

KEW SAFE LINE SERIES

PRODUCT 2.5: - AC MONITOR PROTECTION RELAYS



DESCRIPTION

The **KEW MPR-01** is an advanced AC motor protection relay designed to safeguard motors from electrical faults such as **over/under voltage, current imbalance, and phase failures**. It features a large 3-digit LED display for real-time monitoring of voltage, current, power, frequency, and energy. Compatible with **both SMPS and transformer-type** auxiliary supplies, it **supports RS-485 & Modbus RTU** for remote communication. With user-selectable CT ratios and programmable trip settings, it offers high flexibility across various motor ratings. Dual relay outputs allow seamless control and alarm signaling. It is ideal for industrial motor panels requiring **precise protection and diagnostics**. A compact DIN mount design ensures **easy integration** into standard panels.

FEATURES OF AC PROTECTION RELAY(MPR)

Meter Type	AC Motor Protection Relay (MPR-01)
Monitored Parameters	Voltage (RY, YB, BR), Current, kW, Power Factor, kWh, kVARh, Hours, Run Hours, Rotor Earth Fault
Smart Display & Navigation	3-row, 4-digit bright LED display with Auto/Manual Scroll and LED indicators for trip and relay status
Protection Features	Under/Over Voltage, Over/Under Current, Earth Fault, Phase Reversal, Current Imbalance, Dry Run, Phase Loss
Programmability	CT/PT Ratio Programmable, Settable Trip Values, 2 Relay Outputs (user-configurable), MODBUS RTU support (optional)



SPECIFICATION OF AC PROTECTION RELAY(MPR)

Electrical Characteristics: -

Meter Type	AC Motor Protection Relay (MPR-01)
Auxiliary Supply Voltage	150-300V AC, 45-270V AC/DC, 19-60V AC/DC
Measured Parameters	RMS Voltage (20–600V), RMS Current (0.020–10.00A), Active Power (0.030–6.000kW), Apparent Power (0.030–6.000kVA), Reactive Power (0.030–6.000kVAR), Power Factor (0.3–1.0, Lag/Lead), Line Frequency (45–65Hz), Active Energy (0–999999.99kWh), Apparent Energy (0–999999.99kVAh), Reactive Energy (0–999999.99kVARh)
VA Burden	Auxiliary Supply: <2.5 VA Voltage Input: <0.2 VA/Phase Current Input: <0.2VA/Phase
Relay Contact	2NOS-8 AMPS, 250VAC POTENTIAL FREE
CT Range	CT Primary: 1A–50kA (AC Programmable), CT Secondary: 0.5A–5A (AC Programmable)
Impluse Withstand	3.5KV, 1.2/50micro second

Environmental Characteristics: -

Operating Temperature	0°C to 50°C
Storage Temperature	-10°C to 60°C

Mechanical Characteristics: -

Mounting Type	Panel Mount
Panel Dimensions	96x96 Depth (Behind Bezel)-52

Display Characteristics

Display Type	3-row, 4-digit bright LED display with Auto/Manual Scroll
Indications	Error Code Display, Fault LED Indicators

APPLICATIONS OF AC PROTECTION RELAY

Motor Control Panels



Building Management Systems (BMS)



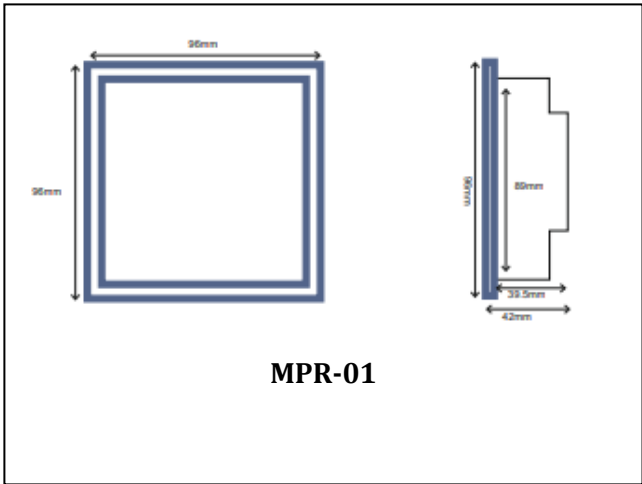
OEM Electrical Panels



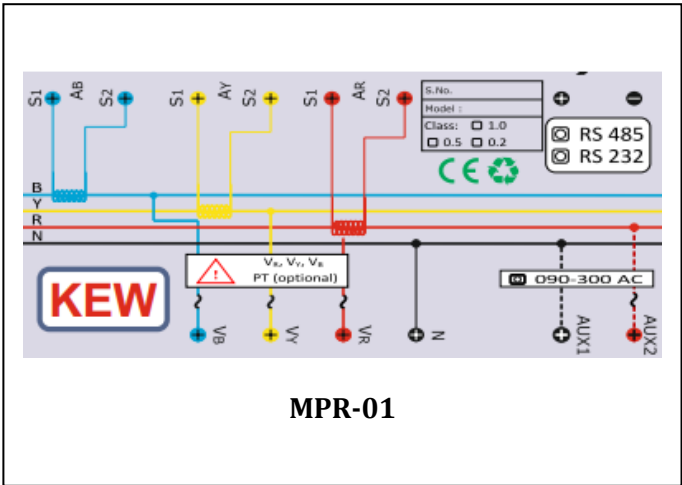
Commercial Sub-Metering / Retail Malls



Panel CutOut



Terminal Connection



Ordering information:

MODEL	CT Input Range	Display	AUX SUPPLY
KEW-MPR	CT 1A–50kA / CT 0.5A–5A (Programmable)	3-Row, 4-Digit LED	80–300VAC / 24–240VDC (Universal)

*WHILE ORDERING PLEASE MENTION RANGE, CLASS & AUX SUPPLY & FOR BULK CUSTOMIZED INQUIRIES



KEW SAFE LINE SERIES

PRODUCT 2.4: - *EARTH LEAKAGE RELAYS*



S-ELR+



D-ELR+

DESCRIPTION

The **S-ELR+ and D-ELR+ Earth Leakage Relays** are advanced protection devices designed to detect leakage current from 10mA to 30A with high accuracy ($\pm 0.5\% \pm 1$ digit). They feature a digital display (7-segment in S-ELR+, LCD in D-ELR+) and operate with auto/manual reset modes. The relay supports wide auxiliary supply ranges (45–270V AC/DC or 90–440V AC/DC). Key functions include **trip indication, test/reset button, delay time programming, and LED fault indication**. The product is suitable for panel mounting with a compact design and supports optional RS485 & MODBUS and **2 relay outputs for contactor tripping**. Complies with IEC 62020 and other safety standards.

Features Of Earth Leakage Relay

Relay Type	Digital Earth Leakage Relay (Available in Segment & Dot Matrix Display Variants)
Measured Parameters	Earth Leakage Current (10mA – 30A, Settable), Imbalance Current
Smart Display & Navigation	1 Row of 3/4 Digit LED Display (Model-wise), LED Trip Indication, Fault & Delay Status, CT Open Indication
Phase Sequence Protection	Yes – Ensures correct phase sequence detection (applicable for 3Ø system)
Communication & Features	RS-485 MODBUS RTU (Optional), Two Relay Outputs (Optional), CICT Slot for Plug-in CTs, Delay Time Programmable



SPECIFICATION OF Earth Leakage Relay

Electrical Characteristics: -

Meter Type	Detects Earth Leakage current and trips the relay to prevent electric shock.
Trip Current Range	10mA – 30A (Settable) Trip Delay- 100ms – 5000ms (Settable)
Relay Output	1 Relay Output (2A @ 250V AC), for tripping or alarm signalling
Auxiliary Supply	45–270V AC/DC or 90–440V AC/DC (Dual supply)
CT Secondary	5A (Compatible with CBCT)
Output Relay	1 C/O, 8A / 250V AC, Potential Free
Relay Contact	8AMPS/16AMP, 250V AC POTENTIAL FREE

Environmental Characteristics: -

Operating Temperature	–10°C to +55°C
Storage Temperature	-10°C to 60°C

Mechanical Characteristics: -

Mounting Type	Panel Mount
Panel Dimensions	S-ELR+:-(96X96) D-ELR+:-(95X35)

Display Characteristics

Display Type	S-ELR+-- (3 Digit 7-Segment RED LED Display) D-ELR+ -- (4 Digit RED LED Display)
Indications	Error Code Display, Fault LED Indicators

APPLICATIONS OF Earth Leakage Relay

Distribution Panels for Commercial Buildings



UPS & IT Server Power Panels



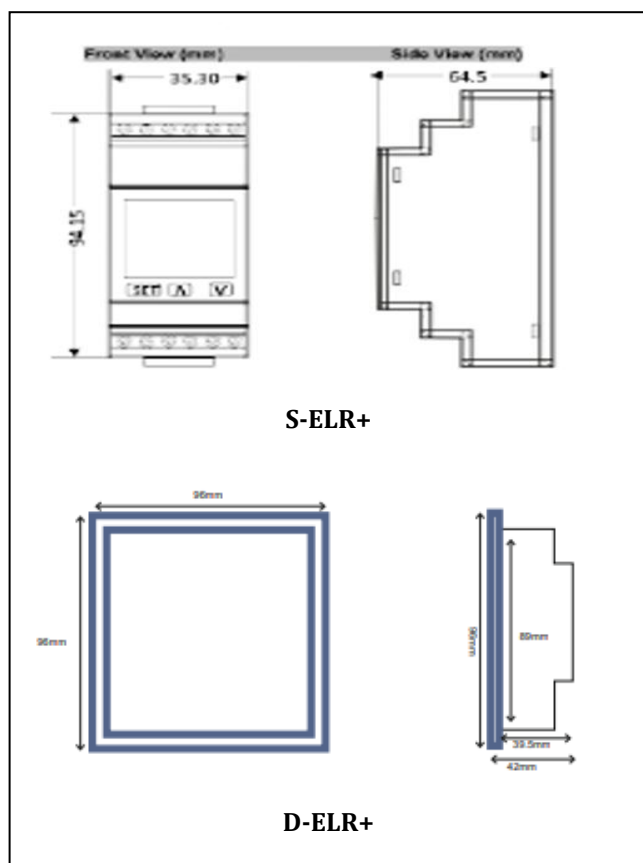
Industrial MCC Panels with Dual Feeders



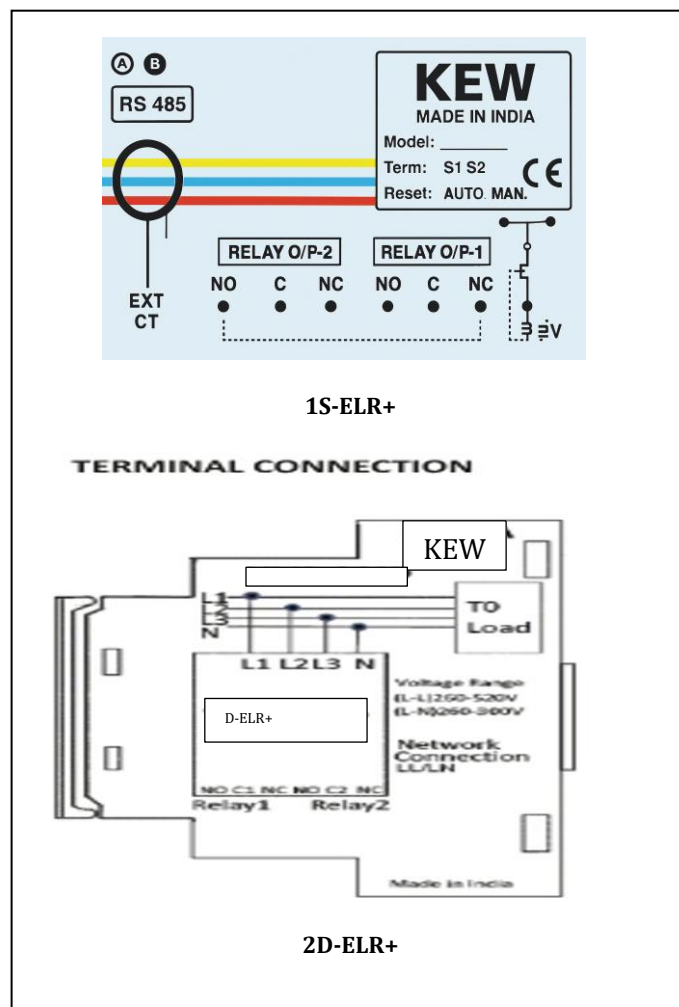
Solar Inverter & Battery Bank Installations



Panel CutOut



Terminal Connection



Ordering information:

MODEL	Display & Protection	ACCURACY CLASS	AUX SUPPLY
S-ELR+ Single Channel Earth Leakage Relay	IMBALANCE CURRENT	$\pm 0.5\%$	45–270V AC/DC, 90–440V AC/DC
D-ELR+ Dual Channel Earth Leakage Relay	IMBALANCE CURRENT	$\pm 0.5\%$	45–270V AC/DC, 90–440V AC/DC

***WHILE ORDERING PLEASE MENTION RANGE, CLASS & AUX SUPPLY & FOR BULK CUSTOMIZED INQUIRIES**

KEW SAFE LINE SERIES

PRODUCT 2.3: - *CURRENT MONITOR RELAYS*



SFL-962



SFL-964D

DESCRIPTION

The **KEW SFL Series Current Monitor** is a smart digital panel meter designed for accurate and reliable current monitoring in both single-phase and three-phase systems. It offers **True RMS measurement**, a high-visibility 4-digit LED display, and advanced protection features like under/overcurrent, phase loss, **reverse current**, and **unbalanced load detection**. With support for RS-485 & MODBUS communication and alarm relay outputs, it ensures smooth integration with industrial automation systems. Its **wide auxiliary supply range**, compact design, and easy front-key programming make it ideal for modern electrical panels. Perfect for industrial and commercial use, the **SFL series delivers real-time protection and performance monitoring** with high precision.

FEATURES OF CurrentMonitor Relay (SP)

Meter Type	Single Phase & Three Phase Current Monitor
Measured Parameters	Current (True RMS), Phase Sequence, Reverse Current, Phase Loss, Unbalance Detection
Smart Display & Navigation	4-digit bright LED display with Trip/Alarm Indication, Error Code Display
Protection Features	Under Current, Over Current, Phase Loss, Phase Reversal, Unbalance, Reverse Current
Relay Output	One Relay Output (2A rated) available for contactor tripping or external fault indication



SPECIFICATION OF Current Monitor Relay

Electrical Characteristics: -

Meter Type	Current Monitor (AC) – Single & Three Phase
RMS Current Input	50mA – 10A (CT set.) (Accuracy: - $\pm 0.5\%$ FS +1 dgt.)
Relay Output	1 Relay Output (2A @ 250V AC), for tripping or alarm signalling
VA Burden	Auxiliary Supply: <1.5 VA Current Input: <1.0 VA
Auxiliary Supply	150-300V AC, 45-270V AC/DC, 19-90V AC/DC
PARAMETER (Current)	R Phase, Y Phase, B Phase, Average
Relay Contact	2AMPS , 250V AC POTENTIAL FREE

Environmental Characteristics: -

Operating Temperature	-10°C to +55°C
Storage Temperature	-10°C to 60°C

Mechanical Characteristics: -

Mounting Type	Panel Mount (Flush Type)
Panel Dimensions	96 × 96 × 65 mm

Display Characteristics

Display Type	4-Digit Red LED Display
Indications	Error Code Display, Fault LED Indicators

APPLICATIONS OF Current Monitor Relay

Motor Control Panels



Building Management Systems (BMS)



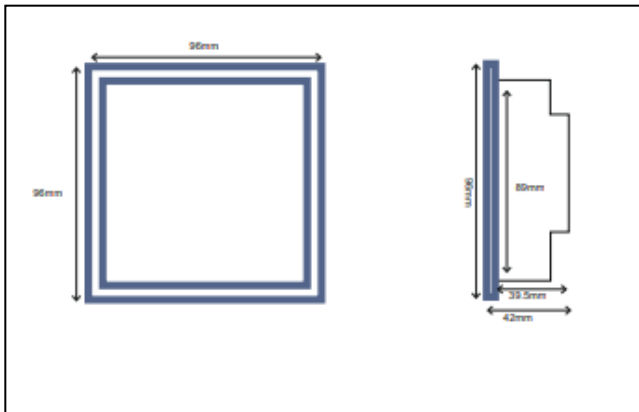
OEM Electrical Panels



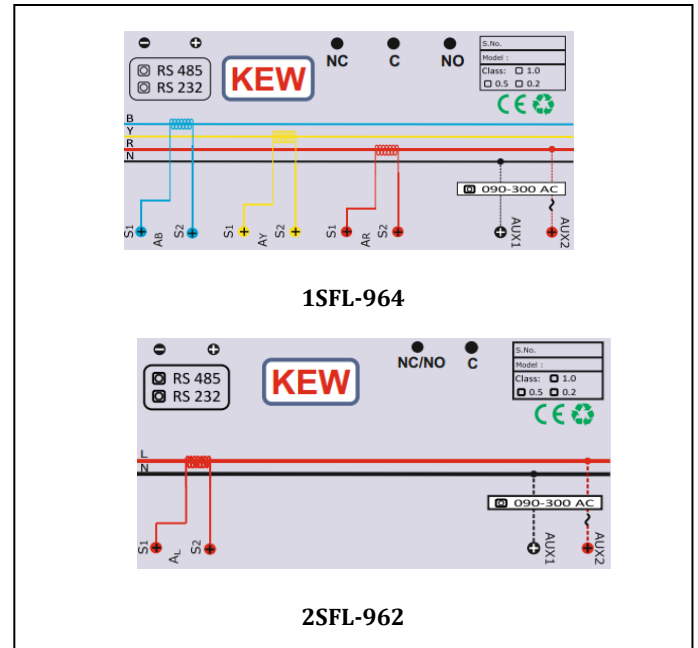
Commercial Sub-Metering / Retail Malls



Panel CutOut



Terminal Connection



Ordering information:

MODEL	Display & Protection	ACCURACY CLASS	AUX SUPPLY
SFL-964	3 Phase Over & Under Current Protection	$\pm 0.5\%$	150–300V AC, 45–270V AC/DC, 19–60V AC/DC
SFL-962	1 Phase Over & Under Current Protection	$\pm 0.5\%$	150–300V AC, 45–270V AC/DC, 19–60V AC/DC
SFL-964D	3 Phase Over & Under Current Protection with Display	$\pm 0.5\%$	150–300V AC, 45–270V AC/DC, 19–60V AC/DC
SFL-962D	1 Phase Over & Under Current Protection with Displa	$\pm 0.5\%$	150–300V AC, 45–270V AC/DC, 19–60V AC/DC

***WHILE ORDERING PLEASE MENTION RANGE, CLASS & AUX SUPPLY & FOR BULK CUSTOMIZED INQUIRIES**

KEW SAFE LINE SERIES

PRODUCT 2.2: - *VOLTAGE MONITOR RELAYS (SELF POWERED)*



SFL-964D



SFL-964D+

DESCRIPTION

SFL-964D / SFL-964D+ is a **digital DIN rail mount voltage monitoring relay** designed to provide precise protection against **over-voltage, under-voltage, phase loss, and imbalance** conditions in single and three-phase systems. It features a user-friendly auto/manual scroll 3-digit LED display and **TRMS measurement** for accurate real-time monitoring. The device supports a wide operating range (160–300V AC L-N / 260–520V AC L-L) and offers fully programmable trip settings. Built with robust **FR-ABS housing and polycarbonate transparent lens**, it ensures durability in industrial environments. Error codes display all faults clearly, and optional RS-485 MODBUS communication and LOGG MASTER software make it integration-ready. **Two 8A relay** outputs are provided for alarm or direct control.

FEATURES OF Voltage Monitor Relay (SP)

Meter Type	Single Phase & Three Phase Digital Voltage Monitoring Relay
Display Mode	3-digit Red Seven Segment LED, Auto / Manual Scroll (User-selectable)
Protection Functions	Under / Over Voltage, Single Phase Prevention
Accuracy	RMS Measurement for precise voltage detection
Power Supply	Wide Range SMPS Power Supply (Self powered version available)

SPECIFICATION OF Voltage Monitor Relay (SP)

Electrical Characteristics: -

Meter Type	Voltage Monitoring Relay (Single Phase / Three Phase)
Voltage Trip setting	160–300VAC(L-N), 260-520VAC(L-L)
Frequency Trip setting	45 to 65 Hz
VA Burden	Auxiliary Supply: <2.5 VA Voltage Input: <0.2 VA/Phase
Relay Contact	2NOS-8 AMPS, 250VAC POTENTIAL FREE
PARAMETER (Voltage)	<ul style="list-style-type: none"> - RY (Phase-Phase) - YB (Phase-Phase) - BR (Phase-Phase) - Average (Phase-Phase) - RN (Phase-Neutral) - YN (Phase-Neutral) - BN (Phase-Neutral) - Average (Phase-Neutral)

Environmental Characteristics: -

Operating Temperature	0°C to 50°C
Storage Temperature	-10°C to 60°C

Mechanical Characteristics: -

Mounting Type	Panel Mount
Panel Dimensions	95x35, Depth (Behind Bezel)-65

Display Characteristics

Display Type	1 Rows of 3 Digit Red Seven Segment
Indications	Error Code Display, Fault LED Indicators

APPLICATIONS OF Voltage Monitor Relay (SP)

Motor Control Panels



Building Management Systems (BMS)



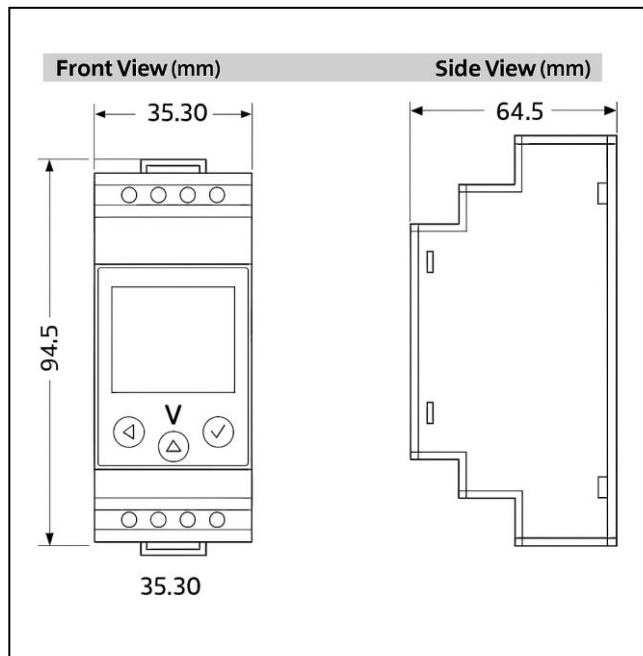
OEM Electrical Panels



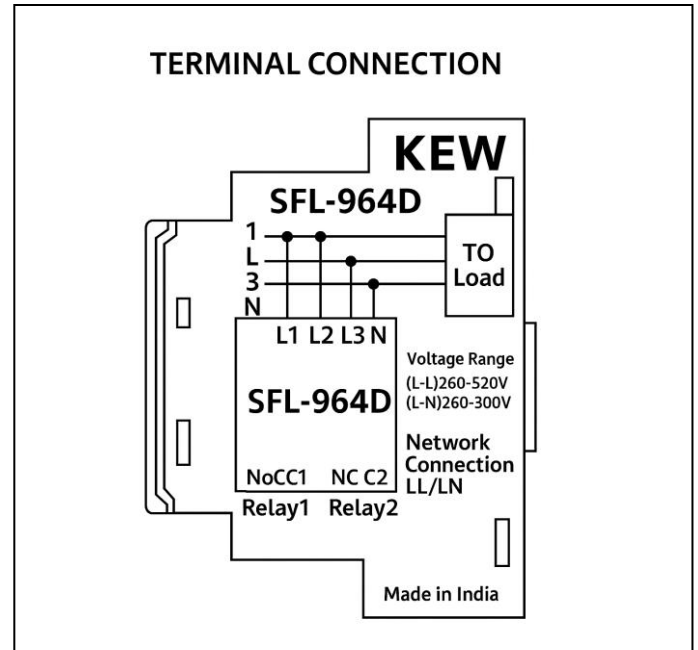
Commercial Sub-Metering / Retail Malls



Panel CutOut



Terminal Connection



Ordering information:

<u>MODEL</u>	<u>Display & Protection</u>	<u>ACCURACY CLASS</u>	<u>AUX SUPPLY</u>
SFL-964D LED DISPLAY (3PHASE/1PHASE)	VOLTAGE (L-L & LN) UNDER-OVER SPP VOLTAGE IMBALANCE	1.0 0.5	200-600V AC(L-L) 45-270V AC/DC(L-N) 19-60V AC/DC SELF POWERED
SFL-964D+ LED DISPLAY (3PHASE/1PHASE)	VOLTAGE (L-L & LN) UNDER-OVER SPP VOLTAGE IMBALANCE	1.0 0.5	200-600V AC(L-L) 45-270V AC/DC(L-N) 19-60V AC/DC SELF POWERED

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KEW SAFE LINE SERIES

PRODUCT 2.1: - *VOLTAGE MONITOR RELAY*



DESCRIPTION

The **KEW Voltage Monitor Relay** (SFL-VR3 for 3PH & SFL-VR1 for 1PH) is a compact, programmable device for monitoring voltage faults like **over/under voltage**, **phase loss**, and **voltage unbalance**. It offers **true RMS measurement**, **auto/manual fault display**, and **LED indicators** for easy fault identification. Optional **4-digit LED display**, **RS-485 & MODBUS**, and **alarm relay output** enhance system integration. Designed with **SMPS-based auxiliary supply** and wide voltage range (150–300V AC/DC), it ensures stable performance. All parameters are **user-configurable** via front keys. Suitable for **motor protection and panel integration** in industrial and commercial setups. Accurate, efficient, and easy to install.

FEATURES OF Voltage Monitor Relay

Meter Type	Single Phase & Three Phase KEW Voltage Monitor Relay
Function	Monitors and protects from Over/Under Voltage, Phase Loss, Imbalance
Smart Display & Navigation	4-digit bright LED display with Auto Scroll, Error Code Indication
Accuracy	±0.5% FS ±1 digit (True RMS Measurement)
Power Supply	SMPS, Transformer-based: 150–300V AC, 45–270V AC/DC, 19–60V AC/DC



SPECIFICATION OF Voltage Monitor Relay

Electrical Characteristics: -

Meter Type	Voltage Monitoring Relay (Single Phase / Three Phase)
Auxiliary Supply Voltage	150–300V AC, 45–270V AC/DC, 19–60V AC/DC
RMS Voltage	20–600V (RMS)
VA Burden	Auxiliary Supply: <2.5 VA Voltage Input: <0.2 VA/Phase
Relay Contact	1 NO (Potential-Free), rated 2A @ 250V AC
Measurement Types	Phase-to-Neutral (1PH), Phase-to-Phase (3PH)

Environmental Characteristics: -

Operating Temperature	0°C to 50°C
Storage Temperature	-10°C to 60°C

Mechanical Characteristics: -

Mounting Type	Panel Mount
Panel Dimensions	SFL-VR3: 96 × 96 mm SFL-VR1: 105 × 40 mm

Display Characteristics

Display Type	4-digit, 7-segment LED (1 Row), Auto Scroll
Indications	Error Code Display, Fault LED Indicators

APPLICATIONS OF Voltage Monitor Relay

Motor Control Panels



Building Management Systems (BMS)



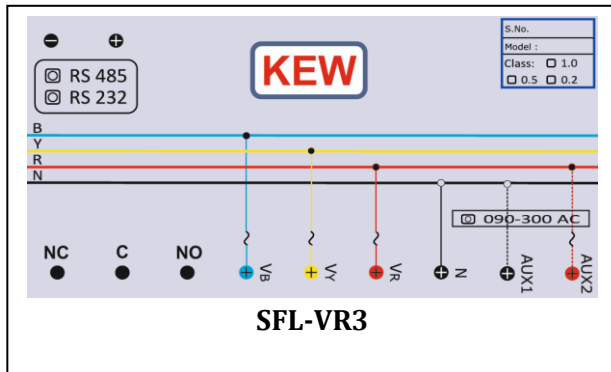
OEM Electrical Panels



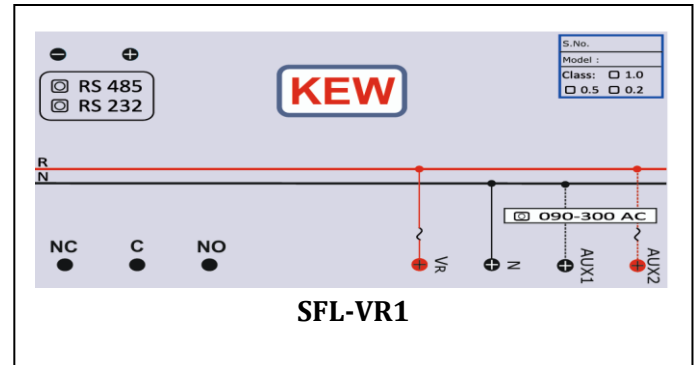
Commercial Sub-Metering / Retail Malls





Terminal Connection



Terminal Connection



Ordering information:

<u>MODEL</u>	<u>Display & Protection</u>	<u>ACCURACY CLASS</u>	<u>AUX SUPPLY</u>
SFL-VR3 (3PHASE) 	VOLTAGE (L-L & LN) UNDER-OVER SPP	1.0 0.5	150–300V AC (TX Supply) 45–270V AC/DC 19–60V AC/DC
SFL-VR1 (1PHASE) 	VOLTAGE (L-N) UNDER-OVER	1.0 0.5	150–300V AC (TX Supply) 45–270V AC/DC 19–60V AC/DC
SFL-VR (HVLV)	SELF POWERED UNDER-OVER	1.0	150–270V SELF POWERED

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