

T4-PROTECH SERIES

T450A OC & EF Protection Relay

Deploying T450A is just a safe & reliable guarantee
Basic function for a high level of protection in every electrical
power network

Protection Solutions



TAIK ELECTRIC CO., LTD.

T4-PROTECH Series, Protection Relay

T450A incorporates the essentials for your expectations of a perfect protection relay deployed in power distribution applications:



Simplicity



Dependability



Safety



Precision



Pricing
Competitiveness



Robustness

Diversities

- Multiple curve compliance standards (IEC, ANSI, IAC, 1.3, DTL)
- High brightness 16 x 2 characters LCD display
- Compact size and short depth for easy installation and space-saving solution
- Measurements to be indicated via selecting either percentage or ampere
- 20 fault records with date/time stamping
- Running hour accumulation while the relay startup
- 11 status LED indicators/6 push buttons
- 3 outputs (NO relay contacts) available for configuring as latching or pulse mode
- Easy setup for fast startup on T450A



Instantaneous
phase
overcurrent



Time-delay
phase
overcurrent



Instantaneous
earth fault
(calculated)



Instantaneous
sensitive
earth fault
(measured)



Time-delay
earth fault
(calculated)



Time-delay
sensitive
earth fault
(measured)



Lockout

Applications



MV/LV power networks



Backup in MV power systems



Buildings in MV power systems



Industrial MV power distribution networks



Public distribution networks and substations

Standards Compliance

Electromagnetic compatibility (EMC)	Directive 2014/30/EU
Product safety requirement	IEC 60255-27
Electrostatic discharge	IEC 61000-4-2 (IEC 60255-26)
Electromagnetic field immunity	IEC 61000-4-3 (IEC 60255-26)
Electrical fast transient/burst immunity	IEC 61000-4-4 (IEC 60255-26)
Surge immunity	IEC 61000-4-5 (IEC 60255-26)
Immunity to conducted disturbances	IEC 61000-4-6 (IEC 60255-26)
Power frequency magnetic field immunity	IEC 61000-4-8 (IEC 60255-26)
Short interruptions and voltage	IEC 61000-4-11 (IEC 60255-26)
Radiated emission	CISPR 11/22 (IEC 60255-26)

Conducted emission	CISPR 22 (IEC 60255-26)
Vibration	IEC 60255-21-1
Shock and bump	IEC 60255-21-2
Cyclic temperature with humidity	IEC 60068-2-30 (IEC 60255-1)
Certificate	CE

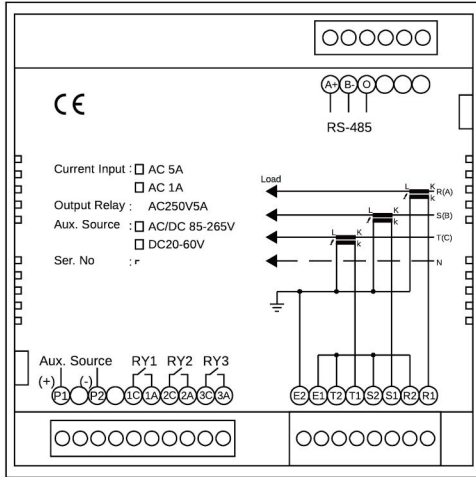


T450A

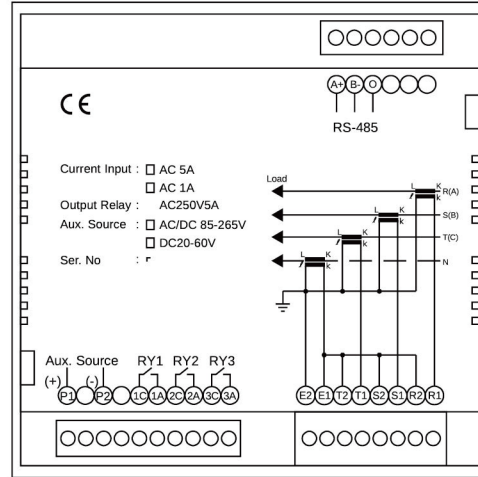
ANSI Protection functions	50 Instantaneous phase overcurrent, 51 Time-delay phase overcurrent 50N/50G Instantaneous earth fault, 51N/51G Time-delay earth fault, 86 Lockout
Curve compliance standards	ANSI, IAC, IEC, 1.3, DTL
Operating curve types (IEC 60255-3)	IEC – Normally inverse, Very inverse, Extremely inverse, Long time inverse ANSI – Normally inverse, Very inverse, Extremely inverse, Moderately inverse IAC – Normally inverse, Very inverse, Extremely inverse, Short time inverse
50/51 (CO) Setting range of pick-up current	
51	10 ~ 250% (1% step)
50 (High-Set)	20 ~ 2500% (1% step)
50 (High-Set) with selected definite time	20 ~ 200ms
50G/N, 51G/N (LCO) Setting range of pick-up current	
51G/N	1 ~ 200% (1% step)
50G/N (High-Set)	5 ~ 1250% (1% step)
50G/N (High-Set) with selected definite time	20 ~ 200ms
Input current	5A or 1 A (option), continuously 20A
Sampling rate	True RMS, 64 samples per cycle
Time multiplier setting	0.03 ~ 2.00 in step of 0.01 (IEC, 1.3) / 0.3 ~ 20.0 in step of 0.1 (IAC, ANSI)
Definite Time Lag (DTL) setting	0.03 ~ 64.00 in step of 0.01 sec
Pick-up current level	100 ~ 115% of setting current
Reset time	<100ms
Reset ratio	>98%
Operation accuracy	±3% of the set current
Operation time accuracy	the set time delay, ±20ms
Relay contacts	3 N.O. contacts, AC 250V 5A, DC 24V 5A (Configurable for latching or pulse mode)
Auxiliary power supply	AC/DC 85 ~ 265V 50/60Hz, DC 20-60V (option)
Power consumption	AC ≤ 8VA, DC ≤ 5VA
Backlit LCD display	High brightness LCD 16 x 2 characters
LED indicators	Indication designated individually for trip, program, check, record, I>, I>>, Io>, Io>>, RY1, RY2, RY3
Communication interface	MODBUS RTU, RS 485
Operating temperature	0 ~ 60 °C
Storage temperature	-10 ~ 70 °C
Max. relative humidity	95%
IP enclosure	IP 52 (front plate), IP 30 (rear)
Flammability of enclosures	UL 94 V-0
Tripping event records	20 tripping event records with date/time stamping

Connections

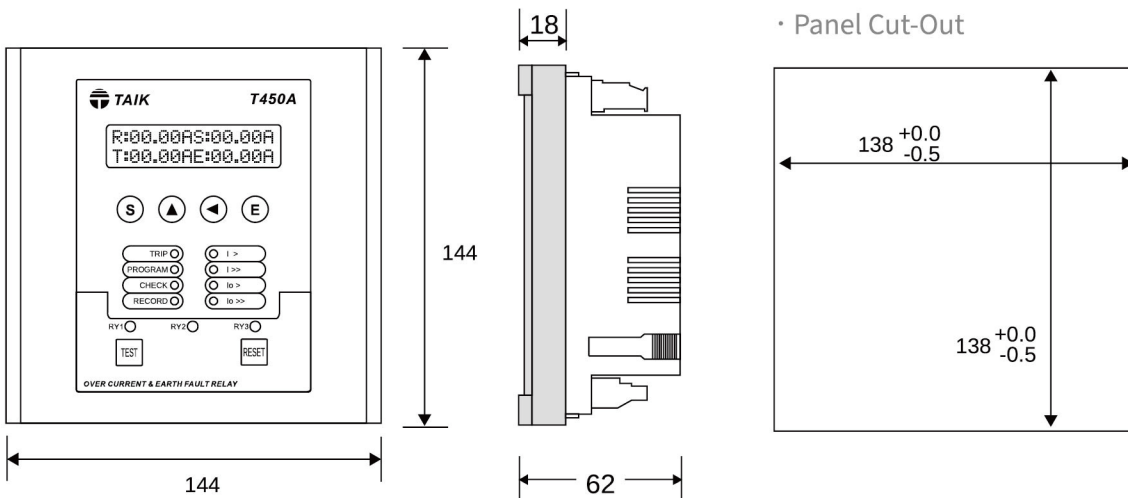
• 3 Phase 3 Wire



• 3 Phase 4 Wire



Dimensions (Unit: mm)



Product Code

Code No.

T4-PROTECH Series, Protection Relay

T450A

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