

GENERATION & NETWORK

NP800 & NP800R Series

GENERAL PRESENTATION

The optimal management of electrical power system is based in particular on the reliability, availability and communication skills of protective, measurement and automation devices.

NP800 relays are dedicated to protection and monitoring for power systems, generators and motors of medium and low voltage. They also provide measurement and recording of the electrical quantities of the network.

The range of relays and equipments is designed to protect Industrial, Railway or Transmission and Distribution power networks. It was developed according to the Quality standards and the latest technological concepts and is enhanced with continuous functional or ergonomic improvement.



Multifunction
Measurement
Recording / event log
Disturbance recording
Local MMI

Now available in its third major version of embedded software, the series was expanded with new products incorporating more advanced functionalities, such as event custom display or on demand disturbance recording.

Some typical applications:

For medium and high voltage networks:

- Generator protection relay
- Feeder protection relay
- Transformer protection relay
- Rotating machine protection relay
- Directional or not overcurrent relay
- Voltage and frequency relay
- Power and voltage relay
- Check synchronizing relay

In the Regulation domain:

- Automatic synchronizer with or without voltage equaliser
- Generator synchro-check relay

In the Railway field (consult us):

- DC line fault protection
- AC Catenary and feeder distance protection
- Fault locator
- AC network power swing detection



CEE Relays Ltd

NP800 SERIES

		NPG800	NPI800	NPIR800	NPIH800	NPIHD800	NPID800	NPIDR800	NPM800	NPSC800-1	NPSC800-2	NPU800	NPUH800	NPW800	NPRG810-1G	NPRG810-4G	NPRG860	NPRG870
Stopping Device	5								●									
Distance relay	21	●																
Volts per hertz relay	24	●																
Synchronizing or synchro-check device	25									●	●				●	●	●	●
Undervoltage relay	27	●										●		●				
Positive sequence undervoltage relay	27P											●						
Reverse power relay	32RP	●																
Directional active power relay	32P	●												●				
Directional reactive power relay	32Q	●												●				
Undercurrent relay	37I								●									
Underpower (active) relay	37P	●												●				
Underpower (reactive) relay	37Q	●												●				
Field relay	40	●																
Reverse-phase or phase-balance current relay	46	●	●	●			●	●	●									
Broken conductor detection	46BC		●	●			●	●										
Phase-sequence or phase-balance overvoltage relay	47											●						
Incomplete Sequence Relay	48								●									
Machine or transformer thermal relay	49	●	●	●			●	●	●									
Instantaneous overcurrent relay	50	●	●	●			●	●	●									
Instantaneous earth fault overcurrent relay	50N		●	●	●	●	●	●										
Breaker failure relay	BF													●				
Breaker failure overcurrent relay	50BF	●	●	●			●	●	●									
Breaker failure earth fault overcurrent relay	50NBF		●	●	●	●	●	●	●									
Instantaneous overcurrent relay with voltage control	50V	●																
AC time overcurrent relay	51	●	●	●			●	●										
AC time overcurrent relay for locked rotor detection	51LR								●									
Earth fault time overcurrent relay	51N		●	●	●	●	●	●	●									
AC time overcurrent relay with voltage control	51V	●																
Power factor relay	55													●				
Overvoltage relay	59	●										●		●				
Zero sequence overvoltage relay	59N	●										●	●	●				
Sensitive earth fault relay	64	●																
Limitation of number of starts	66								●									
AC phase directional overcurrent relay	67						●	●										
AC earth directional overcurrent relay	67N					●	●	●										
Trip circuit supervision	74TC	●	●	●	●	●	●	●	●			●	●	●				
Recloser relay	79			●				●										
Frequency (over & under) relay	81	●										●		●				
Lock-out relay	86	●	●	●	●	●	●	●	●			●	●	●				
Regulating device	90																●	●
Logical selectivity			●	●	●	●	●	●										
Maximum of active and reactive integrated power	$\Sigma P-\Sigma Q$													●				
Tangent φ management	Q/P													●				

NP800R SERIES

NP800R series is mostly dedicated to revamping of industrial existing facilities.

Deeply concerned by its customer demand of reducing maintenance costs, ICE has developed a version compatible with CEE "R case" which is a standard in the protection field.

Hundreds of thousands relays can therefore be refurbished at a minimum cost as they have identical dimensions and almost full wiring compatibility.



The R case series matches with most of the functionalities in the industrial field:

- Generator protection
- Feeder protection
- Transformer protection
- Rotating machine protection
- Directional or not overcurrent protection
- Frequency and voltage protection
- Power protection
- Synchro-Check

Projection or flush mounting.

NP800R RELAY / R CASES RELAYS EQUIVALENCE TABLE

(resumed table, consult us for further information.)

NP1800R	NPID800R	NPIH800R	NPIHD800R	NPU800R	NPUH800R	NPM800R	NPW800R	NPG800R	NPSC800R
ITG series 5-6	RMSD 7921	RMS 711	RMSD 7912	TTG 7000 - 7100	TMS 714	IMM 7900	WTG 7000	Consult us	STS 7041
ITG 7000 - 7100	ITD 7XX1		ITD 7XX2	TTGd 7X12	TTG 7XX4	ITM 7000			
ITT 7610				TMS 700					
RMS 700				TMS 7000					
RMS/RMST 7900				HGX 7020					

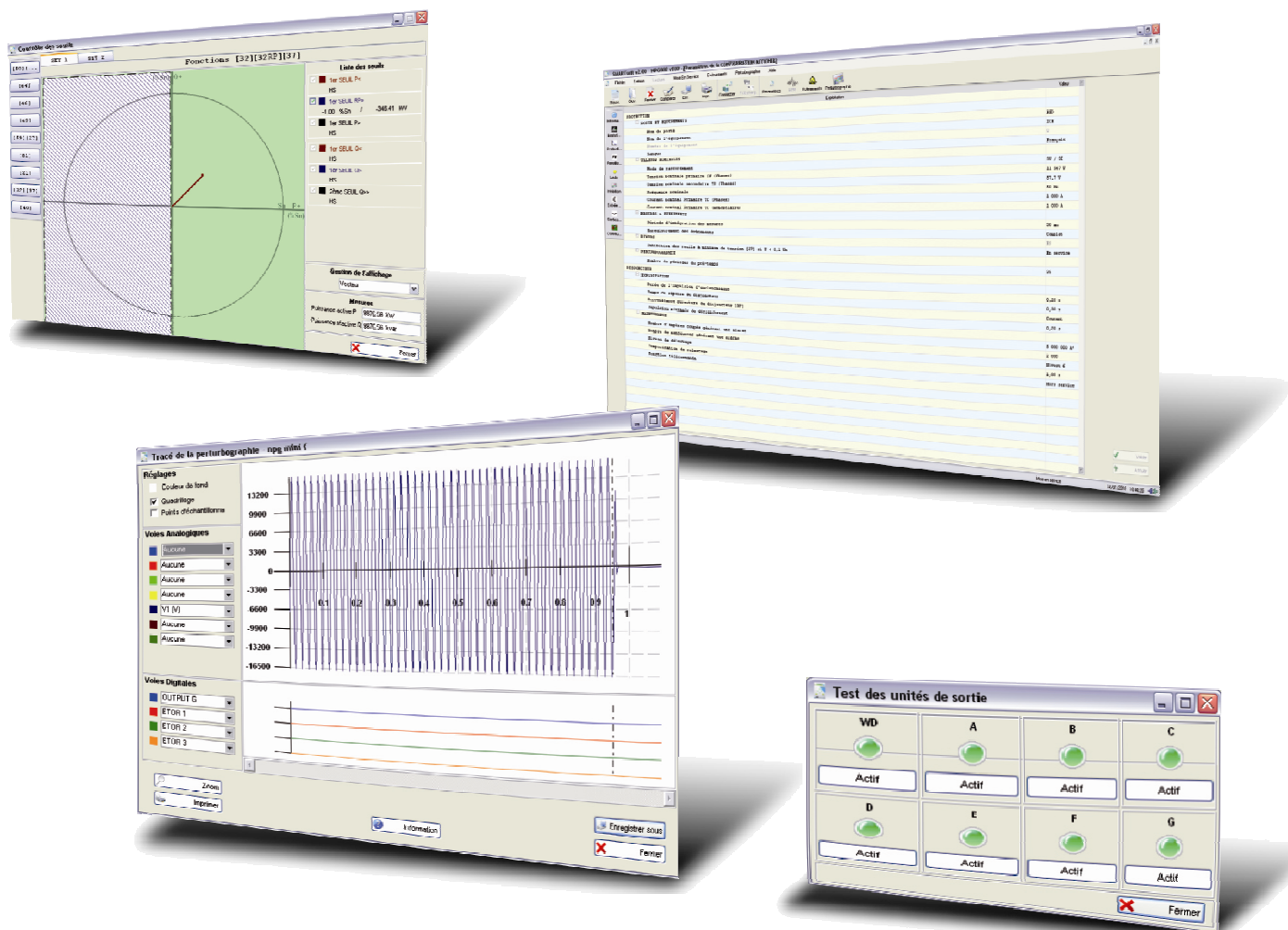


19" rack mounting

SMARTsoft

SMARTsoft, integrated software for the Industry, Railway and Transmission ranges, helps the User get the best from NP800 series relays.

- Setting:** adjustment of all parameters, with 2 or 4 tables according to product, can be prepared on or off-line. Files are stored on PC and identified for each relay, according to User practices.
- Maintenance:** follow-up of installations is made easy by access to the counters of *operations*, cut square amps, overload number.
- Analysis:** measurement functions reflect the installation (set up?) state in real time and allow its follow-up without penalizing protection functions. According to the model, specific screens represent the electric quantities in the adequate diagram (PQ, UI, Z θ ...)
- Recording:** events and disturbance recordings will help understanding the faults suffered by the installation. Files in COMTRADE format can be also read again with a test set.
- Time saving:** commissioning functions offer an immediate and exhaustive sight of the network characteristics as well as diagnosis tools such as check of the installation wiring.



The specifications and drawings given are subject to change and are not binding unless confirmed by our specialists.



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