Synchronization Control
for Electric Linear Units

Description

The lifting motion is generated by an electric motor with a spindle lifting gear. Lifting and lowering is triggered by push-buttons with touch control contact. After release of the push-button, the motion will be immediately stopped.

The electric linear units are equipped with an additional integrated position measuring system, all other details are as per data sheet M 6.910. Due to the control the difference in stroke is normally ± 1 mm.

The standard version of the lifting units is operated by a hand panel with the push-buttons UP and DOWN. These hand panels are connected to the synchronzation control by a plug-type connector. Alternatively a foot button can be connected.

Memory Control

It is also possible to stop one or several lifting units automatically in determined positions.

Standard memory control for lifting units

The lifting units can be moved to three different positions. This is controlled by an operating panel with 6 push-buttons, which have the following functions: UP, DOWN, memory, stop point 1, stop point 2, and stop point 3.

The lifting unit is moved to the desired position by the push-buttons UP and DOWN. The desired positions will be stored by simultaneous pushing of the memory push-button and the stop point push-button.

By pushing the corresponding stop point push-button the linear unit will automatically be moved to the desired position.

Attention! Danger of Accident!

If a lifting unit is directly connected with the floor and the centre of gravitiy of the load to be lifted is outside the fixing screws, considerable pulling forces act on the fixing screws. Depending on the ground conditions, this can lead to pulling out the screws and thereby to tilting of the lifting unit. The centre of gravity must be within the fixing screws.

Application

Synchronization controls are used if two or more electric lifting units are used for height adjustment in technical equipment.

For example they are used to adjust the optimum working position at assembly working places and for simultaneous adjustment of working devices or for height adjustment of feeding and trolley devices.

Notes for application

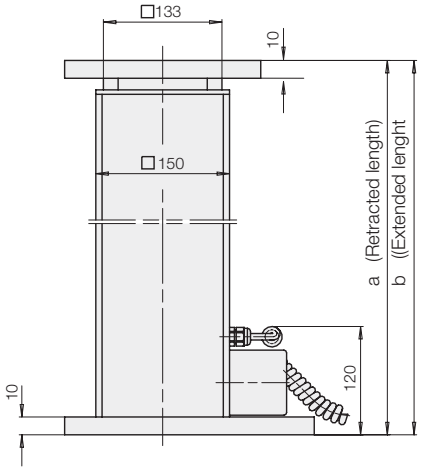
If the lifting units are connected by a mechanically rigid coupling, you have to make sure that alignment of the individual lifting units is exactly matched. For this purpose the adjustable articulated plates (accessory) are to be used. In case of little load a mechanically loose coupling has to be used.

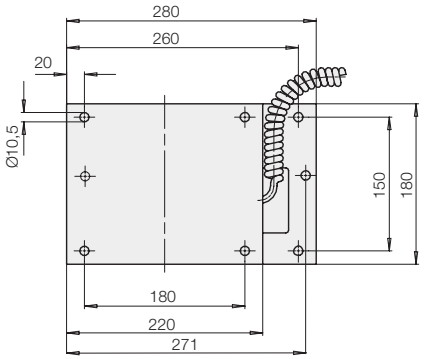
In case of additional friction the useable lifting force can be reduced by up to 20%.

Application example

Height-adjustable assembly working place mounted on 3 electrically-operated lifting units.

Lifting units with electrical operation and integrated position measuring system





Technical characteristics

Input voltage	230V ± 10%, 50Hz
Control and motor voltage	24V DC
Duty cycle	20 % ED
Code class	IP 54
Protection class	II

Note for ordering

An operative unit consists of:
– two or more lifting units
– one synchronization control
– one operating panel

Quantity electric linear units	Part-no. synchronization control
2	**3821-400**
3	**3821-401**
4	**3821-402**

Line 8.917 – Lifting force 2.5 kN

Stroke mm	a mm	b mm	Weight [kg]	Part-no.
200	420	620	15	**8917-425**
300	520	820	20	**8917-435**
400	620	1020	25	**8917-445**
500	720	1220	30	**8917-455**
600	820	1420	35	**8917-465**

Fmax. dynamic	2.5 kN
Fmax. static	3.5 kN
Time required for stroke	15...9 mm/s

Line 8.918 – Lifting force 4 kN

Stroke mm	a mm	b mm	Weight [kg]	Part-no.
200	420	620	15	**8918-425**
300	520	820	20	**8918-435**
400	620	1020	25	**8918-445**
500	720	1220	30	**8918-455**
600	820	1420	35	**8918-465**

Fmax. dynamic	4 kN
Fmax. static	6 kN
Time required for stroke	9...6 mm/s

Line 8.919 – Lifting force 5 kN

Stroke mm	a mm	b mm	Weight [kg]	Part-no.
200	420	620	15	**8919-425**
300	520	820	20	**8919-435**
400	620	1020	25	**8919-445**
500	720	1220	30	**8919-455**
600	820	1420	35	**8919-465**

Fmax. dynamic	5 kN
Fmax. static	6 kN
Time required for stroke	7...5 mm/s

Electric operation

Operation element with precision water level

Hand panel	**Part-no. 3823-025**
Foot button	**Part-no. 3823-029**

Accessory

Articulated plate incl. screw and discs	**Part-no. 6604-001**

Special version on request

Notes for installation