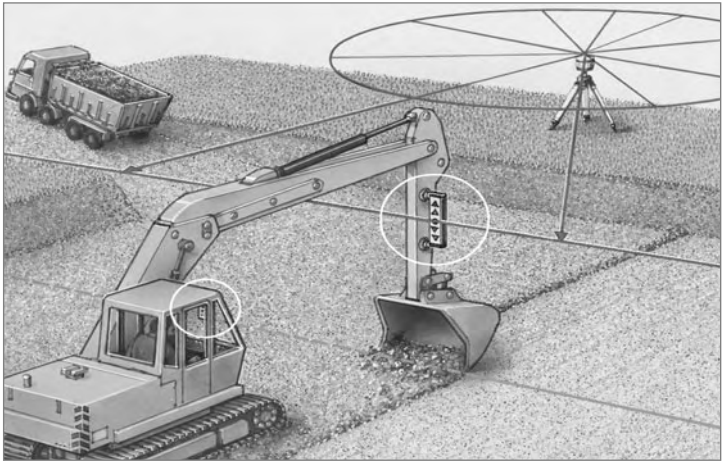
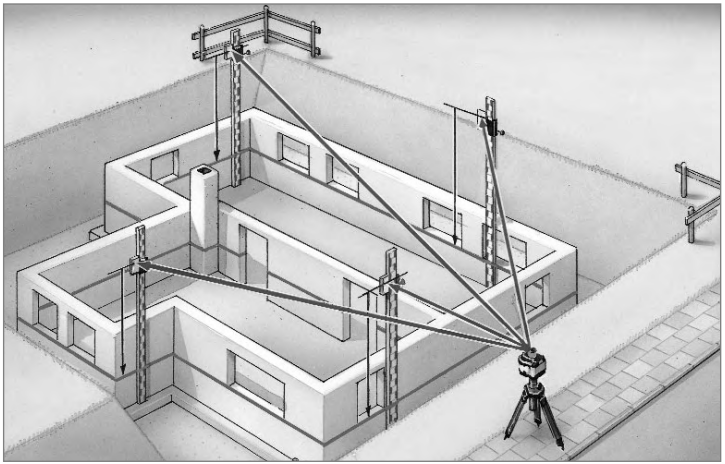
DuraMax

8.027.96.02.1 / Rev 05.07

Laserliner®
Innovation in Tools





Professional rotary laser in extremely rugged design – horizontal levelling even under tough conditions

Automatic rotary laser 635 nm, self-levelling range ± 5° horizontal, precision 1 mm / 10 m, temperature-resistant sensor system (SLS). Ideal for horizontal levelling – even under toughest conditions – e.g. in combination with the optional machine receiver SensoPilot Pro. Highest reliability is guaranteed through the ant-drift system (ADS): The electronics permanently monitor the measuring process and switch the laser off in the case of any outside interference or disturbance. Adjustable horizontal tilt, easy one-button operation. Includes SensoCommander laser receiver and remote control all in one unit.

General safety instructions

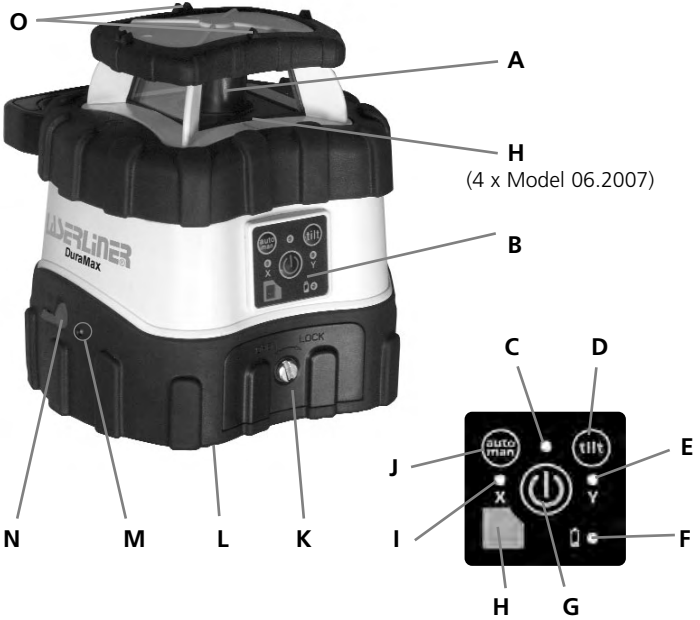
Caution: Do not look directly into the beam. Lasers must be kept out of reach of children. Never intentionally aim the device at people. This is a quality laser measuring device and is 100% factory adjusted within the stated tolerance. For reasons of product liability, we must also draw your attention to the following: Regularly check the calibration before use, after transport and after extended periods of storage. We also wish to point out that absolute calibration is only possible in a specialist workshop. Calibration by yourself is only approximate and the accuracy of the calibration will depend on the care with which you proceed.

Laser light !
Do not stare into the beam or view directly with magnifiers.
Class 2 laser
EN60825-1:2003-10

Note: This product is a precision instrument that must be handled and treated with care. Avoid shocks and impact. Always keep and carry in the case! Switch all lasers off and secure the pendulum. For cleaning, use a soft cloth and glass cleaner.

Warranty:

The warranty period is 2 years from the date of purchase. The warranty covers all material or manufacturing defects occurring during this time. The following are excluded from warranty: Damage due to improper use (e.g. operation with wrong type of current/voltage, connection to unsuitable power source, fall onto hard surface, etc.) or improper storage, normal wear and tear, and defects which only insignificantly impair the value or suitability for use. Any tampering by unauthorised persons will render this warranty void. In the event that you need to claim warranty, please take the complete device together with all information and the invoice to one of our dealers or send it in to Umarex-Laserliner.



A Prism head

B Control panel

C Tilt display

D Tilt button

E Y axis display

F Operating / Battery display

G ON / OFF button

H Receiver window for remote control

I X axis display

J Auto/man button

K Battery compartment

L 5/8" thread (bottom)

M Battery charge display

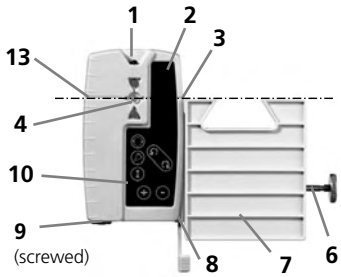
N Charger socket

O Quick sighting

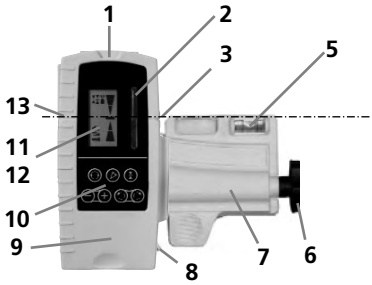
SensoCommander (optional) - Accessory

The SensoCommander is an all-in-one remote control and laser receiver unit.

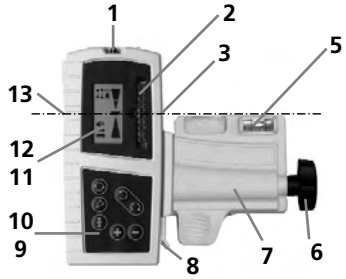
SensoCommander 120:
(Diodes also on the back)



SensoCommander Pro 310



SensoCommander Pro 200 / 300



RoundLite Signal Transmitter (optional)
This system is ingeniously simple: RoundLite and SensoCommander Pro RF communicate with each other via radio technology to form an intelligent network. RoundLite thereby acts as an extended display of the laser receiver. With 6 extra-bright LEDs, RoundLite shows the exact position of the laser.
Note: For SensoCommander Pro RF only.

1 IR output signal
2 Receiver field for laser beam
3 SpotLite marking LED
4 LED display
5 Vial
6 Securing screw
7 Universal mount
8 Securing lever
9 Battery compartment (on back)
10 Control panel
11 LCD display (on back)
12 LCD display
13 All-round marking groove

Self-Levelling-System (SLS)

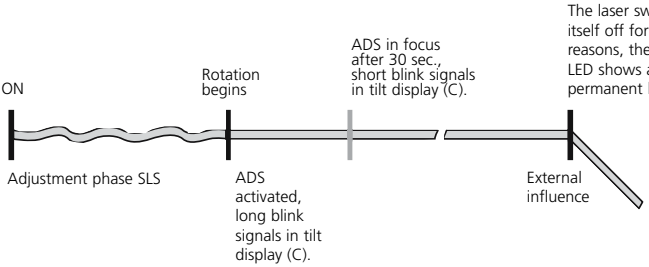
The AutoControl-Master ACM is of the self-levelling kind. After it has been put in the required basic position, fine adjustment is being effected automatically. Horizontal and vertical orthogonal adjustments are effected by the self-levelling system (SLS), while the X-axis and the Y-axis are scanned by two electronic measuring sensors. The working angle is ± 5°.

Anti-Drift-System (ADS)

The Anti-drift system (ADS) prevents mismeasurements. Its principle of function: 30 seconds after ADS has been activated, the laser is permanently being checked for its correct adjustment. In case the instrument has been moved by external influences or the laser has lost its frequency, the system switches itself automatically off and the "tilt"-LED shows a permanent light.

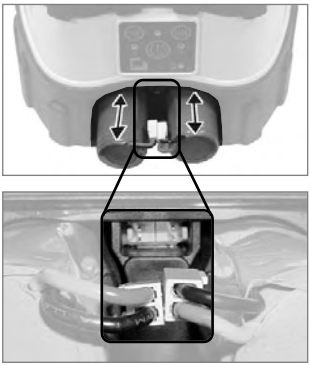
After the instrument has been switched on, the ADS is not active. In order to protect the instrument from position changes caused by external influences, the ADS has to be activated by pressing the push-button "tilt"(D). Should the instrument be moved by external influences, then the laser is switched off and the "tilt"-LED (C) shows a permanent light. The instrument has to be switched off and -on again if work is to be commenced. This is a simple and reliable prevention of misreadings.

Attention: The ADS-function will switch on the control of the laser 30 sec. after the laser has completely been levelled (adjustment phase). Tilt display (C) emits long blink signals during the adjustment phase and short blink signals when ADS is activated



Operation of the DuraMax

Charging the batteries



- Before using the DuraMax, fully charge the batteries
- Open the battery compartment (K), insert the batteries and connect the plugs to the sockets. The plugs fit in the sockets in one position only (see pictures on right). Reclose the battery compartment.
- Connect the battery charger/mains unit to a mains source and plug into the socket (N). Please only use the charger/mains unit supplied with the device. If a different one is used, the warranty will become void.
- The device can also be operated with standard alkali batteries (4 x type D). Insert the batteries as shown by the installation symbols. Ensure the polarity is correct.
- If the LED (F) blinks constantly, either the batteries must be exchanged or recharged.

Insertion of batteries in the SensoCommander:

- Remove the battery cover (9) and insert the batteries as shown by the installation symbol, ensuring that the polarity is correct. Then replace the cover.
- To extend battery life, the receiver switches off automatically after about 5 minutes if not used.

Note: Do not expose batteries to excessive heat such as sunshine, fire, etc. Dry batteries must not be recharged. Used batteries must not be disposed of as household waste. Please take them to a collection point for used batteries or for special waste. Ask your local authority for further details. Batteries with the recycling symbol can also be returned to our dealerships or to our Technical Service.

Operation

Setting up:

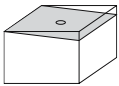
Position the device on a level surface or on a tripod.

- Press the "ON/OFF" switch.
- The device automatically levels itself within a range of ± 5°. When levelling has been completed, the laser rotates at maximum speed. The DuraMax is in hand receiver mode. The operating display (F) is lit up. The laser beam can now be received using the SensoCommander.

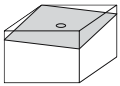
Note: If the device is too far off the horizontal (more than 5°), a warning signal will sound and the rotor head will stop. In this case, the device must be repositioned on a more level surface.

Slope mode:

- The SLS adjusts the X and Y axes. However, if it is intended to project an incline, SLS must be switched off.
- To project an aincline, press the auto/man (J) button. The X axis can now be adjusted, and the X axis display (I) lights up. To adjust the inclination of the Y axis, press the tilt button (D); the Y axis display (E) lights up.
- Adjustment of the X and Y axes is done using the SensoCommander. To do this, press buttons 15.



In one plane

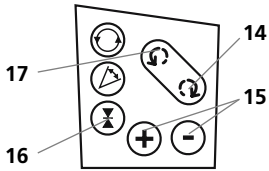


In two planes

Note: The DuraMax is characterised by great ease of operation and is only equipped with hand receiver mode and tilt mode. For this reason, not all the buttons on SensoCommander 120 and Pro are used.

Working with the SensoCommander (optional)

Control panel SC 120 / Pro



14 Switchover between X and Y axes in tilt or calibration mode

15 Sound volume / axis adjustment in tilt or calibration mode

16 Hand receiver mode

17 Save calibration

Note: The laser receiver has two tolerance settings: Precision and free-hand setting. On the SensoCommander 120, the settings are indicated by LEDs: precision setting: green; free-hand setting: orange. On the SensoCommander Pro and Classic, changeover between the settings is done by the ⧗ button.

Precision range: Mode with smaller tolerance for precise alignment (e.g. with measuring staff).

Free-hand range: Mode with greater tolerance for less precise alignment by hand.

Volume adjustment: Volume adjustment feature on SC 120 and Pro.

The SensoCommander can recognise the laser beam over long distances. Set the device to hand receiver mode (press button 16). Move the SensoCommander up and down through the laser beam until the middle display appears. Now mark the height on the all-round marking groove. The Spotlite additionally shows the measured height.

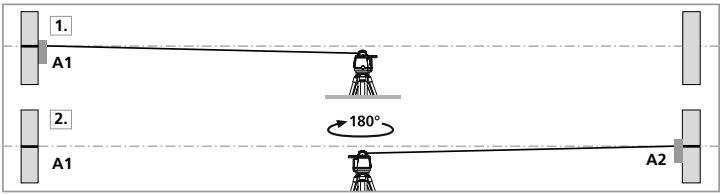
Universal mount (optional):

The receiver can be installed on levelling staffs with the aid of the universal mount. To do this, insert the universal mount into the laser receiver and secure on the levelling staff with the aid of the screw. To release the universal mount from the laser receiver, turn the quick release lock in the direction of the arrow.

Preparing the calibration check:

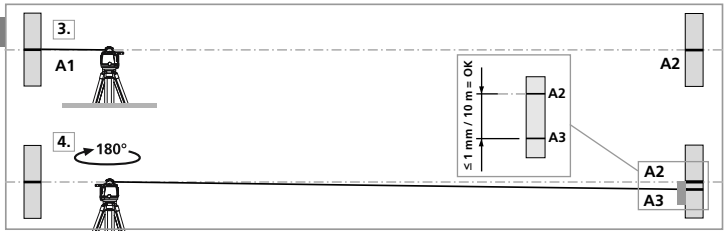
It is possible for you to check the calibration of the laser. To do this, position the device **midway** between 2 walls, which must be at least 5 metres apart. Switch the device on. The best calibration results are achieved if the device is mounted on a tripod. Switch on the device and determine the marking points with the SensoCommander. To do this, set the SensoCommander Pro to the fine adjustment range.

1. Mark point A1 on the wall. (Use spot mode.)
2. Turn the device through 180° and mark point A2. You now have a horizontal reference between points A1 and A2.



Performing the calibration check:

3. Position the device as near as possible to the wall at the height of point A1. Now adjust the device in the X axis.
4. Turn the device through 180° and mark point A3. The difference between points A2 and A3 is the tolerance for the X axis.
5. To check the Y axis, repeat steps 3 and 4.



Note: If points A2 and A3 are more than 1 mm / 10 m apart on either the X or Y axis, the device is in need of calibration. Contact your authorised dealer or else the UMAREX-LASERLINER Service Department.

Recalibration

1. To recalibrate the device, you need an additional remote control or an additional SensoCommander (except SensoCommander Classic). Position one SensoCommander at the height of reference point A2 (see the two previous pages). Then perform calibration with the other.
2. During calibration, pay attention to the alignment of the DuraMax and the displays for the X and Y axes (E, I). Always calibrate both axes. You can switch between axes with button 14 of the additional remote control or SensoCommander.
3. **Set the device to calibration mode:**
   Switch off the DuraMax, and then, with the auto/man button (J) depressed, switch on again (briefly press ON/OFF button (G). Keep the auto/man button (J) depressed until the tilt display (C) lights up. When this happens, the auto/man button (J) can be released.
4. **Correcting calibration:**
   Using button 15 of the additional remote control or SensoCommander, move the laser from its present position to the height of reference point A2.
5. **Ending calibration:**

   Cancel: By switching off the DuraMax, the entire calibration is rejected and the previous status restored.

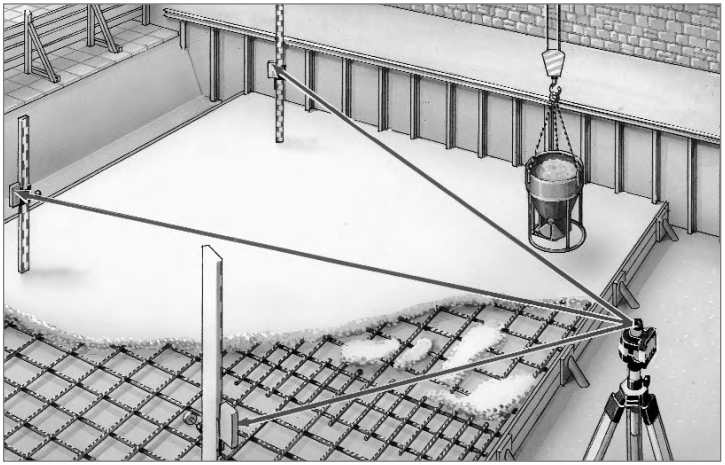
   Save: The new calibration can be saved by pressing button 17 of the additional remote control or SensoCommander.

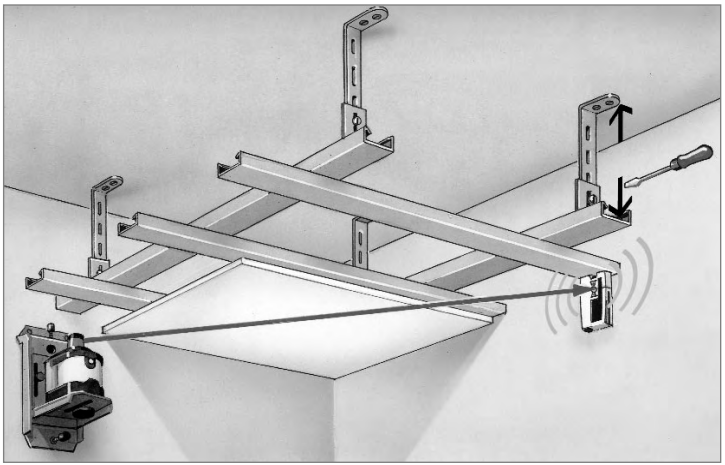
Note: Regularly check the calibration before use, after transport and after extended periods of storage. Always make sure to control all axes. See also "General safety information" on page 13.

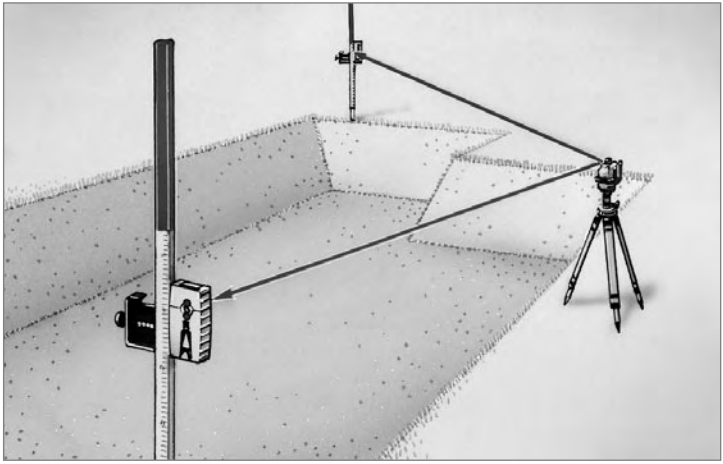
X- / Y- axis

Technical Data (Subject to technical alterations).

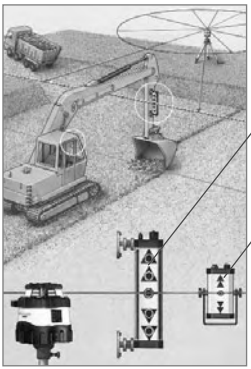
DuraMax	
Self-levelling range	± 5°
Adjustment speed	approx. 30 sec – on entire working angle
Precision	± 1 mm / 10 m
Sensor	Electronic levelling device
Horizontal levelling	Automatic
Rotation speed	500 RPM
Remote control	Infrared IR
Laser wavelength	635 nm
Laser	Class 2 (EN60825-1:2003-10)
Laser output rating	< 1 mW
Rechargeable batt. operating time	approx. 60 h
Non-rechargeable battery life	approx. 90 h, 4 x Typ D (Mono 1,5V)
Battery recharging time	approx. 14 h
Battery recharging time	-10°C ... +50°C
Weight	3 kg
SensoCommander (Optional)	
Batteries / Power supply: SC Pro 200,300 / Pro 310 / SC120	4 x type AA / 1 x 9V block / 2 x type AAA
Battery life	approx. 70 h (mixed operation)
Remote control range IR-Control RF-Control	up to 15 m up to 50 m (only RF-version)
RF-Control (only RF-version) Frequency / Specification	896 - 870 MHz (SRD Radio) / CE 0700!
Laser reception range 120 SensoCommander: Pro 310 Pro 200 Pro 300 / 300 RF	120 m 300 m 200 m 300 m
Operating temperature	-10°C ... + 50°C
Storage temperature	-10°C ... + 70°C







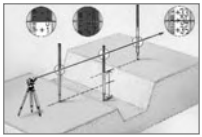
- (D) **Zubehör (optional)**
- (GB) **Accessories (optional)**
- (NL) **Accessoires (optioneel)**
- (DK) **Tilbehør (flere typer)**
- (F) **Accessoires (en option)**
- (E) **Accesorios (opcional)**
- (I) **Accessori (optional)**
- (PL) **Akcesoria (opcja)**
- (FIN) **Lisämahdollisuuksia valinnaisvarusteilla**
- (P) **Acessórios (opcional)**



Art.-Nr: 035.00.A

Art.-Nr: 035.01

Art.-Nr: 080.50



Art.-Nr: 020.70A

Art.-Nr: 080.33

Art.-Nr: 075.108 (8m)
Art.-Nr: 075.105 (5m)

Art.-Nr: 028.61

DuraMax

Laserstrahlung!
Nicht in den Strahl blicken
oder direkt mit optischen
Instrumenten betrachten.
Laser Klasse 2
EN60825-1:2003-10

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