

# 3DM-01 3-Dimensional Manipulator

## Product Overview

TDK RF Solutions' 3DM-01 is a three-dimensional manipulator used for remote positioning of antennas or equipment under test (EUT) in EMC test environments. The 3DM-01 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-01 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.

**Remote Control** The 3DM-01 can be remotely controlled by TDK RF Solutions' SI-300 system interface unit. Remote control of the 3DM-01 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. The 3DM-01 is available in a standard duty model that supports up to 10 kg or a light duty model that supports up to 1 kg.

## 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



**TDK RF Solutions' 3DM-01 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-01 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:	Light Duty – 1 kg Standard – 10 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, ETI-350

## 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-01
Warranty:	1 year limited

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

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