

Scanner Basic Configuration

Part-No. 16R09-00-103-00

3D Laser Scanner LMS-Z210ii-S

Part-No. 16R09-00-005-00

- laser transmitter & receiver front end
- motorized mirror scanning mechanism
- scanning range 95° vertical
scanning range 360° horizontal
(horizontal park position programmable)
- internal power supply electronics
input voltage 12 – 28 V DC for scanner
- heating of the main electronic modules and of the front pane
- wide operating temperature range -25°C to +50°C
(on the condition of use with protective hood installed and
additional heater jacket active, otherwise -10°C to +50°C)
- connector box with industrial standard HARTING® socket
for power supply, data transfer, input of sync pulse, and
serial data interface



Detailed specifications and laser classification according to the latest datasheet *RIEGL* LMS-Z210ii-S.

Electrical Interfaces, integrated

- TCP/IP Ethernet Interface, providing smooth integration of the *RIEGL* LMS-Z210ii-S data into a 10/100/1000 MBit/sec, twisted-pair (TP) Local Area Network (LAN). The scanner acts as a server allowing remote configuration and data acquisition via a platform-independent TCP/IP Ethernet Interface.
- Serial RS232, 19.2 kBd, for scanner configuration via PC or laptop
- Internal TNC interface for feeding in of a sync pulse (1 PPS), accessible via Harting® connection

Industrial Standard HARTING® Connection Cable

Part-No. 16R09-06-022-00

Connection cable, one end fitting with the instrument's HARTING® socket, other end single cables for power supply, ethernet connection, serial interface, and TNC Sync Timer interface, length 3 m





License RiScanLib ONLINE Scan Library

Part-No. [02Z06-02-004-00](#)

The online version of the RiScanLib library assists the software developer in writing an own software application for an LMS-Zxxx scanner, i.e. to control the scanner and to acquire scan data online via TCP/IP or parallel port.

Since the RiScanLib is based on COM technology it can be used in many programming languages. It consists of separate DLL's for scanner configuration, reflector extraction, and scan data decoding.

"Visual C++" example and full documentation is included. For operating systems WINDOWS XP (recommended), WINDOWS 2000 SP2 or above.

1 License RiScanLib ONLINE Scan Library

Software Maintenance for 12 months [Part-No. 02Z06-05-034-00](#)

- Free software updates
- E-mail and telephone support

Firmware Maintenance for 12 months [Part-No. 02Z06-05-035-00](#)

- Free software updates

User Manual (in English language)

"Technical Documentation & User Instructions"
including, among other things, instructions for: Safety, Installation, Operation, etc.

Accessories

Industrial Standard HARTING® Cable

Part-No. 16R09-06-021-00

for power supply, data transfer, input of sync pulse, and serial data interface, within flexible protecting hose, length 3m, 5m, 7m or 10 m (customer specified)



Industrial Standard HARTING® Socket

Part-No. 16R09-08-005-00

for installation in the customer's control cabinet



Protective Hood Part-No. 16R09-06-014-00

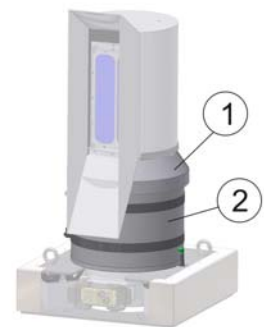
with isolation, acts as cover against dust and harsh environmental effects



Cover and Protection Ring (1)

Part-No. 16R09-08-009-00

covers the joint zone of fixed and moving scanner parts



Heater Jacket (2) Part-No. 16R09-06-013-01

incl. control electronics, isolation, and protection steel cover



Steel Adapter Plate Part-No. 16R09-08-011-00

for tilted mounting of LMS-Z210ii-SH

Note: Mounting structure and integration of shock-absorbing elements fully within customer's responsibility.

Shock-proof Mount

Part-No. 16R09-08-002-00

for vertical scanner setup of LMS-Z210ii-S, with metal cover, prepared for use with optional lifting device



Part-No. 16R09-08-010-00

for horizontal hanging scanner setup of LMS-Z210ii-SH



Wooden Transporting Box

Part-No. 16R02-11-016-00

for safe scanner transport



Lifting Device

Part-No. 16R09-06-019-00

for moving the LMS-Z210ii-S (vertical scanner setup) by crane, weight: approx. 11 kg



Hardware Options

Internal Sync Timer [Part-No. 02Z07-04-001-00](#)

for synchronized time stamping of scan data

The scanner optionally offers a time-stamping mechanism to add real-time-clock information to each laser range measurement. Taking full advantage of this feature needs e.g.

- a GPS synchronization output line, sending SYNC pulses in periods of 1 second (1 PPS), permanently connected to a scanner input line (Trigger input).
- the GPS serial RS232 port connected to a PC controlling the scanner for time synchronization purposes (by means of the *RIEGL* software tool RiSYNC) prior to scan data acquisition or for synchronization checks.

Both SYNC pulse as well as RS232 interface are standard for GPS receivers.

RiSYNC Single User License [Part-No. 02Z06-02-033-00](#)

Software tool to synchronize the scanner's time with the time gained by the Global Positioning System (GPS)

RiSYNC License Scope of Delivery:

- CD coming with software setup and online help-manual
- License Certificate including License Code related to serial number of *RIEGL* scanner in use
- User's manual in printed form
- E-Mail and telephone support for 12 months from delivery
- Software updates within 12 months from delivery

Inclination Sensors for vertical, static scanner setup position

[Part-No. 02Z07-03-002-00](#)

The optionally built-in inclination sensors serve to acquire the 3D position of the scanner in relation to the vertical Z-axis (within the X- and Y-axes).

- smoothly integrated into the *RIEGL* TLS hardware
- utilization of inclination data by RiSCAN PRO's backsighting functions or readout via RiSCAN Lib
- angular correction applicable for vertical scanner setup position
- angular tilt range ± 10 deg
- accuracy typ. ± 0.008 deg ¹⁾

¹⁾ One sigma value under *RIEGL* test conditions



Optional RIEGL RiSCAN PRO Software

License RiSCAN PRO Processing and Acquisition

for laser scanner configuration and data acquisition, global scan data registration, viewing and export of merged and filtered point clouds, as well as for advanced data processing and evaluation of already acquired RiSCAN PRO projects

For details see RiSCAN PRO price list

Services

Training

Scope of training and price to be defined on request