

Conducted Disturbance Power Test System



This system is specifically designed for conducted disturbance power testing in EMC applications, classified as a positioning system for measurement purposes. The standard configuration includes:

1 × GEDPR-6000 Conducted Disturbance Power Test Rail (hereafter referred to as "Test Rail")

1 × GEC-3 Controller

The test rail and controller communicate via fiber optic system to achieve precise motion control of the absorbing clamp during testing.

GEDPR-6000 Cable Rail

The GEDPR-6000 Conducted Disturbance Power Test Rail is a single-track, fully automated test equipment. Its main structure is made of plastic, fiberglass and non-metallic Kevlar belts, with the drive system installed in a shielded enclosure that effectively prevents electromagnetic interference. The interference suppression can reach levels at least 20dB below CISPR 22 limits. The rail length can be customized, with the relationship between effective working length (Lw) and total rail length (Lf) being $Lw + 1m = Lf$. During testing, the cable under test is fixed at both ends of the rail and passes through the absorbing clamp, which is mounted on a carriage driven by the belt system. Measurement results are transmitted to the receiver through signal cables from the absorbing clamp. (As shown in the figure below)



Figure 1 Main Interface of Human-Machine Interaction (The motion drive control of the GEDPR-6000 Test Rail is connected to the GEC-3 Controller via fiber optics.)

GEC-3 Controller

The GEC-3 Controller is an integrated control device incorporating PLC, touchscreen, and fiber optic/LAN communication functions, capable of controlling all GE-branded electric positioning equipment for EMC applications. The GEC-3 Controller features RJ45, USB and RS232 interfaces, supports TCP/IP communication protocol for easy computer connectivity, and runs on an Android-based touchscreen that supports multilingual operation environments and customizable human-machine interfaces.



Specifications

A.SPECIFICS: GEDPR-6000 CABLE RAIL FOR DISTURBANCE POWER TEST

Length of Scan	5.1m
Total Rail Length	6.0 m
Dimensions	L6.2m x W 0.3 m x W 1.0 m
Height of Rail Upper Surface	0.8 m
Max. Load	15kg
Material	PVC, fiberglass
Base Dimensions (L×W)	0.3 mx0.3 m (Base)
Scan Speed	1.0 cm/s ~ 50 cm/s
Scan Accuracy	≤+/- 0.5 cm
Belt	Kevlar reinforced
Power Supply	AC 220 V 50Hz
Interference	10dB lower than limit of CISPR 22
Control and Communication	Polymer optical fibers

B.SPECIFICS: GEC-3 CONTROLLER

Main interface and protocol	RJ45, TCP/IP
Types of interface	2 RJ45, 2 USB, 1 RS232, 2 SC optical fiber
Dimensions	215mm×307 mm×160 mm
Size of touch screen	5.7"
Power supply	AC 220 V 50Hz
Power	20W
Software compatibility	EM E3, Rohde & Schwarz Elektas