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Total Reliability in Power System Protection, Monitoring & Control

ISO 9001-2015

NUMERICAL OVER CURRENT AND EARTH FAULT RELAY MODEL : PNA442AR

FEATURES :

- » Programmable 1A/5A rated CT input
- » Three phase Over Current Low-Set(50) and Earth Fault Protection Low-Set (50N)
- » Draw out type with self CT shorting
- » Three phase Instantaneous Over Current High-Set protection (51)
- » Instantaneous Earth Fault High-Set (51N)
- » Protection against Negative Phase Sequence(46), Broken Conductor(46BC), Trip Circuit Supervision(74TC), Harmonic Restraint, Circuit Breaker Failure(50BF)
- » Relay Latching
- » Programmable matrix for DI(Digital Input) and DO(Digital Output)
- » Communication-local (USB) and Remote(RS 485)
- » Programmable Auto reclosure
- » Fault & Event recording with Date & Time
- » Protection Blocking



DESIGN FEATURES:

- » Microcontroller based design
- » Measurement of True RMS current
- » 4 Programmable Digital Outputs
- » 6 Programmable Digital Inputs
- » 16x2 LCD display with back-lit
- » 7 LED's to indicate Pick-up and trip on fault

SPECIFICATIONS :

Parameters	Model: PNA442AR
Rated Current	1A/5A(site selectable)
Auxiliary Voltage	85-275V AC/DC 21-110V DC
Password Protection	Enable/Disable
Primary CT ratio	5-5000(for 5A)/1-5000(for 1A)
Line frequency	50/60Hz(site selectable)
Phase Low-Set PS	0.05-2.50 in steps of 0.01 (for 1A/5A)
Phase Curves	8 Curves: Normal Inverse, Extremely Inverse, Restricted Inverse, Very Inverse, 1.3sec Curve, Long Time Delay, Definite Time, 0.6sec Curve
Phase TMS	0.10 - 1.60 in steps of 0.01
Phase Definite Time	1-160sec in steps of 0.01
Earth Low-Set	0.05-0.80 in steps of 0.01
Earth Curves	8 Curves: Normal Inverse, Extremely Inverse, Restricted Inverse, Very Inverse, 1.3sec Curve, Long Time Delay, Definite Time, 0.6sec Curve
Earth TMS	0.10 - 1.60 in steps of 0.01
Earth Definite Time	1-160sec in steps of 0.01
Earth High-Set Option	Enable/Disable
Earth High-Set PS	0.50 to 16.00 in steps of 0.10
Earth High-Set Time	0.00 to 1.60sec in steps of 0.10

Parameters	Model: PNA442AR
Auto Reclose(4 shots)	Enable/Disable
Auto Reclose Time	0-600sec in steps of 1(0.0-Shot Bypass)
Auto ReclaimTime	0-600sec in steps of 1(0.0-Shot Bypass)
Negative Phase Sequence Option	Enable/Disable
Negative Phase Sequence Plug Setting	0-600sec in steps of 1(0.0-Shot Bypass)
Negative Phase Sequence Curve	0 - Definite Time 1- Inverse Curve
NPS TMS	5 - 60.00 in steps of 0.10
NPS Definite Time	0.10 - 60.00sec in steps of 0.10
Broken Conductor	Enable/Disable
BC NPS/PPS Ratio	0.10 - 0.50 in steps of 0.10
BC Definite Time	0.05-20.00sec in steps of 0.01
Phase Harmonics	Enable/Disable
Phase Blocking Time	0.10 - 20.00sec in steps of 0.10
Earth Harmonics	Block/Unblock
Earth Blocking Time	0.10 - 20.00sec in steps of 0.10
Trip Circuit Supervision	Enable/Disable
TCS Trip Time	0.05-2.00sec in steps of 0.10
Circuit Breaker Failure Detection	Enable/Disable
CBF Detection Time	0.05-2.00sec in steps of 0.10
Trip Type	Latch/Non-latch
Trip Sense Time	0.05-2.00sec in steps of 0.10
Reset Type	Auto/Manual
DO configuration	Available for Phase Low set, Phase High set, Negative Phase Sequence, Broken Conductor, Trip Circuit Supervision, CB Fail
DI configuration	Available for Circuit Breaker Close, Open, Ready, Protection Block, Remote Trip, Remote Reset
DI block configuration	Available for Phase Low Set, Phase High Set, Earth Low Set, Earth High Set, Negative Phase Sequence, Broken Conductor, Auto Reclose
Communication	Front End: USB communication Back End: RS485 Modbus Communication Baud Rate: 4800bps, 9600bps, 19.2kbps, 38.4kbps, 115.2kbps(site selectable)
Auxiliary Burden	AC < 11VA DC < 5W
CT Burden	< 0.2 VA
Mounting	Flush
Dimensions	157x176x144(WxHxD)
Panel Cut out	140x140x100(WxHxD)
Contact Rating	5A @ 250V AC
Fault Recording	99 Fault recordings with Date & Time
Weight	2kg approx.
Event Recording	250 event recordings with date & time



For more details please contact :

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