a u t o m a t i o n

OPERATING MANUAL

SPRING FEEDER FG

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PLEASE, SAVE THIS MANUAL FOR FUTURE REFERENCE

04/06/02

Function

The spring feeder facilitates the disentangling and feeding of springs. With an airflow, which is to turn-on or turn-off in a determined rhythm, the springs are spinning in the housing and disentangled. Springs that are blocked in the output are blown back into the housing by the airflow. The blown-in air in the housing, which can only escape by the output, conveys the springs into the conveyor tube. With a supplementary airflow the springs are conveyed to the output. The control unit is equipped with an automatic cut-in device that switches on the spring feeder only as required. A ring initiator may effect scanning. Units that are equipped with a hopper can be filled up automatically. The tappet of the hopper conveys the springs on the chute by means of a lifting movement in front of the slide. If the drum is empty (is controlled by a light barrier), the slide is opening automatically; the springs slide into the unit. As soon as the slide is closed, the unit begins again to work. Simultaneously and without loss of time, the chute is filled up again with springs by an exactly defined quantity of lifting s. The process begins again.

Remarks:

The unit is factory set from Meto-Fer for the corresponding springs.
The springs must be clean and dry.
The unit is supplied with a matching nuzzle, tube mount and 2 meter tube.

Operation Instruction

Switch off the unit=> push up the toggle switch
Fill up the drum with springs; ca. 0.3- 0.5 Liter
Connect current supply=> 24V DC
Check slide to make sure it is properly closed
Connect compressed air, set approximately 6 bar
Switch on the unit=> push down the toggle switch (green light on)
If all is switched on correctly and the ring initiator is not initialized, the unit will automatically start functioning

Maintenance

The spring feeder does not need maintenance. It works with oil-fee are. It is recommendable to clean the housing in scheduled time periods.]

Input/ output points

Input	From	Output	To
12	light barrier	Q1	Agitating-ON
13	Slider closed (Q0)	Q2	Blow out-ON
14	Slider open (QL)	Q3	Slider-ON
17	Ring initiator	Q4	Hopper-ON
		Q5	Warning light

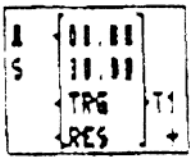
Who controls what

Name	Function	Factory Settings
T1	Agitating time (spinning and dispersion)	0.17 Sec.
T2	Blowing time (blow the spring into the tube)	0.40 Sec.
T3	Pause agitating again (Pause 1)	0.36 Sec.
T4	Opening time when slider is open	1.2 Sec.
T5	Hopper slider	1.2 Sec.
T6	Warning light	0.35 Sec.
T7	Short pause (setting of springs; Pause 2)	0.22 Sec.
T8	Conveyor control	20.0 Sec.
C1	Periodical control of the light barrier	10. Cycle
C2	Filling up of the hopper: ➜ qty. of liftings-1	5 Liftings
C3	Sensibility of the warning lamp	7/10 Cycles

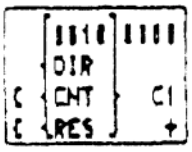
Setting of timer and counter

With the integrated control system the Timer T1 (spinning time), T2 (blowing time), T3 (pause 1), T7 (pause 2) as well as the Counter C1 (light barrier) and C2 (filling up) can be changed during working of the machine. Immediately after confirmation, the changed parameter is taken on, the optimation becomes very easy and has to be carried out in eight steps. If at the same time more than one timer or counter are being matched, step 7 is always followed by step 4 and continues as usual (from top to bottom). For leaving the menu, press ESC.

Control keys



Timer

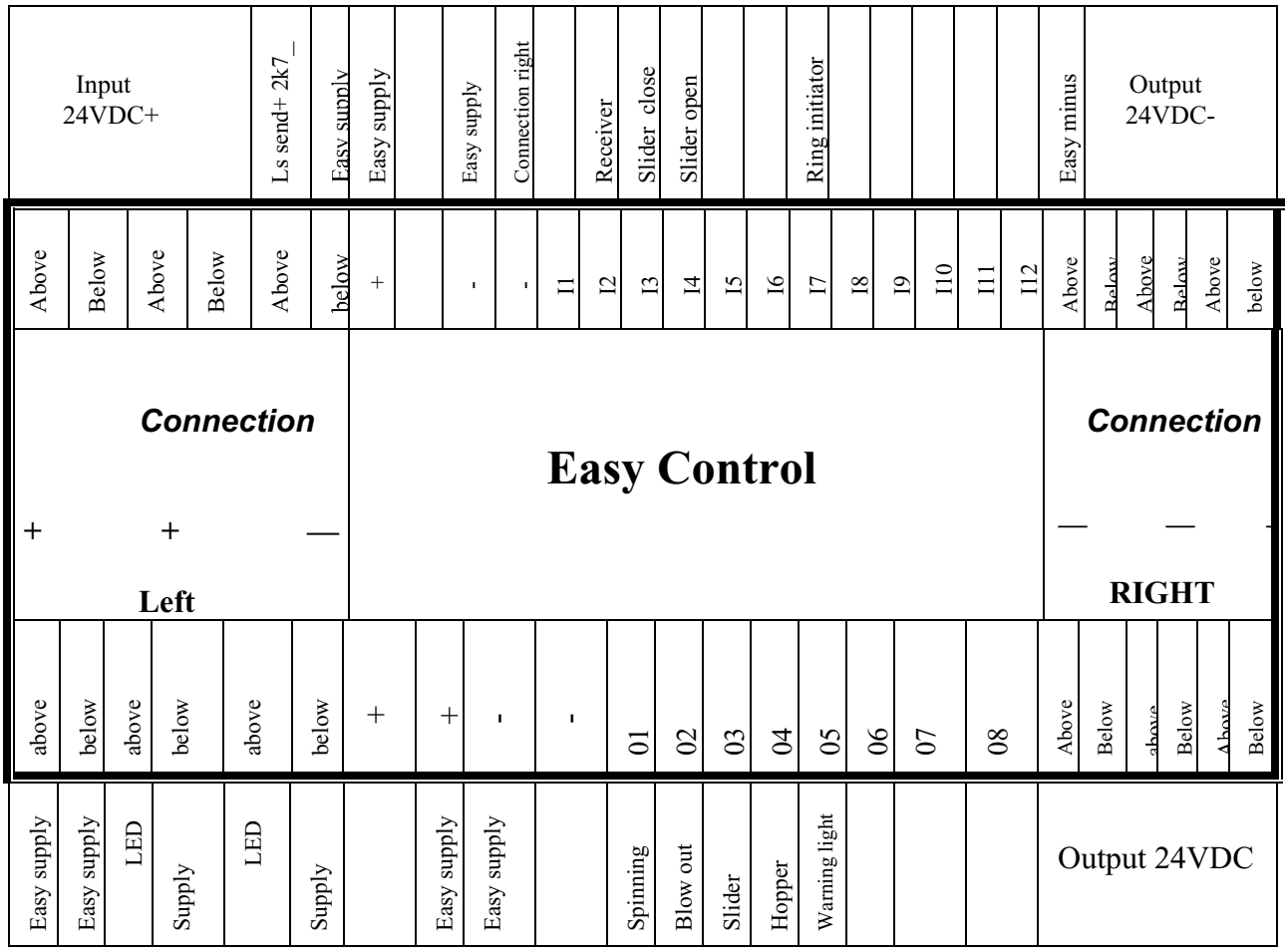


Counter

Step	Action	Effect
1	Press key OK	Menu choice
2	Go down with cursor twice	Indicator PARAMETER is flashing
3	Press key OK	Picture timer
4	Cursor up or down	Choose timer or counter
5	Cursor to left or right	Choose the wished placed (is flashing)
6	Cursor up or down	Change numerical value to the wished size
7	Press key OK	New value is stored
8	Press key ESC twice	Standard view

Control box wiring diagram

Terminal connections:



PG Input/ output wiring

Input signals (Sensors)					Output signals (Valves)	
Terminal 1	**Terminal 2**	**Terminal 3**	**Terminal 4**	**Terminal 5**	**Terminal 6**	**Terminal 7**
¥ Ring ¥ initiator	¥Lightbarrier receiver	¥ Lightbarrier transmitter	¥ Slide close	¥ Slide open	¥ Slide ¥ Hopper ¥ Warning ¥ Light	¥ Supply ¥ Corner ¥ Spinning ¥ blow out