PART A

Technical Specification

1. Panel Mounting DC supply Unit (Type A)

Sr. No.	Parameter	Specification
1.	Application	Field power supply
2.	Mode Of Operation	Selectable CV or CC
3.	Mounting Channel	Required
4.	Matching Accessories	Must be supplied (Details Below)
5.	**Quantity**	**5 Nos.**
	System Output	
6.	DC Voltage	48 Volts
7.	Rated Current	210 Amps
8.	Current Range	0-210
9.	Rated Power	10080W
10.	Maximum Ripple	$200mV_{P-P}$
11.	Voltage Adjust Range	47V to 57V
12.	Voltage Tolerance	± 1 %
13.	Line Regulation	± 0.5 %
14.	Load Regulation	± 0.5 %
15.	Rise Time	80mSec on Full Load
16.	Hold Up Time	14mSec/230VAC at full Load
	System Input	
17.	Voltage Range	4-Wire Star (340V to 530V)
18.	Frequency Range	47Hz to 63Hz
19.	Power Factor	95% at full load
20.	Efficiency	91%
21.	Ac Current	18A/400VAC (3 Phase 4 wire Star)
22.	Inrush Current	100A/400VAC (3 Phase 4 wire Star)
23.	Maximum Leakage Current	7milli Amps at 530VAC
	Protection	
24.	Overload	112% at rated load (With user adjustable delay shutdown feature)
25.	Over Voltage	60V to 67V (With protective shutdown feature and recovery)
26.	Over Temperature	Output shutdown and recovery after temperature goes down
27.	Cooling Type	Forced air cooling (At least 4 Nos. of built in turbo fan with automatic speed control)

	Functions	
28.	Auxiliary Power	12V, 1A supply required
29.	Remote On/Off Control	Required (Potential free contact)
30.	CC/CV Mode	User selectable configuration
31.	Alarm/Indicator Signal Output	I. AC fail II. Ground fail III. Fan fail IV. Auxiliary supply fail V. DC OK VI. Over voltage VII. Auxiliary Ground fail VIII. High Temperature IX. Short circuit X. Overload XI. CC/CV mode (All alarms must be isolated contact outputs)
32.	Output Voltage Trim Range	20-120% of rated voltage range from external control voltage 0-10V (PLC AO compatible)
33.	Output Current Trim Range	20-120% of rated voltage range from external control voltage 0-10V (PLC AO compatible)
34.	Control Wiring Connector	Matching connector must be provided with marshalling TB panel.
	Environment	
35.	Working Temperature	(-30 to 70) Degree Celsius
36.	Working Humidity	(20 to 90) RH
37.	Storage Temperature	(-40 to 85) Degree Celsius
38.	Storage Humidity	(10 to 95) RH
39.	Temperature Co-Efficient	$\pm$ 0.03% for (0 to 50) Degree C
40.	Vibration	10 – 500 Hz
	Standards	
41.	Safety Standards	UL60950, TUV EN60950-1, CE
42.	Voltage Withstand	I/P-O/P:3KVAC, I/P-FG:2KVAC, O/P-FG:0.5KVAC
43.	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH
44.	EMC Emission Compliance	Compliance to EN55022 (CISPR22) Class A, EN61000-3-2,-3
45.	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2, heavy industry level, criteria A
46.	Mean Time Between Failure (MTBF) Maximum Allowable	18000 Hrs in continuous operation at 25 Degree C
	General Conditions	

47.	Manual	User manual in English Design reference manual in English
48.	Dimensions Maximum Allowable	2U rack mount
49.	Mounting	Perforated channel type rack mounting (Mounting channel with RAIL kit for two such modules must be supplied)
50.	Matching Lugs For Connectors	Must be supplied along with the system
51.	Matching Nuts & Bolts For BUS Bar	Must be supplied along with the system
52.	Matching Bracket Connector For Modules	Must be supplied along with the system
53.	Warranty	One year

2. Panel Mounting DC supply Unit (Type B)

Sr. No.	**Parameter**	**Specification**
1	Application	Panel power supply
2	Mode Of Operation	CV
3	Mounting Channel	Required
4	Matching Accessories	Must be supplied (Details Below)
5	**Quantity**	**6 Nos.**
	System Output	
6	DC Voltage	24Volts
7	Rated Current	20 Amps
8	Current Range	0-20
9	Rated Power	480 W
10	Maximum Ripple	$10mV_{P-P}$
11	Voltage Adjust Range	20V to 28V
12	Voltage Tolerance	± 1 %
13	Line Regulation	± 0.5 %
14	Load Regulation	± 0.5 %
15	Rise Time	80mSec on Full Load
16	Hold Up Time	14mSec/230VAC at full Load
	System Input	
17	Voltage Range	Single Phase (180VAC to 250VAC)
18	Frequency Range	47Hz to 63Hz
19	Power Factor	95% at full load
20	Inrush Current	60A/230VAC
21	Maximum Leakage Current	7milli Amps at 530VAC

	Protection	
22	Overload	112% at rated load (With user adjustable delay shutdown feature)
23	Over Temperature	Output shutdown and recovery after temperature goes down
24	Cooling Type	Forced air cooling (At least 4 Nos. of built in turbo fan with automatic speed control)
	Functions	
25	Remote On/Off Control	Required (Potential free contact)
26	Alarm/Indicator Signal Output	I. AC fail II. Ground fail III. Fan fail IV. Auxiliary supply fail V. DC OK VI. Over voltage VII. Auxiliary Ground fail VIII. High Temperature IX. Short circuit
27	Output Voltage Trim Range	80-120% of rated voltage range from external control voltage 0-10V (PLC AO compatible)
28	Control Wiring Connector	Matching connector must be provided with marshalling TB panel.
	Environment	
29	Working Temperature	(-30 to 70) Degree Celsius
30	Working Humidity	(20 to 90) RH
31	Storage Temperature	(-40 to 85) Degree Celsius
32	Storage Humidity	(10 to 95) RH
33	Temperature Co-Efficient	$\pm$ 0.03% for (0 to 50) Degree C
34	Vibration	10 – 500 Hz
	Standards	
35	Safety Standards	UL60950, TUV EN60950-1, CE
36	Voltage Withstand	I/P-O/P:3KVAC, I/P-FG:2KVAC, O/P-FG:0.5KVAC
37	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH
38	EMC Emission Compliance	Compliance to EN55022 (CISPR22) Class A, EN61000-3-2,-3
39	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2, heavy industry level, criteria A

40	Mean Time Between Failure (MTBF) Maximum Allowable	18000 Hrs in continuous operation at 25 Degree C
	General Conditions	
41	Manual	User manual in English Design reference manual in English
42	Matching Nuts & Bolts For BUS Bar	Must be supplied along with the system
43	Matching Bracket Connector For Modules	Must be supplied along with the system
44	Warranty	One year

3. Panel Mounting DC supply Unit (Type C)

Sr. No.	**Parameter**	**Specification**
1	Application	Panel power supply
2	Mode Of Operation	CV
3	Mounting Channel	Required
4	Matching Accessories	Must be supplied (Details Below)
5	**Quantity**	**6 Nos.**
	System Output	
6	DC Voltage	12Volts
7	Rated Current	70 Amps
8	Current Range	0-70
9	Rated Power	850 W
10	Maximum Ripple	$10mV_{P-P}$
11	Voltage Adjust Range	10V to 14 V
12	Voltage Tolerance	± 1 %
13	Line Regulation	± 0.5 %
14	Load Regulation	± 0.5 %
15	Rise Time	80mSec on Full Load
16	Hold Up Time	14mSec/230VAC at full Load
	System Input	
17	Voltage Range	Single Phase (180VAC to 250VAC)
18	Frequency Range	47Hz to 63Hz
19	Power Factor	98% at full load
20	Inrush Current	40A/230VAC
21	Maximum Leakage Current	7milli Amps at 530VAC
	Protection	
22	Overload	112% at rated load (With user adjustable delay shutdown feature)

23	Over Temperature	Output shutdown and recovery after temperature goes down
24	Cooling Type	Forced air cooling (At least 4 Nos. of built in turbo fan with automatic speed control)
	Functions	
25	Remote On/Off Control	Required (Potential free contact)
26	Alarm/Indicator Signal Output	X. AC fail XI. Ground fail XII. Fan fail XIII. Auxiliary supply fail XIV. DC OK XV. Over voltage XVI. Auxiliary Ground fail XVII. High Temperature VIII. Short circuit
27	Output Voltage Trim Range	80-120% of rated voltage range from external control voltage 0-10V (PLC AO compatible)
28	Control Wiring Connector	Matching connector must be provided with marshalling TB panel.
	Environment	
29	Working Temperature	(-30 to 70) Degree Celsius
30	Working Humidity	(20 to 90) RH
31	Storage Temperature	(-40 to 85) Degree Celsius
32	Storage Humidity	(10 to 95) RH
33	Temperature Co-Efficient	$\pm$ 0.03% for (0 to 50) Degree C
34	Vibration	10 – 500 Hz
	Standards	
35	Safety Standards	UL60950, TUV EN60950-1, CE
36	Voltage Withstand	I/P-O/P:3KVAC, I/P-FG:2KVAC, O/P-FG:0.5KVAC
37	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH
38	EMC Emission Compliance	Compliance to EN55022 (CISPR22) Class A, EN61000-3-2,-3
39	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2, heavy industry level, criteria A
40	Mean Time Between Failure (MTBF) Maximum Allowable	18000 Hrs in continuous operation at 25 Degree C
	General Conditions	
41	Manual	User manual in English

		Design reference manual in English
42	Matching Nuts & Bolts For BUS Bar	Must be supplied along with the system
43	Matching Bracket Connector For Modules	Must be supplied along with the system
44	Warranty	One year

4. Panel Mounting DC supply Unit (Type C)

Sr. No.	Parameter	Specification
1	Application	Panel power supply
2	Mode Of Operation	CV controllable
3	Mounting Channel	Required
4	Matching Accessories	Must be supplied (Details Below)
5	**Quantity**	**10 Nos.**
	System Output	
6	DC Voltage	05 Volts
7	Rated Current	50 Amps
8	Current Range	0-50
9	Rated Power	250 W
10	Maximum Ripple	$1mV_{P-P}$
11	Voltage Adjust Range	0 To 5 VDC
1	Voltage Tolerance	± 1 %
2	Line Regulation	± 0.5 %
3	Load Regulation	± 0.5 %
4	Rise Time	80mSec on Full Load
5	Hold Up Time	14mSec/230VAC at full Load
	System Input	
6	Voltage Range	Single Phase (180VAC to 250VAC)
7	Frequency Range	47Hz to 63Hz
8	Power Factor	98% at full load
9	Inrush Current	40A/230VAC
10	Maximum Leakage Current	7milli Amps at 530VAC
	Protection	
11	Overload	112% at rated load (With user adjustable delay shutdown feature)
12	Over Temperature	Output shutdown and recovery after temperature goes down
13	Cooling Type	Forced air cooling

		(At least 4 Nos. of built in turbo fan with automatic speed control)
	Functions	
14	Remote On/Off Control	Required (Potential free contact)
15	Alarm/Indicator Signal Output	XIX. AC fail XX. Ground fail XXI. Fan fail XXII. Auxiliary supply fail XIII. DC OK XIV. Over voltage XV. Auxiliary Ground fail XVI. High Temperature XVII. Short circuit
16	Output Voltage Trim Range	10-120% of rated voltage range from external control voltage 0-6V (PLC AO compatible)
17	Control Wiring Connector	Matching connector must be provided with marshalling TB panel.
	Environment	
18	Working Temperature	(-30 to 70) Degree Celsius
19	Working Humidity	(20 to 90) RH
20	Storage Temperature	(-40 to 85) Degree Celsius
21	Storage Humidity	(10 to 95) RH
22	Temperature Co-Efficient	$\pm$ 0.03% for (0 to 50) Degree C
23	Vibration	10 – 500 Hz
	Standards	
24	Safety Standards	UL60950, TUV EN60950-1, CE
25	Voltage Withstand	I/P-O/P:3KVAC, I/P-FG:2KVAC, O/P-FG:0.5KVAC
26	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH
27	EMC Emission Compliance	Compliance to EN55022 (CISPR22) Class A, EN61000-3-2,-3
28	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2, heavy industry level, criteria A
29	Mean Time Between Failure (MTBF) Maximum Allowable	18000 Hrs in continuous operation at 25 Degree C
	General Conditions	
30	Manual	User manual in English Design reference manual in English
31	Matching Nuts & Bolts For BUS Bar	Must be supplied along with the system

32	Matching Bracket Connector For Modules	Must be supplied along with the system
33	Warranty	One year

5. Measurement accessories:

5.1 DC/DC Transducer and Multiplier:

I. Signal Type: Analog Input/ Output
II. Supply Voltage: 230VAC or 12VDC
III. Supply connection: DIN Terminal
IV. Input Signal: Voltage (0-60) VDC
V. Output Signal (First): (0-10) VDC
VI. Output Signal (Second): (4-20) mA
VII. Maximum Loading: 5 Ohm for 20 mA
VIII. Isolation Strength: Transformer (Galvanic) isolated, 1100 VAC
IX. Accuracy: 0.1% FS
X. Linearity: 0.05%
XI. Frequency Response: 1 KHz or more
XII. Protection Standard: IP62
XIII. Mounting: DIN Rail OR Screw Mount
XIV. Mounting Kit: Required
XV. User's manual: Hard copy required in English language
XVI. Certification: CE, RoHS, ISO 9001:2008, TUV, UL, UR, INTERTEK ISI248, CISPR 16-2
XVII. Compatibility: Panel Mounting DC supply Unit (Type A) (mentioned in para A. 1) of this document.
XVIII. Warranty: One year
XIX. Quantity:5 Nos.

5.2 DC/DC Transducer (Type A):

I. Signal Type: Analog Input/ Output
II. Supply Voltage: 230VAC or 12VDC
III. Supply connection: DIN Terminal
IV. Input Signal: Voltage (0-75) milli VDC
V. Output Signal: (4-20) mA
VI. Maximum Loading: 5 Ohm for 20 mA
VII. Isolation Strength: Transformer (Galvanic) isolated, 1100 VAC
VIII. Accuracy: 0.1% FS
IX. Linearity: 0.05%
X. Frequency Response: 1 KHz or more
XI. Protection Standard: IP62
XII. Mounting: DIN Rail OR Screw Mount
XIII. Mounting Kit: Required

XIV. User's manual: Hard copy required in English language
XV. Certification: CE, RoHS, ISO 9001:2008, TUV, UL, UR, INTERTEK, ISI248, CISPR 16-2
XVI. Compatibility: Must be compatible with instrument mentioned in (Para A.5.5 and para A.5.6) of this document
XX. Warranty: One year
XVII. Quantity:10 Nos.

5.3 DC/DC Transducer (Type-B):

I. Signal Type: Analog Input/ Output
II. Supply Voltage: 230VAC or 12VDC
III. Supply connection: DIN Terminal
IV. Input Signal: Voltage (4-20) milli VDC
V. Output Signal: (0-10) VDC
VI. Maximum Loading: 5 Ohm for 20 mA
VII. Isolation Strength: Transformer (Galvanic) isolated, 1100 VAC
VIII. Accuracy: 0.1% FS
IX. Linearity: 0.05%
X. Frequency Response: 1 KHz or more
XI. Protection Standard: IP62
XII. Mounting: DIN Rail OR Screw Mount
XIII. Mounting Kit: Required
XIV. User's manual: Hard copy required in English language
XV. Certification: CE, RoHS, ISO 9001:2008, CISPR 16-2, TUV, ISI248, CISPR 16-2UL, UR, INTERTEK
XVI. Compatibility: Panel Mounting DC supply Unit (Type B) (mentioned in para A. 2) of this document.
XVII. Warranty: One year
XVIII. Quantity:10 Nos.

5.4 Shunt for DC Current Measurement (Type-A):

I. Measuring Range: (0-500)
II. Output Signal: (0-75) milli Volt
III. Isolation Strength: Transformer (Galvanic) isolated, 1100 VAC
IV. Operation: Continuous
V. Ambient Temperature: (30 to 60) Degree C
VI. Humidity: (0 to 90%) RH
VII. Stable operating temperature: Must be below 70 degrees Celsius at 90% Load
VIII. Accuracy: 0.5% FS
IX. Linearity: 0.1%
X. Protection Standard: IP68
XI. Mounting: Inline mounting (Matching connectors required)

XII. User's manual: Required (In English language)
XIII. Certification: CE, RoHS, ISO 9001:2008, ISI248, CISPR 16-2
XIV. Compatibility: Panel Mounting DC supply Unit (Type A) (mentioned in para A. 1) of this document.
XV. Warranty: One year
XVI. Quantity:3 Nos.

5.5 Shunt for DC Current Measurement (Type-B):

I. Measuring Range: (0-1500)
II. Output Signal: (0-75) milli Volt
III. Isolation Strength: Transformer (Galvanic) isolated, 1100 VAC
IV. Operation: Continuous
V. Ambient Temperature: (30 to 60) Degree C
VI. Humidity: (0 to 90%) RH
VII. Stable operating temperature: Must be below 70 degrees Celsius at 90% Load
VIII. Accuracy: 0.5% FS
IX. Linearity: 0.1%
X. Protection Standard: IP68
XI. Mounting: Inline mounting (Matching connectors required)
XII. User's manual: Required (In English language)
XIII. Certification: CE, RoHS, ISO 9001:2008, ISI248, TUV, UL, UR, INTERTEK, CISPR 16-2, IECEX, ABS
XIV. Compatibility: Panel Mounting DC supply Unit (Type A) (mentioned in para A. 1) of this document.
XV. Warranty: One year
XVI. Quantity: 3Nos.

5.6 Rogowski Coil:

I. Primary rated current: 1000A
II. Rated Frequency: 50 Hz
III. Mutual Inductance: 70nH
IV. Isolation Strength: Transformer (Galvanic) isolated, 1100 VAC
V. Operation: Continuous
VI. Surge current: 100KA
VII. Frequency Response: 350 KHz or more
VIII. Output signal: 0-10Volts
IX. Ambient Temperature: (30 to 60) Degree C
X. Humidity: (0 to 90%) RH
XI. Stable operating temperature: Must be below 70 degrees Celsius at 90% Load
XII. Accuracy: 0.5% FS
XIII. Phase angle: Less than 0.5 degree

XIV. Linearity: 0.1%
XV. Protection Standard: IP57
XVI. Insulation voltage: Cat III
XVII. Feedthrough connector: Required
XVIII. Measurement conductor: 125 mm
XIX. Cable Length: 1 meter
XX. Mounting: Split-core current transformer (suspended)
XXI. User's manual: Required (In English language)
XXII. Certification: CE, RoHS, ISO 9001:2008, ISI248, TUV, UL, UR, INTERTEK, IECEX, ABS, CISPR 16-2
XXIII. Warranty: One year
XXIV. Quantity:1 No.

5.7 Oscilloscope Current Probe:

I. Primary rated current: 10A
II. Rated Frequency: 50 Hz
III. Isolation Strength: Transformer (Galvanic) isolated, 1100 VAC
IV. Operation: Continuous
V. Frequency Response: 2 GHz or more
VI. Ambient Temperature: (30 to 60) Degree C
VII. Compatibility: Rigol DS2072A
VIII. Humidity: (0 to 90%) RH
IX. Stable operating temperature: Must be below 70 degrees Celsius at 90% Load
X. Accuracy: 0.5% FS
XI. Phase angle: Less than 0.5 degree
XII. Linearity: 0.1%
XIII. Protection Standard: IP57
XIV. Insulation voltage: Cat VI
XV. Feedthrough connector: Required
XVI. Measurement conductor: 125 mm
XVII. Cable Length: 1 meter
XVIII. User's manual: Required (In English language)
XIX. Certification: CE, RoHS, ISO 9001:2008, ISI248, TUV, UL, UR, INTERTEK, IECEX, ABS, CISPR 16-2
XX. Warranty: One year
XXI. Quantity:2 Nos.

5.8 Hall sensor for DC Current Measurement:

I. Measuring Range: (0-1000)
II. Output Signal: 0-5 Volt
III. Isolation Strength: Transformer (Galvanic) isolated, 1100 VAC

IV. Operation: Continuous
V. Ambient Temperature: (30 to 60) Degree C
VI. Humidity: (0 to 90%) RH
VII. Stable operating temperature: Must be below 70 degrees Celsius at 90% Load
VIII. Accuracy: 0.5% FS
IX. Linearity: 0.1%
X. Protection Standard: IP67
XI. Mounting: Inline mounting (Matching connectors required)
XII. User's manual: Required (In English language)
XIII. Certification: CE, RoHS, ISO 9001:2008, ISI248, TUV, UL, UR, INTERTEK, IECEX, ABS, CISPR 16-2
XIV. Compatibility: Panel Mounting DC supply Unit (Type A) (mentioned in para A. 1) of this document.
XV. Warranty: One year
XVI. Quantity:6 Nos.

5.9 Hooter:

I. Type: Panel mounting
II. Volume Control: Required
III. Tone Modulator: Required
IV. Body MOC: PP
V. Loudness: 100dB
VI. Mechanism: Diaphragm based speaker
VII. Supply: 230VDC
VIII. Control Input: Potential free contact signal
IX. Certificate: CE, ISO 9001:2008, ATEX
X. C channel mooting clamp: Required
XI. Warranty: One year
XII. Quantity: 10 Nos.

5.10 Panel Fan:

I. Type: Panel mounting
II. Size: 6'' Diameter
III. Filter: Required
IV. Guard: Required
V. Body MOC: MS
VI. Supply: 230VDC
VII. Control Input: Potential free contact signal
VIII. Certificate: CE, ISO 9001:2008
IX. C channel mooting clamp: Required
X. Warranty: One year
XI. Quantity: 10 Nos.

5.11 NO Push Button with indicator:

I. Type: Panel mounting
II. Default State: Normally closed
III. Size: 20mm front fit
IV. Response time: 100 milli Sec
V. Indication: LED on button
VI. Illumination supply: 24VDC or 230VAC
VII. Illumination Type: Dual Color
VIII. ON Indication: GREEN
IX. OFF Indication: RED
X. Guard: Required
XI. Body MOC: PP
XII. Control Input: Potential free contact signal
XIII. Certificate: CE, ISO 9001:2008, ATEX, IECEX, ABS, CISPR 16-2
XIV. Warranty: One year
XV. Quantity: 50 Nos.

5.12 NC Push Button with indicator:

I. Type: Panel mounting
II. Default State: Normally closed
III. Size: 20mm front fit
IV. Response time: 100 milli Sec
V. Indication: LED on button
VI. Illumination supply: 24VDC or 230VAC
VII. Illumination Type: Dual Color
VIII. ON Indication: GREEN
IX. OFF Indication: RED
X. Guard: Required
XI. Body MOC: PP
XII. Control Input: Potential free contact signal
XIII. Certificate: CE, ISO 9001:2008, ATEX, IECEX, ABS, CISPR 16-2
XIV. Warranty: One year
XV. Quantity: 50 Nos.

5.13 Diode redundancy Module:

I. Type: Diode power supply redundancy module
II. Maximum current output: 40A
III. Response time: below 250 milli Second
IV. Mounting: DIN Rail
V. Standards: ANSI/ESD S20.20:2014 and BS EN 61340-5-1:2007, CE, CPT, EAC, GL, UL Listed

VI. Compatibility: Panel Mounting DC supply Unit (Type B) (mentioned in para A. 2) of this document.
VII. Warranty: One year
VIII. Quantity: 3 Nos.

PART B

General Specification

1. Acceptance Criteria

a. Before delivery, the vendor shall arrange for inspection & testing (as per relevant IS codes) of all the instruments and data recorders at their site.
b. During inspection & testing, the offered instruments must meet the technical specification mentioned in PART A of this document.
c. MOC test certificate as per the technical specification must be produced by the vendor.
d. The communication protocols used by the instrument must be well documented and supplied along with the instrument.
e. All the associated device driver for instruments must be provided by the vendor.
f. All the instruments supplied must be of industrial grade.

2. Documentation

a. The supplier shall give all the documents, viz., operational manual and maintenance manual at the time of delivery of the instruments. All the documents shall be in English language.
b. Calibration and test certificate of instruments must be delivered at the time of delivery.
c. MOC certificate of all the instrument must be supplied by the supplier.
d. End connection and fitting details must be provided by the supplier.

3. Bidder's /Vendor's qualification

Vendors, who have supplied similar instruments to DAE / any govt. organization, would be preferred. Details of similar instrument supplied to organizations as mentioned above, along with P.O. number & date, address with contact telephone number shall be furnished. However, qualification of vendors shall be based on following criteria:

a. The vendor shall be reputed and regular manufacturer or authorized dealer of process automation equipment. The offer from dealers would only be considered, if the vendor produces a valid authorization letter from their principals.
b. The vendor shall have suitable facilities for conducting tests during inspection of the system. Details pertaining to the availability of such facilities shall be submitted along with the offer.
c. Incomplete offers shall not be considered for techno-commercial evaluation due to compatibility issues.
d. The vendor offering all the items mentioned in the PART A of this document shall be considered for the techno-commercial evaluation.

4. Terms & Conditions:

a. End user's certificate shall not be provided to the vendor.
b. The vendor must provide support for any driver related issues during the computer interfacing of the instruments.
c. Incomplete offer shall not be considered for techno commercial evaluation due to compatibility issues.
d. The evaluation of the offers shall be done on total cost basis.
e. Post supply inspection shall not be permitted.