



BHARAT HEAVY ELECTRICALS LIMITED
HEEP HARIDWAR INDIA-PIN 249403
FAX NO: 0091 1334 226462
PHONE NO: 0091 1334 285462



REQUIREMENT OF PROXIMITY SWITCH CABLE ASSEMBLY

The Heavy Electricals Equipment Plant (HEEP) located in Haridwar, India is one of the major manufacturing plants of Bharat Heavy Electricals Ltd. The core business of HEEP includes design and manufacture of large steam and gas turbines, turbo generators, Defense Items and so on.

Details of items details as below:

SLN	MAT CODE	ITEM DISCREPTION	Unit	QUANTITY (NOS.)		Delivery Schedule
1	W97052602148	PROXIMITY SWITCH CABLE ASSEMBLY, AS PER DRG/PART NO. -197647129 SIZE: P/N 197647129	No	LOT	QTY	DAYS
				1	12	45
				2	36	180
				3	36	540
				4	24	900

1. ALL VENDORS TO PROVIDE POINT WISE REPLY/CONFIRMATION ALONG WITH RELEVANT SUPPORTING DOCUMENTS TO EACH AND EVERY POINT OF **PRE-QUALIFICATION REQUIREMENT/PQR** FOR ALL ENQUIRY ITEMS. NONCOMPLIANCE OF THESE MAY LEAD TO REJECTION OF OFFER AS THESE ARE ESSENTIAL CONDITION FOR PARTICIPATING IN TENDER ENQUIRY.
2. KINDLY UPLOAD/ATTACH THE SPECIFICATION DETAILS/ CATALOGUE OF OFFERED ITEMS (IF APPLICABLE /AVAILABLE).
3. KINDLY ARRANGE TO **SUBMIT TECHNO-COMMERCIAL CHECKLIST** ALONG WITH YOUR OFFER.
4. KINDLY **SUBMIT TECHNICAL PARAMETERS CHECKLIST** ALONG WITH YOUR OFFER.
1. LOT 1 - EARLY DELIVERY ACCEPTABLE
2. LOT 2 - EARLY DELIVERY ACCEPTABLE OCTOBER 2024 ONWARDS
3. LOT 3 - EARLY DELIVERY ACCEPTABLE OCTOBER 2025 ONWARDS
4. LOT 4 - EARLY DELIVERY ACCEPTABLE OCTOBER 2026 ONWARDS
5. VENDORS TO PROVIDE ENDORSED COPY OF QP.
6. VENDORS TO CONFIRM FOR SUBMISSION OF TEST CERTIFICATES AND INSPECTION REPORTS AS PER ATTACHED BHEL SQP ALONGWITH THE MATERIAL DELIVERY.
7. VENDOR TO SUBMIT MAKE IN INDIA SELF CERTIFICATION AS PER FORMAT GIVEN ALONG WITH THE ENQUIRY.

QUALIFYING CONDITIONS**QUALIFYING CONDITIONS FOR PROXIMITY SWITCH ASSEMBLIES- W97052602148 & W97052602156**

Only those vendors should quote:

Sl.	PQR Requirement	Vendor Response	Vendor Response (Yes / No / Enclosed)
1.	Who have previously manufactured, successfully tested and supplied military grade proximity switch cable assembly. (Vendor to submit relevant documents viz. unpriced PO copy, test certificates, dispatch documents etc. for varication of the above)	Vendor to confirm & submit relevant documents	
2.	who are capable to manufacture or supply military grade proximity switch cable assemblies as per the drawings, BOM, specification/tech.sheet specified by BHEL.	Vendor to confirm	
3.	BHEL reserves the right to verify information submitted by vendor. In case the information is found to be false/incorrect, the offer shall be rejected.	Vendor to accept & confirm	

TECHNICAL PARAMETERS RESPONSE - TO BE FILLED BY VENDOR

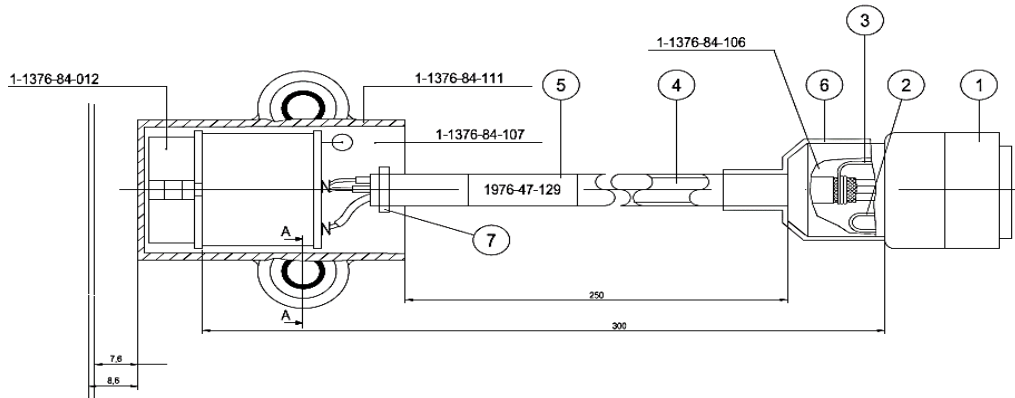
ITEM CODE

W97052602148

DESCRIPTION

PROXIMITY SWITCH CABLE

ASSEMBLY , AS PER DRG/PART NO. -197647129

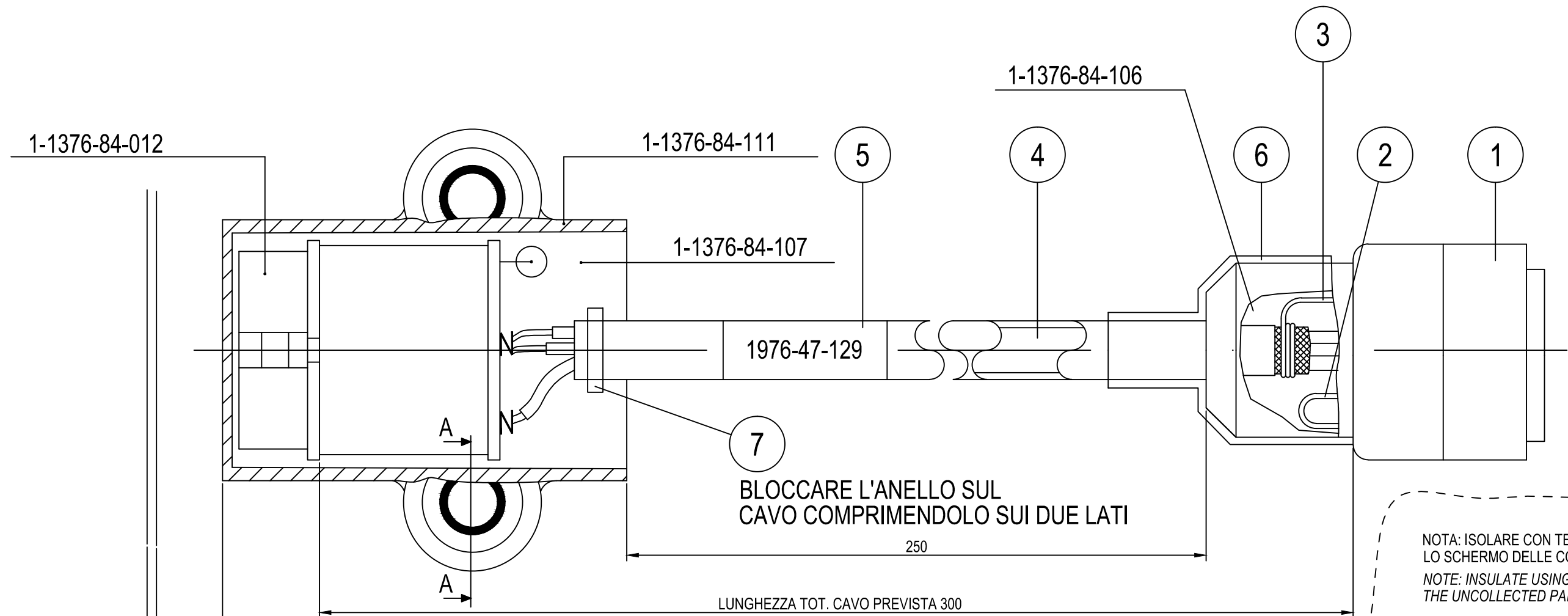


SN.	DESCRIPTION	TECHNICAL PARAMETERS*	VENDOR RESPONSE (Details of offered item to be filled by vendor)
1	ITEM DETAILS	AS PER DRAWING P/N 197647129 & CORRESPONDING BOM	
2	INSULATION RESISTANCE	20 M OHM	
3	PROXIMITY TYPE	INDUCTIVE	
4	SENSING DISTANCE: OBJECT IS BETWEEN	7.6 MM – 8.6 MM	
5	SUPPLY VOLT	18 V DC	
6	O/P VOLT	+17 TO +18 V DC	
7	CABLE TYPE	NAV-80-6145-0003-14-00B000 CS-0.35-O-3	
8	LENGTH	300 MM (As per the drawing)	
9	OPERATING TEMPERATURE	-5 TO +70 DEG CELSIUS	
10	PROTECTION	IP67	
11	PS ENCLOSURE	GF NYLON OR EQUIVALENT.	
12	END CONNECTOR	MS3126P10-6P	
13	LIFE CYCLE	2000 CYCLES OF OPERATION	
14	MATERIAL OF CONSTRUCTION	AS PER BOM (EQUIVALENT MATERIAL WITH BHEL PERMISSION.)	
15	TESTS CERTIFICATES SHALL BE PROVIDED FOR THE TESTS CONDUCTED IN EACH ASSEMBLY	VIZ. RESISTANCE/CONTINUITY, IR, SHORT CIRCUIT, SENSING DISTANCE AND AS PER MANUFACTURER'S STANDARD	
16	CERTIFICATE OF CONFORMANCE (COC) (ALSO KNOWN AS CERTIFICATE OF CONFORMITY OR CERTIFICATE OF COMPLIANCE) SHALL BE PROVIDED	-	
17	Vendor Remarks/Deviations (If Any)		

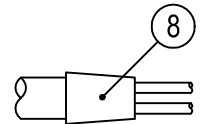
*Note: There may be minor changes in technical parameter/s especially in the sensing distance.

Vendor to re-verify the same from BHEL before manufacturing the proximity switch cable assembly.

ATTENZIONE MODELLO C.A.D. - ogni modifica deve essere eseguita direttamente sul modello C.A.D. originale
WARNING C.A.D. MODEL - every change must be done directly on the original C.A.D. model



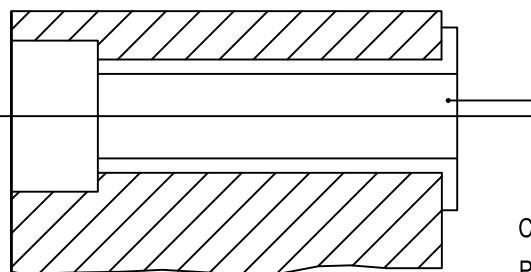
NOTA: ISOLARE CON TERMORESTRINGENTE LO SCHERMO DELLE COPPIE NON RACCOLTO
NOTE: INSULATE USING HEATSHRINK THE UNCOLLECTED PAIRS SHIELD



*ISOLARE NON COLLEGARE
*ISOLATE AND DO NOT CONNECT

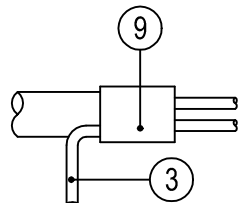
7,6
8,6
ZONA DI FUNZIONAMENTO
ZONA DI FUNZIONAMENTO INCERTO

SEZ. SEC.	SCH. SHIELD	DA FROM	POS. POS.	RACC. SCHERMI SHIELDINGS	A TO	POS. POS.
0,35mm ²	SI / YES	CONNETTORE	A		SENSORE	1
			B			2
0,35mm ²	SI / YES		C			3
			*			*
0,35 mm ² G	NO		D			
0,35 mm ² G	NO		E			
			F			



SEZ. A-A

RACCOLTA SCHERMI
SHIELDING



Cavo\Cablaggio costruito secondo IPC/WHMA-A-620C classe 3
Per note costruttive vedere SNT000017473
Test elettrici richiesti secondo IPC/WHMA-A-620C :

• Continuity	Altro valore definito
• Dielectric Withstanding Voltage	
• Insulation Resistance	

Cable\Wiring construction in according to IPC/WHMA-A-620C class 3
For construction notes see document SNT000017473
Required Electrical Tests in according to IPC/WHMA-A-620C :

• Continuity	Other defined value
• Dielectric Withstanding Voltage	
• Insulation Resistance	

N° REV. REV. NUM.		NUMERO ORDINE DI MODIFICA CHANGE ORDER NUMBER			DESCRIZIONE REVISIONE REVISION DESCRIPTION			DATA REVISIONE REVISION DATE					
0					PRIMA EMISSIONE FIRST ISSUE			29/10/2020					
DISEGNATO DA PREPARED BY		CONTROLLATO DA CHECKED BY		APPROVATO DA APPROVED BY		INSIEME CAVO P.S. P.S. CABLE ASSEMBLY			PESO (kg) WEIGHT (kg)		FORMATO DIS. DWG. SIZE		
Bernardini Alessandro		Marini Lorenzo		Bedini Federico							A3		
STATO DEL DOCUMENTO DOCUMENT STATUS		RILASCIATO RELEASED							SCALA SCALE				
								NO					
		CL. MERC. Q. Q. COMM. CL.		LIV. CRIT. CRIT. LEV.		CAGE CODE		NUMERO DISEGNO / DRAWING NUMBER		REVISIONE REVISION		FOGLIO/FOGLI SHEET/SHEETS	
		E03		2		A0199		1976-47-129		0		1/1	
Il simbolo △ identifica una caratteristica chiave da tracciare in accordo alla EN 9100 The symbol △ identifies a key feature that must be traceable in accordance with EN 9100													
Eccetto dove indicato le specifiche tecniche richiamate a disegno sono da intendersi all'ultima revisione Except where it is specified, all the quoted technical specifications are in the last available revision										Classificazione Industriale Industrial Security Company Internal			
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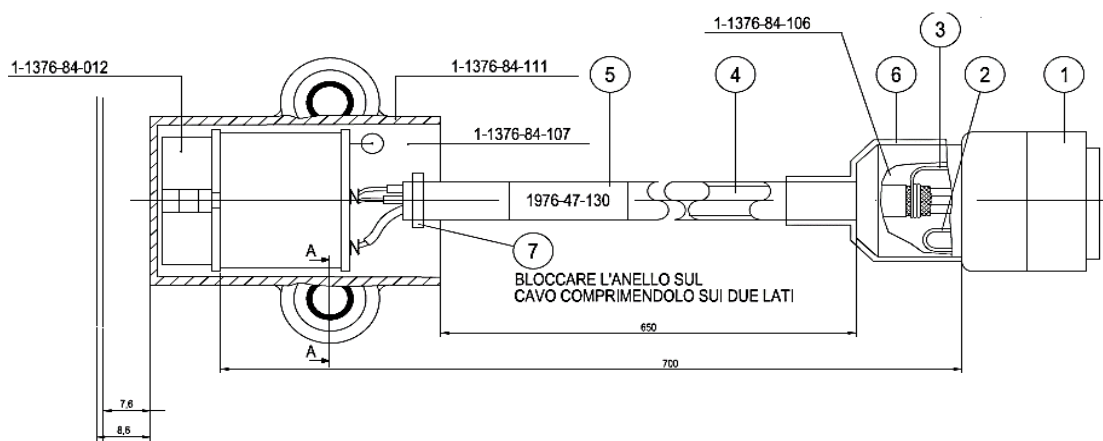
LEV	PARTNO	DESCRIPTION	DRG. REF.	MATERIAL	TREATMENT	QTY	UNIT	COMMERCIAL CODE	PROBABLE_VENDOR
4	197647129	PROXIMITY SWITCH CABLE ASSEMBLY				-	-		
5	816TE0154	Heat Shrink Tubing ZHTM 3/1.5-0-SP	8		RoHS	0.1	ME	ZHTM 3/1.5-0-SP , TR27-3,2/1,6 (E)	TE CONNECTIVITY , HELLERMANN
5	821VN5653	ADHESIVE			RoHS	1	MI	S1125	TE CONNECTIVITY
5	137684107	STYCAST, 2651				40	GR		
5	815UN0232	WIRE NAV-80-6145-0003-14-00B000 UG-N-0.35-4	3		RoHS	0.1	ME	NAV-80-6145-0003-14-00B000 UG-N-0.35-4	NAV-80 Vendors: 1. UNIKA S.p.A. Italy 2. Sami S.p.a Italy
5	810BA0885	CONNECTOR MS3126P10-6P	1			1	ea	MS3126P10-6P	QPL-26482 (QPD)
5	898MC0688	BUSH	7			1	ea	SF-1126	ISB
5	137684012	PROXIMITY SWITCH CIRCUIT				1	ea		
6	137684013	POT CORE ASSY				1	ea		
7	137684100	CORE P22/13-K3.003.20/3B7				1	ea		
7	137684108	WIRE, COIL				3	ME		
7	137684112	WIRE, COIL				5	ME		
7	137684101	COIL, REEL P5-055.89				1	ea		
6	137684109	WASHER				1	ea		
6	137684110	PIN, RETAINING				1	ea		
6	127684132	WIRE				0.15	ME		
6	137684102	PC BOARD- PROXIMITY SWITCH				1	ea		
6	127684131	INSULATOR				0.15	ME		
6	137684103	PC BOARD, PROXIMITY SWITCH				1	ea		
5	811AD0982	ADAPTER LOW SMOKE 202K132-100-0	6		RoHS	1	ea	202K132-100-0 , 770-001S204 (E), 154-42-H (E)	TE CONNECTIVITY , GLENAIR, HELLERMANN
5	890AN0110	CABLE MARKER LABEL	5		RoHS	4	ea	0800473	PHOENIX CONTACT
5	137684106	SILICONE COMPOUND				20	GR		
5	137684111	COVER, CUP		POLYCARBONATE LOADED WITH FIBERGLASS, BLACK COLOR		1	ea		
5	890RS0001	SOLDER SLEEVE, M83519/1-2	9			2	ea	M83519/1-2	QPL-AS83519 (QPD)
5	815CA0605	CABLE NAV-80-6145-0003-14-00B000 CS-0.35-O-3	4		RoHS	0.3	ME	NAV-80-6145-0003-14-00B000 CS-0.35-O-3	NAV-80 Vendors
5	890NA0032	ADHESIVE COPPER TAPE			RoHS	0.35	ME	1181-25.4MM	3M
5	137684120	BOLT SLEEVE				2	ea		
5	220033020	WIRE UNI 5563 d=0.63 STEEL Inox		Stainless steel		0.25	ME		
5	815UN0235	WIRE NAV-80-6145-0003-14-00B000 UG-N-0,35-9	2		RoHS	0.1	ME	NAV-80-6145-0003-14-00B000 UG-N-0,35-9	NAV-80 Vendors

RoHS: Restriction of Hazardous Substance

TECHNICAL PARAMETERS RESPONSE - TO BE FILLED BY VENDOR

ITEM CODE
DESCRIPTION

W97052602156
PROXIMITY SWITCH CABLE ASSEMBLY,
AS PER DRG/PART NO.- 197647130



SN.	DESCRIPTION	TECHNICAL PARAMETERS	VENDOR RESPONSE (Details of offered item to be filled by vendor)
1	ITEM DETAILS	AS PER DRAWING P/N 197647130 & CORRESPONDING BOM	
2	INSULATION RESISTANCE	20 M OHM	
3	PROXIMITY TYPE	INDUCTIVE	
4	SENSING DISTANCE: OBJECT IS BETWEEN	7.6 MM – 8.6 MM	
5	SUPPLY VOLT	18 V DC	
6	O/P VOLT	+17 TO +18 V DC	
7	CABLE TYPE	NAV-80-6145-0003-14-00B000 CS-0.35-O-3	
8	LENGTH	700 MM (As per the drawing)	
9	OPERATING TEMPERATURE	-5 TO +70 DEG CELSIUS	
10	PROTECTION	IP67	
11	PS ENCLOSURE	GF NYLON OR EQUIVALENT.	
12	END CONNECTOR	MS3126P10-6P	
13	LIFE CYCLE	2000 CYCLES OF OPERATION	
14	MATERIAL OF CONSTRUCTION	AS PER BOM (EQUIVALENT MATERIAL WITH BHEL PERMISSION.)	
15	TESTS CERTIFICATES SHALL BE PROVIDED FOR THE TESTS CONDUCTED IN EACH ASSEMBLY	VIZ. RESISTANCE/CONTINUITY, IR, SHORT CIRCUIT, SENSING DISTANCE AND AS PER MANUFACTURER'S STANDARD	
16	CERTIFICATE OF CONFORMANCE (COC) (ALSO KNOWN AS CERTIFICATE OF CONFORMITY OR CERTIFICATE OF COMPLIANCE) SHALL BE PROVIDED	-	
17	Vendor Remarks/Deviations (If Any)		

*Note: There may be minor changes in technical parameter/s especially in the sensing distance.

Vendor to reverify the same from BHEL before manufacturing the proximity switch cable assembly.

1-1376-84-012

1-1376-84-111

1-1376-84-106

AVVOLGERE INTORNO ALLO
SCHERMO E SALDARE

1-1376-84-107

1976-47-130

BLOCCARE L'ANELLO SUL
CAVO COMPRIMENDO SUI DUE LATI

650

LUNGHEZZA TOT. CAVO PREVISTA 700

ZONA DI FUNZIONAMENTO

7,6

8,6

ZONA DI FUNZIONAMENTO INCERTO

2-1376-84-120

SEZ. A-A

RACCOLTA SCHERMI
SHIELDING

Cavo\Cablaggio costruito secondo IPC/WHMA-A-620C classe 3

Per note costruttive vedere SNT000017473

Test elettrici richiesti secondo IPC/WHMA-A-620C :

•	Continuity	Altro valore definito
•	Dielectric Withstanding Voltage	
•	Insulation Resistance	

Cable\Wiring construction in according to IPC/WHMA-A-620C class 3

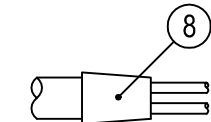
For construction notes see document SNT000017473

Required Electrical Tests in according to IPC/WHMA-A-620C :

•	Continuity	Other defined value
•	Dielectric Withstanding Voltage	
•	Insulation Resistance	

SEZ.	SCH.	DA	POS.	RACC. SCHERMI	A	POS.
SEC.	SHIELD	FROM	POS.	SHIELDINGS	TO	POS.
0,35mm ²	SI / YES	CONNETTORE	A		SENSORE	1
			B			2
C	3					
*	*					
0,35 mm ² G	NO		D			
0,35 mm ² G	NO		E			
			F			

NOTA: ISOLARE CON TERMORESTRINGENTE
LO SCHERMO DELLE COPPIE NON RACCOLTO
NOTE: INSULATE USING HEATSHRINK
THE UNCOLLECTED PAIRS SHIELD



*ISOLARE NON COLLEGARE
*ISOLATE AND DO NOT CONNECT

N° REV. REV.NUM.		NUMERO ORDINE DI MODIFICA CHANGE ORDER NUMBER		DESCRIZIONE REVISIONE REVISION DESCRIPTION		DATA REVISIONE REVISION DATE				
0				PRIMA EMISSIONE FIRST ISSUE		29/10/2020				
DISEGNATO DA PREPARED BY		CONTROLLATO DA CHECKED BY		INSIEME CAVO P.S. P.S. CABLE ASSEMBLY		PESO (kg) WEIGHT (kg)		FORMATO DIS. DWG. SIZE		
Bernardini Alessandro		Marini Lorenzo						A3		
STATO DEL DOCUMENTO DOCUMENT STATUS						SCALA SCALE				
RILASCIATO RELEASED						NO				
				CL. MERC. Q. Q. COMM. CL.	LIV. CRIT. CRIT. LEV.	CAGE CODE	NUMERO DISEGNO / DRAWING NUMBER		REVISIONE REVISION	FOGLIO/FOGLI SHEET/SHEETS
				E03	2	A0199	1976-47-130		0	1/1
Il simbolo △ identifica una caratteristica chiave da tracciare in accordo alla EN 9100 The symbol △ identifies a key feature that must be traceable in accordance with EN 9100										
Eccetto dove indicato le specifiche tecniche richiamate a disegno sono da intendersi all'ultima revisione Except where it is specified, all the quoted technical specifications are in the last available revision							Classificazione Industriale Industrial Security			
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LEV	PARTNO	DESCRIPTION	DRG. REF	MATERIAL	TREAT-MENT	QTY	UNIT	COMMERCIAL CODE	PROBABLE_VENDOR
4	197647130	PROXIMITY SWITCH CABLE ASSEMBLY				-	-		
5	811AD0982	ADAPTER LOW SMOKE 202K132-100-0	6		RoHS	1	ea	202K132-100-0 , 770-001S204 (E), 154-42-H (E)	TE CONNECTIVITY , GLENAIR, HELLERMANN
5	137684120	BOLT SLEEVE				2	ea		
5	220033020	WIRE UNI 5563 d=0.63 STEEL Inox		Stainless steel		0.25	ME		
5	890NA0032	ADHESIVE COPPER TAPE			RoHS	0.35	ME	1181-25.4MM	3M
5	137684111	COVER, CUP		POLYCARBONATE LOADED WITH FIBERGLASS, BLACK COLOR		1	ea		
5	810BA0885	CONNECTOR MS3126P10-6P	1			1	ea	MS3126P10-6P	QPL-26482 (QPD)
5	137684107	STYCAST, 2651				40	GR		
5	815CA0605	CABLE NAV-80-6145-0003-14-00B000 CS-0.35-O-3	4		RoHS	0.7	ME	NAV-80-6145-0003-14-00B000 CS-0.35-O-3	NAV-80 Vendors: 1. UNIKA S.p.A. Italy 2. Sami S.p.a Italy
5	815UN0235	WIRE NAV-80-6145-0003-14-00B000 UG-N-0,35-9	2		RoHS	0.1	ME	NAV-80-6145-0003-14-00B000 UG-N-0,35-9	NAV-80 Vendors
5	137684012	P.S. PRINTED CIRCUIT				1	ea		
6	137684013	POT CORE ASSY				1	ea		
7	137684100	P22/13-K3.003.20/3B7				1	ea		
7	137684108	WIRE, COIL				3	ME		
7	137684112	WIRE, COIL				5	ME		
7	137684101	COIL, REEL P5-055.89				1	ea		
6	137684109	WASHER				1	ea		
6	137684110	PIN, RETAINING				1	ea		
6	127684132	WIRE				0.15	ME		
6	137684102	PC BOARD, PROXIMITY SWITCH				1	ea		
6	127684131	INSULATOR				0.15	ME		
6	137684103	PC BOARD, PROXIMITY SWITCH				1	ea		
5	890AN0110	CABLE MARKER LABEL	5		RoHS	4	ea	0800473	PHOENIX CONTACT
5	890RS0001	SOLDER SLEEVE, M83519/1-2	9			2	ea	M83519/1-2	QPL-AS83519 (QPD)
5	137684106	SILICONE COMPOUND				20	GR		
5	816TE0154	Heat Shrink Tubing ZHTM 3/1.5-0-SP	8		RoHS	0.1	ME	ZHTM 3/1.5-0-SP , TR27-3,2/1,6 (E)	TE CONNECTIVITY , HELLERMANN
5	898MC0688	BUSH	7			1	ea	SF-1126	ISB
5	815UN0232	WIRE NAV-80-6145-0003-14-00B000 UG-N-0.35-4	3		RoHS	0.1	ME	NAV-80-6145-0003-14-00B000 UG-N-0.35-4	NAV-80 Vendors
5	821VN5653	ADHESIVE			RoHS	1	MI	S1125	TE CONNECTIVITY

RoHS: Restriction of Hazardous Substance

MANUFACTURER'S NAME AND ADDRESS			STANDARD QUALITY PLAN							TO BE FILLED BY BHEL			
 BHEL	VENDOR'S NAME	ITEM	PROXIMITY SWITCH (Part no. 157684013, 157684014, 197647129 & 197647130)			QP NO.	QA/DF/QP/004						
						REV.	00	Date: 01.04.2024					
		DRG. NO.	BHEL drawing/ spec./ checklist as per enquiry/P.O.										
		SPEC. No.	OTO MELARA NO. Q576-84-050				Page 1 of 1						
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS		AGENCY			REMARKS
										M	B	N	
1	2	3	4	5	6	7	8	9	D	10			11

1.0 TYPE TEST												
1.1	Immersion Test (Test Number 19 of JSS)	Test condition B, Depth=0.4M, duration - 4 hrs, IP-67 TC	Major	Physical	1 sample/ design type	JSS Spec. JSS 55555-2000	JSS Spec. JSS 55555-2000	T.C.	√	P	V	-
1.2	Vibration test (Test Number 28 of JSS)	Amplitude= ±0.120mm (250µm Pk-Pk). Frequency=19Hz. Time=1 hour for each X, Y and Z direction	Major	Physical	1 sample/ design type	JSS Spec. JSS 55555-2000	JSS Spec. JSS 55555-2000	T.C.	√	P	V	-
1.3	High Temperature Test (Test Number 17 of JSS)	Procedure-6, Test condition-K	Major	Physical	1 sample/ design type	JSS Spec. JSS 55555-2000	JSS Spec. JSS 55555-2000	T.C.	√	P	V	-
1.4	Life cycle test	Satisfactory operation of switch assembly up to 2000 cycle	Major	Physical	1 sample/ design type	BHEL drawing/ spec./ checklist	BHEL drawing/ spec./ checklist	T.C.	√	P	V	-
2.0 ROUTINE TEST												
2.1	Dimensional check of assembly	Dimensions, cable length, surface end diameter etc.	Major	Visual	100%	BHEL drawing/ spec./ checklist	BHEL drawing/ spec./ checklist	I.R.	√	P	V	-
2.2	Visual check of assembly	Enclosure body, connector pins and connecting cable etc.	Major	Visual	100%	Q576-84-050	No defects	I.R.	√	P	V	-
2.3	Performance control/ Operational check @ 18 Volt DC	Iron block at 7.6 mm	Major	Measure	100%	Q576-84-050	+17 to 18 Volt	I.R.	√	P	V	-
		Iron block at 8.6 mm	Major	Measure	100%	Q576-84-050	≤ 0.6 volt	I.R.	√	P	V	-
		Power flow continuity between pin E&F of connector	Major	Measure	100%	Q576-84-050	Q576-84-050	I.R.	√	P	V	-
2.4	Wiring check	Pin A, B & C	Major	Physical	100%	Q576-84-050	Q576-84-050	I.R.	√	P	V	-
2.5	Insulation resistance	--	Major	Electrical	100%	BHEL drawing/ spec./ checklist	BHEL drawing/ spec./ checklist	I.R.	√	P	V	-
2.6	Other test	manufacturer's standard practice	Major	Physical	100%	Relevant standards	Relevant standards	I.R.	√	P	V	-
2.7	Certificate of compliance w.r.t. ordering documents	--	Major	Review	100%	BHEL drawing/ spec./ checklist	BHEL drawing/ spec./ checklist	COC	√	P	V	-
2.8	Identification	Part no., Sr. no., PO no. etc.	Major	Review	100%	BHEL drawing/ checklist	BHEL drawing/ checklist	I.R.	√	P	V	-
2.9	Packing		Major	Visual	100%	Vendor's standard	Vendor's standard	I.R.	√	P	V	-

Note: 1. BHEL reserves right the rights to witness any of the above-mentioned routine test by BHEL or End Customer Indian Navy as per above quality plan at any stage of purchase order execution. However, vendor to provide T.C./ inspection reports as mentioned above for BHEL verification/review along with the delivery of materials. 2. Type test certificates of tests conducted in NABL/Govt. approved labs only will be accepted for BHEL review. In-house TC for clause 1.4 is acceptable for BHEL review.

MANUFACTURER/ SUBCONTRACTOR	LEGEND: APPD.: BHEL APPROVED, DRG: DRAWING, SPEC: SPECIFICATION, BOM: BILL OF MATERIAL, MTC: MATERIAL TEST CERTIFICATE, T.C.: TEST CERTIFICATE, INT. REP.: INTERNAL REPORTS, I.R.: INSPECTION REPORTS, COC: CERTIFICATE OF CONFORMANCE, M: MANUFACTURER / SUBCONTRACTOR, B: BHEL /BHEL NOMINATED INSPECTION AGENCY, N: END CUSTOMER/INDIAN NAVY, 'P': PERFORM, 'W': WITNESS, 'V': VERIFICATION, "√" RECORDS IDENTIFIED WITH 'TICK' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION.	REVIEWED BY: BHEL HARIDWAR - QA	(Not Applicable) APPROVED BY: INDIAN NAVY

TECHNO-COMMERCIAL CHECKLIST

SL. NO.	TERMS & CONDITION	VENDOR CONFIRMATION /REMARKS / REPLY
TENDER DETAILS		
1	BIDDER NAME	
2	GEM BID NO	
QUALITY & TECHNICAL REQUIREMENT		
3	VENDORS TO PROVIDE ENDORSED COPY OF QP.	
4	VENDORS TO CONFIRM FOR SUBMISSION OF TEST CERTIFICATES AND INSPECTION REPORTS AS PER ATTACHED BHEL SQP ALONGWITH THE MATERIAL DELIVERY	
5	VENDOR TO SUBMIT MAKE IN INDIA SELF CERTIFICATION AS PER FORMAT GIVEN ALONG WITH THE ENQUIRY.	
COMMERICAL REMARKS		
6	ITEM IS TO BE SUPPLIED AS PER TECHNICAL SPECIFICATION/DRAWING	
7	KINDLY UPLOAD/ATTACH THE SPECIFICATION DETAILS/ CATALOGUE OF OFFERED ITEMS (IF APPLICABLE/AVAILABLE).	
8	LOT 1 - EARLY DELIVERY ACCEPTABLE LOT 2 - EARLY DELIVERY ACCEPTABLE OCTOBER 2024 ONWARDS LOT 3 - EARLY DELIVERY ACCEPTABLE OCTOBER 2025 ONWARDS LOT 4 - EARLY DELIVERY ACCEPTABLE OCTOBER 2026 ONWARDS	
9	RISK PURCHASE: IN CASE OF ABNORMAL DELAYS (BEYOND THE MAXIMUM LATE DELIVERY PERIOD AS PER LD CLAUSE) IN SUPPLIES / DEFECTIVE SUPPLIES OR NONFULFILLMENT OF ANY OTHER TERMS AND CONDITIONS GIVEN IN PURCHASE ORDER, BHEL MAY CANCEL THE PURCHASE ORDER IN FULL OR PART THEREOF, AND MAY ALSO MAKE THE PURCHASE OF SUCH MATERIAL FROM ELSEWHERE / ALTERNATIVE SOURCE AT THE RISK AND COST OF THE SUPPLIER. BHEL WILL TAKE ALL REASONABLE STEPS TO GET THE MATERIAL FROM ALTERNATE SOURCE AT OPTIMUM COST. IF BIDDER DOES NOT AGREE TO THE ABOVE RISK PURCHASE CLAUSE, BHEL RESERVES THE RIGHT TO REJECT THE OFFER. IN CASE FOR COMPELLING REASONS BHEL ACCEPTS THE OFFER WITHOUT ACCEPTANCE OF THIS CLAUSE BY THE BIDDER AND IN THE EVENTUALITY OF RISK PURCHASE, APPROPRIATE ACTION WILL BE TAKEN AS PER BHEL EXTANT RULES. THIS WILL BE WITHOUT PREJUDICE TO ANY OTHER RIGHT OF BHEL UNDER THE CONTRACT OR UNDER GENERAL LAW. IN CASE OF BREACH OF CONTRACT, WHEREVER THE VALUE OF SECURITY INSTRUMENTS LIKE PERFORMANCE BANK GUARANTEE AVAILABLE WITH BHEL AGAINST THE SAID CONTRACT IS ATLEAST 10% OF THE CONTRACT VALUE, THE SAME BE ENCASHED. IN CASE THE VALUE OF THE SECURITY INSTRUMENTS AVAILABLE IS LESS THAN 10% OF THE CONTRACT VALUE, THE BALANCE AMOUNT BE RECOVERED FROM OTHER FINANCIAL REMEDIES (I.E. AVAILABLE BILLS OF THE CONTRACTOR, RETENTION AMOUNT, ETC. WITH BHEL) OR LEGAL REMEDIES BE PURSUED.	
10	ACTION AGAINST BIDDERS / VENDOR / SUPPLIER / CONTRACTOR IN CASE OF DEFAULT: IN ORDER TO PROTECT THE COMMERCIAL INTERESTS OF BHEL, BHEL SHALL TAKE ACTION AGAINST SUPPLIES / CONTRACTORS BY WAY OF SUSPENSION OF BUSINESS DEALINGS, WHO EITHER FAIL TO PERFORM OR ARE IN DEFAULT WITHOUT ANY REASONABLE CAUSE, CAUSE LOSS OF BUSINESS/ MONEY/ REPUTATION, INDULGE IN MALPRACTICES, CHEATING, BRIBERY, FRAUD OR ANY OTHER MISCONDUCT OR FORMATION OF CARTELS SO AS TO INFLUENCE THE BIDDING PROCESS OR INFLUENCE THE PRICE ETC. SUSPENSION OF BUSINESS DEALINGS COULD BE IN THE FORM OF “HOLD” OR “BANNING” A SUPPLIER/ CONTRACTOR OR A BIDDER AND SHALL BE AS PER “GUIDELINES FOR SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS/ CONTRACTORS” AVAILABLE AT BHEL’S WEBSITE “https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors”	
11	REST GENERAL TERMS AND CONDITIONS SHALL BE AS PER GEM	

MAKE IN INDIA SELF CERTIFICATION

As per Government Public procurement order no. P-45021/2/2017-BE-II dt.15.06.2017 & P45021/2/2017-PP(BE-II) dated 28.05.2018,29.5.2019, 04.6.2020 and amendment dated 16.09.2020, it is hereby certifying that we

.....
..... (supplier name) are(Class-I/Class-II)
local supplier and will meet the requirement of minimum local content of
(50%/20%) as defined in public procurement order dated 04.6.2020 for material against Enquiry no.
..... Details of
location at which local value addition will be made is as follows: -

.....
.....
.....

We also understand, false declarations will be in breach of the code of integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the general financial rules along with such other actions as may be permissible under law.

Note:

As per office order P-45021/102/2019-BE-II-Part (1) (E-50310) Dated 04/03/2021, Bidders can't claim itself as "Class-I local supplier/Class-II local suppliers" by claiming the service such as transportation, insurance, installation, commissioning, training & after sales service support like AMC/CMC etc. as local value addition. Bidder offering imported product will fall under the category of Non-Local supplier.

1. ALL VENDORS TO PROVIDE POINT WISE REPLY/CONFIRMATION ALONG WITH RELEVANT SUPPORTING DOCUMENTS TO EACH AND EVERY POINT OF PRE-QUALIFICATION REQUIREMENT/PQR FOR ALL ENQUIRY ITEMS. NONCOMPLIANCE OF THESE MAY LEAD TO REJECTION OF OFFER AS THESE ARE ESSENTIAL CONDITION FOR PARTICIPATING IN TENDER ENQUIRY.
2. KINDLY UPLOAD/ATTACH THE SPECIFICATION DETAILS/ CATALOGUE OF OFFERED ITEMS (IF APPLICABLE /AVAILABLE).
3. KINDLY ARRANGE TO SUBMIT TECHNO-COMMERCIAL CHECKLIST ALONG WITH YOUR OFFER.
4. KINDLY SUBMIT TECHNICAL PARAMETERS CHECKLIST ALONG WITH YOUR OFFER.
5. EARLY DELIVERY ACCEPTABLE FOR LOT 1
6. LOT 2 - EARLY DELIVERY ACCEPTABLE OCTOBER 2024 ONWARDS
7. LOT 3 - EARLY DELIVERY ACCEPTABLE OCTOBER 2025 ONWARDS
8. LOT 4 - EARLY DELIVERY ACCEPTABLE OCTOBER 2026 ONWARDS
9. VENDORS TO PROVIDE ENDORSED COPY OF QP.
10. VENDORS TO CONFIRM FOR SUBMISSION OF TEST CERTIFICATES AND INSPECTION REPORTS AS PER ATTACHED BHEL SQP ALONGWITH THE MATERIAL DELIVERY.
11. VENDOR TO SUBMIT MAKE IN INDIA SELF CERTIFICATION AS PER FORMAT GIVEN ALONG WITH THE ENQUIRY.
12. MSE/MII: THE SUPPLIER NEEDS TO SUBMIT/UPDATE MSE/MII CREDENTIALS ON GEM PORTAL DURING PROFILE UPDATION/ OFFER SUBMISSION STAGE. THE MSE DATA SUBMITTED IS CROSS VERIFIED BY GEM WITH GOVT. OF INDIA UDYAM/NSIC DATABASE THROUGH API INTEGRATION ON REAL TIME BASIS AND FOR MII, A SELF DECLARATION IS BEING GIVEN AND AUTHENTICATED BY AADHAR OTP. IF THE SELLER FAILS TO CLAIM MSE/MII PROVISION ON GEM PORTAL AT PROFILE UPDATION/BID SUBMISSION STAGE, THE SAID SELLER WILL BECOME INELIGIBLE FOR GETTING THE MSE/MII BENEFITS FOR THAT BID AUTOMATICALLY. THE VENDOR CAN ALWAYS CONTACT THE GEM HELPDESK, IN CASE OF ANY ISSUES.
13. THE PRICE QUOTE BY BIDDER SHOULD BE INCLUSIVE OF GST & SHOULD BE ON BHEL HEEP HARIDWAR STORES BASIS.
14. BIDDER'S OFFER IS LIABLE TO BE REJECTED IF THEY DON'T UPLOAD ANY OF THE CERTIFICATES / DOCUMENTS SOUGHT IN THE BID DOCUMENT, ATC AND CORRIGENDUM IF ANY.
15. **RISK PURCHASE:** IN CASE OF ABNORMAL DELAYS (BEYOND THE MAXIMUM LATE DELIVERY PERIOD AS PER LD CLAUSE) IN SUPPLIES / DEFECTIVE SUPPLIES OR NONFULFILLMENT OF ANY OTHER TERMS AND CONDITIONS GIVEN IN PURCHASE ORDER, BHEL MAY CANCEL THE PURCHASE ORDER IN FULL OR PART THEREOF, AND MAY ALSO MAKE THE PURCHASE OF SUCH MATERIAL FROM ELSEWHERE / ALTERNATIVE SOURCE AT THE RISK AND COST OF THE SUPPLIER. BHEL WILL TAKE ALL REASONABLE STEPS TO GET THE MATERIAL FROM ALTERNATE SOURCE AT OPTIMUM COST. IF BIDDER DOES NOT AGREE TO THE ABOVE RISK PURCHASE CLAUSE, BHEL RESERVES THE RIGHT TO REJECT THE OFFER. IN CASE FOR COMPELLING REASONS BHEL ACCEPTS THE OFFER WITHOUT ACCEPTANCE OF THIS CLAUSE BY THE BIDDER AND IN THE EVENTUALITY OF RISK PURCHASE, APPROPRIATE ACTION WILL BE TAKEN AS PER BHEL EXTANT RULES. THIS WILL BE WITHOUT PREJUDICE TO ANY OTHER RIGHT OF BHEL UNDER THE CONTRACT OR UNDER GENERAL LAW.

IN CASE OF BREACH OF CONTRACT, WHEREVER THE VALUE OF SECURITY INSTRUMENTS LIKE PERFORMANCE BANK GUARANTEE AVAILABLE WITH BHEL AGAINST THE SAID CONTRACT IS ATLEAST 10% OF THE CONTRACT VALUE, THE SAME BE ENCASHED. IN CASE THE VALUE OF THE SECURITY INSTRUMENTS AVAILABLE IS LESS THAN 10% OF THE CONTRACT VALUE, THE BALANCE AMOUNT BE RECOVERED FROM OTHER FINANCIAL REMEDIES (I.E. AVAILABLE BILLS OF THE CONTRACTOR, RETENTION AMOUNT, ETC. WITH BHEL) OR LEGAL REMEDIES BE PURSUED.

16. ACTION AGAINST BIDDERS / VENDOR / SUPPLIER / CONTRACTOR IN CASE OF DEFAULT:

IN ORDER TO PROTECT THE COMMERCIAL INTERESTS OF BHEL, BHEL SHALL TAKE ACTION AGAINST SUPPLIES / CONTRACTORS BY WAY OF SUSPENSION OF BUSINESS DEALINGS, WHO EITHER FAIL TO PERFORM OR ARE IN DEFAULT WITHOUT ANY REASONABLE CAUSE, CAUSE LOSS OF BUSINESS/ MONEY/ REPUTATION, INDULGE IN MALPRACTICES, CHEATING, BRIBERY, FRAUD OR ANY OTHER MISCONDUCT OR FORMATION OF CARTELS SO AS TO INFLUENCE THE BIDDING PROCESS OR INFLUENCE THE PRICE ETC. SUSPENSION OF BUSINESS DEALINGS COULD BE IN THE FORM OF "HOLD" OR "BANNING" A SUPPLIER/ CONTRACTOR OR A BIDDER AND SHALL BE AS PER "GUIDELINES FOR SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS/ CONTRACTORS" AVAILABLE AT BHEL'S WEBSITE <https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors>

17. BIDDERS ARE ADVISED TO CHECK APPLICABLE GST ON THEIR OWN BEFORE QUOTING. BUYER WILL NOT TAKE ANY RESPONSIBILITY IN THIS REGARDS. GST REIMBURSEMENT WILL BE AS PER ACTUALS OR AS PER APPLICABLE RATES (WHICHEVER IS LOWER), SUBJECT TO THE MAXIMUM OF QUOTED GST %.

18. BIDDER SHALL SUBMIT THE FOLLOWING DOCUMENTS ALONG WITH THEIR BID FOR VENDOR CODE CREATION:

COPY OF PAN CARD **B.** COPY OF GSTIN **C.** COPY OF MSE CERIFICATE

19. DEDICATED /TOLL FREE TELEPHONE NO. FOR SERVICE SUPPORT: BIDDER/OEM MUST HAVE DEDICATED/TOLL FREE TELEPHONE NO. FOR SERVICE SUPPORT.

20. DATA SHEET OF THE PRODUCT(S) OFFERED IN THE BID, ARE TO BE UPLOADED ALONG WITH THE BID DOCUMENTS. BUYERS CAN MATCH AND VERIFY THE DATA SHEET WITH THE PRODUCT SPECIFICATIONS OFFERED. IN CASE OF ANY UNEXPLAINED MISMATCH OF TECHNICAL PARAMETERS, THE BID IS LIABLE FOR REJECTION.

21. SCOPE OF SUPPLY (BID PRICE TO INCLUDE ALL COST COMPONENTS): ONLY SUPPLY OF GOODS.

22. PRODUCTS SUPPLIED SHALL BE NONTOXIC AND HARMLESS TO HEALTH. IN THE CASE OF TOXIC MATERIALS, MATERIAL SAFETY DATA SHEET MAY BE FURNISHED ALONG WITH THE MATERIAL.

23. WHILE GENERATING INVOICE IN GEM PORTAL, THE SELLER MUST UPLOAD SCANNED COPY OF GST INVOICE AND THE SCREENSHOT OF GST PORTAL CONFIRMING PAYMENT OF GST.

24. PAYMENT TERMS SHALL BE AS PER FOLLOWINGS:

a) **FOR NON-MSES BIDDER:** 100% payment along with taxes, freight & insurance will be made after receipt and acceptance of material and within 90 days from the date of invoice subject to submission of non-discrepant documents within 15 days of supply as per terms and conditions of Purchase Order (THIS IS IN SUPERSESSION OF 10 DAYS' TIME AS PROVIDED IN CLAUSE 12 OF GEM GTC).

b) **FOR MSES BIDDER:** For MSEs (covered under MSME Act) which are registered and periodically renewed with BHEL, the payment will be made within 45 days or as prescribed in the relevant act. Benefits of MSE (such as EMD Waiver, Tender fee exemption, Price preference, Payment preference etc.) will be given only to those MSE Vendors who are manufacturers of offered items against the NIT. No MSE benefits shall be provided to Agents / Stockists /Dealers / Traders etc. for the items offered but not manufactured by themselves."

- c) **FOR MEDIUM ENTERPRISES:** 100% payment along with taxes, freight & insurance will be made after receipt and acceptance of material and within 60 days from the date of invoice subject to submission of non-discrepant documents within 15 days of supply as per terms and conditions of Purchase Order.
- d) Please note that vendor to adhere to the payment terms as per above. No deviation in payment terms shall be accepted. Vendor to submit their offer accordingly.