

TIEPCO PROTECTION RELAY AND CONTROL PANELS

The TIEPCO's Relay and Control Panels meet the following specifications:-

1. Saudi Electricity Company
31-TMSS-01, 01-TMSS-01, 11-TMSS-10, 38-TMSS-05, 40-TMSS-02
2. Saudi Aramco
16-SAMSS-514, 16-SAMSS-513 and 34-SAMSS-815
3. Other International IEC/ANSI Standards
IEC 60297, IEC 60529, ANSI/NFPA 70 and ANSI/ECA 310D

Characteristics:

- Indoor panels metal enclosed, free standing, integrally designed with all necessary control, instruments, meters, protective and auxiliary relays, and other appurtenances.
- Panels are fabricated from minimum 2mm thick steel. Bottom of panels are covered with three (3), 3mm steel plates
- The gland and bottom plates are vermin proof.
- In each panel a removable type lifting eyes are provided.
- In relay panels swing door splinter proof with transparent tempered glass with minimum thickness 3mm are provided.
- All the control panels are dead front type and hinged door in the rear.
- Test facilities are provided to each protective relay, meter, and instrument separately through Field Test switches.
- All the wiring used within panels are rated 600/1000V with PVC insulated stranded annealed copper conductor in SEC projects. In Saudi Aramco projects type SIS, XHHW or THHN/THWN are used.
- White color ferrules with black lettering are used on both sides of wire to identify the device number and terminal number. For all trip circuits red ferrules are provided on wires.
- A copper ground bus is provided running the entire length of panel line-up.
- Colored Mimic Bus Diagram is provided on the front of Control Panel showing the bus bars, feeders, power transformers, circuit breakers, grounding switches etc. for each level.



- All routine tests prescribed in IEC 60439-1 or ANSI/IEEE C37.21 standards are performed on complete panel assembly.
- All the relays and meters are tested with secondary injection sets.
- Functional checks of complete panel are performed in the factory against approved vendor drawing and as per standard requirement.

Technical Specifications:

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| Auxiliary power supply for AC through MCB's | 220/127 Vac |
| Auxiliary power supply for DC through MCB's | 125Vdc or 220Vdc or 48Vdc |
| Normal current transformer secondary | 1A or 5A |
| Normal voltage transformer secondary | 115/ $\sqrt{3}$ V or 110/ $\sqrt{3}$ V |
| A fluorescent strip light rating | 127Vac/ 220Vac, 20W |
| Thermostatically controlled space heater rating | 127Vac, 50W |
| Protection degree outer cover (IEC 60529) | IP41 |
| Dimensions (H x W x D)(mm) | 2200 x 800 x800 |
| Ambient temperature (IEC 60694) | -5 °C to +40 °C |
| Painting color exterior/interior | RAL 7038 / RAL 9003 |
| Copper ground bus size | 150 mm ² |