

REMOTE DATA CONCENTRATOR (RDC)

The Remote Data Concentrator (RDC) series is a miniature hermetically sealed acquisition unit, useful for installation in harsh and remote locations to both simplify wiring harness design and improve signal fidelity by measuring input signals close to the source. Captive fasteners are included to minimize risks of FOD.

FPGA based processing coupled with high speed analog front ends allows both digital (e.g. ARINC-429) and analog (e.g. Synchro) signals to be measured with the same pins in different applications.

Primary output capability is through a high speed ARINC-429 bus.

Total input capability is determined by exact signal selection and pin availability, e.g.



- Differential (input): 11 channels
- Single Ended (input): 22 channels
- Output transceivers: 2 channels
- Auxiliary Outputs: 1 protected 28VDC

PHYSICAL AND ELECTRICAL SPECIFICATIONS	
Dimensions	29mm (1.1") width, 31mm (1.2") height, 102mm (4.0") depth
Weight	Less than 0.25kg (< 0.5 lb)
Mounting Type	Flanged with Qty 2 #8 captive QPL fastener (NAS1352-08-24)
Mounting Orientation	Unrestricted
Construction	Aluminium AMS QQ-A-200/8, ASTM-B221, hermetically sealed (potted)
Finish	MIL-DTL-5541 Type II Class 3, painted subject to requirement (excluding faying surface)
Power supply input	28 VDC nominal, 10 to 80 VDC, DO-160 CAT Z
Power supply consumption	Maximum 5 watt (excluding inrush and external powered loads)
Power supply hold-up energy	Nil
Input Connector	MIL-DTL-38999 Series III, D38999/20FB35PN
Mating Connector	MIL-DTL-38999 Series III, D38999/20FB35PN
Signal Connector	MIL-DTL-38999 Series III, D38999/20FC35PN
Signal Mating Connector	MIL-DTL-38999 Series III, D38999/26FC35SN
Operating Temperature (operating)	-55 to +71 degrees Celcius
Operating Temperature (non-operating)	-55 to +85 degrees Celcius
Operating Altitude	Up to 55,000 ft
Environmental Qualification	RTCA DO-160G
Design Assurance	RTCA DO-254 and DO-178C (as applicable)
Production Approvals	FAA PMA (where PMA assist applies), otherwise Certificate of Conformance

Diagnostic Solutions International, LLC

ISO9001 & AS9100D Certified

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