

# Linear axis for collaborative robots SLIDEKIT 2.0





# Benefits for industrial applications

Several industrial applications require to cover long distances to perform the manufacturing process operation, like finishing, welding and parts inspection.

These repetitive tasks, usually done manually, are time consuming and with low added value for the operators

By using a cobot on the Ewellix linear module, it is possible to easily automate these processes, increasing the productivity and output quality.

Linear modules from Ewellix provide fast and precise movements to effectively position the robot along a horizontal axis, extending its reach.



# Linear axis for collaborative robots SLIDEKIT 2.0

## Operating range extension

By adding a linear module as a dynamic base for the robot, it is possible to extend the handling operating area of the robot, increasing the productivity of a series of machines working in the same production flow.

## Plug-and-play solution

The SLIDEKIT 2.0 provides quick and fast installation, by having a standardized mechanical, electrical and software

interface with Universal Robots. In few steps, the system is ready to be used and simply programmed in operation.

## Cost savings and higher productivity

UR cobots combined with the SLIDEKIT 2.0 linear module provide a cost-effective solution to upgrade an existing assembly shop, moving from a manual handled to a fully automatized line.

## Improved performances

The 2.0 release of the SLIDEKIT delivers several improvements compared to the former version, like higher system reactivity and stability, lower noise in operation and optimized design for limit switches and re-lubrication points

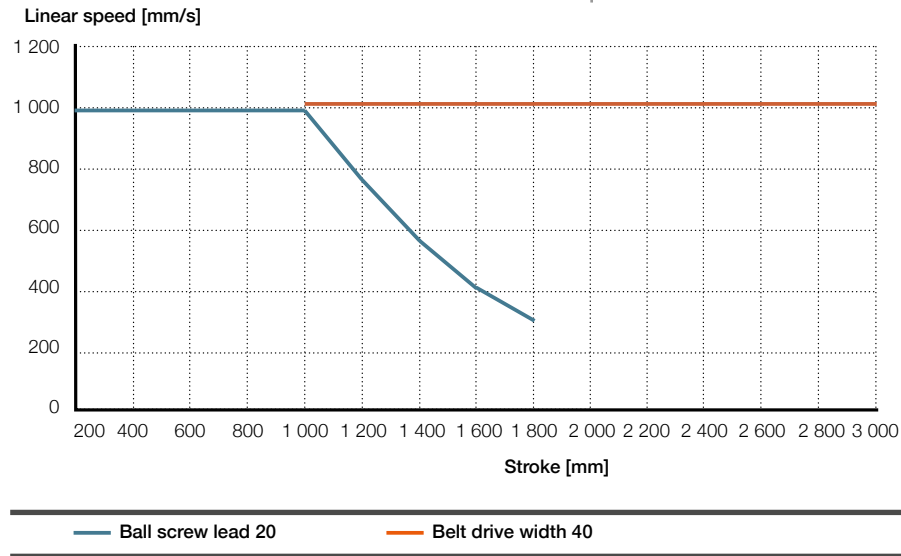


## Technical data

Designation	Unit	SLIDEKIT-UR-Ball screw version	SLIDEKIT-00-Ball screw version	SLIDEKIT-UR-Belt drive version
<b>Linear module type</b>	-	CLSM-150	CLSM-150	CLSM-150
<b>Performance Data</b>				
Max. dynamic payload	N	10 900	10 900	10 900
Max. static load capacity	N	12 100	12 100	12 100
Max. belt tension	N	-	-	960
Max. belt thrust	N	-	-	4 500
Max. dynamic moments Mx	Nm	2 400	2 400	2 400
Max. dynamic moments Mz	Nm	1 800	1 800	1 800
Max. linear speed	mm/s	See graph page 6	See graph page 6	See graph page 6
Duty cycle	%	100	100	100
<b>Mechanical Data</b>				
Drive type	-	Ball screw	Ball screw	Belt drive
Stroke range	mm	100 - 1 800	100 - 1 800	1 900 - 3 000
Repeatability	mm	± 0.01	± 0.01	± 0.08
Weight @ 0 mm stroke	Kg	15	15	17
Δ weight per 100mm stroke	Kg	1,6	1,6	1,4
Robots compatibility	-	UR3, UR5, UR10, UR16, e-Series	Any robot	UR3, UR5, UR10, UR16, e-Series
Cable management	-	Cableveyor	Cableveyor	Cableveyor
<b>Electrical</b>				
Voltage/Current	V/A	115 VAC / 4.8 A 230 VAC / 2.4 A 24 DC / 20 A	115 VAC / 4.8 A 230 VAC / 2.4 A 24 DC / 20 A	115 VAC / 4.8 A 230 VAC / 2.4 A 24 DC / 20 A
Emergency stop	-	Connection to UR safety I/O	Connection to Robot safety I/O	Connection to UR safety I/O
<b>Communication</b>				
Control interface	-	URCaps plugin compatible with CB3.1 / Polyscope 3.6 or higher	Digital I/O control, CAN interface for external software control <sup>1)</sup>	URCaps plugin compatible with CB3.1 / Polyscope 3.6 or higher
Positioning, repeatability	mm	± 0.1	± 0.1	± 0.1
Accessible positions	-	any	14 memory positions programmable	any
Feedback	-	Position feedback via URCaps	Position feedback via output signal	Position feedback via URCaps
Soft start and stop	-	Implemented for smooth operation	Implemented for smooth operation	Implemented for smooth operation
Software control	-	URcap	CAN interface for external software control <sup>1)</sup>	URcap
<b>Environment</b>				
Type of protection	IP	Controll box = IP64 SlideKit =N/A	Controll box = IP64 SlideKit =N/A	Controll box = IP64 SlideKit =N/A
Ambient temperature	°C	0 to +50	0 to +50	0 to +50
Max. humidity	%	95	95	95

<sup>1)</sup> No software provided / The software can be downloaded from the Dunker motor website

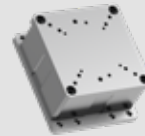
## Performance diagrams



## SLIDEKIT 2.0 contains



*\*Teach pendant not included*



*Robot attachment plate  
(The taps are only provided for Universal Robots cobot as standard)*



*UR software plugin  
(not included in SLIDEKIT-00)*



*CLSM Linear module*



*Control unit*



*CAN*



*D-SUB 9Pin*



*Digital IO*



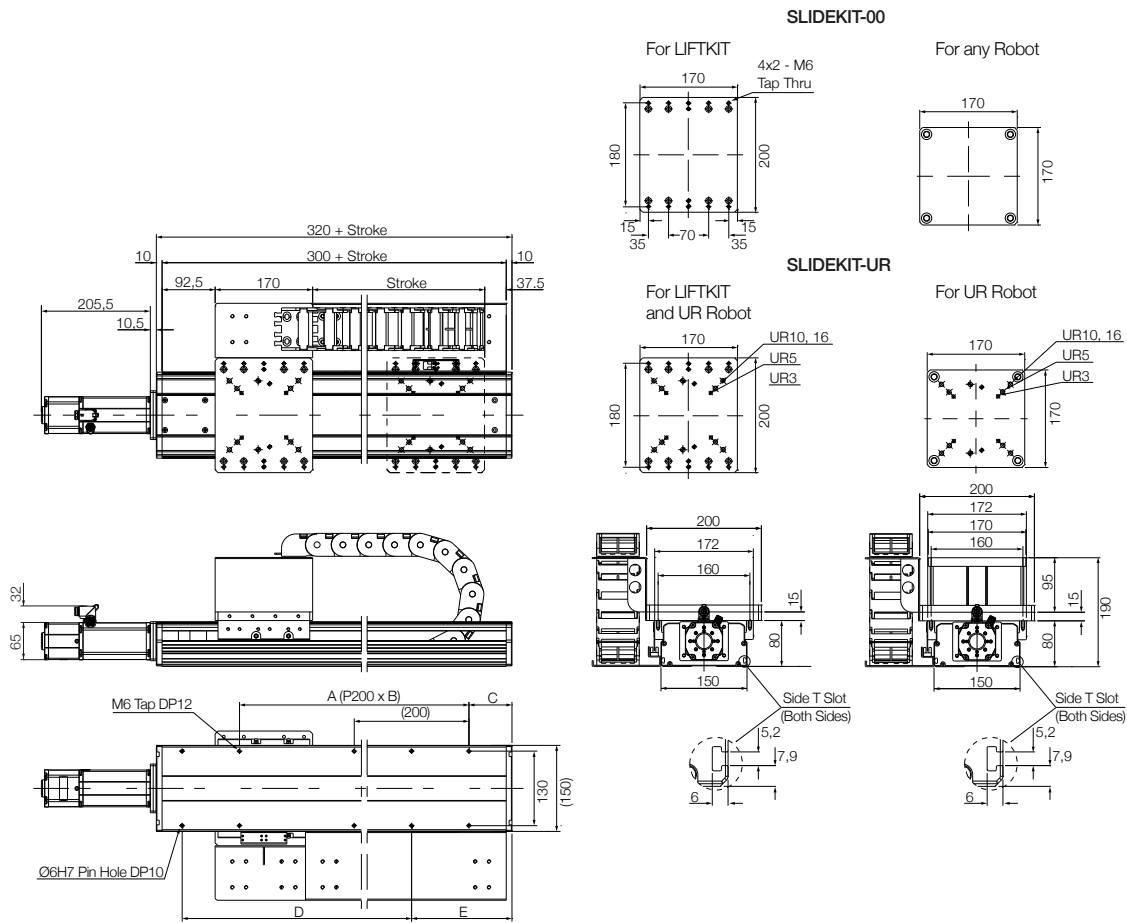
*Motor Power*



*Proximity Switch*

## Dimensional drawing

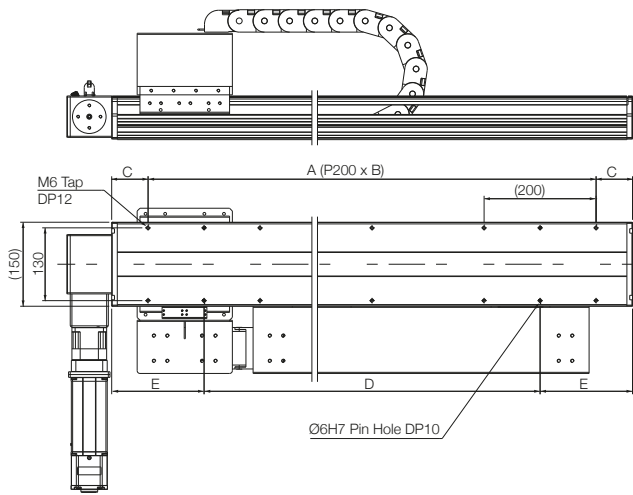
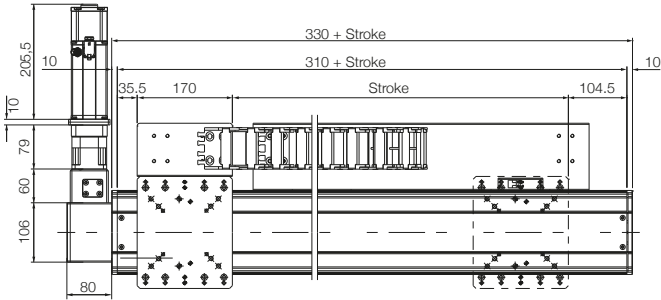
### Ball Screw version



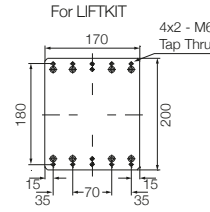
	Stroke	A	B	C	D	E
	mm					
1	100	200	1	75	200	175
2	200	400	2	25		125
3	300	400	2	75	400	175
4	400	600	3	25		125
5	500	600	3	75	600	175
6	600	800	4	25		125
7	700	800	4	75	800	175
8	800	1 000	5	25		125
9	900	1 000	5	75	1 000	175
<b>10</b>	<b>1 000</b>	<b>1 200</b>	<b>6</b>	<b>25</b>		<b>125</b>
11	1 100	1 200	6	75	1 200	175
12	1 200	1 400	7	25		125
13	1 300	1 400	7	75	1 400	175
14	1 400	1 600	8	25		125
15	1 500	1 600	8	75	1 600	175
16	1 600	1 800	9	25		125
17	1 700	1 800	9	75	1 800	175
<b>18</b>	<b>1 800</b>	<b>2 000</b>	<b>10</b>	<b>25</b>		<b>125</b>

Standard stroke

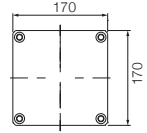
Belt version



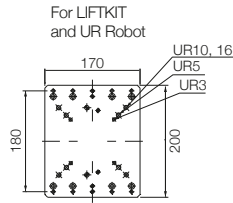
SLIDEKIT-00



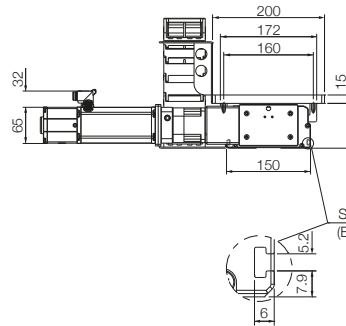
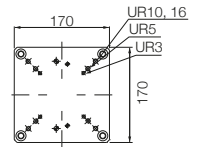
For any Robot



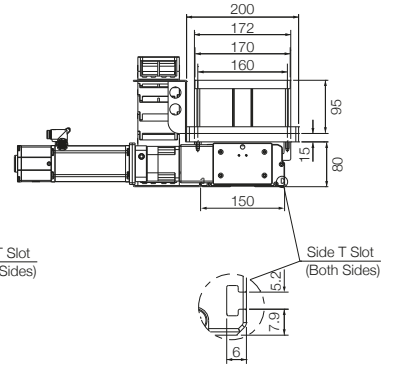
SLIDEKIT-UR



For UR Robot



Side T Slot (Both Sides)

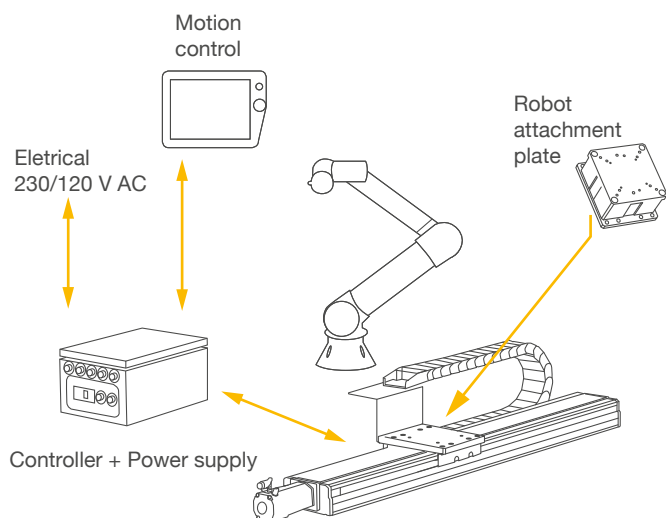


Side T Slot (Both Sides)

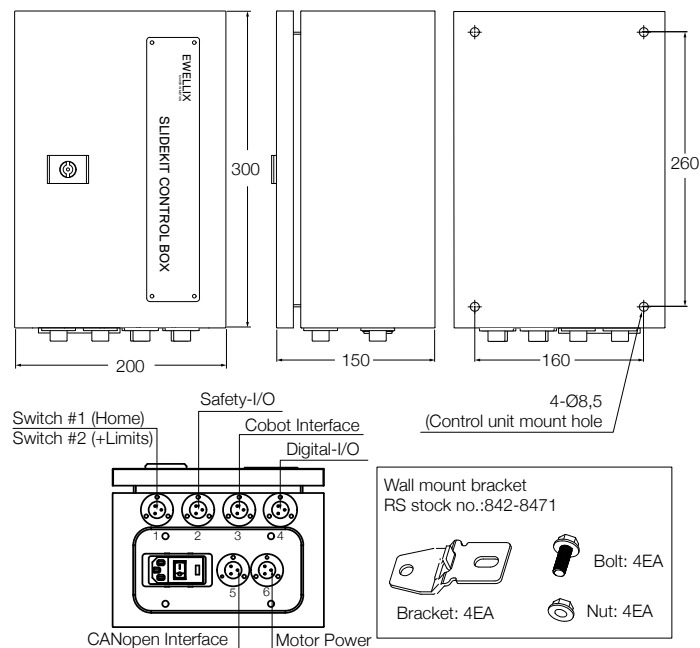
Stroke	A	B	C	D	E	
10	1000	1200	6	65	1000	165
11	1100	1200	6	115	1000	215
12	1200	1400	7	65	1200	165
13	1300	1400	7	115	1200	215
14	1400	1600	8	65	1400	165
15	1500	1600	8	115	1400	215
16	1600	1800	9	65	1600	165
17	1700	1800	9	115	1600	215
18	1800	2000	10	65	1800	165
19	1900	2000	10	115	1800	215
20	2000	2200	11	65	2000	165
21	2100	2200	11	115	2000	215
22	2200	2400	12	65	2200	165
23	2300	2400	12	115	2200	215
24	2400	2600	13	65	2400	165
<b>25</b>	<b>2500</b>	<b>2600</b>	<b>13</b>	<b>115</b>	<b>2400</b>	<b>215</b>
26	2600	2800	14	65	2600	165
27	2700	2800	14	115	2600	215
28	2800	3000	15	65	2800	165
29	2900	3000	15	115	2800	215
<b>30</b>	<b>3000</b>	<b>3200</b>	<b>16</b>	<b>65</b>	<b>3000</b>	<b>165</b>

  Standard stroke

### Connection diagram



### Control unit



### Software functionality

The URcaps software for the SLIDEKIT 2.0 allows easy positioning access directly within the UR Polyscope environment.

#### Setup

In the installation tab, the user can manually move the linear axis in both directions and define multiple user specific positions, that are accessible in programming mode.

#### Motion programming

Within the UR motion program, the SLIDEKIT 2.0 axis is easily integrated through a URcaps command module. Simply insert this element from the structure tab at the desired position of the program. Additionally, reading and setting positions is possible through a script function.

#### Software updates

To download the latest software update please check on [ewellix.com/support/library/software\\_updates](http://ewellix.com/support/library/software_updates).

### Safety elements

The SLIDEKIT 2.0 has a range of safety elements built in to allow its integration into a robot application. It's equipped with 2 safety relays, certified ISO 13849-1.

**NOTE:**

The SLIDEKIT 2.0 is not a functional safety system compliant with EN ISO 13489-1 or IEC 62061. To integrate the SLIDEKIT 2.0 into a functional safety chain, external safety devices have to be integrated into the overall system.



SLIDEKIT 2.0 software functionality



## Ordering key

SLIDEKIT - UR - [ ] - [ ] - [ ] - [ ] - SLM - S00

### Robot

00 Any robot (no software)  
UR Universal Robot

### Module options

#### Drive

B20 Ball screw (lead 20)  
P40 Belt (width 40)  
E Cover Aluminium and External motor attachment

### Stroke

100 ... 3000  
1 000 Preferred range Ball screw  
1 800 Preferred range Ball screw  
2 500 Preferred range Belt  
3 000 Preferred range Belt

### Electrical options

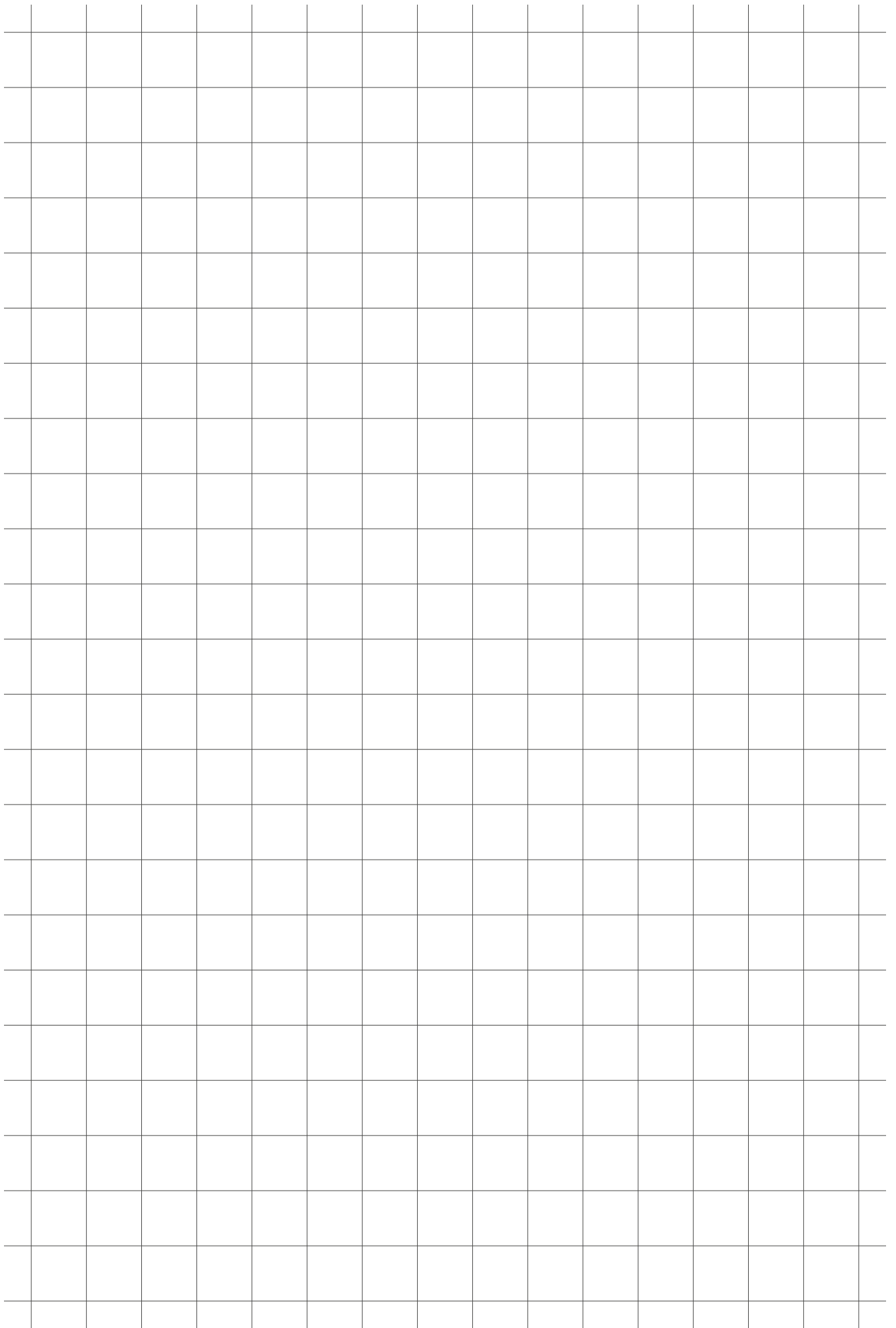
11 120 VAC / US cable  
22 230 VAC / EU cable  
23 230 VAC / CN cable  
24 230 VAC / UK cable  
25 230 VAC / CH cable

### Accessories options

S Limit switch  
Cableveyor  
L Large  
M Standard hole pattern

### Customized options

S Option 1 - Safety relay







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