DIGITAL-MULTIFUNCTION TRANSFORMER DIFFERENTIAL PROTECTION RELAY

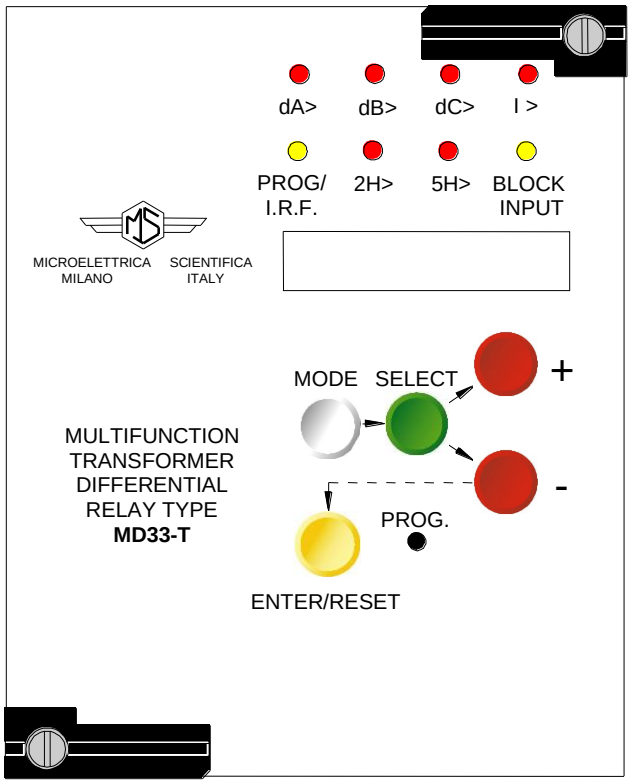
TYPE

MD33-T

OPERATION MANUAL

Addendum

For version with IRIG-B Time synchronization



CE

INDEX

2.7.1 - Clock synchronization

The clock can be synchronized via the IRIG-B digital input (terminals 1 – 14) or the serial communication interface. By programming the variable (T_{syn} = 5', 10', 15', 30', 60', IRGI-B, Dis) the Synchronization is made in different ways :

- T_{syn} = Dis : The current date can only be modified manually either via the front panel keyboard (SETTING MENU) or via the serial communication interface (programming mode).
- T_{syn} = IRIG-B : The clock is automatically updated by the IRIG-B input signal.
- T_{syn} = 5', 10', 15', 30', 60' : The clock is updated via the serial interface as follows

The unit expects to receive a sync signal at the beginning of every hour and once every T_{syn} minutes. When a sync signal is received, the clock is automatically set to the nearest expected synchronization time.
For example: if T_{syn} is 10min and a sync signal is received at 20:03:10 January the 10th, 98, then the clock is set to 20:00:00 January the 10th, 1998. On the other hand, if the same sync signal were received at 20:06:34, the clock would be set to 20:10:00, January the 10th 98.
Note that if a sync signal is received exactly in the middle of a T_{syn} period, the clock is set to the previous expected synchronization time.

8. DIGITAL INPUTS

Three inputs active when the relevant terminals are shorted are provided:

- **B1** (terminals 1 - 2) : For function blocking
- **B2** (terminals 1 - 3) : To activate harmonic restraint variation at inrush
- **B3** (terminals 1 - 14) : Another optoisolated input is available for a IRIG-B time Synchronisation input from GPS – Accuracy 10ms –
  Time Synchronization can also be made via serial communication interface (see § 2.7.1)
  ATTENTION!
  Connection of a GPS system to the IRIG-B input must be made through a proper adapter device supplied on request as optional.
- **B4** (terminals 1 - 15) : External trigger for oscillographic records

13.1 - PROGRAMMING OF FUNCTIONS SETTINGS

1In	500	**A**	Rated primary current of Cts on Transformer's side 1	1 - 65500	1	A
2In	500	**A**	Rated primary current of Cts on Transformer's side 2	1 - 65500	1	A

Tsyn	Dis	**m**	Synchronization Time Expected time interval between sync. pulse.	5 - 60 – IRIG-B - Dis	5-10 15-30 IRIG-B 60-Dis	m

18. CONNECTION DIAGRAM (SCE1937 Rev.1)