MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO. LTD.
CIN No. U40109MH2005SGC153646

From,
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Ref. EE/EHV O&M/DN/SG**NT NO 108**/2025-26   Dtd**12 2 JAN 2026**

Budgetary offer
(Through MSETCL webpage)
TO WHOM SO EVER IT MAY CONCERN

Dear Sir,

The budgetary offers through email/By Hand/By Post are invited Providing & Fixing of Numerical Differential & Distance Protection Relays at various substations under EHV O&M Division, Sangli as per Schedule A. You are requested to quote your lowest rates for tentative quantities as per Schedule A attached herewith.

SCHEDULE 'A

Sr No.	Description	Unit	Qty	Ex Work Rate
1	Providing Fixing, Commissioning & Testing of Numerical Differential Protection Relay (02 Winding)	EA	1	
2	Providing Fixing, Commissioning & Testing of Numerical Distance Protection Relay	EA	1	

The above rates are Exclusive of all taxes and charges.

Numerical Differential Protection Relays should have the following features:-

1) Be fully Numerical, programmable, IEC-61850 compliant (site selectable IEC61850 Edition1&2) having built-in facility for CT ratio correction/selection.

2) Numerical relays shall be SCADA/PC compatible and shall have built-in display units which will indicate the various system parameters and also the settings. The selection of mode/parameter shall be through feather touch push buttons.

3) Be triple pole type, with faulty phase identification / indication.

4) Have an operating time not greater than 40 milliseconds at 2 times setting,35 milliseconds at 5 times setting.

5) Have three instantaneous high set over-current units.

6) **Be a percentage biased Differential current relay with adjustable bias setting range of 20-60%.**

7) Be suitable for Auto transformers (ICTs) & two or three winding Transformers.

8) Be suitable for rated current of 1Amp.

9) Have second harmonic or other inrush proof features and also should be stable under normal over fluxing conditions. Magnetizing inrush proof feature shall not be achieved through any intentional time delays e.g. use of timers to block relay operation or using disc operated relays.

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10) Be capable of adapting to have internal feature in the relay to take care of the angle &ratio correction. Should have suitable inbuilt Over-fluxing Protection configuration for Alarm/Trip.

11) The processor capabilities of the Differential Protection relay shall be 32 bit.

12) The relay shall have GPS time synchronization via IRIG-B, via binary input, via the communication protocol of SCADA/ Protection system or direct fiber connectivity (using SNTP and PTP).

13) One set of (copiable) software required for relay Parameterization and retrieving data from the relay along with two sets of associated cables, connectors, etc. shall be offered free of cost .

14) BI & BO not less than 16 nos. & LED not less than 8 nos.(Dual Colour)

Numerical Distance Protection Relays should have the following features:

1) The Distance Protection Relays offered for Retrofitting shall be Fully Numerical & IEC-61850 Edition 1&2 compliant having built-in supervision feature & having not less than six independent measuring loops for continuous and simultaneous measurement of all potential fault loops (phase to phase & phase to earth). The supervision scheme shall continuously monitor the healthiness of various internal circuitry and sub-modules.

2) Numerical relays shall be SCADA/PC compatible and shall have built-in display units which will indicate the various system parameters as also the settings. The selection of mode/parameter shall be through feather touch push buttons.

3) TheNumerical Distance Protection Relays offered shall have the following built infeatures:
(i) Power Swing blocking.
(ii) Single & Three phase Autore-closing, programmable as per requirement.
(iii) PT supply supervision.
(iv) DC supply supervision.
(v) Carrier supervision & programmable tele-protection facility.
(vi) Distance to fault indication.
(vii) Events recording.
(viii) Detection of over-loading (current) settable for trip or alarm with programmable time setting.
(ix) Disturbance recording.
(x) Switch-on-to-fault trip (SOTF).
(xi) Check synchronizing & deadline charging.
(xii) Broken Conductor detection.
(xiii) Phase overvoltage detection.
(xiv) Self-Supervision.
(xv) Back-up O/C-E/F protection.
(xvi) Local Breaker Backup protection

4) The distance protection shall have minimum four directional zones (three forward zones and one reverse zone).It shall be possible to set overreach setting of each zone independently. **Operating time for faults in the first zone shall be instantaneous and shall not exceed 40 milliseconds including the trip relay timing.** Operation of second zone and third zone shall be with (variable) time delays, that of third zone being more than second zone timing.

5) One set of (copiable) software required for relay Parameterization and retrieving data from there lay along with two sets of associated cables, connectors, etc. shall be offered free of cost.

6) For Numerical Distance Protection Relays the communication protocol shall be as perIEC61850 with site selectable Edition 1 &2 support.

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7) The relay shall have GPS time synchronization via IRIG-B or via binary input or via the communication protocol of SCADA/ Protection system or direct fibre connectivity (using SNTP and PTP).

8) 16 Nos BI & 16 Nos BO & LED not less than 8 nos.(Dual Colour)

Note:-

1) Please note that said budgetary offer is only for estimate purpose & not considered for any bidding & no work order will be issued based on this Enquiry.

2) All interested bidders are requested to submit their best reasonable budgetary offer for above works on **Email ID: ee3120@mahatransco.in**/ By Hand/By Post upto 18:00 Hrs on Dtd.30.01.2026

Thanking you,

Yours' faithfully

Executive Engineer
EHV O&M Division, Sangli

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