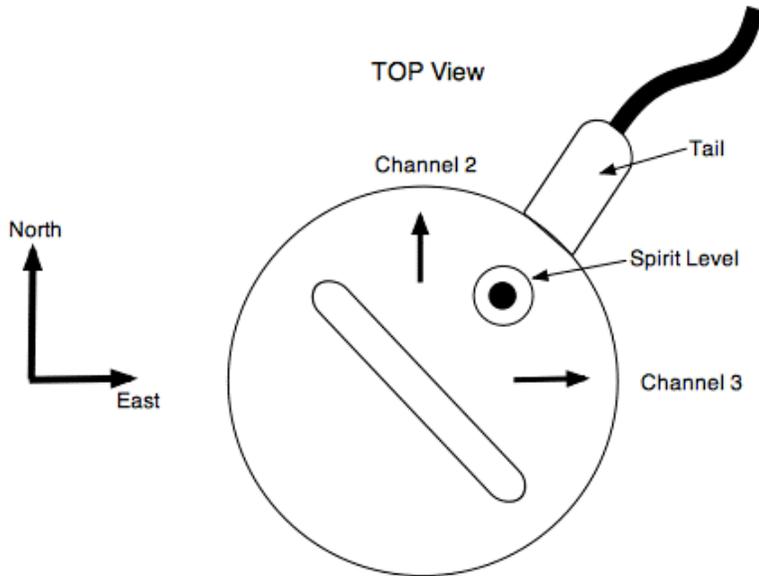


Summary Sheet for PASSCAL Sensor Sercel (Mark Products) L-22D-3D



Channel Order

(positive voltage on DAS channel means ground moved in given direction)

- 1 Down (Vertical)
- 2 North
- 3 East

Sensitivity

88 Volts/Meter/second

Physical Characteristics:

Size: cylinder 18 cm diameter, 14 cm height

Weight: 4.5 kg

Shipping Weight: 29.5 kg (for 6)

Shipping Box Size: 40.6x50.8x30.5 cm (L-box)

Power Consumption: None, passive sensor

Frequency Response:

Natural Freq. 2 Hz

Damping 0.707 critical

Zeros two at zero

Poles $-8.89 + 8.89i$

$-8.89 - 8.89i$

Installation Tips: (See also L-22 Short Period Sensor Installation, these are TIPS not complete instructions)

1. Determine direction of orientation (e.g. North). The sensor has magnets – keep compass away.
2. Dig a hole at least 10 – 18 inches deep.
3. Note the serial number of the sensor.
4. For a short-term experiment (less than 2 months, and not very wet environment) direct burial of the L-22 is okay. For a long-term experiment (more than 2 months) or in a very wet environment the sensor should be protected from flooding by burying it in a plastic bag. Place the instrument in the bag with the top of the bag open in your pit.
5. Align sensor to azimuth. The arrows on the L-22 point North and East.
6. Adjust spirit level until bubble is in center. Placing the sensor on sand in the hole, or plaster of paris on bedrock, makes this easier. Sensor leveling feet are not normally used by PASSCAL with this seismometer.
7. If you are using a bag pull the bag up around the sensor. Pack dirt or sand along the outside of the bag all the way up the sensor and gently compact to keep the sensor level. Check the orientation and bubble level one last time, then close the bag. Evacuate any air remaining in the bag. Secure with electrical/waterproof tape around the cable just beyond the connection into the sensor and seal all open edges of the bag.
8. Carefully fill in the rest of the dirt around and over the sensor. Tamp down the dirt around the sensor as you fill in the hole.
9. Mound more dirt over the sensor pit to help drainage away from the sensor. Dig a small trench from the sensor to the digitizer for the sensor cable. Beware! Do not cut the sensor cable with the shovel. Carefully bury the sensor cable to guard against wind noise and animals.
10. Plug sensor cable into jumper cable provided and then plug into the DAS.
11. Check the Monitor/Quick View on the DAS for proper sensor operation (“stomp test”).

The sensor has no mass locking arrangement, carry it with 2 hands by the handle and the tail, tipped at ~45deg with the Channel 2 arrow pointing up.

Cabling Notes:

Sensor cable is ~2.5 meters long (unshielded). It is attached to the sensor on one end (the tail) and has a U77/U connector on the other. PASSCAL provides a separate jumper cable to either the Ref Tek RT130 DAS or the Quanterra Q330 DAS, which may already be installed on the sensor when shipped.