

DEPARTMENT OF ELECTRICAL ENGINEERING  
INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY,  
SHIBPUR, HOWRAH-711 103.

No. 256/2022/EE-3/21(KM-M/C)

Dated: 23/03/2022

From : The Head of the Department,  
Electrical Engineering,  
IEST, Shibpur, Howrah-711 103

To : Enlisted vendors of the institute and other interested parties/ For Website Tender.

Dear Sir(s),

Sealed techno-commercial quotations mentioning technical specifications, validity, delivery date, price, warranty etc. are invited for supply of the following item(s) within 9 days from the date of publication of this notice in the institute website. The quotation should include 5% GST only as per institute rule, delivery charges, entry tax if any, etc. and should be addressed to the Head, Department of Electrical Engineering, Indian Institute of Engineering Science and Technology, Shibpur and should mention a firm delivery period. Preferences will be given to the suppliers who can supply ex-stock.

Any clarifications regarding specifications only may be obtained sending an e-mail with tender reference to [kmukherjee.ee@faculty.iests.ac.in](mailto:kmukherjee.ee@faculty.iests.ac.in) within 5 days after publication of the tender advertisement in the institute website.

The vendors, who are not enlisted in the Institute register, should submit the copies of their valid Trade License, PAN, latest Income Tax / Sales Tax Statement /Return, SSI/MSME certificate, GST certificate, if any etc. and any other commercial credentials. The institute shall provide the certificate for concessional GST rate (5%) along with the purchase order.



Yours faithfully,

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Signature of the indenting Officer/  
Concerned Faculty Member

Prof. & Head of EE Dept.  
IEST, Shibpur, Howrah – 711 103

Purchase of various instruments for Electrical Machines laboratory, EE Dept., IEST Shibpur:

**LT circuit breakers (MCB/MPCB) with mounting arrangement for protection – 1 lot, detailed below (Quantities given are representative, to be finalized based on funds available):**

(A) **Miniature circuit breakers (MCB's)** are required with B/C/D types of tripping characteristics as per the following:

- 1) DC MCB (Miniature Circuit Breakers), with C Characteristics with Slide Latch Release (SLR) for mounting and universal current feature, as per Standards: IS/IEC 60947-2, Voltage: 440VDC, 2 pole, breaking capacity: 10kA as per IS/IEC 60947-2, as per Siemens make type numbers as given below (or equivalent reputed make):
  - a) 5SL52087RC – 2 no.s
  - b) 5SL52107RC- 3 no.s
  - c) 5SL52207RC – 1 no.
  - d) 5SL52167RC – 2 no.s
  - e) 5SL52327RC – 1 no.
  - f) 5SL52407RC – 2 no.s
  
- 2) DC MCB (Miniature Circuit Breakers), with C Characteristics with Slide Latch Release (SLR) for mounting and universal current feature, as per Standards: IS/IEC 60947-2, Voltage: 220VDC, 1 pole, breaking capacity: 10kA as per IS/IEC 60947-2, as per Siemens make type numbers as given below (or equivalent reputed):
  - a) 5SL51067RC – 1 no.
  
- 3) AC MCB (Miniature Circuit Breakers), 3-pole, with D characteristics with Slide Latch Release (SLR) for mounting and universal current feature, as per Standards: IS/IEC 60898-1, rated voltage:  $U_n = 415V$ , 50/60Hz, breaking capacity: 15kA as per IS/IEC 60898-1, as per Siemens make type numbers as given below (or equivalent reputed):
  - a) 5SL73258RC, D type – 2 no.s
  - b) 5SL73068RC, D type – 1 no.
  
- 4) AC MCB (Miniature Circuit Breakers), 4-pole, 5SL6, with B Characteristics with Slide Latch Release (SLR) for mounting and universal current feature, as per Standards: IS/IEC 60898-1:2015, Voltage: 415V, 50/60Hz With ISI marking: CM/L No. 2255548, , as per Siemens make type numbers as given below (or equivalent reputed):
  - a) 5SL64106RC – 2 no.s

**Notes:**

- (i) **DIN rail suitable for above breakers of total length of 6 metres should be supplied with the above breakers.**
- (ii) **Vendor must be authorized valid vendors/dealers/distributors of the original reputed company/manufacturer of the circuit breakers and provide proof of this fact while submitting offer.**
- (iii) **Original manufacturer should have at least ISO 9000 series certification.**

- (B) DC Miniature circuit breakers (MCB's) are required with Z type of tripping characteristics as per the following:**

DC MCB (Miniature Circuit Breakers), with Z characteristic protection and control against overloads and short-circuits as shown in Fig. 1 below, 2-pole, 125 V DC, with Short-circuit current rating (SCCR acc. to UL 489): 14 kA, Standard: UL 489, CSA 22.2 No. 5 compliant with the following ABB-make type numbers and quantities (or equivalent reputed make):

- 1) S202UDC-Z1.6 – 2 no.s

- 2) S202UDC-Z2 – 1 no.
- 3) S202UDC-Z8 – 5 nos.
- 4) S202UDC-Z10 – 1 no.
- 5) S202UDC-Z13 – 2 no.s

These MCB's should contain fitted permanent magnets, which should assist in the forced extinguishing of the arc. These MCBs should have arc chutes, permanent magnets, with clear marking of polarity which should help during the installation process. Doing so will ensure that in the case of a short circuit the magnetic field of the permanent magnets corresponds with the electromagnetic field of the short-circuit current, therefore safely leading the short circuit into the arc chute.

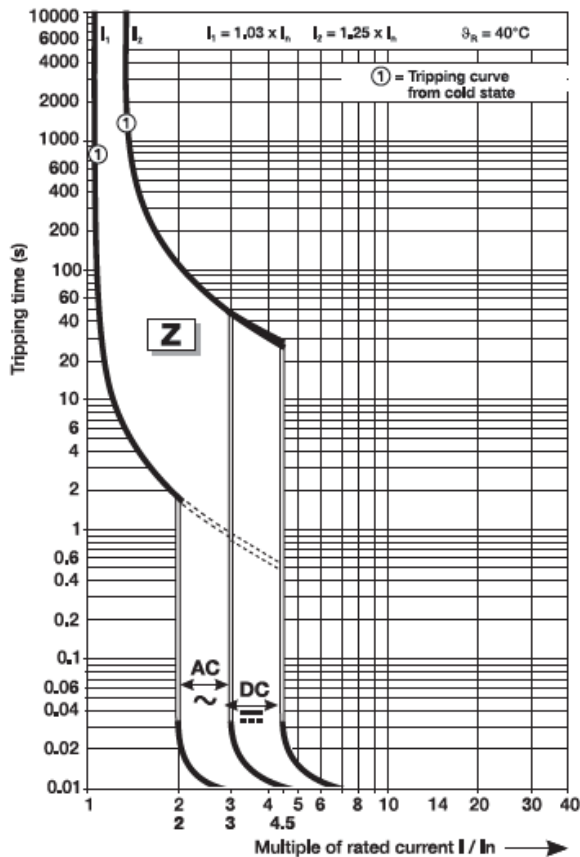


Fig. 1

**Notes:**

- (i) DIN rail suitable for above breakers of total length of 5 metres should be supplied with the above breakers.
- (ii) Vendor must be authorized valid vendors/dealers/distributors of the original reputed company/manufacture of the circuit breakers and provide proof of this fact while submitting offer.
- (iii) Original manufacturer should have at least ISO 9000 series certification.

**(C) Motor protection circuit breakers (MPCB's) are required as per the following:**

MPCB (Motor Protection Circuit Breakers) with standard release (Short circuit and overload), 3-pole, rated voltage 690V AC, AC duty, 50/60 Hz, tripping class 10, without auxiliary switch, standard switching capacity, screw terminals, MPCB size S00, with built-in protection against

single phasing, applicable standards: IEC 60947-1, EN 60947-1 (VDE 0660 Part 100), IEC 60947-2, EN 60947-2 (VDE 0660 Part 101), IEC 60529, as per Siemens make type numbers as given below (or equivalent reputed make):

Siemens make MPCB type number	Quantity required	Item description	Desired specification in a nut shell
1) 3RV20111FA10	3	Circuit breaker size S00 for motor protection, CLASS 10 A-release 3.5...5 A N release 65 A screw terminal Standard switching capacity	AC-3 5Amp 1.5KW (SC Trip: 65A) 100KA at 400V Class 10 Motor Protection Circuit Breaker, range 3.5-5A rated at 60 Deg Celcius with from Rotary Type Operator in size 97x45x97mm (HxWxD)
2) 3RV20111GA10	1	Circuit breaker size S00 for motor protection, CLASS 10 A-release 4.5...6.3 A N-release 82 A screw terminal Standard switching capacity	AC-3 6.3Amp 2.2KW (SC Trip: 82A) 100KA at 400V Class 10 Motor Protection Circuit Breaker, range 4.5-6.3A rated at 60 Deg Celcius with from Rotary Type Operator in size 97x45x97mm (HxWxD)
3) 3RV20111HA10	2	Circuit breaker size S00 for motor protection, CLASS 10 A-release 5.5...8 A N-release 104 A screw terminal Standard switching capacity	AC-3 8Amp 3.0KW (SC Trip: 104A) 100KA Class 10 Motor Protection Circuit Breaker, range 5.5-8A rated at 60 Deg Celcius with from Rotary Type Operator in size 97x45x97mm (HxWxD)
4) 3RV20111JA10	1	Circuit breaker size S00 for motor protection, CLASS 10 A-release 7...10 A N release 130 A screw terminal Standard switching capacity	AC-3 10Amp 4.0KW (SC Trip: 130A) 100KA Class 10 Motor Protection Circuit Breaker, range 7-10A rated at 60 Deg Celcius with from Rotary Type Operator in size 97x45x97mm (HxWxD)
5) 3RV20111KA10	1	Circuit breaker size S00 for motor protection, CLASS 10 A-release 9...12 A N-release 163 A screw terminal Standard switching capacity	AC-3 12Amp 5.5KW (SC Trip: 163A) 100KA Class 10 Motor Protection Circuit Breaker, range 9-12A rated at 60 Deg Celcius with from Rotary Type Operator in size 97x45x97mm (HxWxD)

**Notes:**

- (i) DIN rail suitable for above breakers of total length of 5 metres should be supplied with the above breakers.
- (ii) Vendor must be authorized valid vendors/dealers/distributors of the original reputed company/manufacturer of the circuit breakers and provide proof of this fact while submitting offer.
- (iii) Original manufacturer should have at least ISO 9000 series certification.

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