



INTRODUCTION

All information necessary for a correct assembly to ensure trouble free operation of the cable reel are described in the present operating instructions. The warranty given by the manufacturer is only valid if these operating instructions are observed and adhered to.

Terms and conditions are available upon request or at https://www.schill.de/AGB_en

Additional user manuals for other product variants can be found at <https://www.schill.de/en/downloads/> or received on request (see "CONTACT").

GENERAL

The automatic cable rewriter with integrated charging electronics provides the simple means for modern AC charging of electrically powered vehicles (EV). The cable is only pulled out when needed and in the required length. The remainder stays neatly stored on the cable reel and is protected from contamination and damage. The power connection is always accessible, but never in the way. The cable length can be easily adapted to a changing parking situation. There is no cable chaos, no tripping hazard anymore. If the charging connection is no longer needed, a short pull on the cable stopper will suffice and the cable will roll up neatly. The automatic cable rewriter ensures safety and order.

HANDLING

The coiled cable should be pulled out to the required length against the spring tension, but please refrain from the use of undue force. The cable is coiled and fixed in position as described under "LOCKING DEVICE". The cable should never be pushed in manually. If the cable becomes entangled when winding it onto the reel, simply pull the cable out again and then rewind.

Incorrect use caused by torsional stress together with simultaneous expansion of cable should be avoided.

MAINTENANCE

The cable reel does not require any maintenance, due to the excellent antifriction properties of the plastic bearing. However, the cable must be checked in regular intervals for damages and replaced if necessary.

SPIRAL SPRING

The spiral spring is subject to natural wear and tear causing a fatigue fracture of the spring steel. Based on experience, we recommend changing the spring after approx. 30.000 operations. The term "operations" defines not only a complete winding and unwinding of the spring but includes also a partial movement of the spring.

In the event of spring breakage or spring fatigue, please contact us (see "CONTACT").

SPRING LOAD

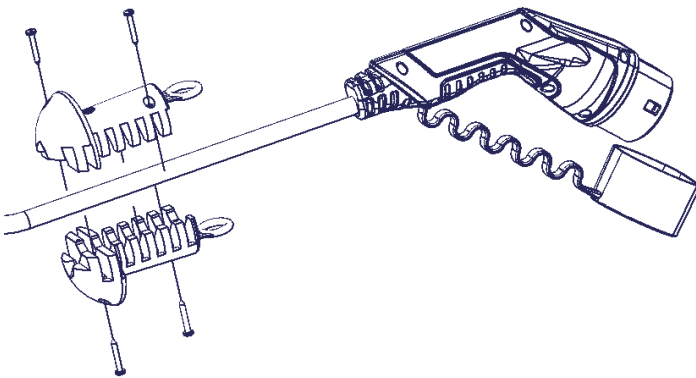
The spring load is set at the factory. It may become necessary to adjust this setting. Before doing so, the locking device should be engaged. Then remove the cable stopper and draw the cable out of the roller guide. The load can be increased by additional windings of the cable anti clockwise and decreased by unwinding the cable in clockwise direction (rewind). Once this has been completed, it is very important that the cable is fed back through the roller guide and secured with the cable stopper. Increasing the spring load reduces the extractable cable length. A reduction of the spring load may affect the rewind function of the reel.

ATTENTION

Do not release the cable when rewinding, the tension of the spring can accelerate the winding speed to such a degree that the swinging cable end could cause injury.

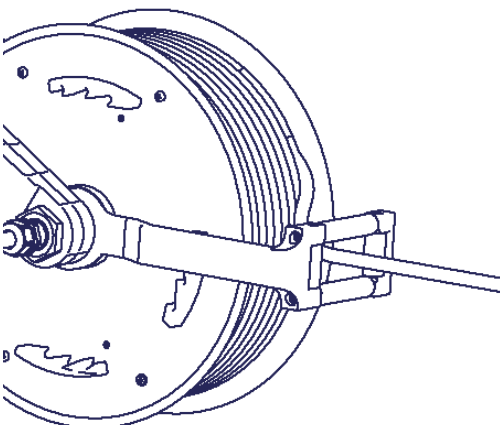
Also damage to the cable and spring could be the result of such an action.

CABLE STOPPER



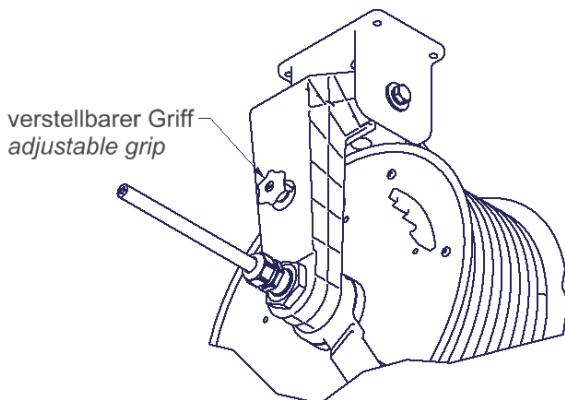
The length of the available cable can be individually adjusted with the provided cable stopper. The reliable clamping adapts to various cable diameters between 6 and 16 mm. For a thicker cable, a larger version is available. The stopper also serves as a safeguard against a full unload of the spring if the cable is unintentional released. It should therefore never be removed.

ROLLER GUIDE



Fitted with four rollers, the roller guide ensures that the cable is correctly guided. It can be operated in a fixed or flexible mode. The roller guide adjusts then to the direction of the pull. The guide ensures that the cable is always guided onto the reel and prevents it from sliding of the drum.

LOCKING DEVICE



As a standard feature the cable reel has a disengageable cable locking device. The latching mechanism ensures that the pulled-out cable stays without traction fixed in place. When the cable is being pulled out, the spring detent passes over a series of grooves. An audible click indicates that the locking device is engaged. If you gently rewind the cable after the clicking sound, you will notice that the spring detent will engage into the notches, locking the cable in position. The cable can be disengaged by gently continuing to pull the cable until the

click can no longer be heard. The loaded spring will pull the cable back onto the reel.

The locking device can be disengaged by pulling the knurled grip out by approx. 1cm and turning it between 90° and 180°. This will disengage the locking device the cable is then constantly under tension.

ATTENTION

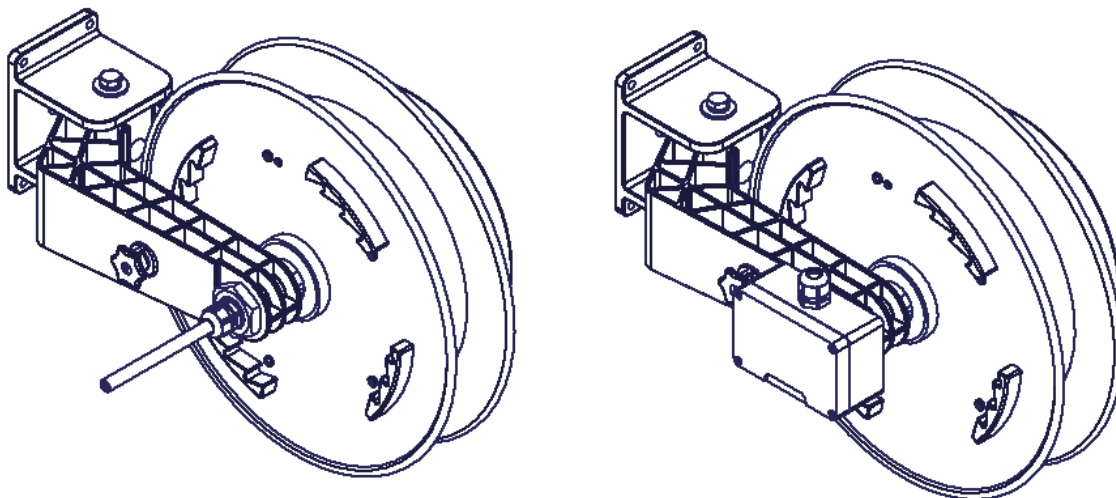
Do not release the cable when rewinding, the tension of the spring can accelerate the winding speed to such a degree that the swinging cable end could cause injury. Also damage to the cable and spring could be the result of such an action.

CONNECTING

To connect the reel to the mains/supply service a connection cable is mounted. As a standard a plug-in connector is not included in the scope of supply.

Depending on the version, the reel can be delivered with

- a connection cable only (standard)
- with an on the reel mounted terminal block



 **ATTENTION**

- Observe installation instructions
- According to DIN VDE 0100-722 (VDE 0100-722): 2013-01, a separate circuit must be set up for each charging socket (IEC 60364-7-722: Low-voltage electrical installations - Part 7-722: Requirements for special installations or locations - supply of electric vehicle)
- Protection via residual current device (RCD) at least type A, which switches off with AC or pulsating residual current with $I_{\Delta n} \geq 30\text{mA}$
- If DC fault currents $I_{\Delta n} \geq \text{DC } 6\text{mA}$ can occur due to insulation faults in the charging circuit, a residual current device (RCD) type B is required or suitable protective measures for DC fault currents $\geq \text{DC } 6\text{mA}$ must be provided (e.g. DC residual current monitoring device).

EXTENSION CABLE

The included standard cables are designed to tolerate the weight of the pulled-out cable including the cable stopper. Additional weights are not allowed. The mounted cables are limited to the specified lengths. Never use excessive force to unwind the cable as this can damage both the cable and the reel. Should the cable be blocked while coiling up, please pull the cable out again and recoil. Attention should also be paid to section „GENERAL“.

If the cable is damaged, please contact us (see "CONTACT").

FUSE / THERMAL SAFETY GUARD

The integrated charging electronics is protected with a 5x20 glass bulb fuse. Accessible from the outside, this is located on the operating and signaling devices on the front of the charger. To change the fuse, remove the cap of the fuse holder the glass bulb fuse can then be replaced.

The series of these automatic cable reels with integrated charging electronics is dimensioned so that there is no excessive heat development when the cable is rolled up or unrolled. A self-retaining temperature switch is installed to protect against unusual heat development. If the switch is tripped, the charging of the electric vehicle is interrupted. After an appropriate cooling phase, operation can be resumed by pressing the red temperature switch. See also "OPERATING AND SIGNALING ELEMENTS".

READY FOR USE

Before commissioning, please conduct an electrical check according to VDE 0100 or to the respective national standard. Check that the end of the pull-out cable is correctly fitted with a charging socket. After connecting to the power supply (see "CONNECTING"), the cable reel should be live and ready for use.

If this is not the case, the fuse and thermal safety guard must be checked (see "FUSE / THERMAL SAFETY GUARD").

INSTALLATION

Pull out the extension cable to the desired length and lock. Connect the charging socket to the electrical vehicle (EV). Switch on the automatic cable reel with integrated charging electronics using the rocker switch (ON / OFF). A flashing LED (STATUS CONTROL) signals operational readiness. If this is not the case, the fuses must be checked. Observe the description under "OPERATING AND SIGNALING ELEMENTS".

If the charging electronics are equipped with an AC / DC sensitive residual current monitoring device, this must be checked for proper function before each charging process. It is necessary that the charging process is deactivated (no vehicle connected). Observe the notes under "OPERATING AND SIGNALING ELEMENTS"

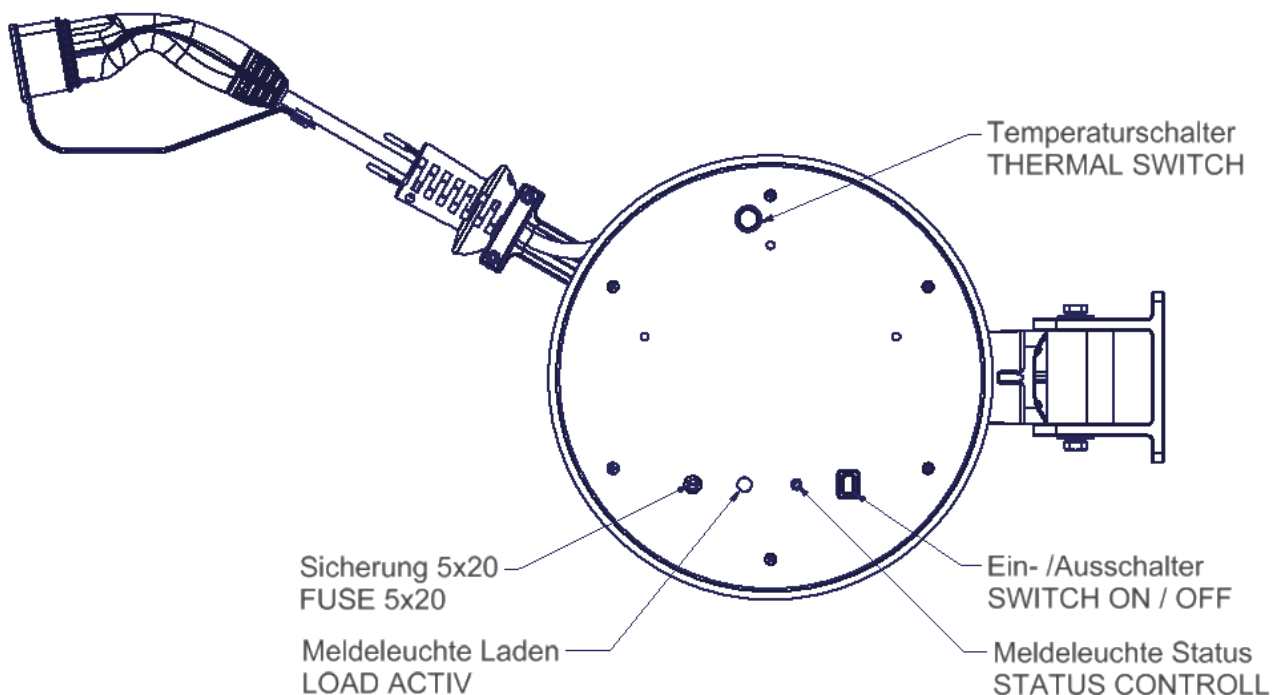
ATTENTION

Danger to life from electric current!

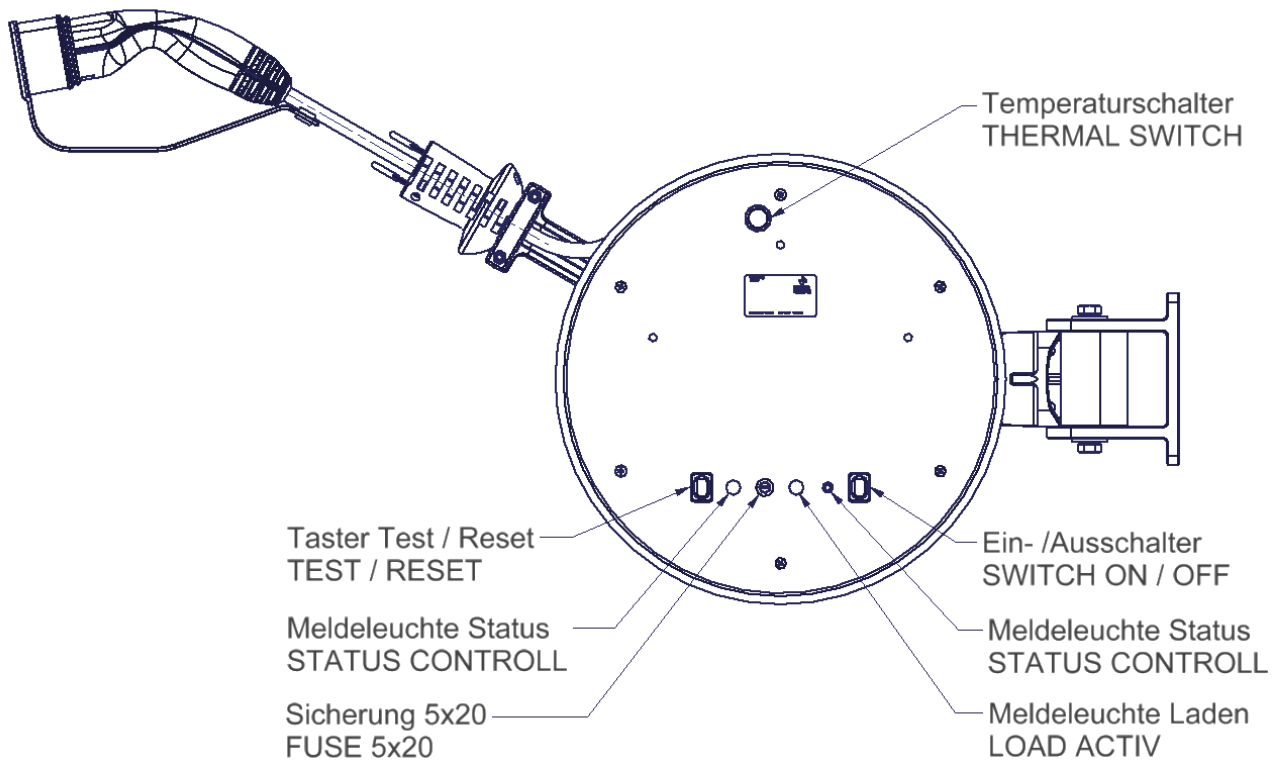
Safety for life is only guaranteed if the monitoring device functions properly. Therefore, a device test (by the charge controller) must be carried out before each charging process!

OPERATING AND SIGNALING ELEMENTS

FT 038.0516.I02 / FT 038.1032.I02



FT 038.0516.I03 / FT 038.1032.I03



Switch ON / OFF:

Switches the integrated charging electronics on or off. The charging electronics must be switched off after each charging process.

Signal lamp STATUS CONTROL (LED yellow)

Different flashing frequencies of the indicator light is shown the status of the charging controller.

flashing frequency	meaning
1x fast + pause	No vehicle detected - standby
2x fast + pause	Vehicle detected
1x long + pause	Vehicle requests charging (contactor is ON)
20x fast in 0,5 sec	The current setting mode is called up or exited
1x each 0,3 sec	Current setting mode – one more amper set
	error states (no charging)
3x fast + pause	controller is disabled in software (FW >= 6)
4x fast + pause	charging with ventilation is disabled (FW >= 13)
5x fast + pause	Pilot signal check failed (FW >= 11)
6x fast + pause	Residual current check failure (FW >= 16)

Signal lamp LOAD ACTIVE (lamp green):

Contactor is switched (loading vehicle)

FUSE:

Protection of the charging electronics

Signal lamp STATUS DEVICE (lamp green):

AC / DC sensitive residual current device: no device fault

Pushbutton TEST / RESET:

The device test for residual current monitoring is carried out with the push button.

The device test is carried out via a connected measuring current transformer. The effective value of the direct current component contained in the differential current and the alternating current component below the cut-off frequency is formed. The alarm relays switch when the limit values of $I_{\Delta n} \geq DC 6 \text{ mA}$ and / or effective value $I_{\Delta n} \geq 30 \text{ mA}$ are exceeded. The regular check increases the safety of the charging process and prevents long-term drifting of the residual current measurement.

Fault storage is integrated in the residual current monitoring. An error that has occurred or a test that has been carried out must be reset manually using the pushbutton. (The error storage can optionally be switched off, then the reset takes place automatically as soon as the residual current fulfills the connection condition.

THERMAL SWITCH:

Switches off the charging process when a critical temperature is reached

If the electronics of the automatic cable winder are defective, please contact us (see "CONTACT").

TECHNICAL DATA

The cable reels consist of a plastic drum core with coated steel discs and a steel bracket. Is corrosion resistant and has very good winding and running characteristics due to the ball-bearing axle. The stable construction is designed for operation in factories and workshops. The cable reels are supplied as standard without a plug device.

- Spiral spring for approx. 30. 000 operations
- Disengageable cable locking device
- High quality flat slip rings 240 / 400V AC - 16A with double contacts
- flexible and lockable cable guide
- Mounting fixture WB 038 for wall installation (standard)
- Mounting fixture DB 038 for ceiling installation (optional)
- Ambient temperature range: -20°C bis 40°C
- IP classification: IP 42
- Construction: protection class I
- Protection / internals
 - Temperatur protection device: self-retaining Thermal switch (56°C±5°C)
 - Glass bulb fuse 5x20 400mA slow
 - Installation contactor 4way 40A
- Input / power connection
 - Connecting cable (standard 2m / optional >2m)
 - H07RN-F 3G2,5 (3,7kW) / H07RN-F 3G6 (7,4kW)
 - H07RN-F 5G2,5 (11kW) / H07RN-F 5G6 (22kW)
 - Nominal Voltage 230V / 400V AC

- Rated Current: 16A / 32A
- Nominal frequency: 50Hz
- 16A / 32A back-up fuse (optional or required by customer) recommended C-characteristic
- RCCB type A, 30mA (optional or required on site)
- DC residual current detection electronic, $I_{\Delta n} DC \geq 6mA$ (optional or required on site)
- *as an alternative to DC residual current detection and RCCB type A. RCCB type B (optional or required on site)*
- Output / vehicle connection
 - Max. 10m extension cable with connector Typ 2 (optional Typ 1)
 - 5G2,5 + 1x0,5 (11kW) 3G2,5 + 1x0,5 (3,6kW)
 - 5G6 + 1x0,5 (22kW) 3G6 + 1x0,5 (7,2kW)
 - Standards for the charging cable: IEC 60332-1; IEC 60228; DIN EN 50620; DIN EN 50363-10-2; DIN EN 50267-2-1; DIN EN 50363-10-2; ISO 4982-2
 - Cable stopper with segmented gentle clamp 6 – 16 mm
 - Output Voltage: 230V / 400V AC
 - Maximum charging current [A]: 16 / 32
 - Maximum charging power [kW]: 3,6 / 7,4 (1ph) - 11 / 22 (3ph)
 - Communication EV according to IEC 61851-1, mode 3

The stated operating temperatures relate only to the standard cable reel as described above and do not apply to e.g. plug-in device. They are only as an exception part of the delivery. Specification for plug-in devices can be found within the relevant standard DIN EN 60309 or respectively DIN VDE 0620. **Other operating temperatures please contact us.**

Additional information with respect to cable types, spring tensions, power loads and weights can be found on the product rating plate, in our current product catalogue and also on our website www.schill.de/en

The dimensions, weights, lengths, colours and traction are subject to modifications. We cannot rule out discrepancies and we reserve the right to make technical changes to the product without giving advance notice.

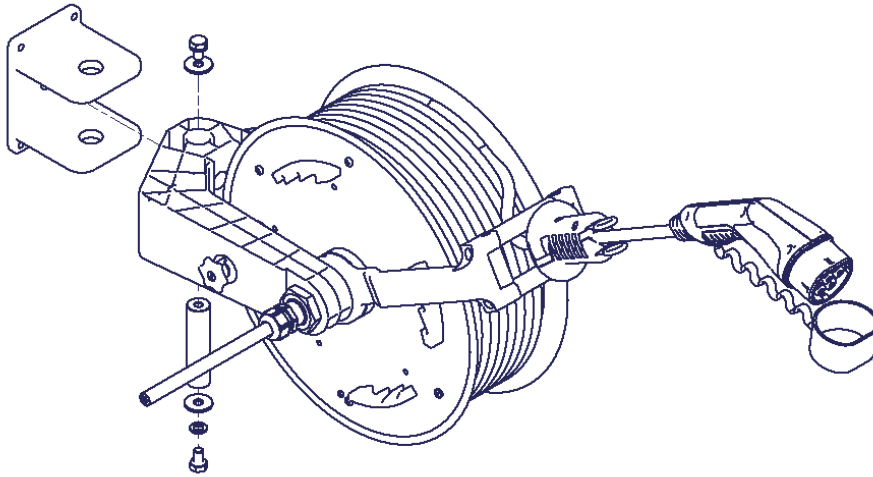
INSTALLATION HEIGHT

The installation height of the cable rewriter is not limited. The maximum extension length is the specified cable length. The standard cables are designed to withstand the weight of the extended cable included cable stopper. Additional tensile forces (cause by additional weights for example) are not permitted.

When the cable is pull-out horizontally due to the weight of cable a slack occurs. This is about 10% of the cable pull-out length.

FITTING INSTRUCTION

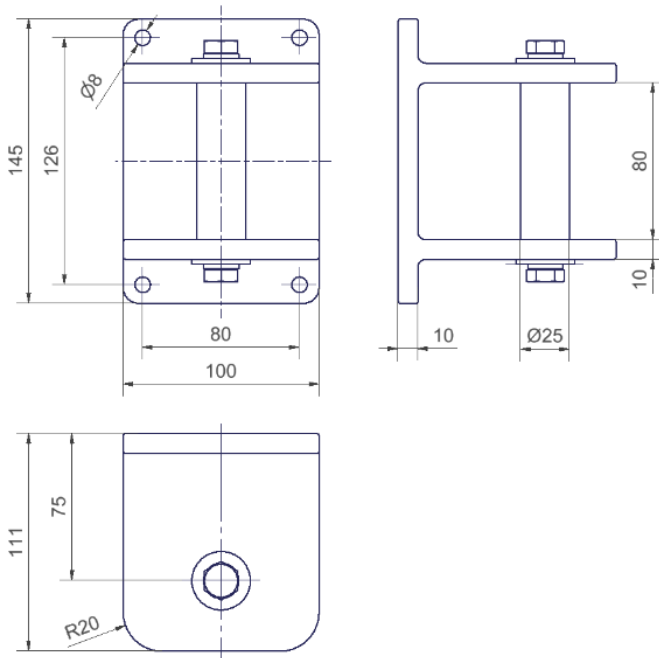
Wall installation with universal holder WB038



The cable reel can be rotated 150°.

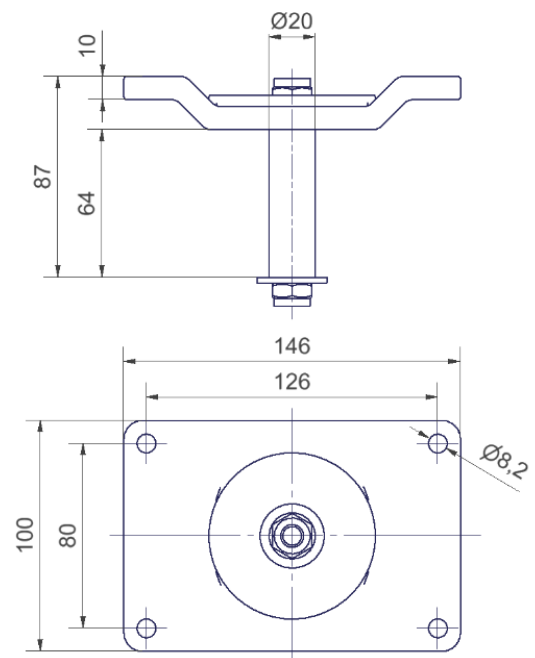
Depending on the mounting height, the rotatable roller guide can be adjusted to the cable pull direction and fixed.

Mounting fixture WB 038 for wall installation



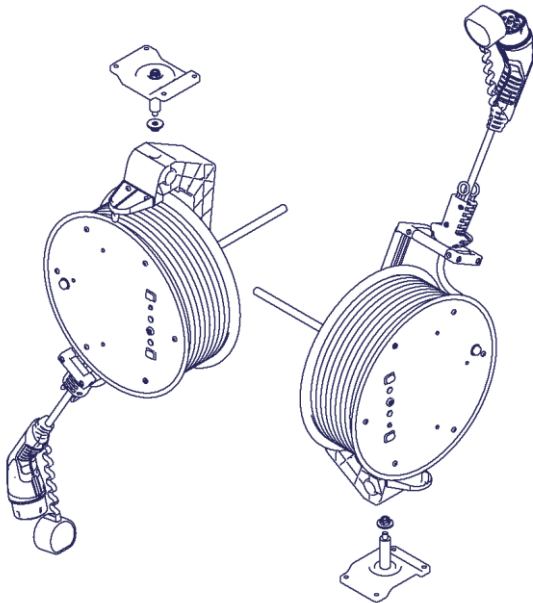
Mounting fixture WB 038 is included in the scope of supply, but no fastening screws.

Ceiling installation rotating DB 038



Mounting fixture DB 038 and fastening screws are **not** in the scope of supply

Ceiling and floor month with DB038



The extension cable swivels on a 360° axis. The swivel roller guide is to be adjusted to the cable extension direction and secured (screw connection) in this position.

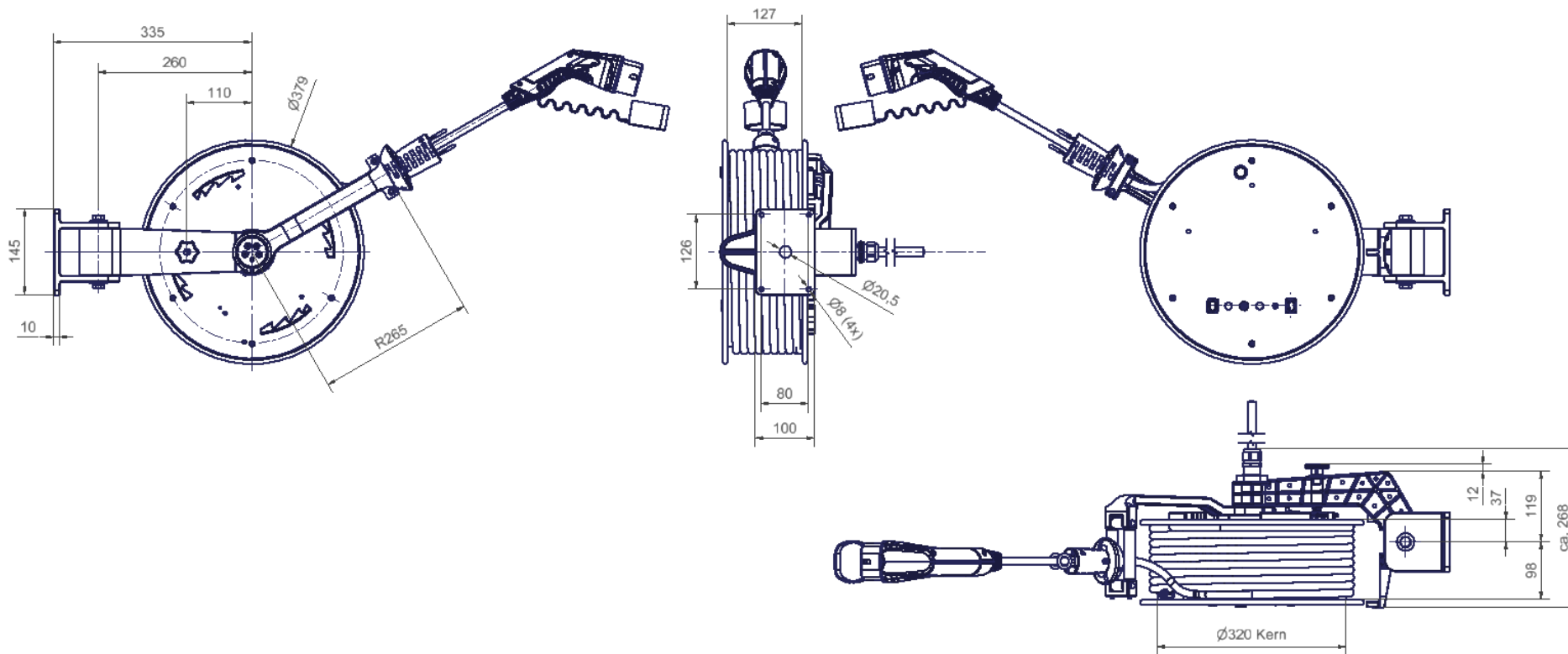
⚠ ATTENTION

If repeated over-tightening, the connection cable can be mechanically stressed and torn off.

TIGHTENING TORQUE

Gehäuseschrauben <i>Cover screws</i>	0,8 Nm
Sicherungsschraube. M8 <i>Locking screw M8</i>	0,8 Nm
Zugentlastung <i>Strain relief</i>	0,8 Nm
Kabelstopper <i>Cable stopper</i>	0,8 Nm
Schraubenmutter M30 <i>Screw nut M30</i>	40 Nm
Kabelverschraubung <i>Cable gland</i>	2,5Nm
Elektrische Anschlüsse <i>Electrical connections</i>	0,5 Nm
MS-Schleifring Mutter M3,5 <i>MS slip ring nut M3,5</i>	0,3 - 0,35 Nm
MS-Schleifring Schraube M3 <i>MS slip ring screw M3</i>	0,6 - 0,7 Nm
Doppelschenkelhalter M5/M6/M8 <i>Double brush holder M5/M6/M8</i>	2,8 / 4,8 / 10 Nm
Schleifringkörper M5/M6/M8 <i>Slip ring body M5/M6/M8</i>	2,8 / 4,8 / 10 Nm

DIMENSION FT 038.05XX.IXX.



DECLARATION OF CONFORMITY

Declarations of conformity are available at <https://www.schill.de/en/downloads/> or upon request (see "CONTACT")

SPARE PART ORDER

If you require spare parts, please contact our local distribution partner or give us a ring on 0049 711/ 578807-0 or send a mail at sales@schill.de. Please have the product number or the part number ready.

Artikel-Nummer

ARTICLE NUMBER

Bezeichnung

INDICATION

Leistungsdaten

TECHNICAL DATA

Bemerkung

REMARKS



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CHANGES

version	changes	date
A	extended display indicator signal lamp status control / update	25.09.2020