

AUTOMATIC POWER FACTOR CONTROLLER SPF-T SERIES

Features :

- Suitable for Single CT Thyristor Switched APFC panels.
- Protection for Over/Under - Voltage/ Load/Capacitor Current, Over Capacitor Current THD, Over Temperature, etc.
- Compensation on fundamental waveform, KVAR calculation and also the effects of supply frequency and voltage.
- Size: H x W x D = 144 x 144 x 100 mm. Recommended cutout for panel front door is 138 x 138 mm.
- Digital output commands are available up to 8 and 12 steps.
- Modes of Operation: Auto and Manual.
- One Auxiliary Input and One Auxiliary Output with user defined functionality.
- Editing option for various parameters available such as Display parameters, General parameters, System parameters, Fault parameters & Step parameters.
 - For Display parameters, available options are LCD contrast, Auto scroll, Scroll time, THD to Display, etc.
 - For General parameters, available options are Password setting, Auxiliary Input and Output setting, etc.
 - For System parameters, available options are P.T. ratio, Load side primary C.T. ratio, Capacitor side primary C.T. ratio, P.F. upper and lower settings, etc.
 - For Fault parameters, available options are Over/Under Voltage, Over/Under Load, Over/Under Capacitor Current, Over Temperature, etc.
 - For Step parameters, available options are Correction mode, Correction time, Step response time, Banks connected, Fixed bank setting, Correction type, etc.
- Displaying of various parameters available such as Mains Voltage, Mains Current, Capacitor Current, Active Power, Reactive Power, Apparent Power, C-KVAR, Load side KVAR, Load side KVA, Load side COS ϕ , Frequency, Voltage THD-Fundamental, Current THD-Fundamental, Capacitor Current THD-Fundamental, Temperature, Time and Date, etc.

Technical Specifications



- Auxiliary (Measurement) Voltage: 415V \pm 10 % (L-L).
- Load and Capacitor Current measurement Input: Single phase, either 1A or 5A secondary.
- Solid State command output rating: 30mA, 12Vdc.
- Frequency: 50Hz \pm 5 %.
- Measurement accuracy: Class-1.
- Class measurement Operating temperature: 0 to 55°C.
- Storage temperature: -10 to +75°C.
- Humidity: 0 to 98%.
- Available Digital Output commands: 8 and 12 for SPF-08T and SPF-12T series respectively.
- Connectors: Screwable, plug in type with 2.5 Sq.mm max. capacity.
- Casing: Front – Plastic Instrument casing, Rear – Metal with Silver plating.
- Protection: Front – IP 54, Rear – IP 20.
- Display: 2 x 16 Characters LCD type.

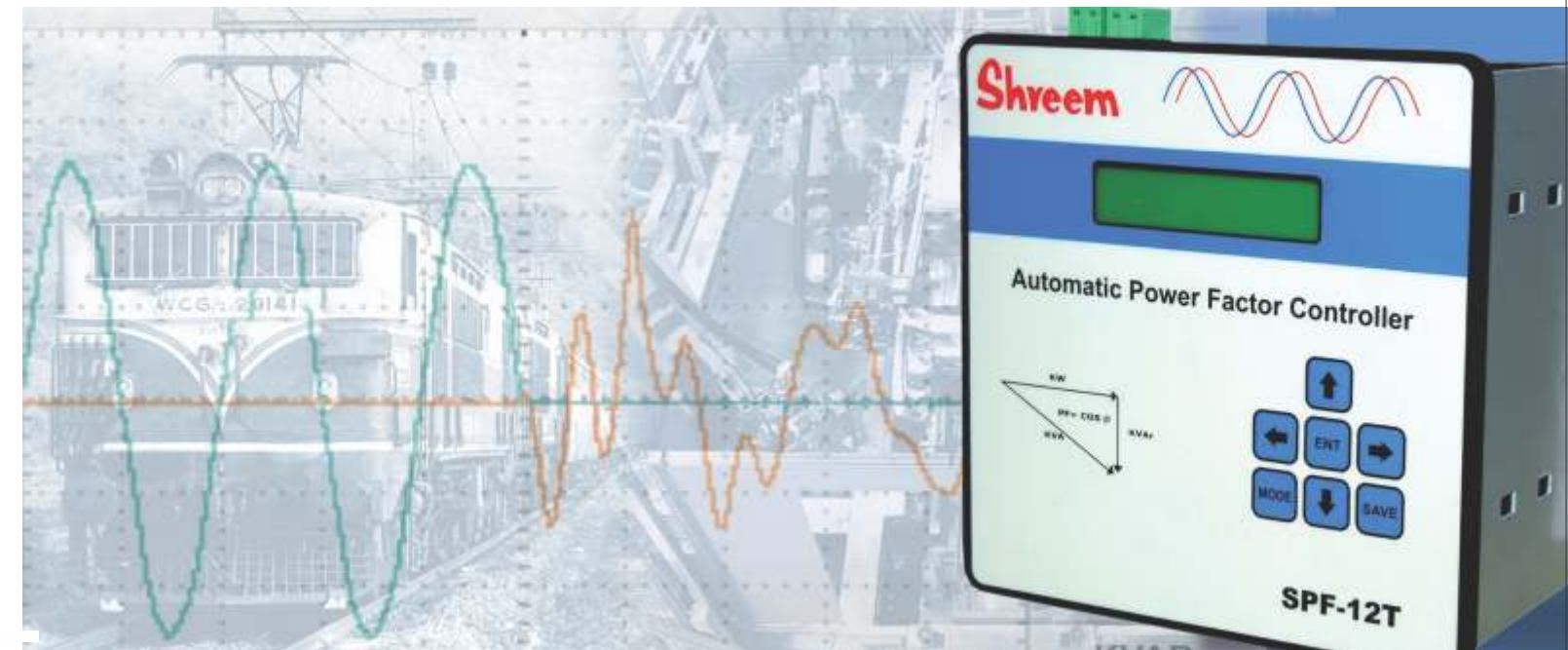
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Shreem



Automatic Power Factor Controller SPF3-M, SPF3-MT, SPF-T & SPF SERIES

SPF SERIES

- **Application:**
Suitable for Contactor Switched APFC Panel.
- **Display:**
LCD type Display with 2 x 16 Characters.
- **Fault Protection :**
Protection for Over/Under - Voltage/Load, Over Temperature, etc.
- **Size:**
H x W x D = 144 x 144 x 100 mm. Recommended cutout for panel front door is 138 x 138 mm.
- **Switching Outputs:**
Relay contacts are available upto 4, 8, 12 and 16 steps.
- **Displaying of Parameters:**
Single-phase display of parameters like Voltage, Current, Active Power, Reactive Power, Apparent Power, P.F., Frequency, Voltage THD, Current THD, etc.

TECHNICAL SPECIFICATIONS:

- **Supply Voltage and Measurement Voltage:**
Common 415V AC \pm 10 % (L-L).
- **Load Current Measurement:** Single phase 1A and 5A Secondary Selectable.
- **Rated Frequency:** 50Hz \pm 5 %.
- **Rating of Switching Outputs:** Relay contact rating is 5A, 250Vac.
- **Measurement Accuracy:** Class-1.
- **Operating Temperature:** 0 to 55°C.
- **Storage Temperature:** -10 to +75°C.
- **Humidity:** 0 to 98%.
- **Protection:** Front – IP 54, Rear – IP 20.



AUTOMATIC POWER FACTOR CONTROLLER SPF3-M SERIES

Features :

- Suitable for 3- CT Contactor Switched APFC panels.
- Protection for Under –Voltage / Load, Over –Voltage/Load/Capacitor Current/Capacitor Current THD/Temperature, Load Unbalance, etc.
- Compensation on fundamental waveform, KVAR calculation and also the effects of supply frequency and voltage.
- Size: H x W x D = 144 x 144 x 150 mm. Recommended cutout for panel front door is 138 x 138 mm.
- Outputs of relay contacts are available up to 8 and 16 steps.
- Modes of Operation: Auto and Manual.
- One Auxiliary Input and One Auxiliary Output with user defined functionality.
- RS-232 serial communication port is available on front fascia. Serial communication through standard protocols. In case of requirements with MODBUS connectivity, this can be provided on optional basis.
- 2MB flash memory built in for data logging. Data logging of 2 months data in the form of Hourly Records, Fault Records & Daily Records – recording all electrical values.
- Editing option for various parameters available such as General parameters, System parameters, Fault parameters, Step parameters, Utilization Counter & Communication parameters.
 - For General parameters, available options are Password setting, THD to Display, Energy counter reset, Auxiliary Input and Output setting, etc.
 - For System parameters, available options are P.T. ratio, Load side primary C.T. ratio, Capacitor side primary C.T. ratio, P.F. upper and lower settings, etc.
 - For Fault parameters, available options are Over/Under voltage, Over/Under Load, Load Unbalance, Over Capacitor Current, Capacitor Current THD, Internal Temperature, NV RAM battery, etc.
 - For Step parameters, available options are Steps Connected, Default mode, Capacitor Bank Voltage, Correction time, Discharge time, Step response time, Fixed bank setting, Correction type, etc.
 - For Utilization Counter, available options are Utilization of bank Counter and Clear bank Counter.
 - For Communication parameters, available options are Unit ID, Baud rate, Time, Date, Initialization of RTC and Clear NVRAM.
- Displaying of various parameters available such as Overall Values, Per-Phase RMS Values, Power parameters, Energy parameters, Harmonics parameters, KVAR for each steps connected in circuit, Internal and External Temperature, Time and Date.
 - Display Overall Values: Average Voltage, Average Current, Active Power, Reactive Power, Apparent Power, Capacitor Current, C-KVAR, Load side P.F., Load side KVAR, Load side KVA and Frequency.
 - Display Per-Phase RMS Values: Line-Line Phase Voltage, Phase Current and Capacitor Phase Current.
 - Display Power parameters: Per Phase values of P.F., KW, KVAR, KVA and CKVAR.
 - Display Energy parameters: KWH, IND KVARH, CAP KVARH, KVAH and C-KVARH.
 - Display Harmonics parameters: For Load Voltage, Load Current and Capacitor Current THD with odd harmonic coefficient upto 15th harmonic. Neutral current analysis too.

Technical Specifications

- Auxiliary Voltage: 415V (L-L) (+20%/-40%).
- Feed-back (Measurement) Voltage: 3 phase, 3 wires, 415Volt (+20%/-40%).
- Load and Capacitor Current measurement Input: Three Phase, Selectable 1A or 5A secondary.
- Output relay contact rating: 5A, 250Vac.
- Frequency: 50Hz \pm 5 %.
- Measurement accuracy: Class-1.
- Class measurement Operating temperature: 0 to 55°C.
- Storage temperature: -10 to +75°C.
- Humidity: 0 to 98%.
- Available Output commands: 8 and 16 for SPF3-08M and SPF3-16M series respectively.
- RS-232 baud rate selectable upto 57.6 KBPS.
- Connectors: Screwable, plug in type with 2.5 Sq.mm max. capacity.
- Casing: Front – Plastic Instrument casing, Rear – Metal with Silver plating.
- Protection: Front – IP 54, Rear – IP 20.
- Display: 2 x 16 Characters LCD type.



AUTOMATIC POWER FACTOR CONTROLLER SPF3-MT SERIES

Features :

- Suitable for 3-CT Thyristor Switched APFC panels.
- Protection for Under –Voltage / Load, Over –Voltage/Load/Capacitor Current/Capacitor Current THD/Temperature, Load Unbalance, etc.
- Compensation on fundamental waveform, KVAR calculation and also the effects of supply frequency and voltage.
- Size: H x W x D = 144 x 144 x 150 mm. Recommended cutout for panel front door is 138 x 138 mm.
- Digital output commands are available up to 8 and 16 steps.
- Modes of Operation: Auto and Manual.
- One Auxiliary Input with user defined functionality.
- RS-232 communication port is available on front fascia. Serial communication through standard protocols. In case of requirements with MODBUS connectivity, this can be provided on optional basis.
- 2MB flash memory built in for data logging. Data logging of 2 months data in the form of Hourly Records, Fault Records & Daily Records – recording all electrical values.
- Editing option for various parameters available such as General parameters, System parameters, Fault parameters, Step parameters & Communication parameters.
 - For General parameters, available options are Password setting, THD to Display, Energy counter reset, Auxiliary Input setting, etc.
 - For System parameters, available options are P.T. ratio, Load side primary C.T. ratio, Capacitor side primary C.T. ratio, P.F. upper and lower settings, etc.
 - For Fault parameters, available options are Over/Under voltage, Over/Under Load, Load Unbalance, Over Capacitor Current, Capacitor Current THD, Temperature, NV RAM battery, etc.
 - For Step parameters, available options are Steps Connected, Default mode, Capacitor Bank Voltage, Correction time, Step response time, Fixed bank setting, Correction type, etc.
 - For Communication parameters, available options are Unit ID, Baud rate, Time, Date, Initialization of RTC and Clear NVRAM.
- Displaying of various parameters available such as Overall Values, Per-Phase RMS Values, Power parameters, Energy parameters, Harmonics parameters, KVAR for each steps connected in circuit, Internal and External Temperature, Time and Date.
 - Display Overall Values: Average Voltage, Average Current, Active Power, Reactive Power, Apparent Power, Capacitor Current, C-KVAR, Load side P.F., Load side KVAR, Load side KVA and Frequency.
 - Display Per-Phase RMS Values: Line-Line Phase Voltage, Phase Current and Capacitor Phase Current.
 - Display Power parameters: Per Phase values of P.F., KW, KVAR, KVA and CKVAR.
 - Display Energy parameters: KWH, IND KVARH, CAP KVARH, KVAH and C-KVARH.
 - Display Harmonics parameters: For Load Voltage, Load Current and Capacitor Current THD with odd harmonic coefficient upto 15th harmonic. Neutral current analysis too.

Technical Specifications

- Auxiliary Voltage: 415V (L-L) (+20%/-40%).
- Feed-back (Measurement) Voltage: 3 phase, 3 wires, 415Volt (+20%/-40%).
- Load and Capacitor Current measurement Input: Three Phase, Selectable 1A or 5A secondary.
- Solid State command output rating: 30mA, 12Vdc.
- Frequency: 50Hz \pm 5 %.
- Measurement accuracy: Class-1.
- Class measurement Operating temperature: 0 to 55°C.
- Storage temperature: -10 to +75°C.
- Humidity: 0 to 98%.
- Available Digital Output commands: 8 and 16 for SPF3-08MT and SPF3-16MT series respectively.
- RS-232 baud rate selectable upto 57.6 KBPS.
- Connectors: Screwable, plug in type with 2.5 Sq.mm max. capacity.
- Casing: Front – Plastic Instrument casing, Rear – Metal with Silver plating.
- Protection: Front – IP 54, Rear – IP 20.
- Display: 2 x 16 Characters LCD type.

