Grid Solutions
a GE and Alstom joint venture

PROTECTION PRODUCT SOLUTIONS

MVTP

Buswire supervision for high impedance schemes

The MVTP is a monitoring device, used to ensure the integrity of busbar, and restricted earth fault schemes.

Type MVTP

Monitoring and protection

The MVTP relay is available in two types:

- Type MVTP 11 - single phase relay.
- Type MVTP 31 - three phase relay.

These provide continuous supervision of the buswires in high impedance type busbar protection schemes, detecting open-circuited buswires as well as open-circuited main current transformers.

In earth-fault only protection schemes, the single-phase relay is employed.

MVTP relays have a setting range of 1-16 V, adjusted by means of DIL switches on the relay front panel. Relays are continuously rated at 600 V rms and no external components are required.

The AC voltage input is continuously monitored and when it exceeds the level pre-set by means of the plug setting, the output relay is actuated after a three or ten second delay.

The hand reset contacts of the output relay are normally connected across the buswires of the busbar protection thus short-circuiting the busbar protection relay and rendering the protection of the zone concerned inoperative.

On the same output relay are hand reset contacts for alarm purposes.

Operation of the relay is indicated by a hand resettable mechanical flag.

CUSTOMER BENEFITS

- Integral buswire shorting facility
- Low ACburden
- No external resistors required
- Ensures the availability of MCAG and MFAC schemes

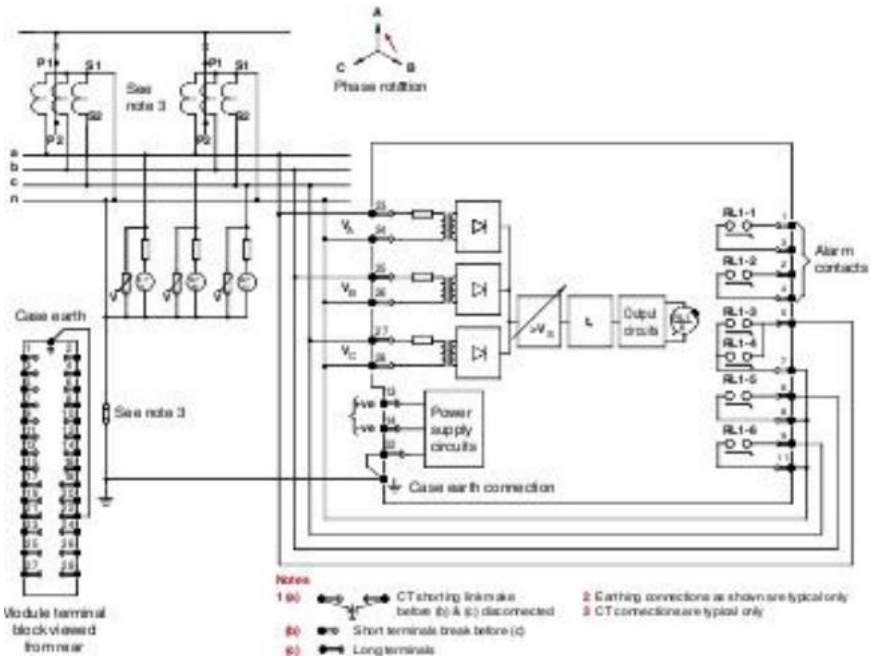

Figure 1 Application diagram: buswire voltage supervision relay, type MVTP31

TECHNICAL DATA

- Burdens
- Measuring circuit - typical burdens
- Settings
- Setting range (VS) 1-16 V rms adjusted by means of DIL switches in 1 V steps.

APPLIED VOLTAGE VAC	2	8	14	600
BURDEN VA	$0.04x10^{-3}$	$0.7x10^{-3}$	$2.2x10^{-3}$	4.0

- Auxiliary supply - typical burdens at the upper rated voltage

Vx RATED VOLTAGE	OUTPUT RELAY NOT ENERGISED		OUTPUT RELAY ENERGISED	
(V dc)	mA	W	mA	W
30/34	24	0.82	90	3.06
48/54	24	1.3	90	4.86
110/125	24	3.0	35	4.37
220/250	24	6.0	35	8.75

AUXILIARY SUPPLIES (V_X)

RATING (VDC)	OPERATIVE RANGE (VDC)
24/27*	19.2-30.2
30/34	24-37.5
48/54	37.5-60
110/125	87.5-137.5
220/250	175 -275

*** Use a 30/34 V relay with a separate MSTZ 02 DC/DC converter.**

CONTACT RATINGS

	MAKE AND CONTINUOUSLY CARRY	MAKE AND CARRY FOR 3 SECONDS	BREAK
AC	1250 VA with maxima of 5 Amps and 600 V	7500 VA with maxima of 30 Amps and 600 V	1250 VA with maxima of 5 Amps and 600 V
DC	1250 W with maxima of 5 Amps and 600 V	7500 W with maxima of 30 Amps and 600 V	100 W (resistive) 50 W (inductive) and maxima of 5 Amps and 600 V

All relays are rated continuously at the maximum voltage in the operative range.

- Frequency 50 and 60 Hz
- Operative range 47-61 Hz
- Operating time Fixed at 3 or 10 seconds
- Contact disengaging time 150 ms
- Drop off/pick up ratio
  > 85% after 3 second delay
  > 98% before 3 second delay

CONTACTS

Buswire shorting contacts are normally open type. The two alarm contacts may be specified in any combination of make or break (2M, 1M 1B, or 2B)

Type MVTP relay withdrawn from case

The hand-reset contacts will carry 150 A rms for 0.5 seconds.

Thermal rating

- Continuous 600 V rms per phase on all three phases simultaneously (at any setting).
- Short time The relay will withstand 2 kVrms per phase, for 3 seconds on all three phases simultaneously (at any setting)

Cases

Types MVTP 11 and MVTP 31 are supplied in size 4 and size 6 cases respectively, as shown in Figures 2 and 3.

INFORMATION REQUIRED WITH ORDER

- Relay type
- DC auxiliary voltage
- Configuration of alarm contacts
- Time delay 3 seconds or 10 seconds

Self monitoring for high impedance unit protection, for peace of mind

TRACK RECORD - AUXILLIARY RELAYS

Over 200,000 MVAJ tripping relays delivered since launching in 1983
Over 150,000 MVAA auxiliary relays delivered since launching in 1983
Over 350,00 PRiMA auxiliaries delivered since launching in 1994
Nearly 300,00 MVAX relays delivered since 1983

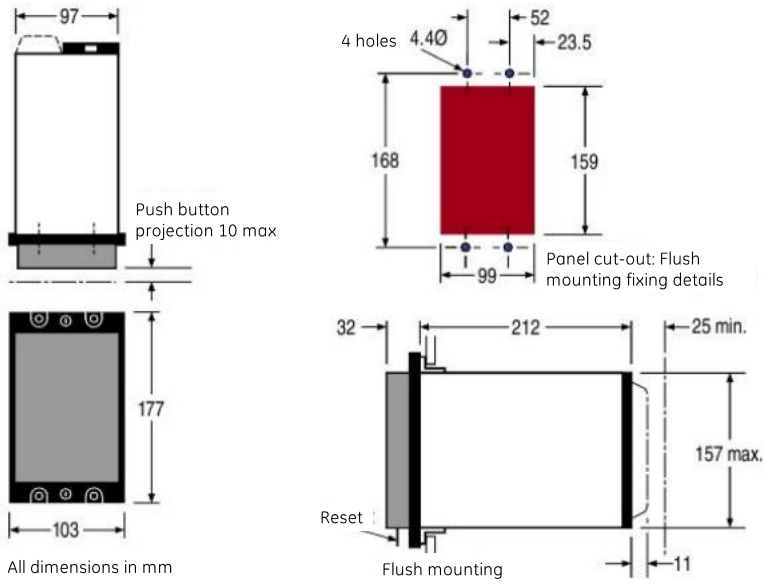

Figure 2 MVTP 11. Case outline size 4

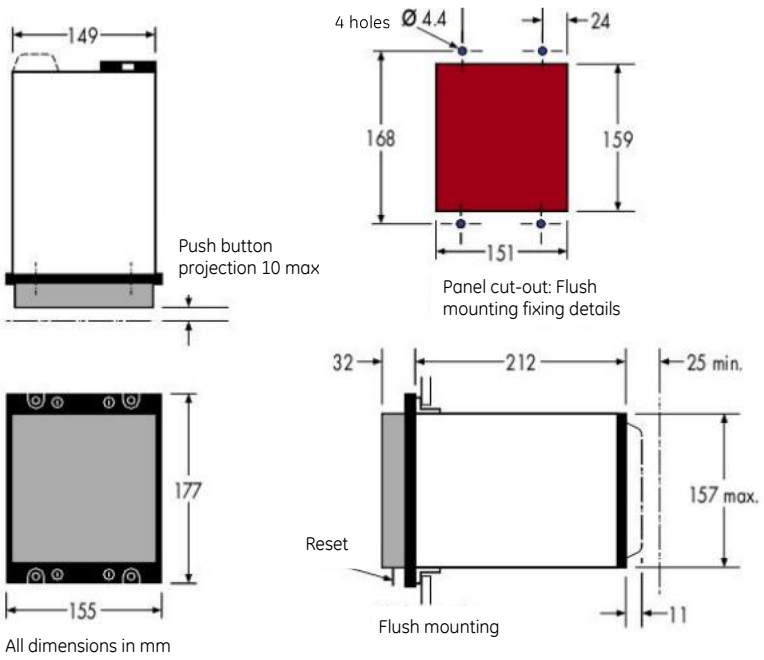

Figure 3 MVTP 31. Case outline size 6

For more information please contact
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