

Silo Weighing

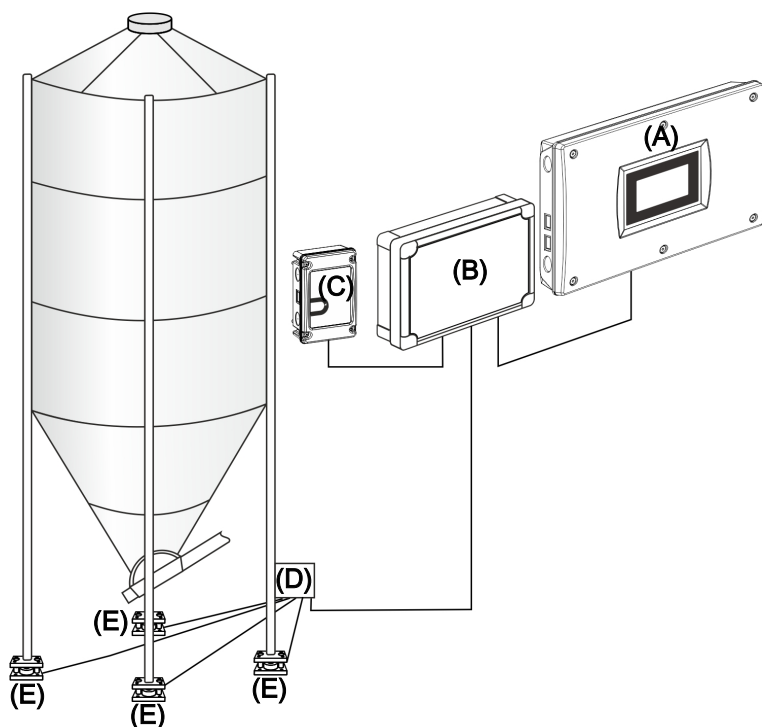
Technical Info



1 Product description

During the silo weighing process, a silo load cell registers the weight of the silo content and transmits it to the DOL 199 silo weighing box. The DOL 199 converts the weight to digital signals and sends them to the controller using CAN bus communication.

You can connect up to four silos to the DOL 199 silo weighing box. A silo has up to eight legs and a silo load cell is placed under each leg. The DOL 199 can be connected to a total of four silos.



(A) Controller

(B) Silo weighing box

The DOL 199 is fitted with one silo load cell as standard and one silo can be connected.

The DOL 199 can be extended with three silo load cell modules, so that three extra silos can be connected.

(C) External 24 V DC power supply

(D) Connection box

The connection box is used for extending cables from the silo load cells to the silo weighing box. The silo load cells are connected in parallel when there are more than four of them. (SKOV A/S does not supply the connection box).

(E) Silo load cell

2 Product survey



130185 DOL 199 silo weighing box

The silo weighing box is used for silo weighing. The DOL 199 converts the weight from the silo load cells into digital signals and transmits them to the controller using CAN bus communication.

The DOL 199 is fitted with one silo load cell module by default and you can connect one silo with up to eight load cells.

The DOL 199 can be extended with three silo load cell modules (130187). Additional silo load cell modules enable the DOL 199 to support four silos.

Note that CAN bus module (132245) must be mounted in the controller.

The DOL 199 must be powered using a 24 V DC external power supply (135752).

Order one 135752 per DOL 199 silo weighing box.



130188 DOL 199 silo weighing box with display

Choose silo weighing box with display if displaying of silo content and delivery start is required on DOL 199. For floor feeding, information is provided on the amount of time that is left until delivery can start.

The silo weighing box with display has clear and legible numbers/letters that can be seen from a distance, even in bright sunshine.

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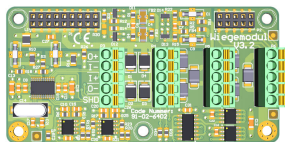
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2.1 Accessories



130187 Silo load cell module

This is used to extend the DOL 199 silo weighing box and enable the DOL 199 to support four silos.

Up to eight silo load cells can be connected to the silo load cell module.

Supplied with screws, spacers and M20 screwed flange.

One silo load cell module must be used for each silo.

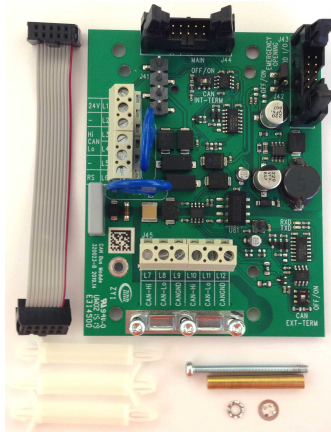


135752 Power supply 24V, 2.1A in box

Extra power supply.

Voltage 90 – 264 V
Frequency 47-63 Hz
Power 160 VA/ 80 W
Current 0.7 A

Output
Voltage 24 V +/- 10 %
Current 2.1 A



132245 CAN bus module

Always use the CAN bus module when using external CAN bus communication.

One for each controller.



130121 CAN bus cable 50 m
130125 CAN bus cable 100 m
130126 CAN bus cable 250 m
130122 CAN bus cable 500 m

For indoor use.

Must be used with external units using CAN bus communication.



130123 CAN bus cable UV 50 m
130127 CAN bus cable UV 100 m
130128 CAN bus cable UV 250 m
130124 CAN bus cable UV 500 m

For outdoor use.

Must be used with external units using CAN bus communication.

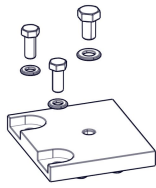


132907 DOL 199 cable 30 m f/load cell kit

Must be used between silo weighing box and connection box.

The cable is supplied with stripped wire ends. The wire colors in the cable are the same as the wire colors in the cable from the silo load cells to the connection box.

2.2 Silo weighing leg



132675 DOL 199 load cell kit 3T for 1 leg

132676 DOL 199 load cell kit 5T for 1 leg

132677 DOL 199 load cell kit 10T for 1 leg

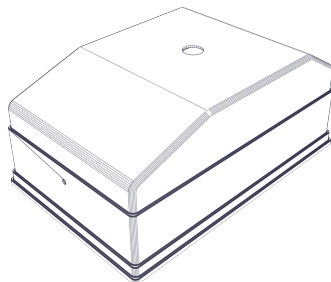
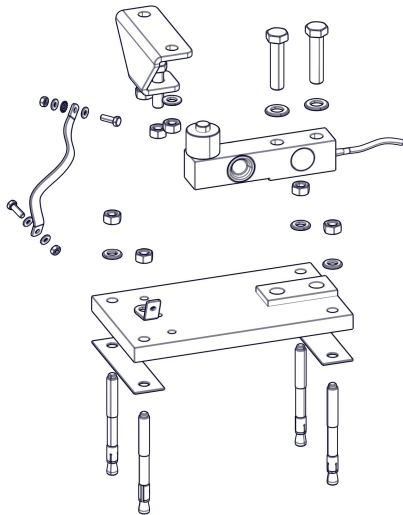
The load cell kit is used to weigh the contents of a silo. A kit must be mounted under each leg and connected to a DOL 199 silo weighing box.

Silo load cell kits contain a strong ground wire that connects from the silo leg to the bottom plate of the silo load cell kit for lightning protection.

Four bolt anchors are enclosed to be used for mounting the silo load cell kit on a flat concrete foundation.

One DOL 199 silo weighing cell kit per silo leg must be ordered.

Is supplied with silo load cell, metal plates, mounting set, and 10 m wire on the silo load cell.



132908 DOL 199 cover f/load cell kit 1 pcs.

Is used for protection of the silo load cell kit.

Cover is always recommended and especially in areas where frost can occur to prevent ice from entering the silo load cell.

3 Technical data

3.1 Silo weighing box

Electrical		
Operating voltage	V DC	20 - 29
Max. power	W	44
Max. power consumption	A	1.5
Input from silo load cell		
Rating	mV/V	2 ± 5 %
Resistance	Ω	350 ± 10 Ω
CAN bus		
Protocol		CANopen in accordance with CiA301 and CiA401
Baud rate (fast)	Kbd	125
Max. cable length	m	400
Mechanical		
Material		ABS
Number of silo load cell modules		1 – 4
Number of silo load cells		4 - 32
Environment		
Temperature, operation	°C	0 - 50
Protection class	IP	67
Shipment		
Dimensions (H x W x D)	mm	90 x 270 x 170
Dimensions crated H x W x D	mm	165 x 310 x 230
Weight	g	970
Shipping weight	g	1300

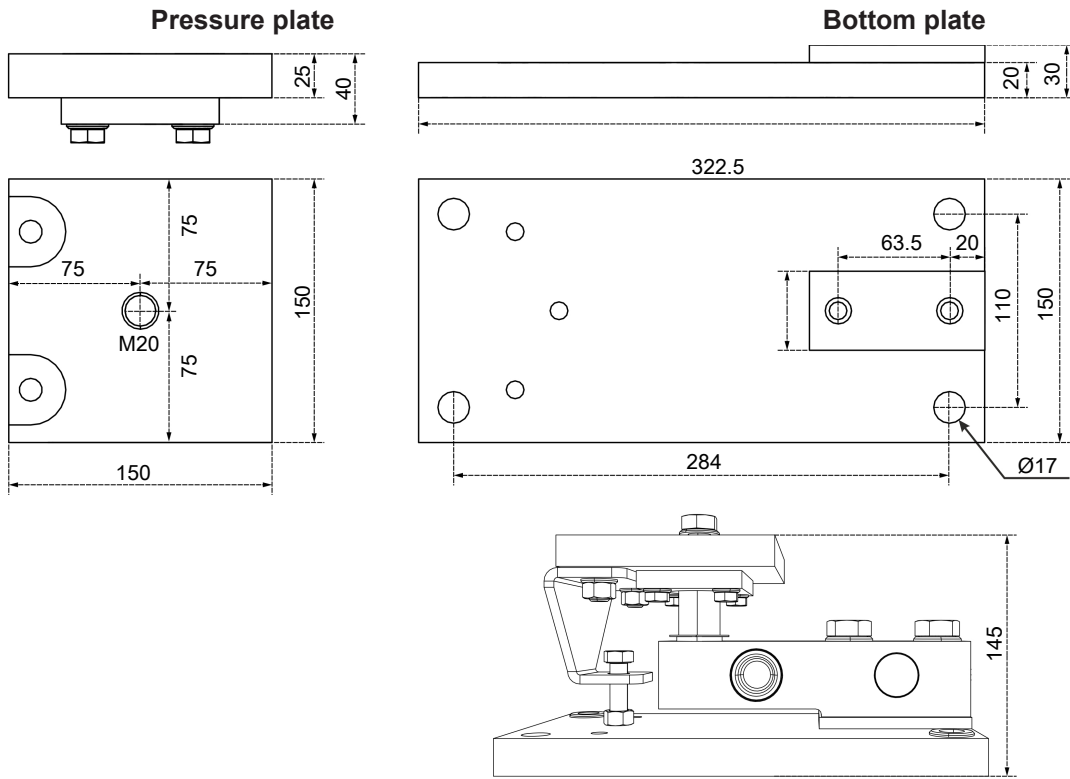
3.2 Silo load cell

		Silo load cell 3T	Silo load cell 5T	Silo load cell 10T
Electrical				
Operating voltage	V DC	5 - 12		
Rating output	mV/V	2		
Resistance	Ω	350		
Mechanical				
Capacity	kg	3000	5000	10000
Accuracy	%	1		
Cable length	m	10		
Shipment				
Weight	g	18500	31000	39900
Shipping weight	g	19000	36400	48000

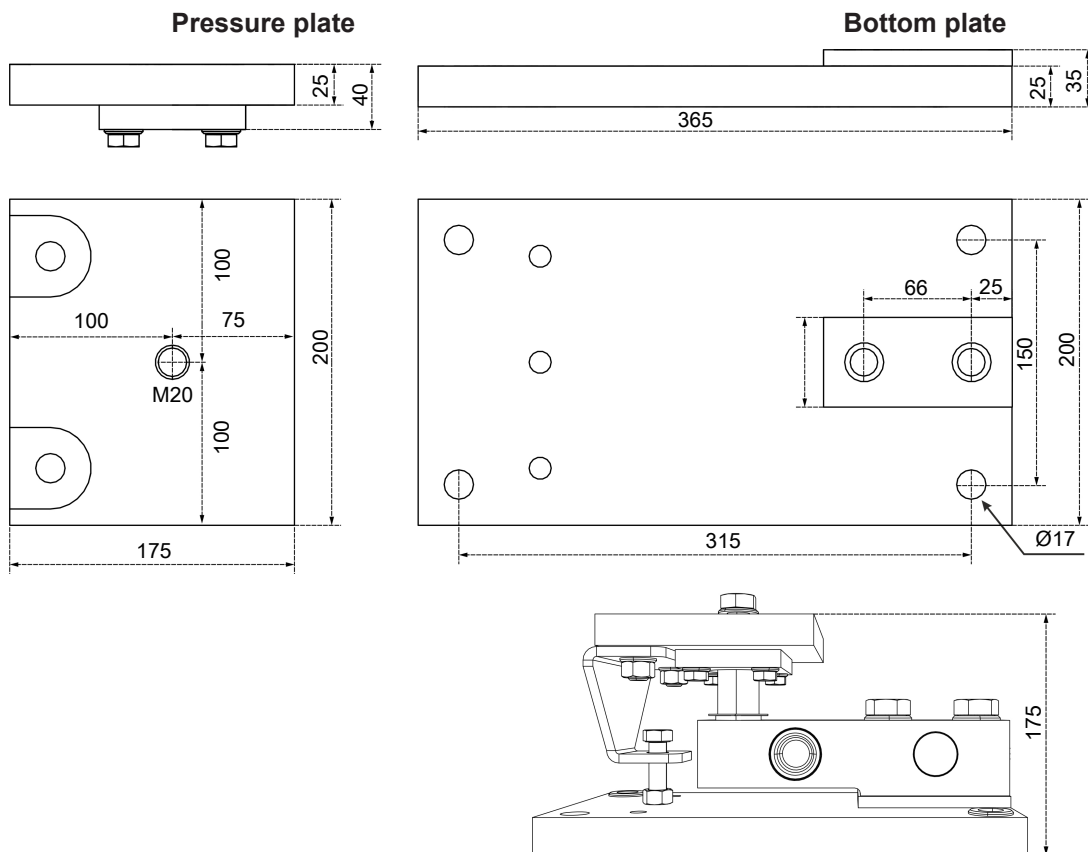
3.3 Dimensioned sketch

In mm.

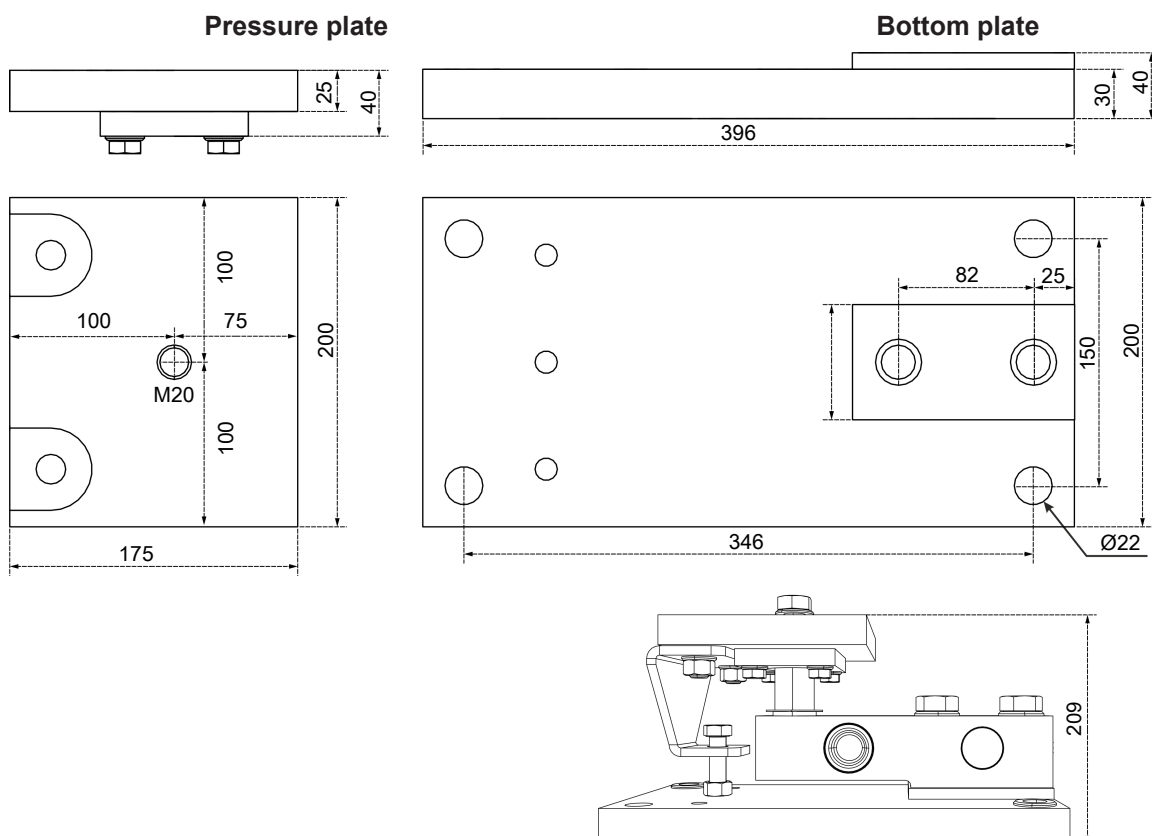
3.3.1 Silo weighing leg 3T



3.3.2 Silo weighing leg 5T



3.3.3 Silo weighing leg 10T



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