

- Under voltage, over voltage, under frequency, over frequency, asymmetry, phase failure and phase sequence monitoring in 3 \emptyset system
- RMS measurement
- Power ON delay, Trip time delay and Delay on release
- LED Indication: Relay ON, Power ON
- Adjustable switching hysteresis
- Two separate alarm relays
- Din-Rail Mount



Voltage Phase Monitor

SPECIFICATIONS

ENVIRONMENTAL SPECIFICATION

DISPLAY	Liquid Crystal Display 3 Digits
----------------	------------------------------------

INPUT SPECIFICATIONS

FUNCTIONS

MEASUREMENTS	Voltage (V_{L-N} , F_{L-L}), Frequency, Phase Asymmetry, Phase Failure, Phase Sequence
---------------------	--

TIME SETTING	Power ON delay, Trip time delay and Delay on release
---------------------	--

ALARM INDICATIONS	Trip
--------------------------	------

LATCHING	Selectable
-----------------	------------

RESET	Auto/Manual reset
--------------	-------------------

ELECTRICAL CONNECTION	3 \emptyset -3 wire, 3 \emptyset -4 wire
------------------------------	--

SUPPLY VOLTAGE	Self powered
-----------------------	--------------

OPERATING RANGE	280 - 520V AC (L-L) 160 - 300V AC (L-N)
------------------------	--

VA RATING	30VA max.
------------------	-----------

FREQUENCY	45 - 65Hz
------------------	-----------

MEASURING RANGE (RMS Value)	0 - 520V AC (L-L)* 0 - 300V AC (L-N)*
------------------------------------	--

TRIP SETTINGS

UNDER VOLTAGE	280 to 520V AC (L-L) [for 3 \emptyset -3 wire] 160 to 300V AC (L-N) [for 3 \emptyset -4 wire]
----------------------	--

OVER VOLTAGE	280 to 520V AD (L-L) [for 3 \emptyset -3 wire] 160 to 300V AC (L-N) [for 3 \emptyset -4 wire]
---------------------	--

UNDER FREQUENCY	45 - 65Hz
------------------------	-----------

OVER FREQUENCY	45 - 65Hz
-----------------------	-----------

PHASE FAILURE	Yes
----------------------	-----

PHASE SEQUENCE	Yes
-----------------------	-----

PHASE ASYMMETRY	5.0 - 99.9%
------------------------	-------------

* For 3 \emptyset -3W, at least 2 phase must be present

* For 3 \emptyset -4W, at least 1 phase must be present

TRIP TIME SETTINGS

POWER ON DELAY	2 - 99.9 Sec
-----------------------	--------------

TRIP TIME DELAY	0 - 99.9 Sec
------------------------	--------------

DELAY ON RELEASE	0 - 99.9 Sec
-------------------------	--------------

RESPONSE TIME	<200ms
----------------------	--------

HYSTERESIS

VOLTAGE	1.0- 99.9V
----------------	------------

FREQUENCY	0.2 - 2Hz
------------------	-----------

ASYMMETRY	2 - 20%
------------------	---------

RESOLUTION

VOLTAGE	1V
----------------	----

FREQUENCY	0.1Hz
------------------	-------

ACCURACY

VOLTAGE	$\pm 1\%$
----------------	-----------

FREQUENCY	$\pm 0.3\text{Hz}$
------------------	--------------------

TIME (Recovery Time, Trip Delay, Power ON Delay)	$\pm 5\%$ of setting + 200ms
---	------------------------------

OUTPUT SPECIFICATIONS

NO. OF RELAYS	2
----------------------	---

TYPE OF OUTPUT (Relay 1)	45 - 65Hz SPDT
---------------------------------	-------------------

(Relay 2)	SPDT
------------------	------

RELAY RATING	N/O: 5A @ 250V AC N/C: 3A @ 250V AC
---------------------	--

LED INDICATION

LED 1 (Green)	Power ON
----------------------	----------

LED 2 (Red)	Relay 1 (Continuously ON after trip)
--------------------	--------------------------------------

LED 3 (Red)	Relay 2 (Continuously ON after trip)
--------------------	--------------------------------------

ENVIRONMENTAL SPECIFICATION

AMBIENT TEMP.	Operating Temp: 0°C to 50°C Storage Temp: -20°C to +70°
HUMIDITY (Non-condensing)	95% RH
POLLUTION DEGREE	IP50 Faceplate IP30 Housing IP20 Terminals

MECHANICAL SPECIFICATIONS

NO. OF PUSH BUTTON	3
SIZE	35mm width
MOUNTING	Din Rail Mount
WEIGHT	135 g
CONDUCTOR CROSS SECTION (SOLID)	1 x (0.5 to 4) Sq. mm

CONDUCTOR CROSS SECTION

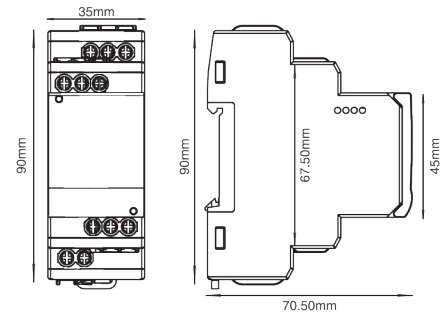
(SLEEVED)	2 x (0.5 to 1.5) Sq. m
(STANDARD)	1 x 0.5 TO 2.5) Sq. mm

SCREW TIGHTENING TORQUE	0.5 N-M
--------------------------------	---------

EMC

ELECTRICAL COMPATIBILITY	IEC 61326-1
ESD IMMUNITY IEC 61000-4-2	Level 3
SURGE IMMUNITY IEC 61000-4-5	±2 kV common mode, ±1 kV differential mode
RADIATED SUSCEPTIBILITY IEC 61000-4-3	Level 3, 80 - 1000 MHz
CONDUCTED SUSCEPTIBILITY IEC 61000-4-6	LEVEL 2
VOLTAGE DIPS & INTERRUPTION IEC 6100-4-11	Dips: 0% residual voltage / 1 cycle (Crit B.) 40% residual voltage / 10 cycles 50 Hz / 12 cycles 60 Hz (Crit C) 70% residual voltage / 25 cycles 50 Hz . 30 cycles 60 Hz (Crit C) Interruptions: 0% residual voltage / 250 cycles 50 Hz / 300 cycles 60 Hz (Crit C)
CONDUCTED EMISSIONS	CISPR-11 & IEC 61000-6-3
RADIATED EMISSIONS	CISPR-22
ELECTRICAL FAST TRANSIENT: IEC 6100-4-4	Level 3

DIMENSIONS



TERMINAL CONNECTIONS

