

Silo overflow monitoring system

The protection for silos and vessels

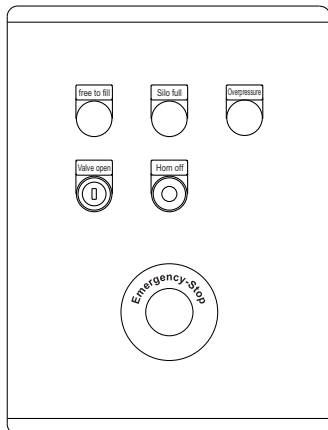
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Operating instructions

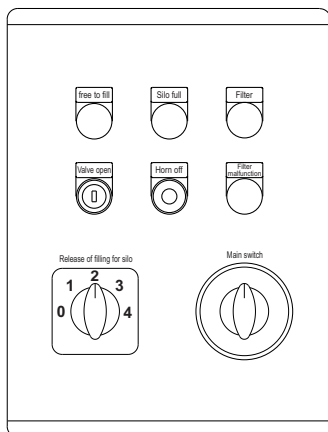
**silo
safe
system**

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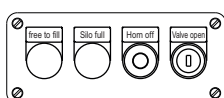
Function specification



Control cabinet for jet filter



Control cabinet for vibrating filter



Local operator panel

1. GB Basic module – Silo overflow monitoring system

- 1.1 The coupling of the filling hose activates the limit switch and sets the control to work. The jet filter starts with the continuous clean-up. The blocking valve opens, the full indicator will be turned on, the green lamp “free to fill” lights up and the filling process can start.
- 1.2 If the filling level reaches the measuring blade of the full indicator, the red lamp “Silo full” lights up and the horn sounds. The green lamp goes off.
- 1.3 The horn can be switched off with the button “Horn off”.
- 1.4 The filling process has to be stopped immediately and the filling pipe has to be blown empty.
- 1.5 After 30 seconds the blocking valve closes automatically the filling pipe.
- 1.6 With a key switch the blocking valve can be opened under supervision to blow the filling pipe empty or to fill small heels or for release of pressure of the silo vehicle.

2. E1 Add-on module – Silo pressure detector

- 2.1 If the pressure rises above 40 mbar – e.g. during the final torrent – the silo pressure detector reports this. The blocking valve closes the filling pipe immediately.
- 2.2 The red lamp “Overpressure” lights up, the green lamp “free to fill” goes off. The horn sounds and the filter cleans-up itself.
- 2.3 If the pressure falls and the cleaning period is finished the blocking valve opens. The lamp “Overpressure” goes off, the green lamp “free to fill” lights up and the filling can be continued.

3. E4 Add-on module – Jet filter

- 3.1 The jet filter cleans-up continuously and therefore a steady air permeability of the filter area is ensured during the filling and at the beginning of the final torrent.
- 3.2 At the end of the filling the jet filter cleans-up for another 5 minutes so that the filter area is cleaned and any harden or encrust of the filter cake is out of question.
- 3.3 The pressure switch mounted in the air pipe reports if the pressure is too low to clean-up the filter area. The lamp “free to fill” goes off, the blocking valve closes the filling pipe, the horn sounds and the red lamp “Compressed air missing” lights up.

4. E5 Add-on module – Control for vibrating filter

- 4.1 By coupling of the filling hose the vibrating filter cleans-up automatically the filter area for a time. During the filling process the filter doesn't clean-up.
- 4.2 By decoupling of the filling hose the filter cleans-up once more for a time. So it is ensured that the filter area is clean and any harden or encrust of the filter cake is debarred.
- 4.3 The operation of the vibrating filter will be indicated by a white lamp “Filter”. Malfunctions of the vibrating filter were signalled by the red lamp “Malfunction filter”.

Operating elements and display elements



green indicator light "free to fill"
When this lamp lights up the silo can be filled.



red indicator light "Silo full"
When this lamp lights up the filling has to be stopped immediately and the filling pipe has to be blown empty.



red push button "Horn off"
With this button the horn can be switched off.



Key switch "Valve open"
The valve can be opened under supervision with this switch to fill-up small heels and for release of pressure of the silo vehicle.



red indicator light "Overpressure"
Reports to high pressure in the silo.



red indicator light "Compressed air missing"
Reports Compressed air is missing.



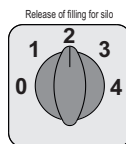
white indicator light "Filter"
Light shines when the filter cleans-up itself.



red indicator light "Filter malfunction"
Reports malfunction at the filter.



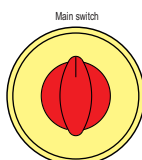
white indicator light "Silo empty"
Light shines when the filling level falls short of the installation height of the level indicator.



Selector switch "Release of filling for silo"
If the control cabinet is mounted in the switch station the silo to be filled can be chosen resp. allowed to be filled with the selector switch. The other silos are blocked. With position "0" all silos are blocked.

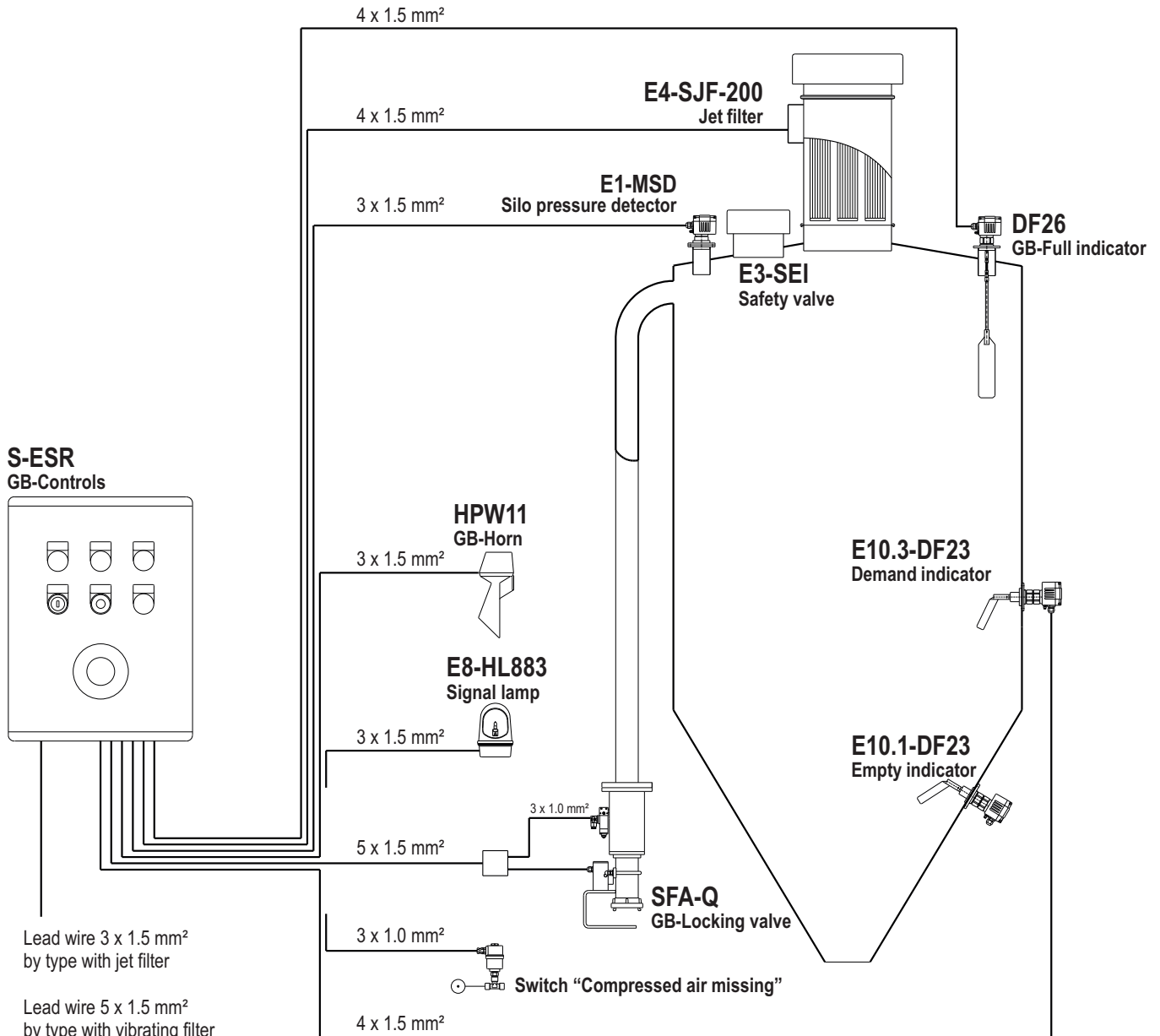


Emergency-Stop
According to type of control.

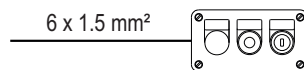


Main switch also emergency-stop
According to type of control.

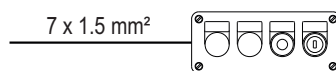
Electro cable - number of wires and cross-sectional areas



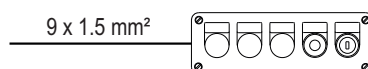
Check the details for
accordance with the
electro plan



E7.3-SVB Local operator panel



E7.4-SVB Local operator panel



E7.5-SVB Local operator panel

011-1009

Compressed air connections – cross-sectional areas and consumption

