

# 3DM-01LD 3-Dimensional Manipulator

## Product Overview

The TDK 3DM-01-LD is a three-dimensional manipulator used for remote positioning of antennas or equipment under test (EUT) in EMC test environments. The 3DM-01LD is used with a turntable to allow a complete three-dimensional pattern to be constructed. The turntable provides information for one axis and the 3DM-01LD provides accurate elevation rotation. This combination permits rotation of a test object in polar coordinates for three-dimension characterization of the test object. The test object can be rotated in  $\theta$  and  $\phi$  independently, allowing positioning of the object in any particular plane about its axis. The 3DM-01LD is supports up to 1 kg.

**Remote Control** The 3DM-01LD can be remotely controlled by TDK's SI-300 system interface unit. Remote control of the 3DM-01LD is achieved by use of fiber optic links, eliminating a potential interference source and distance limitations.

**Custom Dimensions** The dimensions of the manipulator are designed to your specifications. Dimensions are limited only by the maximum length of cable that is used.

## Features

- Independent vertical and horizontal positioning control
- Compatible with the TDK SI-300 system interface
- Fiber optic interface
- Shielded remote modules for use in high field environments
- Custom dimensions to meet your requirements



**The TDK 3DM-01-LD 3-D Manipulator is designed for remote three-dimensional positioning of test objects in EMC test environments.**

## Applications

- Remote positioning of test objects
- Antenna pattern measurements, antenna characterization

# 3DM-01LD 3-Dimensional Manipulator

## Physical Specifications

Dimensions:	79 cm W x 51 cm D x 157 cm H (31" x 20" x 62"); custom heights available
3DM Weight:	22 kg (49 lbs.)
Maximum Load:	1 kg
Construction:	Non-conductive commercial grade fiberglass and ABS plastic

## Mechanical Specifications

Positioning Accuracy:	$\pm 2^\circ$ standard with $\pm 0.5^\circ$ accuracy
Rotation Angle:	360 deg. continuous
Rotating Speed:	0.5 rev/min
Drive:	12 V/AC motor
Drive Controller:	Shielded controller unit
Interface:	Fiber optic serial communication
Remote Control Unit:	SI-300

## Motor Box Specifications

Houses the motor to drive the belt and the circuitry to convert optical signals to analog signals.

Power:	48 VDC
Control Cables:	Fiber optic control
Connectors:	Filter connectors
Dimensions:	11.25" x 3" x 4" (28.5 cm W x 7.6 cm D x 10 cm H)
Construction:	Painted steel

## Ordering Information

Product:	3-Dimensional Manipulator
Model Number:	3DM-01LD
Warranty:	1 year limited

**To place an order or to learn more about the TDK products that best meet your needs, contact your TDK sales representative:**

### TDK RF Solutions Inc.

1101 Cypress Creek Rd.  
Cedar Park, Texas 78613 USA  
Phone: 1-512-258-9478  
Fax: 1-512-258-0740  
Email: [sales@tdkrf.com](mailto:sales@tdkrf.com)  
World Wide Web: [www.tdkrfsolutions.tdk.com](http://www.tdkrfsolutions.tdk.com)

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