



EDN BANGALORE

PURCHASE SPECIFICATION

PS/415/2239

Rev. No.: 01

PAGE No. : 01 OF 04

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PURCHASE SPECIFICATION

OF

AC-DC (24V/10A) SWITCHED MODE POWER SUPPLY

APPROVED

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PREPARED

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CHECKED BY

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ISSUED BY

ENGG

DATE

04/11/2014



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REVISION HISTORY SHEET

REV. NO	DATE	NATURE OF CHANGE	REASONS	PREPARED BY	APPROVED BY
00	08/10/2014	First Issue	-----	MN	SS
01	04/11/2014	DC input has been removed.	-----	MN <i>[Signature]</i>	SS

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COPY RIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in anyway detrimental to the interest of the company.		A. Scope: This specification covers the technical requirements for AC-DC Switched Mode Power Supply. B. Purpose: AC-DC Switched Mode Power Supply Units are used in DCS Control Cabinets for System / Field Supply. C. Technical Specification: The power supply unit shall meet the following minimum requirements. 1) Input Range: AC I/P range: 93-264 VAC (or) as a suitably split range (s) of 110VAC $\pm$ 15% and 230VAC $\pm$ 15%. Input operating voltage selection: Auto Select 2) Output: 24 VDC, 10A 3) Load sharing >85% when paralleling upto 4 units 4) Output Diode 'OR'ing: For parallel operation of power supplies, output diode is to be provided either (i) as part of PS and housed inside PS or (ii) external diode 'OR'ing module and suitable for DIN rail mounting. Supplier to indicate the details of the diode 'OR'ing methodology. External diode 'OR'ing module shall have LED indication for inputs and output / suitable PFC contact for remote fault monitoring (Supplier to indicate the details) 5) Suitable for DIN rail mounting 6) Enclosure: Ventilated, Natural air-cooling when housed in Control cabinet of IP42 protection. 7) Operating temperature = 0~60 degC 8) Indications: LED indications for AC input, DC OK and DC Low preferred. Supplier to indicate the details of LED indications in the PS offered. 9) I/P Protection: Fuse. 10) I/P Surge protection for compliance: as per EN61000-4-5, level 3 11) Inrush current: <60A for 230VAC 12) Line Regulation: $\leq \pm 1\%$ 13) Load Regulation: $\leq \pm 1\%$ 14) Efficiency $\geq 85\%$ over the range 20% to full 100% Load. 15) O/P settable from 23 to 28VDC through potentiometer on front. 16) Ripple $\leq 100\text{mV}$ p-p max. 17) O/P Protection: overload, short-circuit protection with output power limitation 18) The Power Supply module should have batch number/month & year of manufacturing printed on it.		

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COPY RIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in anyway detrimental to the interest of the company.		19) Remote Power Supply alarm: Potential-free contact (Common-NO) shall be provided to facilitate remote monitoring of power-supply output error condition. 20) HV Test Capability: The unit shall withstand HV/IR test as per the details indicated below and this shall be carried out by supplier on 100% of the modules. - Input /Output : 2 KV minimum Voltage for 1 min. - Input / Earth : 2 KV minimum Voltage for 1 min. - Output / Earth : 0.5 KV minimum Voltage for 1 min. - Output Relay contact/ Earth: 0.5 KV minimum Voltage for 1 min. Note : (IR value before and after HV test shall be within $\pm 10\%$ of each other) 21) Test report: Supplier shall submit Test Report / Compliance report for all the above mentioned features indicating serial number of the PS module and date of test. Documents / Certificates to be submitted along with Technical Offer: 22) Type Test Certificate: Type Test Certificates for the PS model being supplied & conducted in a Govt Approved Lab/ Internationally reputed Test Lab & within the last five years shall be submitted along with offer to enable technical evaluation. - ESD Immunity: EN61000-4-2, level 3 Perf Criteria B - Radiated Immunity: EN61000-4-3, level 3 Perf Criteria A - EFT/Burst: EN61000-4-4, level 3 Perf Criteria A - Surge: EN61000-4-5, level 3 Perf Criteria B 23) Approvals: The Power Supply Unit shall have the required CE/UL certification. 24) Catalogue: Supplier to submit catalogue / performance curves for the model being offered - Efficiency Vs Load - Op.Temperature Vs Load Current etc. 25) Deviation: Supplier shall indicate clause-wise deviation, if applicable.		