RESIDUAL CURRENT CIRCUIT BREAKERS (RCCB) AND SOCKET OUTLET RCD (SRCD)

FOR COMMON ZONE

1. GENERAL

1.1 Scope

a) This section sets out the requirements for the residual current circuit breaker (RCCB) for distribution boards and Socket Residual Current Device (SRCD) for wall socket outlets

b) For single phase supply, the residual current circuit breaker (RCCB) shall be rated 240 Volts 50 Hz A.C. 2 poles. For three phase supply, the residual current circuit breaker (RCCB) shall be rated 415 Volts 50 Hz A.C. 4 poles.

c) Residual current circuit breaker (RCCB) shall be current operated type with milliampere tripping current and continuous load current as shown on Drawings.

d) All residual current circuit breakers (RCCB) and Socket Residual Current Device (SRCD) shall bear the local authority trade mark.

e) All residual current circuit breakers (RCCB) and Socket Residual Current Device (SRCD) shall come with a 'test tripping test' instruction label/sticker.

1.2 Standards and Regulations

a) SS 97-1: Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCB's) - General rules

b) BS EN 61008-1: Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCB's)

c) BS 7288: Specification for socket outlets incorporating residual current devices (S.R.C.D.s)

d) The RCCB of 30 mA sensitivity and the operating time less than 0.1 second is a Controlled Good as defined by the Singapore Consumer Protection (Safety Requirements) Registration Scheme (CPS). it must be registered with SPRING Singapore and bear the SAFETY Mark.

e) The RCCB of 10mA sensitivity and the operating time less than 0.1 second is to be provided to wall plugs of common zone. Discrimination has to be provided for localized tripping.

f) Socket Outlet RCD (SRCD) of 10mA is to be available at common area, namely corridors, washrooms, atrium. Discrimination has to be provided for localized tripping. During test tripping button test, the SRCD shall not create nuisance tripping to the upstream RCCB.

1.3 Quality

The manufacturer shall be certified to ISO 9001 Quality Management.

System in the design, manufacture, installation and service of the residual current circuit breaker (RCCB).

All SRCD must be protected against loss of neutral, loss of earth cable connection and NOT causing nuisance trip to upstream RCCB during trip test.

2. CONTRACTOR'S PROPOSALS AND SUBMISSIONS

2.1 Detailed products specifications. Copy of conformity and test reports.

3. PRODUCTS

3.1 High Surge immunity RCCB shall install at critical zone to prevent nuisance tripping due to transient over-voltage. A test button shall be incorporated to enable periodic check on the tripping mechanism of the RCCB.

3.2 All incoming and outgoing cables, and copper links connected to residual current circuit breakers (RCCB) shall be insulated.

4. TESTING AND COMMISSIONING

4.1 Test shall be conducted on all the residual current circuit breakers (RCCB) installations using an approved residual current circuit breaker (RCCB) tester. The actual value and one step below the actual tripping current shall be tested. Four (4) sets of test results endorsed by Licensed Electrical Workers (LEW) shall be submitted.

4.2 All SRCD is to be tested against loss of neutral and NOT causing nuisance trip to upstream RCCB during trip test.