

TOSHIBA

Leading Innovation >>>

Protection and Control
for MV Systems

GRE-Series

GRE-Series Key Features

- Multiple protection relay elements
- Local/remote CB control
- Automatic supervision and recording functions
- Combined 1A/5A CT rating
- Wide range of auxiliary input supply voltage
- DC/AC auxiliary supply
- Configurable binary inputs and outputs
- Configurable LEDs (assignable function and color)
- Trip circuit supervision using two binary inputs for high integrity
- USB port for local PC connection
- Remote communication
(Modbus RTU, DNP3, IEC 60870-5-103 or IEC 61850)

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GRE-Series Multi-Function Protection and Control



The GRE-series of multi-function protection devices have been developed especially for MV network applications. Drawing on the proven technologies of Toshiba protection and control products, developed over more than 100 years these compact, cost-effective devices provide a comprehensive range of protection and control functions.

GRE110 to GRE140 Feeder and motor protection and control

Features

- Feeder and motor protection in medium voltage networks
- Backup protection for generators, transformers and feeders in high voltage networks
- Feeder manager device with CB control function, 43R/L switch and comprehensive support functions
- Compact and cost-effective design
- Elementary, environmentally-friendly, easy to use and featuring enhanced product concepts

GRE110

Over-current and earth fault protection and control for MV feeders.
Three-phase current and optional SEF inputs.

GRE120

Motor protection and control.
Three-phase current and optional SEF inputs.

GRE130

Voltage and frequency protection and control
Three-phase voltages inputs.

GRE140

Directional overcurrent and earthfault protection and control for MV feeders.
Three-phase current and three-phase voltage inputs with optional SEF input.



GRE-Series

GRE160 and GRE170 Transformer and machine protection and control

Features

- Protection for two-winding transformers (GRE160) and medium and small capacity generators and motors (GRE170)
- Feeder manager device with CB control function, 43R/L switch and comprehensive support functions
- Comprehensive protection and control functions with optional analog and sensor inputs (RTD input for GRE170 only)

GRE160

Transformer protection and control for two-winding transformers.
Current differential input and optional residual current input for restricted earth fault detection. Optional voltage input.

GRE170

Machine protection and control for small and medium size generators and motors.
Optional current differential function, sensitive earth fault input, voltage input and RTD input for temperature measurement.

