Technical Specification CAN Communication Joystick

Overview: The Metallux CAN joystick family supports CANopen (CiA 301) and SAE J1939 communication. This document summarizes the communication capabilities of the Standard and Extended controller boards for mobile machinery and industrial applications.

Category	Parameter	Standard Board MJ-F14, MJ-F15, MJ-H10, MJ-H11	Extended Board MJ-H10	Remarks
General	Protocols	CANopen / SAE J1939	CANopen / SAE J1939	Selectable via DIP switch
	Controller	STM32F1	STM32F1	ARM Cortex-M3 with integrated CAN
	Physical Layer	ISO11898-2	ISO11898-2	11-bit CANopen / 29-bit J1939
	Supply Voltage	9–36 VDC	9–36 VDC	
	Termination	120 Ω switchable	120 Ω switchable	
Baudrate	CANopen	250/500/1000 kbit/s	250/500/1000 kbit/s	DIP switch selectable
	J1939	250 kbit/s	250 kbit/s	
Addressing	CANopen Node ID	1–127 via LSS	1–127 via LSS	Stored in Flash
	J1939 Address	Commanded Address	Commanded Address	Stored in Flash
CANopen	PDOs	2 TPDO + 1 RPDO	4 TPDO + 1 RPDO	Dynamic mapping
	Heartbeat	Producer + Consumer	Producer + Consumer	
	Emergency	Supported	Supported	
	SYNC	Consumer	Consumer	
	E2E Safety	Optional CRC-8 SAE J1850	Optional CRC-8 SAE J1850	Polynomial 0x2F
SAE J1939	Transport	BAM	BAM	
	PGNs	FF00, FF01	FF00–FF04	
I/O	Analog Inputs	2	15	12-bit ADC
	Digital Inputs	7	15	50 ms debounce
	Digital Outputs	3	3	Low active
	DIP Switches	4	4	Protocol/Baudrate/Service

Notes: This specification is intended as a customer overview. Detailed communication objects and object dictionaries are available on request.

© Metallux AG | Robert-Bosch-Str. 29 | 71397 Leutenbach, Germany | info@metallux.de | www.metallux.de