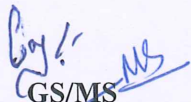


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			CHECKED BY  SBB		APPROVED BY  VIDYA S
			PREPARED  GS/MS	ISSUED 410 ENGG	DATE 18.12.2020



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REV NO.	DATE	NATURE OF CHANGE	REASON	PREPARED BY	APPROVED BY
00	18.12.2020	FIRST ISSUE	-----	GS/MS	VIDYA S

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COPY RIGHT AND CONFIDENTIAL THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.		<u>TECHNICAL SPECIFICATIONS & GUIDELINES FOR QUOTATION</u> 1.0 This specification covers the requirements of digital display modules (DDMs). The digital display module items shall include digital display modules, connectors, screw and clamps for fixing the DDM on mosaic grid etc. as per the requirements of BHEL. 2.0 GENERAL TECHNICAL REQUIREMENTS 2.1 The basic size of DDMs shall be of the DIN size of 48(W) x 24(H) mm. 2.2 Display shall be minimum 3 and half digit seven segment with +/- sign. Range of display shall be ± 1999. Display character height shall be 7.5mm minimum. Display color shall be Green, however based on project requirement display color can be red also. Display shall be LED decimal continuous reading with selectable decimal point. DDMs should have provision of recalibration of display range with push buttons. Recalibration of any range should be possible without loss of accuracy as specified at Sr. No. 2.3 below. 2.3 Accuracy: ± 0.1 % of reading ± 1 digit or better. 2.4 The bezel colour of DDMs shall be RAL 7035 (Light Grey), and surface finish shall be semi-glossy. 2.5 Aux. power supply: 24V DC $\pm 10\%$. 2.6 Input shall be 4-20mA DC signal. Input filter for suppressing harmonics in the 4-20mA DC signal shall be provided. 2.7 Flush mounting with screw clamps. Screw clamps required for mounting of DDMs on mosaic grid are also under bidder's and the same have to be supplied alongwith each DDMs. Screw and clamps should be designed in such a way to ensure proper mounting of DDMs on mosaic grid. Mounting depth of the DDM should not be greater than 110mm. 2.8 Complete covered housing shall be provided. 2.9 Generally DDMs will be mounted on the mosaic grid which will be fitted on vertical panel. DDMs should be able to withstand vibrations and shock caused during transportation of the panel.		
		2.10 Power/signal connection: screwed.		
		2.11 Engineering unit: Engineering unit to be put on the front face of DDMs.		
		2.12 Bidder must invariably mention the particular type no./article no./ordering no. of the DDMs being offered, supported by detailed catalogs/data sheets, without which, an offer will be deemed incomplete, and will be liable for rejection.		

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COPY RIGHT AND CONFIDENTIAL THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.	2.13 Actual requirements are dependent on specific project inputs which are finalized only after detailed engineering is completed for each of the project. Due to this reason, there may be variations in the final quantity ordered for various items at the end of the specified period of one year. Bidders must agree to such item-wise quantity variations which may occur at the end of the year. No change in agreed unit rates of items shall be entertained by BHEL due solely to this reason.			
	2.14 Range and engineering unit shall be furnished by BHEL after finalization of order and before placement of Purchase order.			
	2.15 Catalogue: Bidder to submit detailed catalogue for the model being offered.			
	2.16 Each DDMs should be marked with SL. NO, BATCH NUMBER for easy identification.			
	2.17 Deviation: Bidder shall indicate clause-wise deviation, if applicable.			
		3.0 QUALITY ASSURANCE		
		3.1 Bidder shall enclose in the offer, for review by BHEL, the Quality Assurance Plan/Procedure of the manufacturer for the entire process from incoming goods to finished products.		
		3.2 At the purchaser's (BHEL) end, the items shall be subjected to inspection at 'Goods Inwards' stage for physical verification matching to purchase order details, as per BHEL standards. Subsequently, they shall be further inspected at the stage of assembly of panels at works, and then all (100%) active (functional) modules shall be functionally tested during system testing of the panels. If, during any of these stages, any component/item is found to be non-conforming to specifications, or functionally defective, they shall be rectified/replaced by the manufacturer or their authorized representative without any financial implications, and in the shortest possible time-frame.		
		3.3 Type test report as per IEC-68-2/3 or as per IS-9000 from any certified lab. Bidder shall submit type test certificate alongwith the offer. In case bidder is not able to produce test reports at the time of offering, the vendor need to confirm that the type test report shall be submitted within one month after the placement of order before supply of the items.		
		4.0 DOCUMENTS REQUIRED WITH TECHNICAL BID		
		4.1 Following documents, as a minimum, are required to be submitted along with the technical bid:		
		1) Company/Organisation details. 2) Detailed catalog giving overall details of DDMs being offered. 3) Reference list of customers/utilities, with specific stress on power plant applications, where the offered items are in service for not less than three years. 4) Quality Assurance Plan/Procedure as per cl. 3.1 of this specification. Type test report as per cl. 3.3 of this specification 5) Any other information deemed necessary by the bidder for completeness of the technical bid.		
		Technical bids not accompanied with the above documents are liable to be rejected.		