



RTPFC is designed to compensate the reactive power on real time basis for extremely rapid acquisition of the power factor within the range of 40 - 60 msec. Connection and disconnection of the capacitor to and from the network occurs at zero crossing. This smooth connection avoids transient effects like waveform distortions, generation of switching spikes etc., typically created by electromechanically switched contactor based system. The response time of this is much faster than electromechanically switched systems.

Technical Specification

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| ▪ Rating from 100 – 1200 kVAR. |
| ▪ Standard Steps 6 / 12.5 / 25 / 50 / 75 / 100 kVAR. |
| ▪ Incomer : MCCB / ACB |
| ▪ HRC fuse / MCB / MCCB / Protection in each step. |
| ▪ Systems include Detuned iron core reactors that detune the network to prevent resonance and absorb Harmonics. |
| ▪ Capacitor :- Dry – Gas filled / Resin - 440 V / 525 V |
| ▪ Three / Single Phase Load sensing to achieve target Power Factor. |
| ▪ Current feedback system in each step for spike and over current detection with auto-reset facility. |
| ▪ Over temperature protection. |
| ▪ Supply ON, Step ON, Spike current, Over current, Thyristor short, Phase missing, Over temperature Indication. |

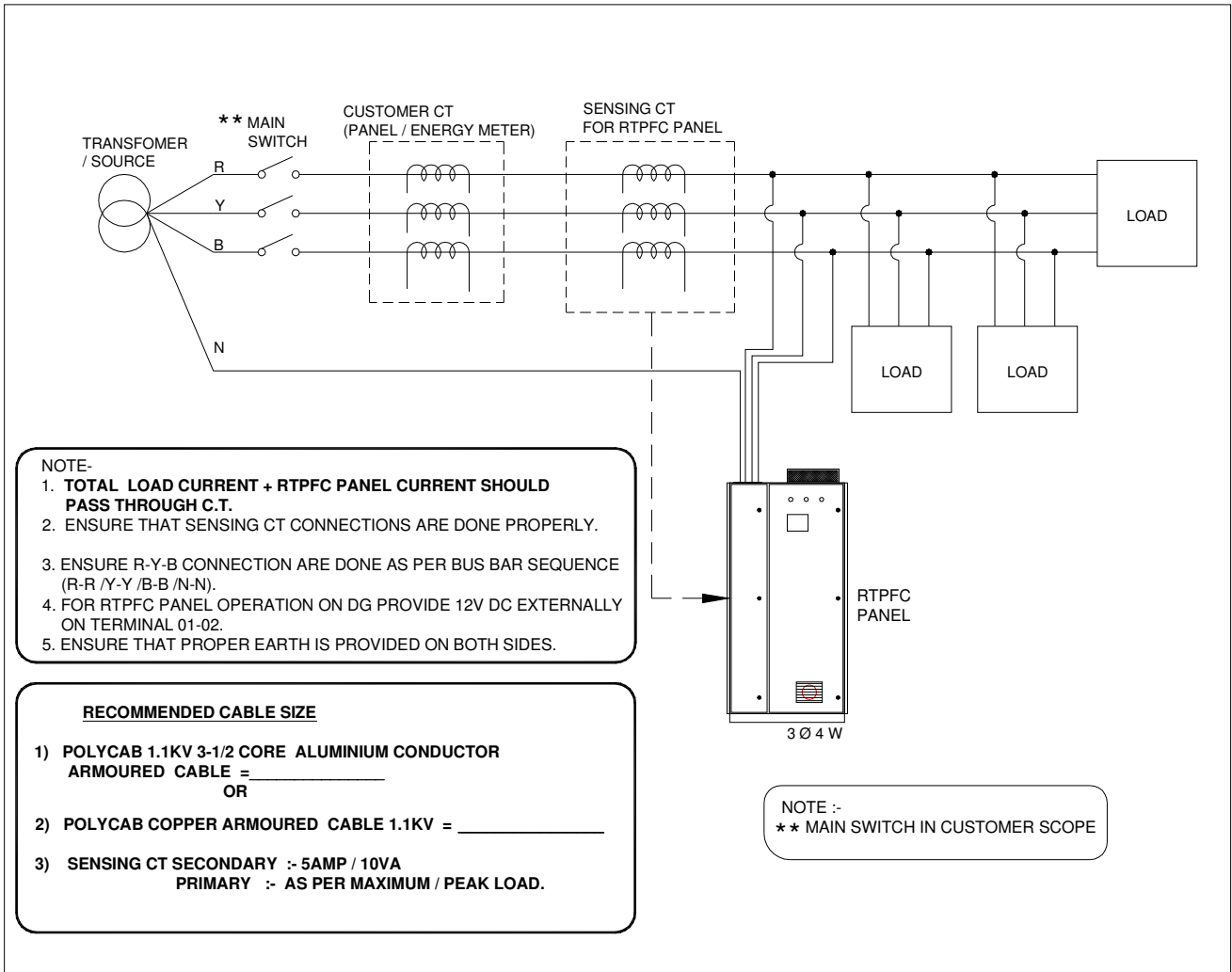
Advantages

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| ▪ Transient free capacitor group switching using Electronics Switching elements. |
| ▪ Response time 40-60 milli seconds Max. |
| ▪ Reduction of voltage flickering. |
| ▪ Enhances capacity of Transformer, Local generator systems such as Diesel and windmill generator. |
| ▪ Avoid wave form distortions, since capacitors are connected and disconnected during Zero crossing. |
| ▪ Prevents damages to sensitive electronic equipment. |
| ▪ Saves energy by reduced max. Demand, PF bonus & saving in Transformer losses. |
| ▪ Accurate Power Factor control, even in the presence of Harmonics. |
| ▪ Dramatically increases the life expectancy of switching elements and capacitor. |
| ▪ Built-in network analyzer, measuring all network parameter including harmonics. |
| ▪ Modular and up gradable with increased plant load. (Optional) |
| ▪ Detuned systems include iron core reactors that detune the network to prevent resonance and absorb harmonics. |
| ▪ Current feedback system in each step for spike and over current detection with auto-reset facility. |

Guide line to Select Panel

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|---|--|------|----|----|----|-----|
| 1) Rating KVAR | 100 - 1200 KVAR (Select with following steps) | | | | | |
| 2) Step Size | 6 | 12.5 | 25 | 50 | 75 | 100 |
| 3) Main Controller to achieve target Power Factor (Load Sensing CT Secondary 5A / 10VA - Customer Scope) | 1) Single Phase Load Sensing (Option 1) | | | | | |
| | 2) Three Phase Load sensing (Option 2) | | | | | |
| 4) Capacitor Aluminum Can Type - Gas impregnated, dry, Low loss, Self healing High inrush current withstand capability with Triple Safety System. | 1) 440 Volts with 0.96 % Detuned Reactors (Option 1) | | | | | |
| | 2) 525 Volts with 7 % Detuned Reactors (Option 2) | | | | | |
| 5) Main Incomer | 1) MCCB (Option 1) | | | | | |
| | 2) ACB (Option 2) | | | | | |
| 6) Protection in each Step | 1) HRC Fuse standard (Option 1) | | | | | |
| | 2) MCB / MCCB (Option 2) | | | | | |

Standard Installation



- # Standard Installation shown is for three Phase (Load) Sensing RTPFC.
- # Nonstandard KVAR are also available on request.
- # NEELKANTH reserves the right to amend design and specification without notice as continuous efforts are made to improve Product.
- # Dimensional Detail available on request.

NEELKANTH POWER SOLUTIONS

10, Bishen Udyog Premises, Opp. Raja Industrial Estate. P. K. Road, Mulund (W), Mumbai- 80. INDIA.
Tel: 022- 2592 2511, Fax: 022- 2592 2516, Customer Care: +91- 88796 36610
Email: info@neelpower.com, Web: www.neelpower.com

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