

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.



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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

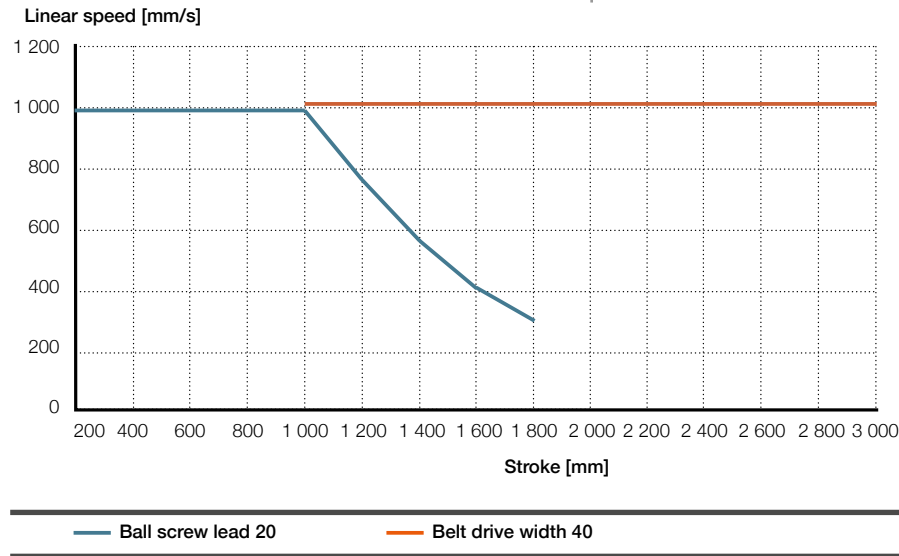


Technical data

| Designation | Unit | SLIDEKIT-UR-Ball screw version | SLIDEKIT-00-Ball screw version | SLIDEKIT-UR-Belt drive version |
|----------------------------|------|---|--|---|
| Linear module type | - | CLSM-150 | CLSM-150 | CLSM-150 |
| Performance Data | | | | |
| 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 |
| Mechanical Data | | | | |
| 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 |
| Electrical | | | | |
| 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 |
| Communication | | | | |
| Control interface | - | URCaps plugin compatible with CB3.1 / Polyscope 3.6 or higher | Digital I/O control, CAN interface for external software control ¹⁾ | 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 ¹⁾ | URcap |
| Environment | | | | |
| 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 |

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

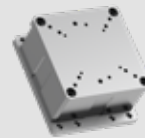
Performance diagrams



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



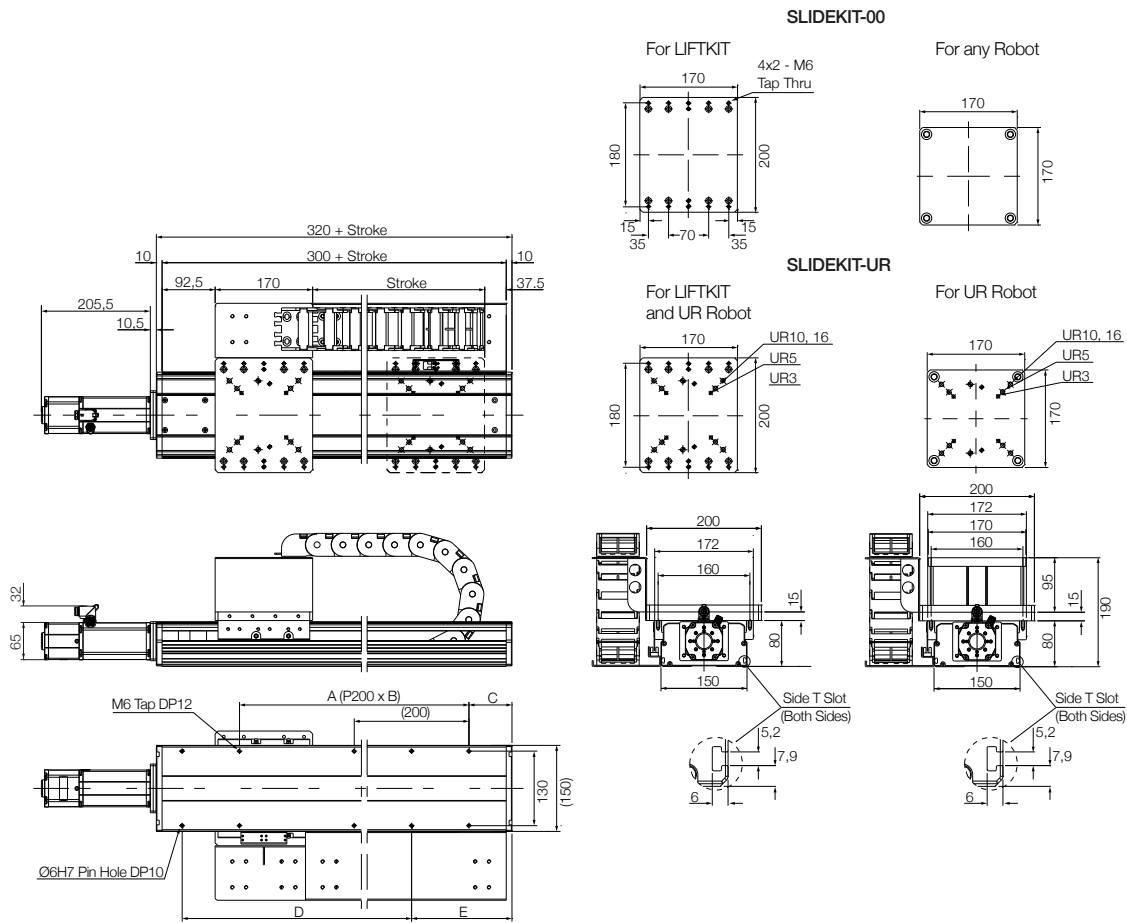
Motor Power



Proximity Switch

Dimensional drawing

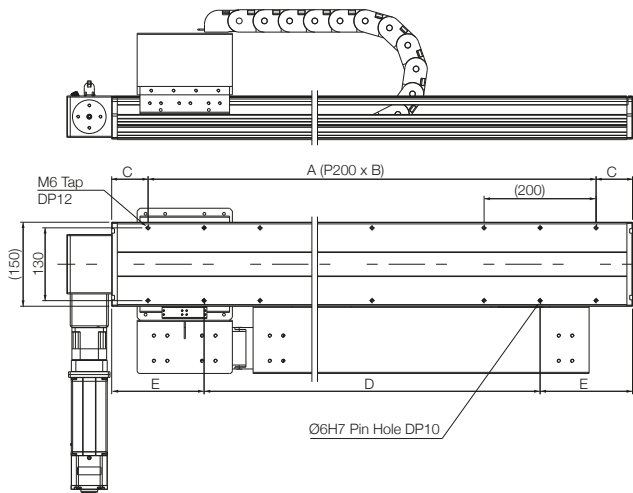
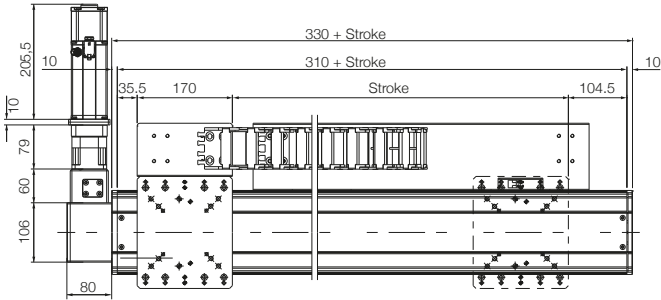
Ball Screw version



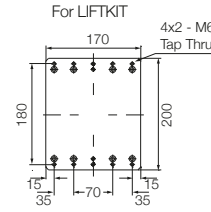
| | Stroke | A | B | C | D | E |
|-----------|--------------|--------------|-----------|-----------|-------|------------|
| | mm | | | | | |
| 1 | 100 | 200 | 1 | 75 | 200 | 175 |
| 2 | 200 | 400 | 2 | 25 | | 125 |
| 3 | 300 | 400 | 2 | 75 | 400 | 175 |
| 4 | 400 | 600 | 3 | 25 | | 125 |
| 5 | 500 | 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 |
| 10 | 1 000 | 1 200 | 6 | 25 | | 125 |
| 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 |
| 18 | 1 800 | 2 000 | 10 | 25 | | 125 |

Standard stroke

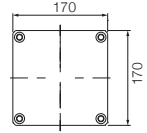
Belt version



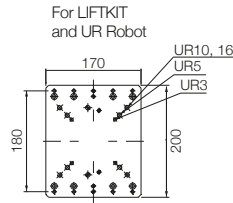
SLIDEKIT-00



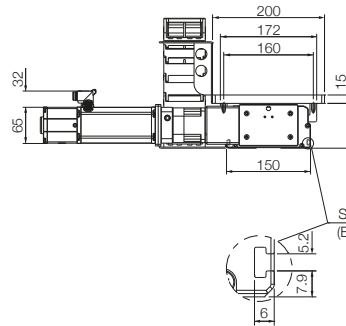
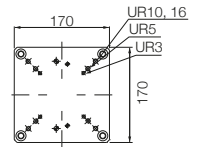
For any Robot



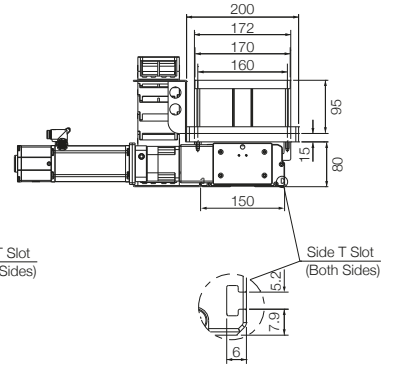
SLIDEKIT-UR



For UR Robot



Side T Slot (Both Sides)

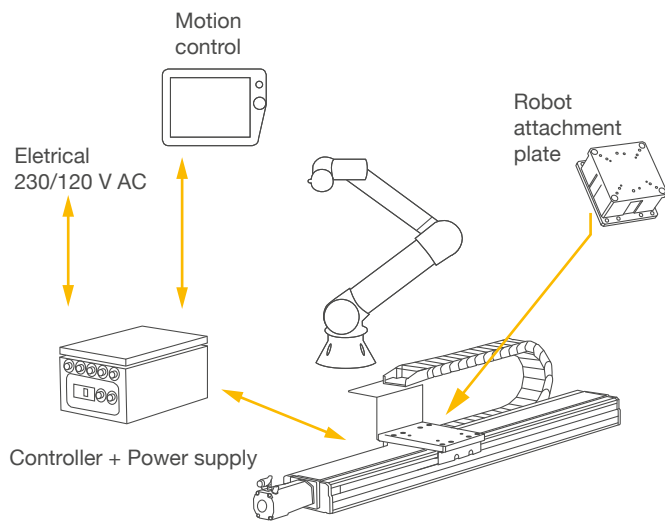


Side T Slot (Both Sides)

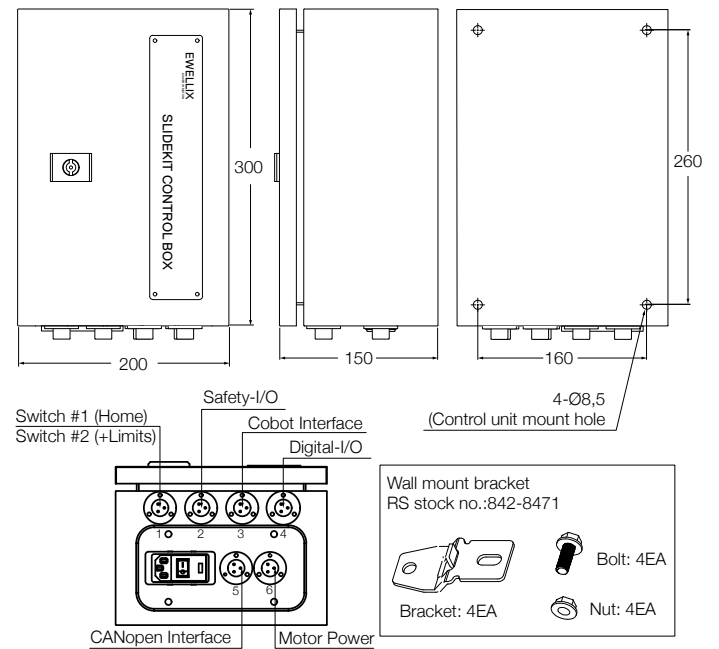
| Stroke | A | B | C | D | E | |
|-----------|-------------|-------------|-----------|------------|-------------|------------|
| 10 | 1000 | 1200 | 6 | 65 | 1000 | 165 |
| 11 | 1100 | 1200 | 6 | 115 | 1000 | 215 |
| 12 | 1200 | 1400 | 7 | 65 | 1200 | 165 |
| 13 | 1300 | 1400 | 7 | 115 | 1200 | 215 |
| 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 |
| 25 | 2500 | 2600 | 13 | 115 | 2400 | 215 |
| 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 |
| 30 | 3000 | 3200 | 16 | 65 | 3000 | 165 |

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.

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 - [] - [] E - [] - [] - 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 Alumium 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

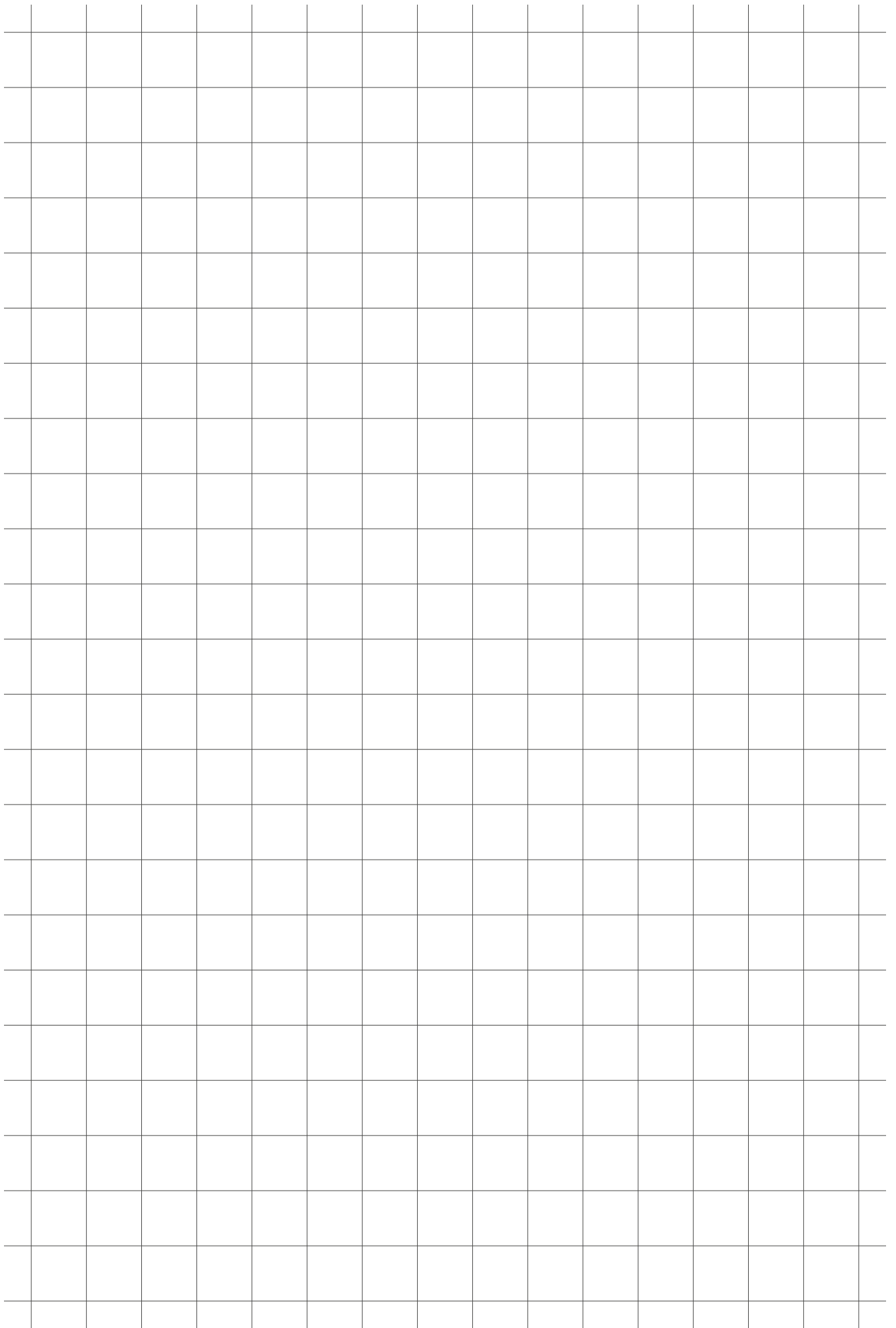
- 11 120 VAC / US cable
- 22 230 VAC / EU cable
- 23 230 VAC / CN cable
- 24 230 VAC / UK cable
- 25 230 VAC / CH cable

Accessories options

- S Limit switch
- Cableveyor
- C Compact
 - L Large
- M Standard hole pattern

Customized options

- S Option 1 - Safety relay





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PUB EL-07023/6-EM-January 2021

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