

- Multifunctional HMI
- Standard LCD and touch type screens together with mimic option
 - 24 configurable tri-state LEDs selectable red/green/yellow provided at the local human-machine interface
 - 7 programmable function keys and direct control buttons for open/close (O/I) and control authority (43R/L)
 - Standard local USB port and three signal monitoring terminals for testing purposes
 - Multi-language display

- Metering and Recording
- Measurement of V, I, P, Q, f and THM%
 - Alarms and events (each with 1,024) can be recorded with 1ms resolution.
 - 8 most recent time-tagged fault records including pre-fault and fault values for currents and voltages in text format
 - Disturbance records provided using sampled data from all analog inputs and binary signals selected, recorded in COMTRADE format

- Extensive Hardware Options and Flexible Adaptation
- Comprehensive range of hardware components
 - Main Processing/computing board with enhanced processor
 - Wide variety of binary input & output combinations
 - Plug-in communication module
 - Flexible hardware combinations to meet specific applications

- Function-wise Implementation
- Library of function blocks enables wide application for protection, control, measurement and other functions
 - Protection elements and schemes
 - Control schemes
 - Metering and recording functions
 - Individual function blocks work independently
 - Easy IED customisation to add/delete particular function blocks
 - Flexible implementation of new functions and modification of specific functions

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Leading Innovation >>>

GR-200 Series

GRZ 200

Distance Protection IED

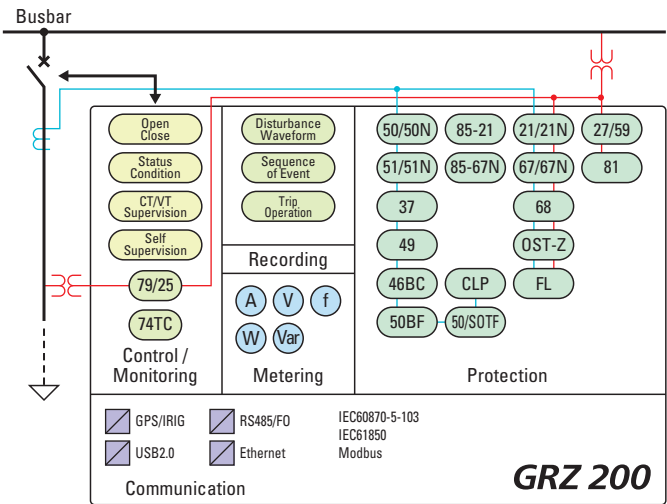


GR-200 Series — GRZ 200



Distance Protection IED

The GRZ200 distance protection is implemented on Toshiba’s next generation GR-200 series IED platform and has been designed to provide distance protection and control applications for feeders in solidly earthed networks. This powerful and user-friendly IED will provide you with the flexibility to meet your application and engineering requirements in addition to offering high performance, the highest quality and operational peace of mind.



- Features
- EHV/HV/MV applications including parallel lines and underground cables
 - Backup protection for generators, transformers and reactors
 - Advanced fault location function
 - Bay control and monitoring functions
 - Communications
 - Within a substation or to a remote control centre, IEC 61850, Modbus® RTU protocol and IEC 60870-5-103.

Function/ device number	Description	Single breaker scheme	One and a half breaker scheme
21(4Z)	Distance protection (for phase fault) with 4zone	○	○
21(6Z)	Distance protection (for phase fault) with 6zone	●	●
21N(4Z)	Distance protection (for earth fault) with 4zone	○	○
21N(6Z)	Distance protection (for earth fault) with 6zone	●	●
85-21	Command protection by distance schemes	●	●
85-50N/ 51N/67N	Command protection by EF and DEF schemes	●	●
50/67,51/67	Non-directional / directional Phase over-current protection	●	●
50N/67N, 51N/67N	Non-directional / directional Earth fault over-current protection	●	●
46/67	Non-Directional / directional Negative sequence phase over-current protection	●	●
37	Phase under-current protection	○	○
49	Thermal overload protection	●	●
46BC	Broken conductor protection	●	●
50BF	Circuit breaker failure protection	●	●
50SOTF	Switch on to fault protection	●	●
50STUB	Stub protection	-	●
59	Phase over-voltage protection	●	●

Function/ device number	Description	Single breaker scheme	One and a half breaker scheme
59P	Phase-phase over-voltage protection	○	○
59N	Earth fault over-voltage protection	○	○
59	Positive sequence phase over-voltage protection	○	○
47	Negative sequence phase over-voltage protection	○	○
27	Phase under-voltage protection	●	●
27P	Phase-phase under-voltage protection	○	○
27	Positive sequence phase under-voltage protection	○	○
81	Frequency protection	●	●
68	Power swing block	●	●
56Z	Out of step tripping by distance	●	●
ICD	Inrush current detection function	○	○
CLP	Cold load protection function	○	○
FS	Fail-safe function	○	○
VTF	VTF detection function	●	●
CTF	CTF detection function	●	●
21FL	Fault locator	●	●
79	Autoreclosing function	●	●
25	Voltage check for autoreclosing	●	●
Control	Control	○	○

●:Standard ○:Available(by integration) -: Not available