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### प्लाज़मा अनुसंधान संस्थान INSTITUTE FOR PLASMA RESEARCH परमाणु ऊर्जा विभाग, भारत सरकार का एक सहायता



### प्राप्त संस्थान

### An Aided Institute of Department of Atomic Energy, Government of India

इन्दिरा प्ल के पास, भाट, गांधीनगर - 382 428 भारत

दूरभाष: (079) 2396 2020/2021/2028

फैक्स: 91-079-23962277

वेब: www.ipr.res.in

NEAR INDIRA BRIDGE, BHAT

DIST. GANDHINAGAR - 382 428 (INDIA) Phone: (079) 2396 2020/2021/2028

Fax : 91-079-23962277

Web : www.ipr.res.in

#### **ENQUIRY**

ENQUIRY NO : IPR/EQL/19-20/088

Date : 30-05-2019

Due on : 01-08-2019 by 1:00 PM IST

Reminder-1 Dt: 05-07-2019

Please send your offer in sealed envelope specifying Enquiry No, Date & Due Date, ALONG WITH your credentials for the following items:

#### **Important Note:**

Please note that e-mail quotations are not acceptable however you may send your queries (if any) to <a href="mailto:localpurchase@ipr.res.in">localpurchase@ipr.res.in</a>

Please ensure your sealed quotation reaches this office not later than above mentioned due date and time.

Kindly go through the following documents properly before quoting which are available on the IPR web portal i.e., <a href="http://www.ipr.res.in/documents/tender\_terms.html">http://www.ipr.res.in/documents/tender\_terms.html</a> / attached herewith.

- 1) Instructions to the bidders & Terms and conditions (refer Form No: IPR-LP-01.V4)
- 2) Bidding format

GST for Goods and Services (IGST/CGST/SGST TAX BENEFITS): Please refer clause no: 8 of Form No: IPR-LP-01.V4

#### QUOTATION SHOULD BE ADDRESSED TO PURCHASE OFFICER ONLY

Sr No	Description	Quantity
1	Supply of High Vacuum Compatible Cable 16 AWG-4Core	300.0 Mtrs.

2 Supply of High Vacuum Compatible Cable 300.0 Mtrs. 24AWG-6Core

Note:

1.Please quote with complete technical details (Technical compliance sheet and product data sheet).

2.TDS as per CGST Act: As per the provisions mentioned under Section No. 51 of the CGST Act 2017, TDS @ 2% (IGST 2% or CGST 1% and SGST 1%) will be deducted while making payment to the suppliers where total value of the purchase order/contracts/work orders exceeds Rs.2.5 Lakhs. Necessary TDS Certificate will be issued to

the supplier after TDS deduction.

Encl: As Per Attachment

Sd/-

Mr. D. Ramesh Purchase Officer-II

**Information to Vendors:** We are working towards a single platform for our future requirement. Hence, please refer IPR website i.e, http://www.ipr.res.in/documents/tenderseng.html for our future requirement.

## Technical Specifications:

## Supply of High Vacuum Compatible Cables (16 AWG/4 Core)

#	Parameter	IPR Specification Requirement	Specification Provided by Vendor
1	Cable purpose	DC Motor power line	
2	Conductor material	Copper (≥ 99%) (multi- stranded) (test report to be attached)	
3	Tolerance class	class A ( $\pm$ 30 $\mu$ V or $\pm$ 0.5 deg C)	
4	Conductor thickness	16 AWG	
5	Number of • Conductors	4 core	Ceruficats for
6	Conductor insulation material	Kapton Polyamide	Compliance with
7	Braiding	Stainless Steel (SS304 or equivalent) Should be non-magnetic	ins Compatibility
8	Outer Jacket insulation material	Kapton Polyamide	
9	Voltage Rating	24V DC	
10	Current Rating / conductor	10 A / conductor	
11	Insulation thickness	As per design proposed by vendor	
12	Insulation design	Bi-directional overlapping using fused Kapton Polyamide tape	
13	Conductor insulation color	Natural Kapton (colour code as per ANSI MC96.1)	Pre dispatch
14	Overall cable insulation color	Natural Kapton colour	. nodsagani
15	Twist pitch	As per MIL standards for the above cable	monupar dignal Late
16	High Vacuum compatibility	1e-7 mbar	(ovaj)
17	Outgassing rate of Assembled Conductor	<1 x 10^-9 mbar.l/s/m	

18	Cable end form cross- section	Round	anottsoiltage lea	ann
	GRUNDWAR	The vendor must agree to either of the following	Please Select Your consent	*
	Specification Foodad by Vendor	criteria:  1. Vendor will provide a		
		test report and certificate that the cable is compatible High	(Yes/No)	
		Vacuum environment and has Outgassing rates as per specification above (in Sr. 16 & 17)		
v	Certificate for	OR STORE STO	Annaber of .	
19	Compliance with Vacuum & Outgassing Rate Compatibility	2. After the enquiry, the Technically Acceptable	notis insulation material	
	Kate Companionity	vendor will have to send a 5m -10m sample of the	Braiding	
6		proposed cable to IPR for Outgassing rate	(Yes/No)	
		measurement and vacuum compatibility test. After successful	Voltage Kating Current Kabing /	
		testing of Outgassing rate measurement and	conductor  unulamps thickness	
		vacuum compatibility test, at IPR, the final PO will be placed by IPR.	Insulation design	
1)	D 1' 11	IPR will witness the standard MIL tests on the final product at	nedation resultation	
20	Pre dispatch inspection	manufacturer's lab for acceptance and clearance	Control Cable	
	Control of the contro	(Note 1)		
21	Total length required (in m)	300	ribliq leta-T	3

# Technical Specifications:

# Supply of High Vacuum Compatible Cables (24 AWG/6 Core)

	#	Parameter	IPR Specification Requirement	Specification Provided by Vendor
	L .	Cable purpose	Hall sensor line	Trada by vendor
.2	2	Conductor material	Copper (≥ 99%) (multi- stranded) (test report to be attached)	
3		Tolerance class	class A (± 30 μV or ± 0.5 deg C)	
4		Conductor thickness	24 AWG	
. 5		Number of Conductor	cs 6 core	
6		Conductor insulation material	Kapton Polyamide	
7		Braiding Outer Jacket insulation	Stainless Steel (SS304 or equivalent) Should be non-magnetic	Certificate for
8	1	material	Kapton Polyamide	gnizzegtuO st muus
7		Voltage Rating	24V DC	Andrew Property Spirit
10	0	Current Rating / conductor	10 A / conductor	•
11	I	nsulation thickness	As per design proposed by vendor	
12	Ir	nsulation design	bi-directional overlapping using fused Kapton Polyamide tape	
3	CC	onductor insulation blor	Natural Kapton (colour code as per ANSI MC96.1)	
4		verall cable sulation color	Natural Kapton colour	
5	$T_{V}$	vist pitch	As per MIL standards	
5	Hi	gh Vacuum ( mpatibility	1e-7 mbar	
	Oı	atgassing rate of sembled Conductor	<1 x 10^-9 mbar.l/s/m	

	10	Cable end form cross-		
	18	section	Round	77 0.1 (1)/
		Assispinoses .	The vendor must agree	Please Select Your
		rebread of Vendor	to either of the	consent
			following criteria:	
			1. Vendor will	
			provide a test	(D/ -/NT-)
			report and	(Yes/No)
			certificate that the	
			cable is compatible	
			High Vacuum	
			environment and	
	*** 6		has Outgassing	Conductor insulation
			rates as per	Triplino A leightent
			specification above	
			(in Sr. 16 & 17)	
			OR (Instavados	
		Certificate for	2. After the enquiry,	
	· · · · · · · · · · · · · · · · · · ·	Compliance with	the Technically	in waste to our such as I water
	19	Vacuum & Outgassing	Acceptable vendor	o longton
	de	Rate Compatibility	will have to send a	(Yes/No)
		Rate Companionity	5m -10m sample of	A notice of tracerus
			the proposed cable	West Annual Annu
			to IPR for	A ACCOUNT
			Outgassing rate	A John Jolde contelluer
			measurement and	60
			vacuum	10
			compatibility test.	10
,			After successful	
1			testing of	12
			Outgassing rate	N
			measurement and	13) HORMANIA CANA
			vacuum	abias Remark
	- 12		compatibility test,	
			at IPR, the final PO	delication
			will be placed by	Thorey Salve
			IPR.	
			IPR will witness the	91 vittigaactto
1	44	ta ta	standard MIL tests on	
	200		the final product at	A DESIGNATION DESIGNATION
	20		manufacturer's lab for	
			acceptance and	
		Pre dispatch inspection	clearance (Note 1)	

300		
	300	300

### Special Note:

- 1. NO PTFE/FEP/EPFE material should be used in the cable
- 2. Filler material, if used, should comply with the above vacuum and outgassing rate specifications.