

Leica Nivel210 and Nivel220 sensors **Equipment list**



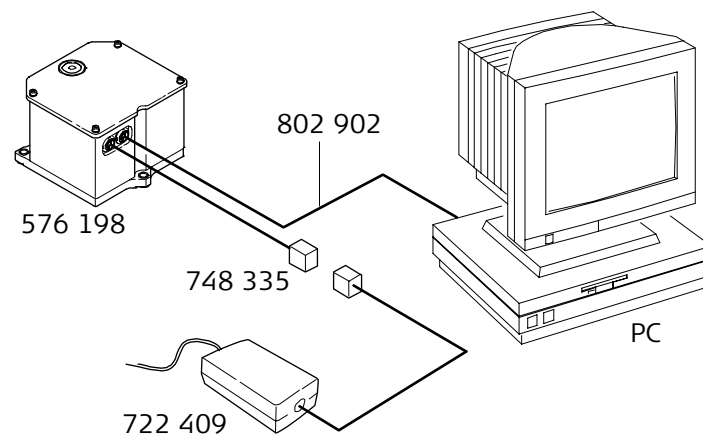
- when it has to be right

Leica
Geosystems

Single sensor setup with NIVEL210

Essential Items:

576 198	NIVEL210 RS232
748 335	Cable, Lemo 0 – power supply cable Lemo 1
802 902	Cable, Lemo 0 – PC
	PC
722 409	Power supply plus power cords

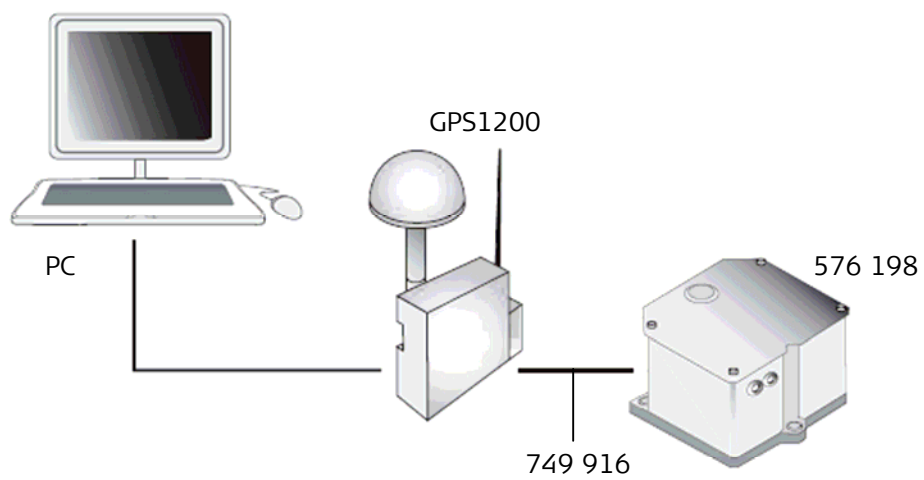


Regional and local Leica support specialists will help you selecting the optimal equipment configuration.

Single sensor setup with NIVEL210 and GPS1200

Essential Items:

576 198	NIVEL210 RS232
749 916	Cable, Lemo 0 – GPS1200 port 1,2 or 3
	GPS1200
	PC



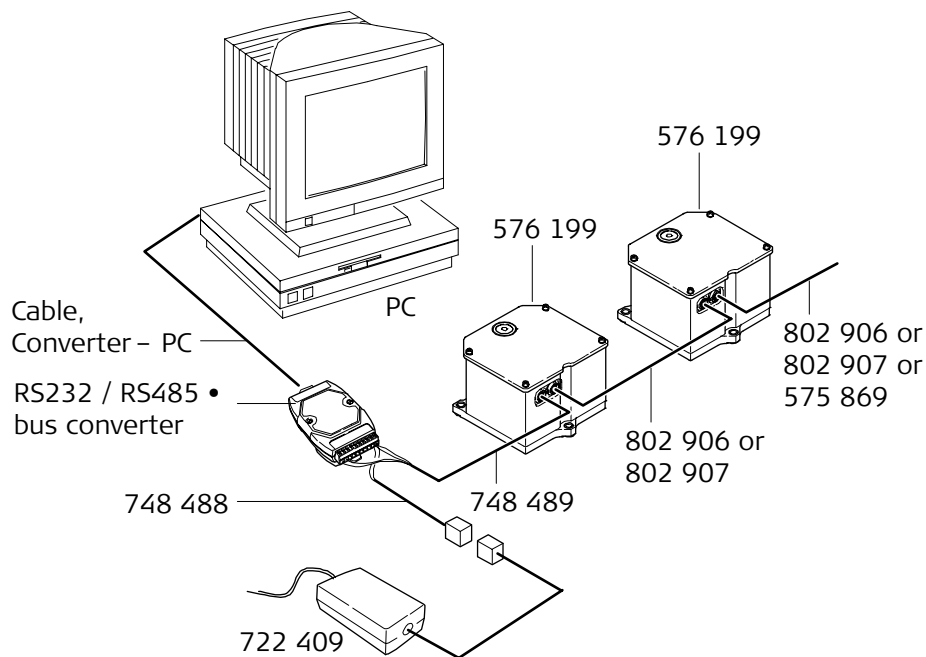
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Multiple sensor setup with NIVEL220

Essential Items:

	PC
	Cable, Converter – PC
	RS232 / RS485 bus converter
748 488	Cable, Lemo 1 - Converter
722 409	Power supply
748 489	Cable, Converter - Lemo 0
576 199	NIVEL220 RS485
802 906 or 802 907	Cable, Lemo 0 - Lemo 0
576 199	NIVEL220 RS485
802 906 or 802 907	Cable, Lemo 0 - Lemo 0 - or
575 869	Terminator

In order to run the bus system properly it has to be terminated. This has to be done via the terminator resistor.

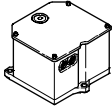


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NIVEL200 equipment

1. NIVEL200 sensors:

Select the NIVEL200 sensor



- | | |
|---------|------------------------------------|
| 576 198 | NIVEL210, inclination sensor RS232 |
| 576 199 | NIVEL220, inclination sensor RS485 |

2. Power supply equipment:

2.1 Continuous 12V Power supply

A permanent 12V power supply is needed for a NIVEL200 sensor, except for using in combination with a GPS1200.

- | | |
|---------|---|
| 722 409 | Power supply unit for GPS receiver, for indoor use only, input 100V-240VAC 50-60 HZ, output 12VDC, cable with 5 pin Lemo. Standard mains/line cable select from following list. Can be used for NIVEL200 sensors. |
|---------|---|

Select power cords for 12V power supply unit 722 409:

- | | |
|---------|---|
| 731 772 | Power Cord for Dual Bay Charger GKL24 or NIVEL200 Power supply unit, US-Version. |
| 731 773 | Power Cord for Dual Bay Charger GKL24 or NIVEL200 Power supply unit, EU-Version. |
| 734 232 | Power Cord for Dual Bay Charger GKL24 or NIVEL200 Power supply unit, UK-Version. |
| 734 233 | Power Cord for Dual Bay Charger GKL24 or NIVEL200 Power supply unit, AUS-Version. |
| 738 586 | Power Cord for Dual Bay Charger GKL24 or NIVEL200 Power supply unit, CH-Version. |

2.2 Power cables

To connect power supply to NIVEL210 sensor.

- | | |
|---------|--|
| 748 335 | 1.7 m power supply cable, connects NIVEL210 sensor to power supply unit 722 409. |
|---------|--|

To connect power supply to NIVEL220 sensor.

Refer to "5. Converter".

3. Cables:

3.1 Power supply cables

Refer to "2. Power supply equipment".

3.2 Communication cables

Essential cable, at least one should be ordered for each NIVEL210 sensor, except for using in combination with a GPS1200.

Direct serial connection:

802 902 1.0 m Connection cable. Connects NIVEL210 sensor Ports 1 and 2 to PC for data communication etc. Lemo to 9 pin RS232 serial connector.

3.3 Bus system cables

Essential cable, at least one should be ordered between each NIVEL220 sensor

802 906 5.0 m Connection cable RS485. Connects two NIVEL220 sensors Ports 1 or 2, Lemo to Lemo.

802 907 20.0 m Connection cable RS485. Connects two NIVEL220 sensors Ports 1 or 2, Lemo to Lemo.

3.4 RS232 / RS485 Converter cables

Refer to "5. Converter".

3.5 GPS1200 communication / power cable

749 916 1.8m communication and power cable, GEV209, Nivel210 to GPS1200

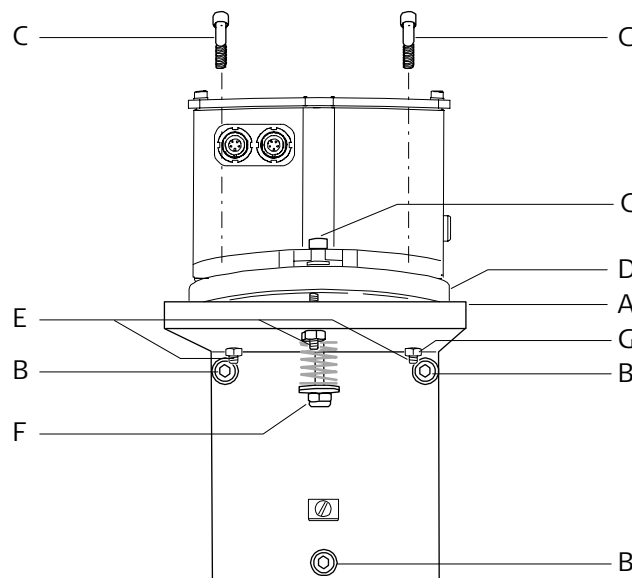
4. To mount NIVEL200 sensor:

Holder for fixed mounting of NIVEL200 sensors.

749 031 Wall Mounting Kit for NIVEL200 sensors.

Each Wall Mount kit comprises:

- 1x steel assembly (chemical nickel-plated, including 1x angle profile, 1x turning flange with screw and spring for adjustment, 3x M5 ball pressure screws, 3x M4 sensor screws, cable tie fastener with screw)
- 3x M6 brass plugs
- 3x M6 screws
- 3x M6 washer
- 2x cable tie



- A - M6 screw
- B - M6 screw and M6 washer
- C - M4 screw
- D - Flange assembly
- E - M5 ball pressure screw
- F - Centre screw
- G - Nuts

5. Converter:

5.1 RS232 / RS485 Converter

- Leica Geosystems **recommends** to use the following RS232 to RS485 converter:
I-7520
- <http://www.icpdas.com>

5.2 RS232 / RS485 Converter cables

Essential cable, at least one should be ordered for each converter

Power supply cable:

748 488 0.8 m power supply cable, connects power supply unit
722 409 to RS232 / RS485 converter, Lemo – 2 wires
to terminal strip.

Communication cable:

748 489 1.8 m communication cable, connects NIVEL220
sensor to RS232 / RS485, Lemo – 4 wires to terminal
strip.

6. Terminator:

One terminator must be ordered and installed for each structural monitoring installation with NIVEL220 sensors.

575 869 Terminator for RS485

Whether you monitor the movement of a volcanic slope, the structure of a long bridge or track the settlement of a dam; whether you measure, analyse and manage the structures of natural or man-made objects: the monitoring systems by Leica Geosystems provide you with the right solution for every application.

Our solutions provide reliable, precise data acquisition, advanced processing, sophisticated analysis and secure data transmission. Using standard interfaces, open architectures and scaleable platforms, the solutions are customizable to meet individual requirements – for permanent and temporary installations, for single sites and monitoring networks.

When it has to be right.

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