



# ENCARDIO RITE



## MEASURING ANCHOR

### MODEL EMA-11

#### INTRODUCTION

The Encardio-rite model EMA-11 measuring anchor, also known as rock bolt extensometer, is a combination of rock bolt and extensometer and is used to determine the load exerted on rock bolts. It is a precision instrument designed to help civil engineers and geologists to evaluate anchor system forces and their distribution within the bolt and hence its safety and effectiveness.

The measurement with model EMA-11 measuring anchor is economical, very reliable and is preferred at locations where access to the mouth of the borehole is available.



#### FEATURES

- ◆ Easy to handle and install.
- ◆ Reliable and robust.
- ◆ Replaces a system anchor, thus no extra bore hole is required.
- ◆ High accuracy.

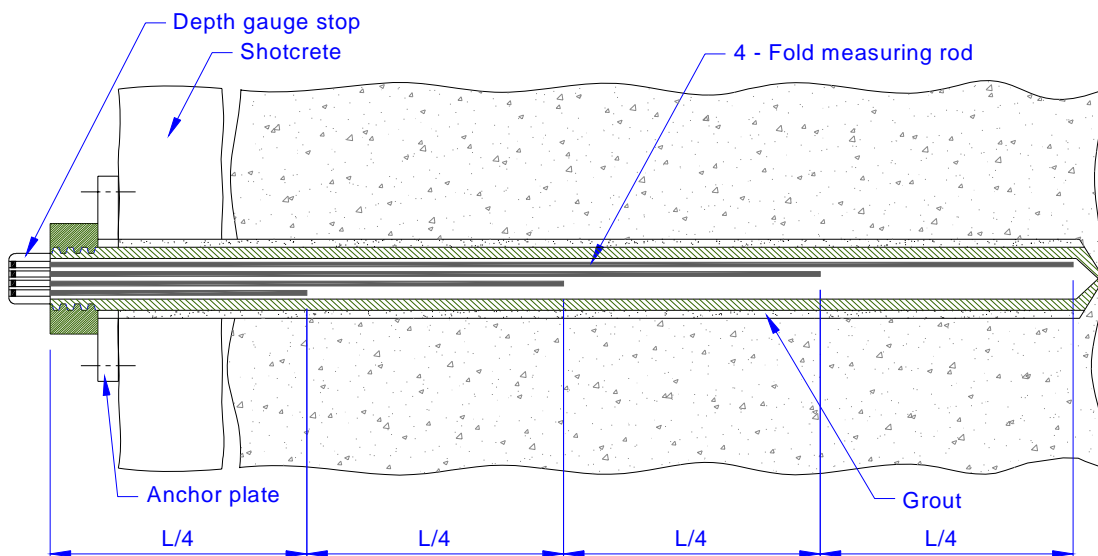
#### APPLICATIONS

- ◆ To determine the effectiveness of anchoring system in an underground cavity or tunnel

#### MEASUREMENT METHOD

The principle function of measuring anchor is to determine the depth where force is exerted on the bolt due to loosening effects of rock.

Model EMA-11 measuring anchor consists of a steel hollow anchor/rock bolt with a precise 4-point extensometer integrated in it. The measuring bars inside the hollow bolt have anchor points at each quarter of the total length so that the extension of the rock bolt and the corresponding forces can be determined.



Model EMA-11 measuring anchor has a breaking force of upto 250 kN. The length offered ranges from 3 m to 6 m.

The change in length due to compression or extension between individual measuring bars are taken by measuring the depth of the near end of the respective measuring bars from a reference plate provided at the mouth of the borehole. A digital caliper/micrometer depth gage with a resolution of 0.01 mm is used to take the readings.

An electrical head assembly consisting of four potentiometric sensors is optionally available for electrical output.

## SPECIFICATIONS

Length	3, 4, 6 m
Fixed points	4
Bore hole diameter	51 mm
Loading capacity	250 kN

### Electrical measurement

Range	± 5 mm
Resolution	0.01 mm
Linearity	0.2% fs
Enclosure	IP 65

*Specifications are subject to change without notice.*

## ENCARDIO-RITE ELECTRONICS PVT. LTD.

A-7 Industrial Estate, Talkatora Road, Lucknow, UP 226011, India

Tel +91 (522) 2661044, 2661040 Fax +91 (522) 2661043 E-mail [sales@encardio.com](mailto:sales@encardio.com)

Visit us at: [www.encardio.com](http://www.encardio.com)

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