

PRODUCT DATA

Turntable System — Type 9640

Turntable System Type 9640 consists of Controllable Turntable Type 5960, Turntable Controller Type 5997 and Remote Control WB 1254. The Turntable System is designed to rotate a test object, such as a loudspeaker, microphone, or hydrophone, for measurement of directional response. Used in combination with a personal computer, or an analyzer such as Audio Analyzer Type 2012, Type 9640 becomes part of a system capable of automatically recording the directional characteristics of many different test objects.

USES

- Controlling test-object (e.g., loudspeaker, microphone, hydrophone) orientation during:
 - Directional response measurements
 - Sound power measurements
 - Directional noise radiation measurements

FEATURES

- Rotation of up to 100 kg load
- Continuous, relative or absolute rotation
- Controlled from turntable controller, remote control unit, analyzer or PC over IEEE-488 interface
- Adjustable turntable speed and acceleration
- Connection of test object power supply and signal through slip ring
- Front panel read-out of mode and current test-object position

Applications

Type 9640 can be used to measure directivity by means of frequency-response test methods. The test object can be accurately rotated using the Turntable System so that it is located at the desired angle to a measurement microphone. The response of the test object in any direction can then be obtained using Audio Analyzer Type 2012 or PULSE Type 3560 C or D.

Controlling the Turntable

Turntable Controller Type 5997 offers three modes of operation (Turn_Rel, Turn_Abs and Cont.) and three commands Set 0°, Acc. and Max_360. Turn_Rel and Turn_Abs allow a relative or absolute turn (specified in degrees) to be made, respectively. When a polar plot of a single frequency is required, the CONT mode is to be selected as it rotates the turntable continuously at a constant speed.

As test objects have different inertia, the acceleration and deceleration in the start and stop phases can be controlled by using the command ACC. The acceleration of the turntable can be adjusted to accommodate different test object masses, up to 100 kg.



The Set 0° command is used to set the zero degree mark that will be the reference for a given test. In order to prevent cable wrapping, the MAX_360 command limits the turns between 0° and 360°. Alternatively the cable can be fed through the slip ring on the turntable, allowing an unlimited number of rotation


Remote Control WB 1254 offers 5 commands for controlling Turntable Type 5960 via a 15 m cable. The “<” and “>” keys are used to turn the test object clockwise and anticlockwise, respectively. When the test object has been positioned at the starting point, the zero degree mark can be set by pressing Set 0°. The mode of operation can be chosen at the front panel of Turntable Controller Type 5997. Controllable Turntable Type 5960 can then be started or stopped by using the Start and Stop keys.

Connections to the Test Object

Two types of connection can be made from the base plate of the turntable, through slip rings, to the test object on the table plate. One supplies power to the test object while the other, a screened coaxial connection, carries signals to and from the test object. The connections are heavily screened from each other, making spurious signals negligible under normal conditions.

9640

Compliance with Standards:

	CE-mark indicates compliance with: EMC Directive and Low Voltage Directive.
Safety	IEC 348: Safety requirements for electronic measuring apparatus. Safety Class II
EMC Emission	EN 50081-1: Generic emission standard. Part 1: Residential, commercial and light industry. CISPR 22: Limits and methods of radio disturbance characteristics of information technology equipment. Class B Limits. FCC Class B limits.
EMC Immunity	EN 50082-1: Generic immunity standard. Part 1: Residential, commercial and light industry. Note: The above is guaranteed using accessories listed in this Product Data sheet only.
Temperature	IEC 68-2-1 & IEC 68-2-2: Environmental Testing. Cold and Dry Heat. Operating Temperature: 5°C to 40°C (41°F to 104°F) Storage Temperature: -25°C to +70°C (-13°F to +158°F)
Humidity	0 to 90% RH (5°C to 40°C), non-condensing at 40°C
Enclosure	IEC 529: IP20

Specifications – Turntable System Type 9640

Controllable Turntable Type 5960

Load: Max 100 kg (220 lb.) on centre, 30 kg (66 lb.) on periphery, when table plate is lined up perfectly in horizontal plane. Same loads apply with turntable hung upside down
Thread of Mounting Holes: UNF 10 -32 and M5
Resolution: 1°
Speed of Rotation:
Cont. Mode: 22.7 to 720 seconds/revolution
Turn-abs and Turn-rel Modes: 10 seconds/revolution (max.)
Cable Length: 15 m (48.5 ft)
Table Plate Diameter: 354 mm (13.9")
Weight: 12 kg (26 lb.)

Turntable Controller Type 5997

OPERATING MODES

Turn-rel: Sets the relative turn in degrees
Turn-abs: Sets the absolute turn in degrees
Cont.: Sets the continuous speed in seconds/revolution

COMMANDS

Set 0 Deg: Sets the reference angle
Acc.: Sets the acceleration
Max-360 On/Off: Turns max. 360°. On or off. On prevents cable wrapping

IEEE INTERFACE

Conforms with IEEE-488.1 and compatible with IEC 625-1. Provides remote control of all front-panel functions

FUNCTIONS IMPLEMENTED

SH1 – Source Handshake
 AH1 – Acceptor Handshake
 L3 – Listener
 SR1 – Service Request
 DC1 – Device Clear

RL1 – Remote/Local

COMMAND SET

Standard engineering English reflecting the front panel and screen names
Device Address: Set to 10 (decimal) on delivery
Power Supply:
Voltage: 100, 115, 127, 200, 220 and 240 V AC ±5%
Power Rating: approx. 15 VA

GENERAL:

Cabinet: Supplied as model A (metal cabinet)
Dimensions:
Height: 143 mm (5.6")
Width: 188 mm (7.4")
Depth: 235 mm (9.3")
Weight: approximately 3 kg (6.6 lb.)

Ordering Information

ACCESSORIES INCLUDED

Type 9640 Turntable System
 Includes the following accessories:
 Type 5960 Controllable Turntable
 Type 5997 Turntable Controller
 WB 1254 Remote Control
 AO 0422 Turntable Cable
 AN 0019 Power Cable (country specific)
 AN 0020 Power Cable
 2×JP 0101 Screened Plug
 JP 0313 Plug
 QA 0105 Chuck Key
 3×VF 0042 316 mA Fuse
 3×VF 0051 160 mA Fuse
 WT 9261 Autosequence disk for Type 2012

OPTIONAL ACCESSORIES

AO 0422 Extra Turntable Cable
 AO 0265 Interface Cable (2 m), IEEE-488

Brüel & Kjær reserves the right to change specifications and accessories without notice