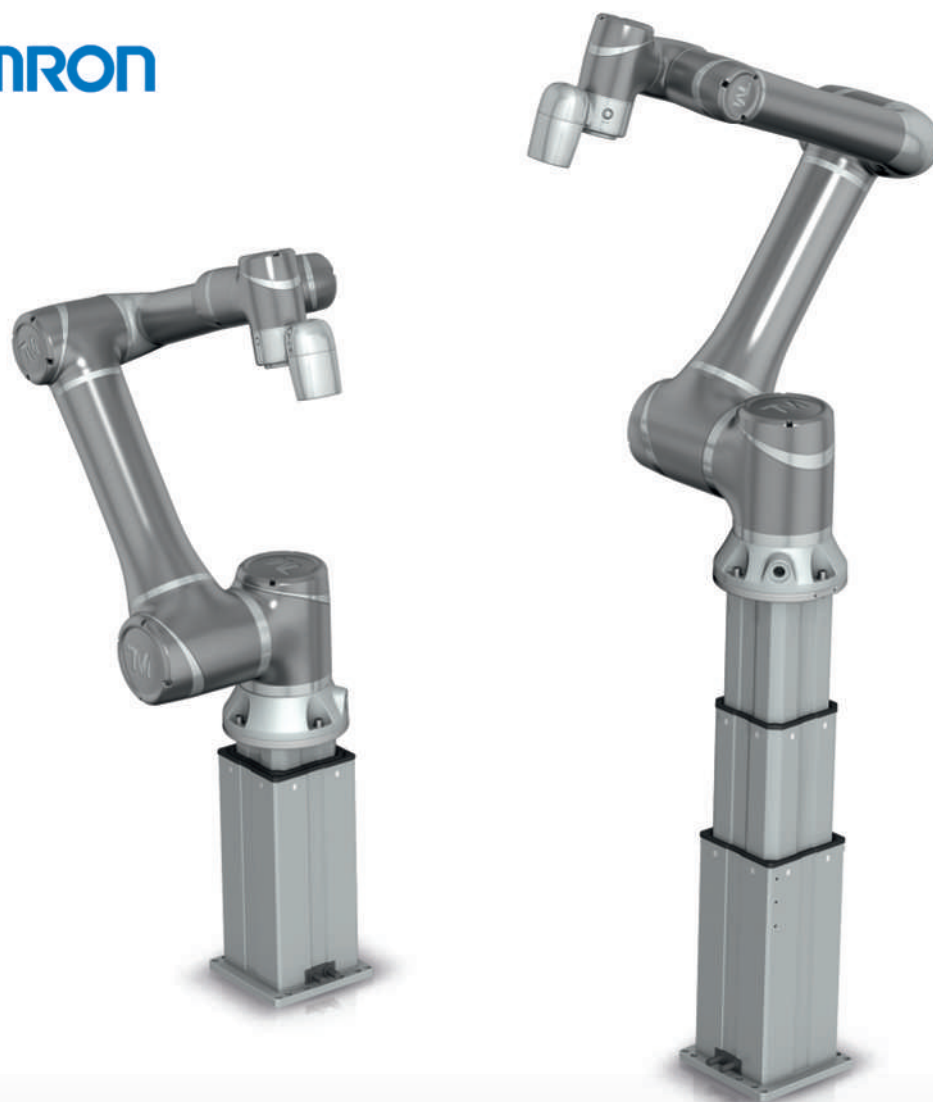


OMRON



EWELLIX



EWELLIX linear axis for OMRON cobots

LIFTKIT-OM

Product Data Sheet

We pioneer motion

SCHAEFFLER

1 Benefits for handling and inspection

Schaeffler offers effective solutions for intelligent and complete vertical adjustment with a wide range of ready-to-mount additional linear axis solutions. These have been developed for various applications and thus extend the application range of your robot.

Fully automated pick-and-place solutions are becoming the new standard in packaging stations. A traditional cobot does not have such a large vertical working area. The LIFTKIT can be used to raise or lower the robot base to work in the optimum position. Stacking on pallets starts at floor level, but can be at heights of up to 2 m. The LIFTKIT can increase the efficiency of your packaging station in this scenario. And whenever you need a repetitive operation sequence, such as final inspections, the LIFTKIT guarantees precision and reliability to deliver the best-possible outcome.

2 Product description

Expansion of the working range

- vertical lifting of the cobot by up to 1400 mm with a compact, retracted length
- robust column design for industrial use, vibration-free movement, and virtually maintenance-free operation

Plug-and-play solution

- Hardware interface compatible with TM5 cobots, TM12 cobots, TM14 cobots and TM20 cobots
- OMRON-certified product
- integrated software control via TMflow for easy motion programming

Cost savings and increased productivity

Cobots working in combination with a LIFTKIT offer a cost-effective solution for modernizing an existing assembly hall with a switch from a manual to a fully automated production line.

3 Scope of delivery

3.1 LIFTKIT-OM scope of delivery

The following parts are included in the scope of delivery:

- 1 EWELLIX lifting column TLT
- 1 EWELLIX control unit SCU16/56/96
- 1 SBOX mains cable EU/US/CH/CN
- 1 interface cable RS232
- 1 controller I/O cable (M/0133975)
- 1 EWELLIX hand switch EHA3
- 1 mounting plate OMRON
- 1 bottom mounting plate
- 8 screws M10×40 for mounting plates
- 4 screws M6×20 for OMRON robots
- 2 pins, dia. 8×20, for aligning the OMRON robot
- 1 quick guide manual
- 1 EWELLIX SBOX
- 1 SBOX key
- 1 SBOX I/O cable
- 1 power cable SBOX to SCU
- 1 Ethernet cable
- SBOX mounting elements

1 LIFTKIT-OM scope of delivery



Quick start guide



EWELLIX-Control unit SCU



EWELLIX-SBOX



EWELLIX-Lifting column TLT



Attachment plate Techman



Bottom mounting plate



EWELLIX-Operating handswitch EHA31



Screws and pins



SBOX Key



SBOX I/O cable



SBOX power cable



SBOX to SCU power cable



SCU I/O cable



Interface cable RS232



Ethernet cable

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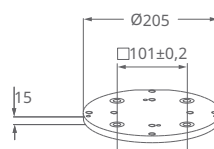
4 Technical data

1 Technical information for the LIFTKIT-OM-601

| Characteristic | Unit | LIFTKIT-OM-601 |
|--------------------------------------|------|--|
| Column type | - | TLT |
| Rated push force | N | 1500 |
| Rated pull force | N | 0 |
| Max. dynamic bending moment | Nm | 210 |
| Max. static bending moment | Nm | 3000 |
| Max. linear speed | mm/s | 80 |
| Duty cycle of operation | - | 10 % (20 % at 500 N) |
| Screw type | - | Lead screw |
| Strokes | mm | 500 to 1400 |
| Retracted length (virtually limited) | mm | Stroke/2 + 275 |
| Mass at 0-mm stroke | kg | 21 |
| Δ mass per 100-mm stroke | kg | 1.7 |
| Compatible robots | - | TM5, TM12, TM14, TM20 |
| Cable management | - | Threads on column and adapter plate for attaching cables |
| AC voltage | V | 120 |
| Amperage | A | 6.5 |
| AC voltage | V | 230 |
| Amperage | A | 3.3 |
| Input frequency | Hz | 50 to 60 |
| Input fuse | A | 10 |
| DC I/O voltage | V | 24 |
| I/O amperage | A | max. 10, not protected |
| Emergency stop | - | Safe Torque Off (STO) up to PLe, Cat. 4 |
| Communication interface | - | TMflow |
| Positioning | mm | ±1 |
| Achievable positions | - | Any |
| Feedback | - | Position and status |
| Soft start and soft stop | - | Implemented for smooth running |
| Software | - | TMflow software |
| Protection class | - | IP40 |
| Ambient temperature | °C | +10 to +40 |
| Max. humidity | % | 85 |
| Vibration | | Stationary industrial environment |

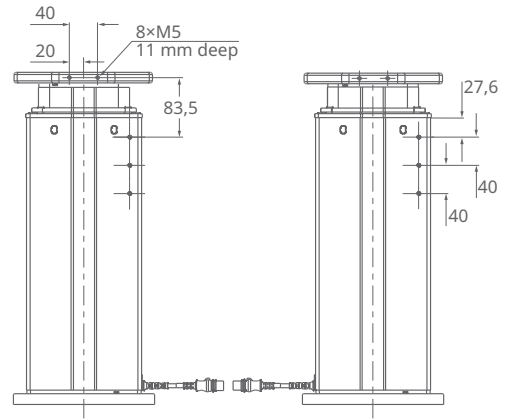
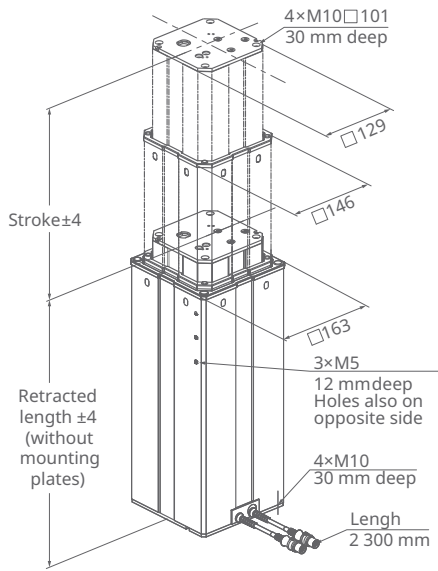
4.1 Dimensional drawing of a LIFTKIT-OM

2 Robot fixation plate



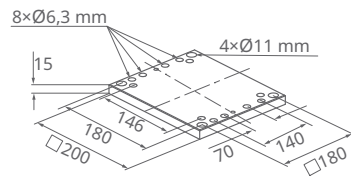
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3 EWELLIX lifting column TLT



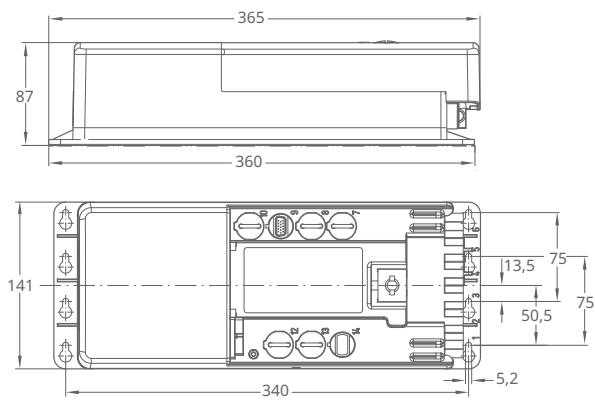
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4 Lower fixation plate

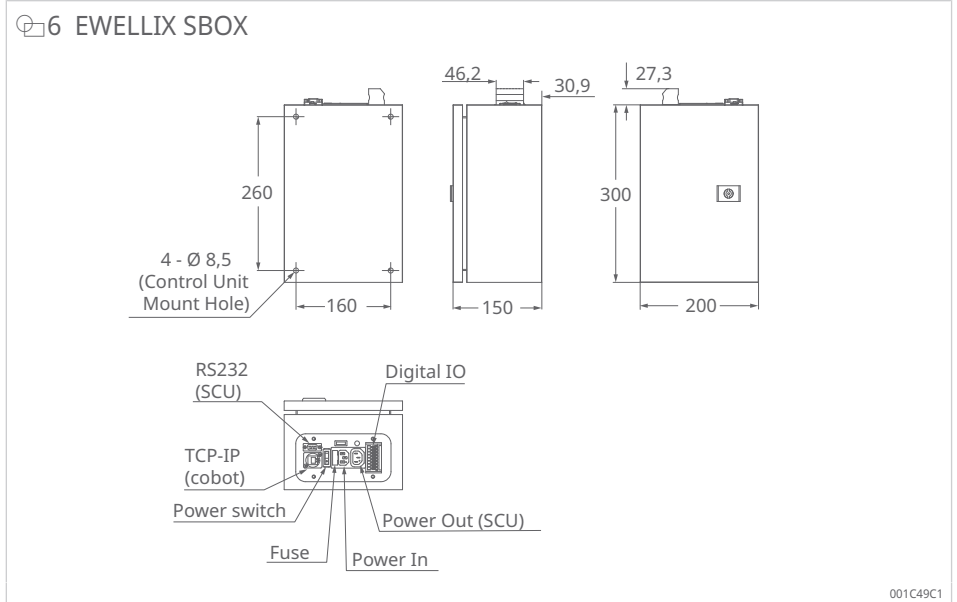


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5 EWELLIX control unit SCU



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4.2 Cable management



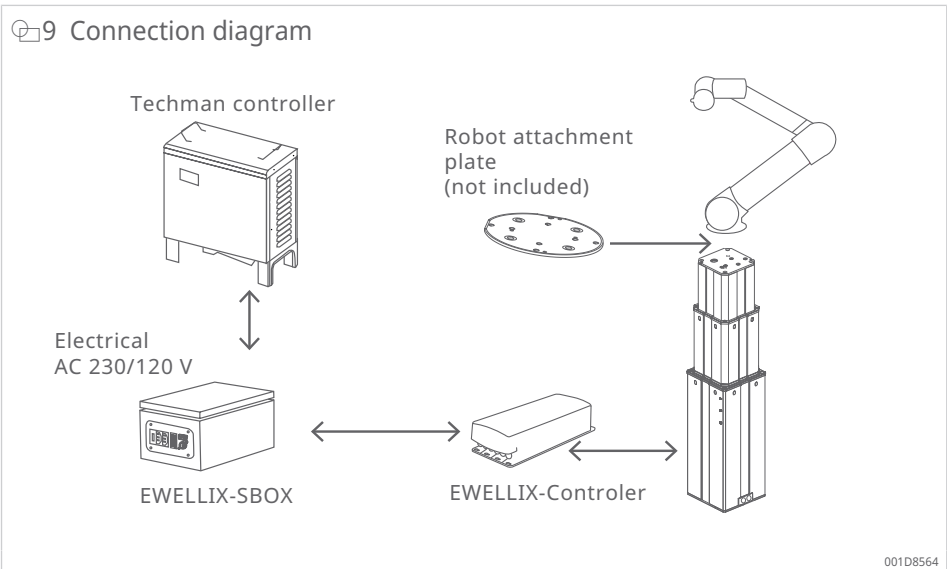
8 Cable management (drag chain for cable routing)



001D8544

4.3 Connection diagram

9 Connection diagram



001D8564

5 Software functionality

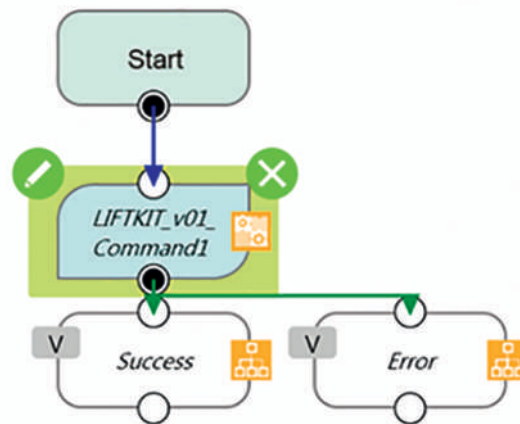
The LIFTKIT component allows customers to integrate the functions of the EWELLIX lifting column into TMflow applications.

Setup and programming

The LIFTKIT command component allows the LIFTKIT to be setup and controlled in TMflow. The component can be inserted into a TMflow project multiple times via drag and drop, meaning that different positions can be accessed while receiving feedback on the current position and status.

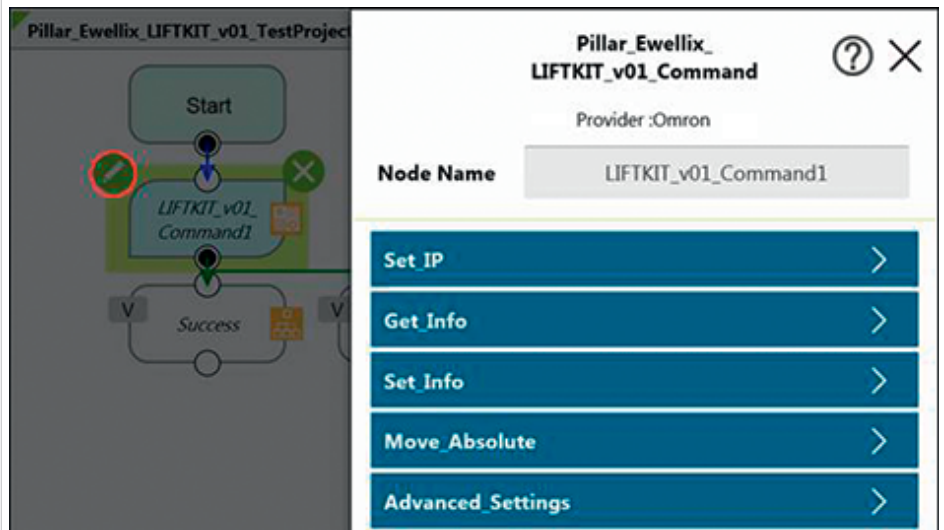
5

10 LIFTKIT software functionality test project



001C3C80

11 LIFTKIT software functionality command



001D8554

Safety elements

The LIFTKIT has a number of safety elements that enable integration into a robot application, including safety relays certified to DIN EN ISO 13849-1, that allow ratings from STO up to PLe, Cat. 4.

Software updates

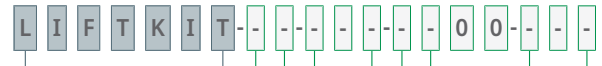
To download the latest software update, go to <https://www.schaeffler.de/std/226A>.

12 QR code software update for LIFTKIT



6 Ordering key

13 LIFTKIT-OM ordering key



Type

Robot

OM Omron

Stroke

| | Stroke | Retracted length | Extended length |
|-----|---------|------------------|-----------------|
| 500 | 500 mm | 525 mm | 1025 mm |
| 600 | 600 mm | 575 mm | 1175 mm |
| 700 | 700 mm | 625 mm | 1325 mm |
| 800 | 800 mm | 675 mm | 1475 mm |
| 900 | 900 mm | 725 mm | 1625 mm |
| A00 | 1000 mm | 775 mm | 1775 mm |
| B00 | 1100 mm | 825 mm | 1925 mm |
| C00 | 1200 mm | 875 mm | 2075 mm |
| D00 | 1300 mm | 925 mm | 2225 mm |
| E00 | 1400 mm | 975 mm | 2375 mm |

Electrical options

- 11 AC 120 V, US cable
- 22 AC 230 V, EU cable
- 23 AC 230 V, CN cable
- 24 AC 230 V, UK cable
- 25 AC 230 V, CH cable

Column type

601 TLT

001D8344

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