

## Operating and installation instructions Linear module LM 4 FZ

### Items included in the delivery

The linear module is supplied fully packaged. A listing of delivery contents can be found in the catalog entitled „Domino handling components“.



**Note:**

Deliveries must be checked to ensure they are complete and in perfect condition.

### Technical data

Please see catalog: „Domino handling components“

### Safety notes:



**Warning:**

When installing the module, you must switch the power supply off.  
Both local and product-specific safety instructions must be observed without fail.

### Installation and integration of LM 4 FZ

#### Preliminary work

The precise stop positions are to be specified according to the process documentation (hole matrix 15 mm).

#### General setup, fig 1

1. Loosen M4 screws (1) of stop block (2).
2. Remove centering rings (ZR 7) (3).



**Note:**

The centering rings have an internal thread.  
To remove or offset the rings, you can use a screw with the same thread.

3. Insert centering rings (ZR 7) (3) in required mounting position.
4. Fit stop block (2) again.

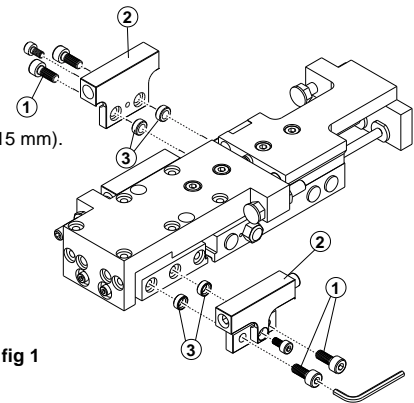


fig 1

#### Fine adjustment/stop left, right, intermediate stop, fig 2

1. Loosen M5 conternut (1) of stop screw (2).
2. Adjust stop screw (2) to precise travel path. (Adjustment range 0-15mm)
3. Lock stop screw (2) with conternut (1).

#### Adjustment of limit switch (ES), fig 3

1. Loosen M3 clamping screw (1).
2. Slide limit switch (2) from rear into stop block guide (3) up as far as stop.

#### Adjustment of limit switch (ES), intermediate stop, fig 3

1. Loosen M3 clamping screw (11).
2. Slide limit switch (12) from rear into guide of rear carriage body (4).
3. Slide both carriage bodies together, adjust the limit switch (12) in such a way that the distance between the limit switch (12) and the front carriage body (5) is about 0.5 mm.



**Caution:**

Limit switch (12) must not touch the front carriage body (5) or it will be damaged. A distance of 0.5mm must be maintained without fail.

4. Retighten clamping screw (1, 11).
5. Connect limit switch (2, 12) to electricity supply.



**Note:**

The wiring and connection of the limit switch must be carried out according to the manufacturer's instructions!

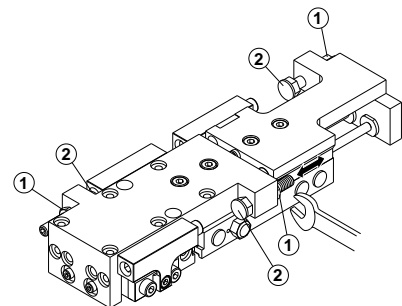


fig 2

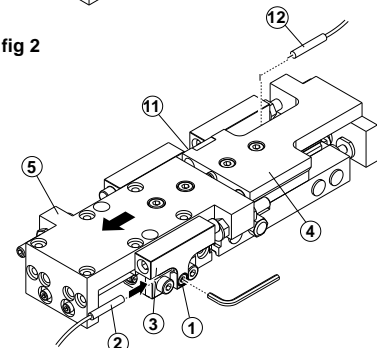


fig 3

### Compressed air connection, fig 4 + 5

1. Remove threaded stopper (1) on cylinder (2) and refit on parallel connection.
2. Fit exhaust air throttle.
3. Connect pneumatic hoses as per diagram; fig 4.
4. Adjust throttle (speed).



#### Caution:

Exhaust air throttles must be used without fail in order to comply with permissible operating conditions. Adjust exhaust air throttles in such a way that the carriage travels to the end positions without banging.

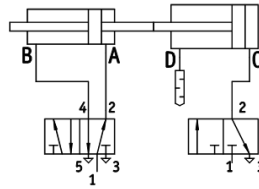


fig 4

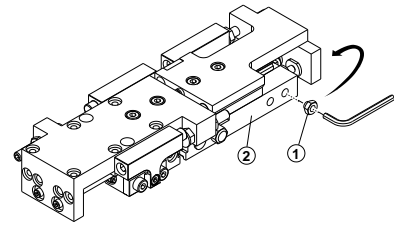


fig 5

### Remedying faults

| Problem                                    | Cause/Remedy   |
|--|--|
| <b>Module does not move</b>                | <ul style="list-style-type: none"> <li>▪ Check air supply (3 – 7 bar)</li> <li>▪ Pressure dropped below minimum level</li> <li>▪ Air lines mixed up</li> <li>▪ Throttle valves closed</li> <li>▪ Unused connections not capped</li> <li>▪ Foreign body between carriage body and stop</li> </ul> |
| <b>Travel path incorrect</b>               | <ul style="list-style-type: none"> <li>▪ Foreign body between carriage body and stop</li> <li>▪ Pressure dropped below minimum level</li> <li>▪ Check stops</li> </ul>   |
| <b>Module moves jerkily or too quickly</b> | <ul style="list-style-type: none"> <li>▪ Throttle valves missing or incorrectly set</li> <li>▪ Load too great (please see data sheet in catalog)</li> </ul>  |
| <b>Module moves too slowly</b>             | <ul style="list-style-type: none"> <li>▪ Throttle valves set incorrectly</li> </ul>  |
| <b>The motive power is declining</b>       | <ul style="list-style-type: none"> <li>▪ Check air supply</li> <li>▪ Check seals</li> <li>▪ Clean and lubricate module</li> </ul>  |

### Maintenance and lubrication instructions

To ensure perfect operation of the module the following must be observed:

- The compressed air must be filtered, dry, oiled or oilless.
- Modules must be inspected and cleaned regularly.

#### Shock absorbers:



#### Note:

Top quality shock absorbers are used in the modules ! In spite of this, they can still fail occasionally.



#### Caution:

Make absolutely certain the carriage does not slam into its end position. Should this prove to be the case, the relevant shock absorber must be replaced without delay. Faulty shock absorbers reduce the service life of modules considerably and the accuracy and reproducibility of end positions can no longer be guaranteed.

#### Guides:

We recommend that you do the following periodically/once a month: clean all shiny guide parts, check them for corrosion and if necessary lightly lubricate them with grease or lubricating oil according to DIN 51825, K2K (no synthetic greases!).

#### Relubricating:

The lubrication interval for the guide is approx. 5 million cycles.

Lubrication involves direct application of the lubricant (grease as per DIN 51825, K2K) onto the guide tracks and then sliding the carriage in and out several times by hand (repeat procedure 3 to 4 times).



#### Note:

However, adverse operating conditions (dust, aggressive fluids, vibration, impact stress, corrosion, etc.) can necessitate cleaning and relubricating at an earlier stage.