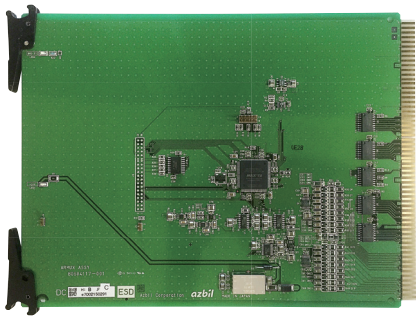
Advanced-PS™ Data Hiway System

Azbil Robust A/D Multiplexer Card (ARMUX)

1. Description

The Azbil Robust A/D Multiplexer Card (ARMUX) is an input card used in the common card file. The ARMUX can be used in both primary and reserve controllers of the Basic (CB), Extended (EC) and Multifunction (MC) controllers. The original analog input cards used in these controllers have well known design and component availability issues. The new ARMUX is a redesigned version of the original A/D Mux card based on the latest technology. With the replacement of older, limited-life technology by today's state of the art technologies, users of these products can be assured of long-term support and a more robust control system.

The ARMUX provides sixteen input circuits that are equivalent to the original design (8 PV / 8 RV) and is compatible with other board types used within these controllers (see note concerning UCIO).



2. Benefits

The ARMUX supports Data Hiway user requirements for economical continuation of process control and process interface functions that are crucial for safe and stable process plant operations. The ARMUX provides the following specific benefits:

- Calibration-free Plug and Play replacement for the original analog input card
- Design incorporating new technology, with improved internal diagnostics and status indication via onboard LEDs
- Power-on self-test, including auto zero and input high calibration
- Continuous zero calibration prior to A/D conversion to eliminate temperature drift
- MTBF increased 5X
- Power consumption reduced 4X
- Improved tolerance to environmental conditions due to conformal coating

3. Ordering Information

Model No.	Part No.	Description
J-CAX10	80604117-001	Azbil Robust A/D Multiplexer Card
J-CAX10-1	80604212-001	Azbil Robust A/D Multiplexer Card w/ Documentation CD

4. Product Application

The ARMUX (80604117-001) replaces the parts indicated below and is mounted in the specified controller slots:

CB/EC Primary and Reserve Controller

Slot No.	Part No.	Description	Replacement
9	30731823-001	A/D Mux	ARMUX

MC Primary and Reserve Controller

Slot No.	Part No.	Description	Replacement
10	30731823-001	A/D Mux	ARMUX

Note: When replacing a failed UCIO card it is recommended to replace both UCIO cards with Azbil Corporation's AROC cards and to replace the jumper card and cable with the ARMUX.

CB/EC Primary and Reserve Controller—UCIO

Slot No.	Part No.	Description	Replacement
9	51305437-100	Jumper card	ARMUX
	51195339-101	Jumper cable	
10	51305406-100	UCIO	AROC
11	51305406-100	UCIO	AROC

MC Primary and Reserve Controller—UCIO

Slot No.	Part No.	Description	Replacement
10	51305437-100	Jumper card	ARMUX
	51195339-101	Jumper cable	
11	51305406-100	UCIO	AROC
12	51305406-100	UCIO	AROC

5. General Specifications

5.1 Functional Specifications

Item	Specification
Number of points per board	16 (8PV + 8RV)
Input signal	1 to 5 VDC
Input Range (FS)	0.724 V (-6.9%) to 5.276 V (106.9%)
Input circuit	Differential inputs, not isolated, multiplexer circuit
A/D conversion resolution	0.025 %F.S.
Input accuracy	±0.10 %F.S.
Effect of temperature variation	±0.005 %F.S./°C
Effect of supply voltage variation	±0.01 %F.S./V (based on the nominal 24 VDC value)
Allowable common mode voltage	0 VDC to +8 VDC
Common mode rejection ratio (CMRR)	60 dB or greater
Input impedance	5 MΩ min. (with system power on)
A/D conversion cycle	6 ms per point
Automatic drift compensation	Automatic drift compensation is executed on offset (zero) during operation

5.2 Environmental Conditions

Item		Specification			
		Reference Condition	Operating Condition	Operating Limit	Transportation & Storage Condition
Ambient Temperature	Range (deg c)	25 ± 2	0 to +40	0 to +50	-40 to +70
	Change Rate (deg c/min)	0	0.25	1	5
Relative Humidity	(%RH)	45 ± 5	10 to 90 %	5 to 90 %	5 to 95 %
Vibration	Frequency	0	0 to 60	0 to 60	0 to 60
	Acceleration	0	0.1	0.2	0.5
	Amplitude mmp-p	0	0.75	0.75	—
Impact	Acceleration (g)	0	1	5	25
	Impact time (msec)	0	30	30	30
Corrosive Environment		Conformal Coated			
EMI		EN55011 compliant			
RFI		EN61000 compliant			

6. Complied Regulatory Requirements

UL 61010-1
RoHS Directive

7. Dimensions

Fully compatible with all Common Card Files of the CB/EC/MC Hiway Boxes

Please, read 'Terms and Conditions' from following URL before the order and use.
http://www.azbil.com/products/bi/order.html

Specifications are subject to change without notice.

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