



Cable Assemblies

Item to be Scouted

_____ days
Opportunities will be posted for 30 days unless specified

Please describe the item application/ the end use of item.* Provide the item number if applicable: (N95 Mask vs Protective Mask).

Cable Assemblies used in robotics applications.

2021-115

Supplier Scouting Number (NIST MEP use)

Scouting customer/product [NAICS Code](#), if known

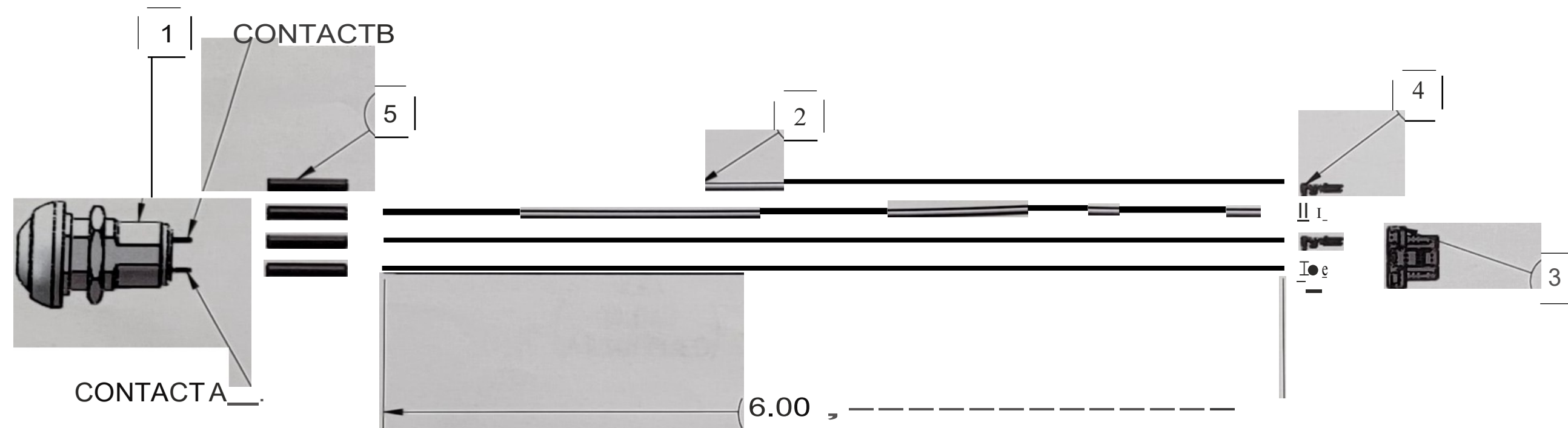
TECHNICAL INFORMATION:	1. Supplier Information	a. Type of supplier being sought*
		<input checked="" type="checkbox"/> Manufacturer <input type="checkbox"/> Contract Manufacturer <input type="checkbox"/> Distributor <input type="checkbox"/> Other _____
	2. Summary of Technical Specifications and Performance Requirements:	b. Reason for scouting submission*
		<input type="checkbox"/> 2 nd Supplier <input type="checkbox"/> Price <input type="checkbox"/> Re-shore <input type="checkbox"/> Past supplier no longer available <input checked="" type="checkbox"/> New Product Startup <input type="checkbox"/> Other _____
		a. Describe the manufacturing processes (elaborate to provide as much detail as possible).*
		see additional comments section
	b. Provide dimensions / size / tolerances / performance specifications for the item.*	
	10AWG to 32AWG crimps and splicing. All dimensions for heat shrink, cable lengths, and other physical dimensions will be provided in the drawing. Quality inspections must be made per the dimensions in the drawing.	
	c. List required materials needed to make the product, including materials of product components.*	
Please reference attached prints and pictures. All other information will be provided upon request during the quoting process.		

BUSINESS INFORMATION:	2. Summary of Technical Specifications and Performance Requirements cont:	d. Are there applicable certification requirements?* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Please explain
		e. Are there applicable regulations?* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Please explain
		f. Are there any other standards, requirements, etc.?* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Please explain
		g. Additional Comments: Is there other information that would impact the item's performance or usefulness? Please explain. Manufacturing processes: Design cable assemblies that are simple single conductor cables with crimps, to 20+ conductor, varying gauges size, and integrated with several cots and machined components with varying heat shrink and sheathing needs.
	3. Volume and Pricing	3a. Estimated potential business volume (i.e., # Units Per Day, Month, Year) *: Prototyping of 1-5 pieces per job Production of 1-25+ pieces per job various complexities
		b. Estimated target price / unit cost information (flexible and negotiable <u>not</u> accepted) *: will vary based upon complexity and turnaround time
	4. Delivery Requirements:	a. When is it needed by? (Immediate, 30 Days, 6 months, etc.)* Company has both short term and medium-term requirements. Suppliers need to be prepared to quote and provide available capacity for 3, 5, 10, 15 and 20+ day turnaround (delivery to customer).
		b. Describe packaging requirements (i.e., individually/group packaging)* At a minimum each item to be labeled with part number and revision number. Orders to be shipped complete and no short shipments will be allowed unless authorized by customer in advance.
		c. Where will this item be shipped? * Pittsburgh, PA
	5. Additional Comments:	Is there other information you would like to include?

Photos or diagrams of the item (helpful but not required).

ITEM NO.	MANUFACTURER	PART NUMBER			DESCRIPTION	QTY
1	APEM	IPR1SAD2LOG			Push Button Laich Switch	1
2	RE2MCOTS				24 AWG Wire	4
3	Molex	502578-0400			Clik Mole Housing, 4 Pin Single Row, 1.5mm Pilch	1
4	Molex	502579-1000				
5	RE2MCOTS				Clik-Mole Crimp Terminal, 1.5mm Pilch, 20-28 AWG, Gold Plated	
					Heat Shrink	

REV.	ECN	DESCRIPTION	DATE	REV BY	CHECKED BY
1	N/A	INITIAL RELEASE	8/20/15	JG	MCC
2	N/A	CONTACT FROM TIN TO GOLD PLATED; ADDED IPC STANDARD TO NOTE	4/28/2016	JJG	FFC
3	N/A	UPDATED NOTE 3, UPDATED PINOUT TABLE, UPDATED HEAT SHRINK MATERIAL IN BOM	8/23/2016	JJG	FFC
4	N/A	CHANGED WIRE LENGTH FROM 2.5" TO 6"	7/12/2019	CD	JJG



PIN OUT		
ITEM0	ITEMG_)	TWIST
CONTACTA	PIN 1	2 TWISTS/INCH
CONTACTB	PIN 2	
LONG LEAD -t	PIN 3	2 TWISTS/INCH
SHORT LEAD -	PIN 4	

NOTES:

1. CUT LED LEADS FROM ITEM0 TO .25"
2. SOLDER ITEM (D TO LED LEADS AND LUGS OF ITEM0
3. USE MOLEX CRIMP TOOL 63819-4600 WITH MODULAR CRIMP HEAD 63819-4670
4. ALL CABLE ASSEMBLIES AND HARNESSSES SHALL BE MANUFACTURED AND INSPECTED ACCORDING TO IPC/WHMA-A-620B, CLASS 2 DEDICATED SERVICE ELECTRONIC PRODUCTS STANDARD.

MATERIAL	N/A
CONDITION	N/A
FINISH	N/A

ALL DIMENSIONS ARE INCHES UNLESS OTHERWISE SPECIFIED: FRACTIONS X/X ! 1/16" DECIMAL .x ! .025 DECIMAL .xx ± .010 DECIMAL .xxx ! .005 ANGLES !.50 BREAK ALL SHARP EDGES		SURFACES TO BE 63 RMS MAX.	
DRAWING SIZE "B" SHEET 1 OF 1		PART NO.	

ITEM NO.	MANUFACTURER	PART NUMBER			DESCRIPTION	MATERIAL	QTY.
1	OTTO	P7-571 I22			Sealed Subminiature Pushbutton Switch	N/A	1
2	Molex	51021-0200			PicoBlade, 2Pin, CrimpHousing	Thermoplastic Resin	1
3	Molex	500798100			Crimp Terminal	N/A Alphowire	2
4					28 AWG Wire 2, Teflon	6820-WHOOS	2

REV	DESCRIPTION	DATE	REV BY	APPROVED
1	INITIAL RELEASE	8/26/15	JG	MGC
2	ADD IPC STANDARD NOTE	6/17/2016	JJG	FFC
3	REMOVED CHANGED ORIENTATION OF WIRES TO BE PERPENDICULAR TO SWITCH	8/5/2016	JJG	FFC
4	ADD PICTURES FOR BETTER DETAIL OF HOT GLUE	9/20/2016	JJG	FFC

GLUE ZONE FLUSH WITH THIS SURFACE

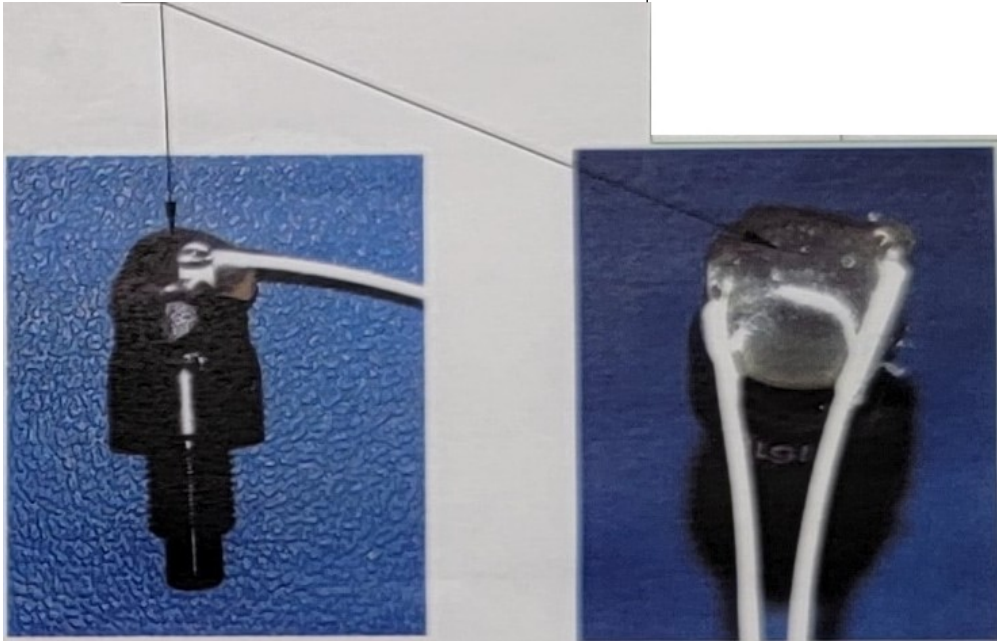
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GLUEZONE. NO GLUE ALLOWED OUTSIDE OF THIS ZONE

(4_3)

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ADD HOT GLUE(MCMasterCARR 7518A55) AROUND TERMINALS AND WIRES AFTER SOLDERING FOR STRAIN RELIEF AS SHOWN



PIN OUT

ITEM0	ITEMG)
PIN 1	PIN 1
PIN 2	PIN 2

REVISION

NOTES:

- USE MOLEX CRIMP TOOL 63819-0400
- SOLDER ITEM 0 TO ITEM 0
- ALL CABLE ASSEMBLIES AND HARNESSSES SHALL BE MANUFACTURED AND INSPECTED ACCORDING TO **IPC/WHMA-A-620B, CLASS2 DEDICATED SERVICE ELECTRONIC PRODUCTS** STANDARD

UNLESS OTHERWISE SPECIFIED:

FRACTIONS $\frac{X}{Y}$ ±.060

DECIMAL .X : .025
DECIMALS .XX : .010
DECIMALS .XXX : .001

ANGLES ±5°

BREAK ALL SHARP EDGES

SURFACES TO BE 125 RMS MAX

SCALE: 1:1 NOT TO SCALE

UNITS: INCHES

PROJECT

FILENAME

PART NUMBER

DESCRIPTION

MATERIAL

FINISH

DRAWING SIZE

Otto Pushbutton Switch Terminated

N/A

N/A

SHEET 1 of 1

