



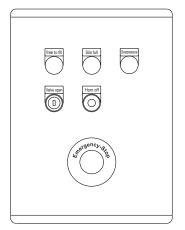
# Silo overfill monitoring system The protection for silos and vessels

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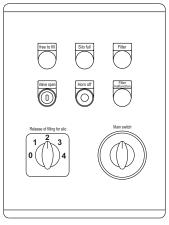
# Operating instructions silo safe safe system

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#### **Function specification**



Control cabinet for jet filter



Control cabinet for vibrating filter



Local operator panel

#### 1. GB Basic module - Silo overfill 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 to 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".

### Silo overfill monitoring system



#### Operating elements and display elements



#### green indicator light "free to fill"

When this lamp lights up the silo can be filled.



#### orange 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.



#### orange indicator light "Silo empty"

Light shines when the filling level falls short of the installation hight 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.



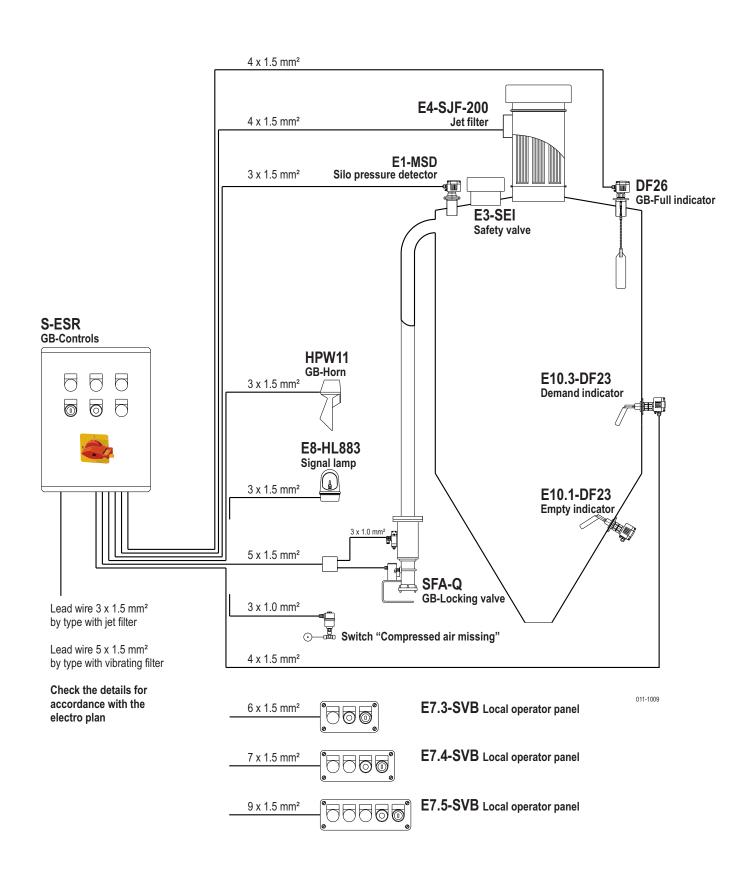
#### Main switch also emergency-stop

According to type of control.





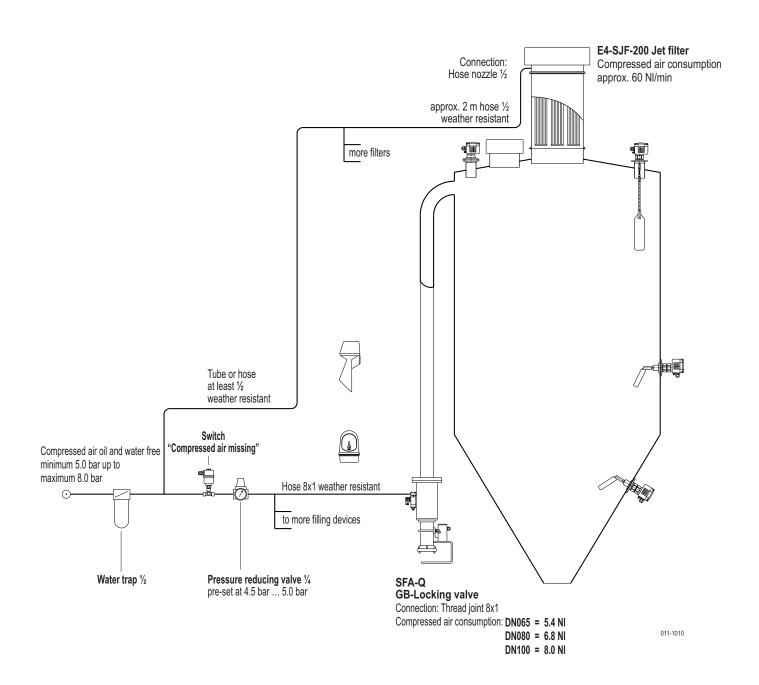
#### Electro cable - number of wires and cross-sectional areas







#### Compressed air connections – cross-sectional areas and consumption





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## **EU-Konformitätserklärung EU-Declaration of Conformity**

Wir/We

#### MOLLET Füllstandtechnik GmbH

Industriepark RIO 103 D-74706 Osterburken Tel. 06291 64400 Fax 06291 9846

erklären hiermit, dass die Geräte:

Silo-Überfüllsicherung (silo-safe-system) mit den elektrischen Betriebsmitteln:

S-EST ... (elektr. Steuerungen), SFA- ... , DF2 ... , HPW ... , HLD ... , MSD-070, MSD-A. ... , SEI- ... , SES- ... , SIS- ... , SNS- ...

auf die sich diese Erklärung bezieht, den folgenden Normen oder normativen Dokumenten entsprechen:

Richtlinie 2014/35/EU (NSR-Richtlinie) Richtlinie 2014/30/EU (EMV-Richtlinie)

und

DIN EN 61010-1:2020, DIN EN 60529:2014 DIN EN 61326-1:2013, DIN EN IEC 60947-5-2:2021

Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt gemäß den Bestimmungen der Richtlinien und durch Einhaltung der Normen soweit es im Rahmen des Lieferumfanges möglich ist. declare that the devices:

Silo overfill monitoring system (silo-safe-system) with the electrical equipment:

S-EST ... (electrical controller), SFA- ... , DF2 ... , HPW ... , HLD ... , MSD-070, MSD-A. ... , SEI- ... , SES- ... , SIS- ... , SNS- ...

to which this declaration relates is in accordance with the following standards or other normative documents:

**Directive 2014/35/EU** (Directive LVD) **Directive 2014/30/EU** (Directive EMC)

and

DIN EN 61010-1:2020, DIN EN 60529:2014 DIN EN 61326-1:2013, DIN EN IEC 60947-5-2:2021

The Essential Health and Safety Requirements are assured by compliance with the directive and observance of the normative documents, as far as the scope of delivery allows.

Osterburken, 03. Juni 2022

Osterburken, June 3rd 2022



Wolfgang Hageleit

This declaration is only allowed to hand out in unchanged form.