SOUND 2



ELECTRONIC EAR

Function:

The electronic Ears senses the noise of the mill

This noise varies with the product and the filling level of the mill. The Ear consist of a very sensitive microphone installed at the mill inlet, at the grinding ball impact point, and as close as possible to the mill shell. The foam of the Electronic Ear must nearly touch the mill shell between two rows of bolts. The head of the micropone is 4-5 cm in the rear, and is protected by a fine grid covered by a thin plastic film at the level of the foam coat.

Therefore, fitted in foam, the microphone is insulated from the interfering noises existing in the plant.

The front cover prevents the entrance of dust, the accumulation of which would disturb the response of the Electronic Ear.

Controller:

The heart of the electronic ear HASLER becomes digital and allows accurate measurement.

The New Sound2 allows you to filter the sound to gain acuracy. From now on the calibration is automatic during the commisionning with the SOUND2. The filling level is displayed on the LCD screen. The digital outputs are configurable by the user.



Communication

- The SOUND2 is configurable by the communication via various protocols, and also allows the data transmission of measurement :



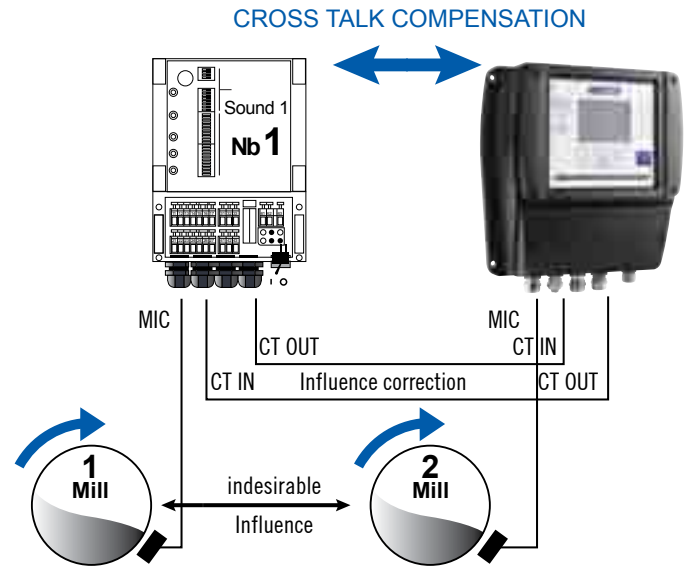
- Modbus TCP (Ethernet)
- Modbus RTU (RS422)
- Profi bus DP (RS485)

Configuration and software maintenance

- Maintenance can be performed by web server
- The calibration parameters can be stored on SD card
- Restitution of parameters by SD card

Cross Talk Compensation

- SOUND2 compensates the interference noise from adjacent mills.
- In the low example, a portion of the output of the wiretap No. 1 is used to offset the interference of the mill Wiretap No. 2 and vice versa.
- The crosstalk compensation is adjustable between 0-17%.
- 0 to 6 V signal - independent of the configuration of the monitor - is used to correct the indication of the other ear. This signal is called CT OUT, an abbreviation for «Cross Talk OUTput.»
- Sound 2 is compatible with Sound 1



Technical specifications

Power supply :

- 230 V, AC input : 88 VAC until 264 VAC. Frequency : from 47Hz to 63Hz
- 24 V, DC input : 18VDC to 36VDC

Adjustable gain from 0 db to 45 db

Operating frequency span :

300 Hz to 4600 Hz.

Voltage output :

0...10 V on minimum 1 kΩ.

Current output :

0/4 ... 20 mA on a maximum load of 600 Ω.

Relays contacts:

- Max. switching current: 2 A, AC.
- Max. switching voltage: 220 VDC, 250 VAC.
- Max. switching power : 125 VA (60 W).

Temperature :

According to IEC 654-1.

- Operating : -20°C to + 60°C.
- Storage : -40°C ot +70°C.

Humidity :

According to DIN40040 class F 95% at 25°C non-condensing

EMI rating :

±2 kV on the signal, ±4 kV on the 220 VAC power supply

Case size :

Width 256 mm, height 260 mm, depth 118 mm.

Protection grade :

IPW657 (IP65).

Weight :

2900g.

Certification



General electrical emissions : EN50081-2
General Electrical Immunity : EN50082-2
Electrical safety : EN61010-1