| Function 50P | Permission: yes/no |
| :---: | :---: |
|  | Operating range: 0.10 to $30 \times \ln$ (step 0.01) |
|  | Operating time: 0.02 to 300 s (step 0.01s) |
|  | Activation level 100\% |
|  | Deactivation level 95\% |
|  | Instantaneous deactivation |
|  | Timing accuracy: 30 ms |
| Function 50N/G | Permission: yes/no |
|  | Operating range: 0.10 to $30 \times \ln$ (step 0.01) |
|  | Operating time: 0.02 to 300 s (step 0.01s) |
|  | Activation level 100\% |
|  | Deactivation level 95\% |
|  | Instantaneous deactivation |
|  | Timing accuracy: 30 ms |
| Function 50/51P | Permission: yes/no |
|  | Operating range: 0.10 to $7 \times \ln ($ step 0.01) |
|  | Curves: IEC 60255-151 |
|  | Operating time: inverse curve, very inverse curve, extremely inverse curve. <br> Defined time: 0.02 to $300 \mathrm{~s}(\operatorname{step} 0.01 \mathrm{~s})$ |
|  | Dial: 0.02 to 1.25 (step 0.01) |
|  | Curve, activation level 110\% |
|  | Curve, deactivation level 100\% |
|  | Defined time, activation level 100\% |
|  | Defined time, deactivation level 95\% |


|  | Instantaneous deactivation |
| :---: | :---: |
|  | Timing accuracy: 5\% or 30 ms (greater of both) |
| Function 50/51 N/G | Permission: yes/no |
|  | Operating range: 0.10 to $7 \times \ln (\operatorname{step} 0.01)$ |
|  | Curves: IEC 60255-151 |
|  | Operating time: inverse curve, very inverse curve, extremely inverse curve. <br> Defined time: 0.02 to $300 \mathrm{~s}($ step 0.01 s$)$ |
|  | Dial: 0.02 to 1.25 (step 0.01) |
|  | Curve, activation level 110\% |
|  | Curve, deactivation level 100\% |
|  | Defined time, activation level 100\% |
|  | Defined time, deactivation level 95\% |
|  | Instantaneous deactivation |
|  | Timing accuracy: 5\% or 30 ms (greater of both) |
| Trip blocking | Permission: yes/no |
|  | Blocking level: 1.5 to $20 \times \ln$ (step 0.01) |
| Circuit breaker monitoring | Circuit Breaker state: start, open, closed, error, opening time, opening error, closing time, closing error |
|  | Input 52a and/or input 52b |
|  | Opening and closing command |
|  | Alarm, maximum number of openings: 1 a 10000 |
|  | Alarm, accumulated amps: 0 a $100000 \mathrm{M}\left(\mathrm{A}^{2}\right)$ |
|  | Excessive repeated openings: 1 a 10000 |
|  | Time of excessive repeated openings: 1 a 300 min |


| Function 50BF | Function permission : yes/no |
| :---: | :---: |
|  | Opening failure time: 0.02 to 1.00 s (step 0.01 s ) |
|  | Open breaker activation threshold: 8\% In |
|  | Open breaker reset threshold: 10\% In |
|  | Function start: Device trip, opening failure input activation, breaker opening command activation |
| CLP | Permission: yes/no |
|  | No load time: 0,02 to 300s (step 0.01s) |
|  | Cold load 0,02 to 300s (step 0.01s) |
| Setting Tables | 1 General |
|  | 3 Criteria |
|  | Activated, by inputs, by communications, by settings |
| Function 49 | Function permission : yes/no |
|  | Tap: 0.10 a 2.40 Inominal (step 0.01) |
|  | $\zeta$ heating: 3 a 600 minutes (step 1 min ) |
|  | $\zeta$ cooling: 1 a $6 \times \zeta$ heating (step 1) |
|  | Alarm level: 20 a 99\% (step 1 \%) |
|  | Trip level: 100\% |
|  | Trip reset: 95\% of alarm level |
|  | Timing accuracy: $\pm 5 \%$ regarding theoretical value |
| Function 49T | Available through configurable inputs (optional) |
| Programmable Logic Control | OR4, OR4_LATCH, OR4_PULSES, NOR4, NOR4_LATCH, AND4, AND4 PULSES, NAND4 |
| Function 86 | Allows to latch (lock out) the contact trip due to programable logic (PLC) |
| 2 inputs configurable | The same voltage as auxiliary power supply |


| Frequency | $50 / 60 \mathrm{~Hz}$ |
| :---: | :---: |
| Current measure | True RMS |
|  | Sampling: 16 samples/cycle |
|  | Accuracy of $\pm 2 \%$ in a band of $20 \%$ over the rated current and $\pm 4 \%$ for the rest of measurement range |
| Fault reports | 4 fault reports with 24 events each |
| Communications | USB port: Modbus RTU |
|  | RS485 port: Modbus RTU |
| Auxiliary power supply | 110-230 Vac / 90-300 Vdc $\pm 20 \%$ |
|  | $24-48 \mathrm{Vdc} \pm 10 \%$ |
| Battery supply | With KITCOM adapter to USB |
| Environment | Operating temperature: -10 to $70 \times$ - ${ }^{\text {C }}$ |
|  | Storage temperature: -20 to $80{ }^{\circ} \mathrm{C}$ |
|  | Humidity: 95\% |
| Transformers | 3 or 4 CT /5, /1 or /0.2 |
| Mechanical features | Metallic box |
|  | Panel Mounting |
|  | 1/4 Rack - 4 U |
|  | Depth: 74,6 mm |
|  | IP-54 on panel |

