NP800 & NP800R Series

General Presentation

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

NP800 relays are dedicated to protecting and monitoring 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 equipment 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 synchronising 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

NP800 SERIES

		NPG800	NPI800	NPIR800	NPIH800	NPIHD800	NPID800	NPIDR800	NPM800	NPSC800-1	NPSC800-2	NPU800	NPUH800	NPW800	NPRG810-1G	NPRG810-4G	NPRG860	NPRG870
Inhibition of hot start function	5								●									
Minimum of impedance	21	●																
Flux control	24	●																
Synchronism check	25									●	●				●	●	●	●
Undervoltage	27	●										●		●				
Minimum of positive sequence voltage	27P											●						
Reverse active power	32RP	●																
Maximum of active power	32P	●												●				
Maximum of reactive power	32Q	●												●				
Single phasse undercurrent	37				●													
Loss of load - no-load operation	37I								●									
Minimum of active power	37P	●												●				
Minimum of reactive power	37Q	●												●				
Loss of excitation	40	●																
Maximum of negative phase sequence current	46	●	●	●			●	●	●									
Detection of broken conductor	46BC		●	●			●	●										
Maximum of negative phase sequence voltage	47											●						
Too long start	48								●									
Cable thermal image / transformer	49		●	●			●	●										
Machine thermal image	49	●							●									
Instantaneous phase overcurrent	50	●	●	●			●	●	●									
Instantaneous max of zero sequence current	50N		●	●	●	●	●	●										
Circuit breaker failure monitoring	BF	●												●				
Circuit breaker failure monitoring	50BF		●	●			●	●	●									
Circuit breaker failure monitoring	50NBF		●	●	●	●	●	●	●									
Voltage restrained overcurrent	50V	●																
Phase overcurrent	51	●	●	●			●	●										
Locked rotor	51LR								●									
Max of zero sequence current	51N		●	●	●	●	●	●	●									
Maximum overcurrent with voltage control	51V	●																
Power factor management	55													●				
Overvoltage	59	●										●		●				
Max of zero sequence voltage	59N	●										●	●	●				
Stator earth fault	64	●																
Limitation and spacing of number of starts	66								●									
Directional phase overcurrent	67						●	●										
Directional max of zero sequence voltage overcurrent	67N					●	●	●										
Trip-circuit supervision of circuit breaker	74TC	●	●	●	●	●	●	●	●			●	●	●				
Recloser	79			●				●										
Under frequency and over frequency	81	●										●		●				
Latching of the output relays	86	●	●	●	●	●	●	●	●			●	●	●				
Regulating device	90																●	●

Load reclosing function			●	●	●	●	●	●										
Logic selectivity			●	●	●	●	●	●										
Load shedding by external input and high speed restarting									●									
Maximum of active and reactive integrated power	∑P-∑Q													●				
ϕ tangent management	Q/P													●				

NP800R SERIES

NP800R series is mostly dedicated to revamping 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.

Projection or flush mounting

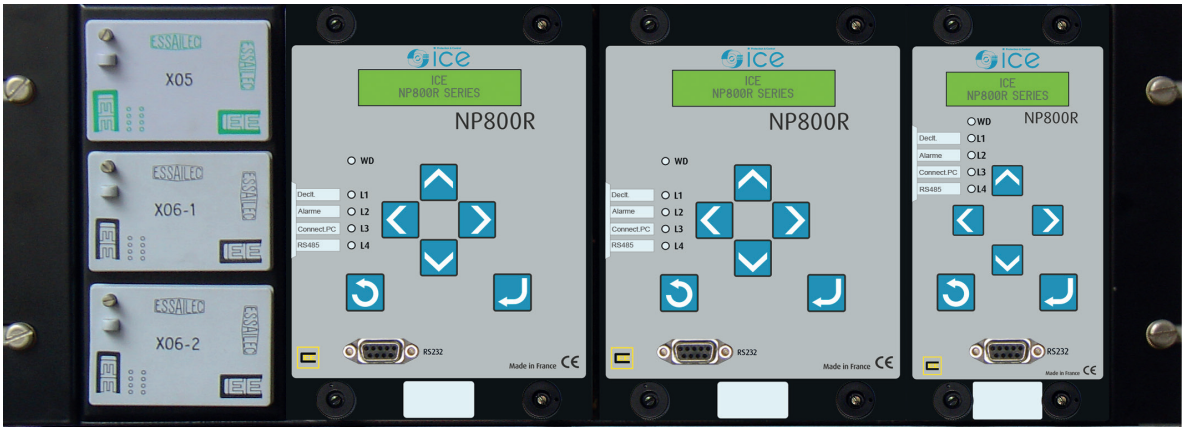
The R case series matches with most of the functionalities in the industrial field:

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

NP800R RELAY / R CASES RELAYS EQUIVALENCE TABLE

(resumed table, consult us for further information)

NPI800R	NPID800R	NPIH800R	NPIHD800R	NPU800R	NPUH800R	NPM800R	NPW800R	NPG800R	NPSC800R
ITG series 5-6	RMSD7921	RMS711	RMSD7912	TTG7000-7100	TMS714	IMM7900	WTG7000	Consult us	STS7041
ITG7000-7100	ITD7XX1		ITD7XX2	TTGd7X12	TTG7XX4	ITM7000			
ITT7610				TMS700					
RMS700				TMS7000					
RMS/ RMST7900				HDGX7020					



19" rack mounting

SMARTsoft

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

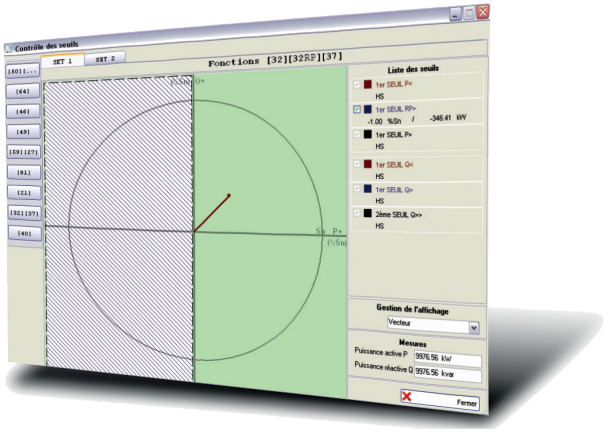
Setting — adjustment of all parameters, with 2 or 4 tables according to product, can be prepared on or off-line (configuration files can be saved, backed-up and edited on the user's PC and can be assigned unique identifying names for each relay in a connected system.

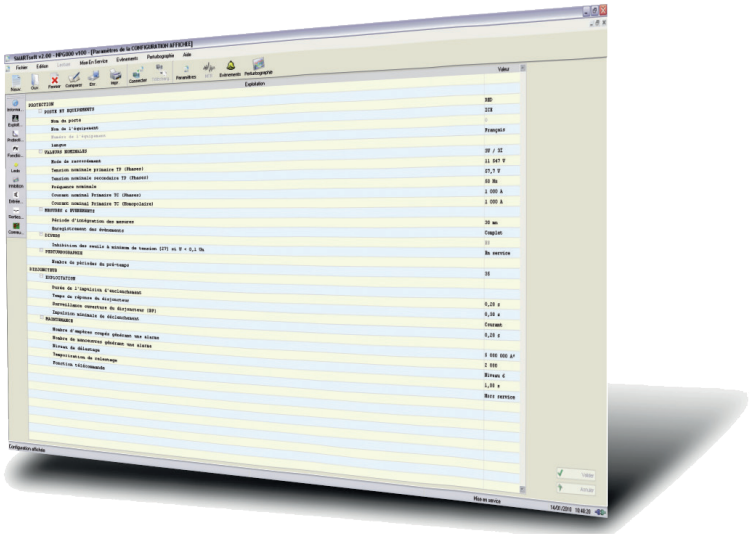
Maintenance — follow-up of installations is made easy by access to the operation counters, cut square amps, overload number.

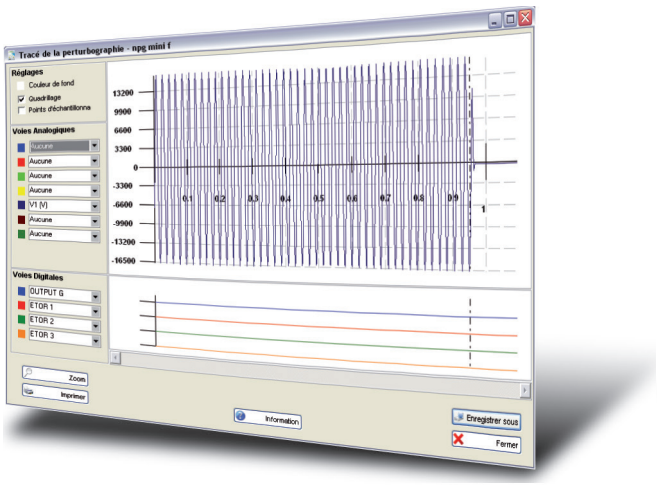
Analysis — measurement functions reflect the installation state in real time and allow its follow-up without penalising protection functions. According to the model, specific screens represent the electric quantities in the appropriate diagram (PQ, UI, ZΘ...).

Recording — events and disturbance recordings will help understanding the faults suffered by the installation. Recordings are stored on the user's PC in COMTRADE format and can be used to simulate a fault using a test set.

Time saving — commissioning functions offer an immediate and exhaustive overview of the network characteristics as well as diagnosis tools such as installation wiring checks.







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• ISO 19443 : 2018 • ISO 9001 : 2015 and ISO 14001 : 2015 certified •