



Relion® 605 series

# Self-powered feeder protection REJ603

# Self-powered feeder protection for utility distribution and industrial applications

**REJ603 is intended to be used for the selective short circuit and earth fault protection of feeders in secondary distribution networks and for protection of small transformers in utilities and industries.**

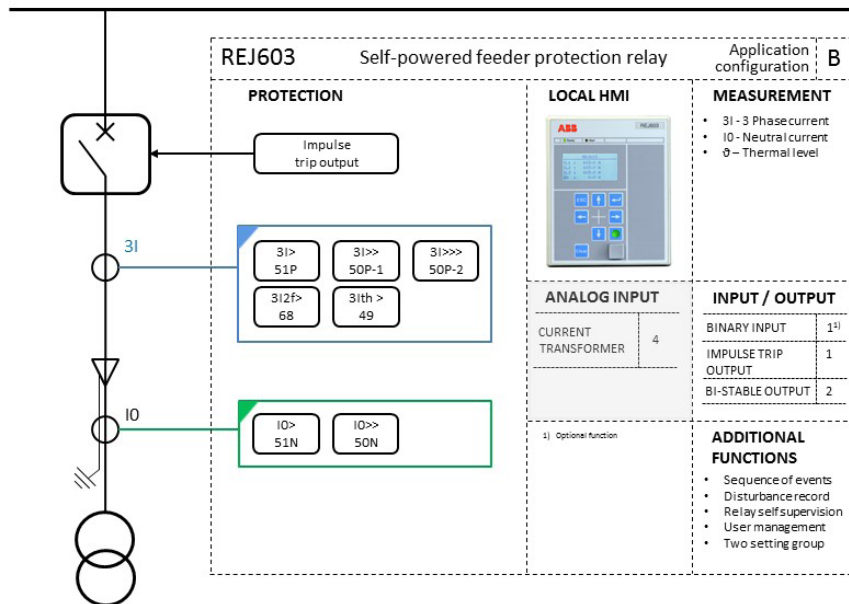
**REJ603 is a member of ABB's Relion® protection and control product family and its 605 series. The 605 series features basic devices that fulfill the essential protection needs in medium voltage networks.**

## Application

REJ603 is a self-powered numerical relay, which requires no external supply voltage, making it an ideal choice for installation even in remote locations where auxiliary supplies are not available. The relay is primarily used in ring main units and secondary distribution switchgear within distribution networks and it receives power from the primary current transformers. The relay can measure earth current by internal calculation and also by external core balance current transformer/split core CT input.

## Highlights of REJ603

- Relay power up through front USB port in the absence of CT supply
- Built-in hand-reset electromagnetic flag for trip indication
- Low energy trip output (100mJ)
- Bi-stable signal output for trip indication to external system
- Compact size and ease of use
- Standard 1A or 5A CT input for phase current measurement
- Earth current measurement internally or externally through standard 1A or 5A CT
- Test facility with USB power for testing entire scheme including relay and trip to circuit breaker
- Disconnecting type CT terminals with CT shorting arrangement supporting to reduce MTTR (mean time to repair)
- Relay self supervision
- 250 event logs with date and time stamping
- Disturbance recording functionality also in CT powered mode
- Online current measurements in primary or secondary value
- Multi line HMI display
- Optional remote trip function through binary input with wide range auxiliary supply
- Optional universal auxiliary supply enables measurement at low load current, providing sensitive earth fault protection and reduce trip time of instantaneous functions
- Non-volatile memory for settings, events and disturbance records
- Suitable for 50/60 Hz frequency
- Multi language support for local HMI
- Two setting groups



Functional overview of REJ603 Ver. 3.0

Table 1: Standard configuration

Description	Relay type
Self-powered feeder protection	REJ603

Table 2: Application configuration and supported functions

Functionality	ANSI	IEC	Configuration B
<b>Protections</b>			
Non-directional overcurrent protection, low-set stage	51	3I>	•
Non-directional overcurrent protection, high-set stage	50-1	3I>>	•
Non-directional overcurrent protection, instantaneous stage	50-2	3I>>>	•
Earth-fault protection low-set stage	51N	IO>	•
Earth-fault protection high-set stage	50N	IO>>	•
Three-phase transformer in-rush detector	68	3I2f>	•
Three-phase thermal protection for feeders, cables and distribution transformers	49	3Ith	•
Two setting group			•
Remote trip with external power supply			o
<b>Measurements</b>			
Three-phase current measurement	3I	3I	•
Residual current measurement	In	Io	•
Thermal level	Ø	Ø	•
Disturbance recorder			•

• = Included, o=Optional at the time of ordering

Table 3: Input/output overview

Relay type	Analog input	Binary input	Binary output
REJ603	CT 4	BI 1(optional)	BO 1 (Impulse trip, 100mJ) 2 (Bi-stable signalling)

# Contact us

For more information see REJ603 Product Guide  
or contact us:

## **ABB India Limited**

Distribution Automation  
Maneja Works  
Vadodara-390013, India  
Phone: +91 265 6724402  
Fax: +91 265 6724407

## **ABB Oy**

Medium Voltage Products  
P O Box.699  
65101, Vaasa, Finland  
Phone: +358 10 22 11  
Fax: +358 10 22 41094

[www.abb.com/mediumvoltage](http://www.abb.com/mediumvoltage)  
[www.abb.com/substationautomation](http://www.abb.com/substationautomation)