Johnson Controls

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MSEA Controllers

Romutec
Input/Output Modules

Romutec Input/Output Modules are designed to integrate seamlessly into the Metasys® system. They are installed on the BACnet MS/TP Sensor Actuator (SA) Bus of a Network Control Engine (NCE) or on the SA Bus of a Field Equipment Controller (FEC/FAC) and expand the point count of these controllers. A full range of FEC/FACs, NCEs and Romutec IO Modules allow various combinations, which will meet the requirements from simple to advanced building applications.

Romutec Input/Output modules can be used when manual overrides are required or when control panel space is limited and a small footprint is needed.

Five models of IO modules are offered with different combinations of BI's, BO's, AI's and AO's. In addition to the standard models optional manual override modules are available. Manual override modules come in two versions, one which can be used inside a control cabinet (DIN rail mounting) and the other for fixing on the cabinet door (front panel mounting). The manual override modules are connected with a USB type cable directly to their corresponding host IO Module.
They are preconfigured so setting up requires nothing more than selecting the appropriate DIP switch settings.

Five additional models are also available to meet the requirement for DIN rail mounted IO modules with integral overrides.

Features

● Small footprint, compared with the Metasys Input/Output Module (IOM) series.
● Manual overrides available as an option. Integral Manual overrides for AO and BO on selected models.
● Models available for indicating the status of binary inputs with LED's.
● Supports BI, BO, AI and AO objects.
● Easy engineering as supported by CCT (Controller Configuration Tool).
● Quick engineering for manual overrides as all modules are preconfigured.
● Connected to the SA Bus of the FEC/FAC or NCE controller as an MSTP slave device.
● Equipped with fault and status LED's for troubleshooting.
● Pluggable terminals with spring clamp for quick and simple wire termination without special tools.

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Ordering Information

Ordering Codes	Description
JDB8410	12-Point Romutec IOM with 8 BI, 4 BO and SA Bus Support (four 1-state drives)
JDB8420	Optional manual override module for JDB8410, Front Panel mounting
JDB8430	Bundle of JDB8410 (Base module), JDB8420 (Override module, panel) and 3,0 m USB-cable
JDB8440	Optional manual overrides for JDB8410, DIN Rail mounting
JDB8450	Bundle of JDB8410 (Base module), JDB8440 (Override module, DIN rail) and 0,1 m USB-cable
JDB6410	10-Point Romutec IOM with 6 BI, 4 BO and SA Bus Support (two 2-state drives)
JDB6420	Optional manual override module for JDB6410, Front Panel mounting
JDB6430	Bundle of JDB6410 (Base module), JDB6420 (Override module, panel) and 3,0 m USB-cable
JDB6440	Optional manual overrides for JDB6410, DIN Rail mounting
JDB6450	Bundle of JDB6410 (Base module), JDB6440 (Override module, DIN rail) and 0,1 m USB-cable
JDB8010	8-Point Romutec IOM with 8 BI and SA Bus Support
JDB8020	Optional LED's for indicating the BI status of JDB8010, Front Panel mounting
JDB8030	Bundle of JDB8010 (Base module), JDB8020 (LED module, panel) and 3,0 m USB-cable
JDB8040	Optional LED module for indicating the BI status of JDB8010, DIN Rail mounting
JDB8050	Bundle of JDB8010 (Base module), JDB8040 (LED module, DIN rail) and 0,1 m USB-cable
JAB0410	4-Point Romutec IOM with 4 AO and SA Bus Support
JAB0420	Optional manual overrides for JAB0410, Front Panel mounting
JAB0430	Bundle of JDB8010 (Base module), JAB0420 (Override module, panel) and 3,0 m USB-cable
JAB0440	Optional manual overrides for JAB0410, DIN Rail mounting
JAB0450	Bundle of JAB0410 (Base module), JAB0440 (Override module, DIN rail) and 0,1 m USB-cable
JAB6610	12-Point Romutec IOM with 2 BI, 2 BO, 4 AI, 4 AO and SA Bus Support (Points only, no overrides or input status LED's), DIN rail mounting
JDB8451	12-Point Romutec IOM with 8 BI, 4 BO (four 1-state drives) and SA Bus Support with Integral overrides and status LED's, DIN rail mounting
JDB6451	10-Point Romutec IOM with 6 BI, 4 BO (two 2-state drives) and SA Bus Support with integral overrides and status LED's, DIN rail mounting
JDB8051	8-Point Romutec IOM with 8 BI and SA Bus Support with integral status LED's, DIN rail mounting
JAB0451	4-Point Romutec IOM with 4 AO and SA Bus Support with integral overrides and status LED's, DIN rail mounting
JAB6651	12-Point Romutec IOM with 2 BI, 2 BO, 4 AI, 4 AO and SA Bus Support (Points only, no overrides or input status LED's), DIN rail mounting, Part of integral family

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Romutec Point types, functions and ratings

Point Types	Function	Signal/Rating
Analog IN	Analog Input, Voltage Mode	Accepts a 0-10VDC input signal, internal 75kΩ pull-down
	Analog Input, Current Mode	Accepts a 0-20 mA input signal, internal 100Ω load impedance
	Analog Input, Resistive Mode	Accepts a 0-600 kΩ input signal, internal 12V, 15kΩ pull-up RTD:1k Nickel [L & G], 1k Nickel [DIN], 1k Platinum, A99B Silicon Temperature Sensor
Binary IN	Binary Input, Dry Contact Maintained Mode	0.01s minimum pulse width (50Hz at 50% duty cycle) Internal 35V, 2.7kΩ pull-up
Analog OUT	Analog Output, Voltage mode, sources 0-10 VDC output voltage	External 1kΩ minimum load required 10 VDC maximum output voltage, 10 mA maximum output current
Binary OUT	Binary Output, up to 250VAC Relay Contact Connects NO to Common when activated	Characteristics (Resistive Load): Initial contact resistance 100mΩ (at 1A / 24VDC) Rated load 5A at 250VAC, 5A at 30VDC, 10A at 125VAC Max. switching voltage 277VAC, 30VDC Max. switching capacity 1250VA (AC), 150W (DC) Endurance 1x105 ops (Rated Load), 1x107 ops (no Load)
	Binary Output, up to 250VAC Relay Contact Disconnects NC from Common when activated	Characteristics (Resistive Load): Initial contact resistance 100mΩ (at 1A / 24 VDC) Rated load 3A at 250VAC, 5A at 30VDC, 10A at 125VAC Max. switching voltage 277VAC, 30VDC Max. switching capacity 1250VA (AC), 150W (DC) Endurance 1x105 ops (Rated Load), 1x107 ops (no Load)

Romutec Accessories

Ordering Codes	Description
USB-A-B-0.1	USB-cable A-B type, 0,1 m
USB-A-B-3.0	USB-cable A-B type, 3,0 m
USB-A-B-5.0	USB-cable A-B type, 5,0 m
JD-RTR4084	19"-rack 4HE/84TE, plastic (GRP), for mounting of 10 front panels
JD-RTR4084S	Same as JD-RTR4084, but with transparent lockable cover and IP54 protection class
JD-RTR7050	19"-rack 7HE/50TE, plastic (GRP), for mounting of 12 front panels
JD-RTR7050S	Same as JD-RTR7050, but with transparent lockable cover and IP54 protection class
JDL8000	Cover 3HE/8TE , colour blue, for unused slots
JD-JUMPER	Three-pole jumper, needed for coding the colour of a LED to orange

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Technical Specifications

Product Code Numbers	JDB8010 JDB8410 JDB6410 JAB0410 JAB6610	JDB8020 JDB8420 JDB6420 JAB0420	JDB8040 JDB8440 JDB6440 JAB0440	JDB8451 JDB6451 JDB8051 JAB0451 JAB6651
Supply Voltage	24 VAC ± 10% at 50 or 60 Hz	5 VDC ± 5%, provided by the I/O-Module via USB		24 VAC ± 10% at 50 or 60 Hz
Power Consumption	12 VA maximum incl. Front Panel Load	1 VA maximum, provided by I/O-Module		12 VA maximum
Ambient Conditions				
Operating	0 to 50°C; 10 to 90% RH non-condensing			
Storage	0 to 70°C; 10 to 90% RH non-condensing			
Terminations	Spring-type terminals for I/O's, power supply and MS/TP Bus	USB type B for the connection to the I/O Module		Spring-type terminals for I/O's, power supply and MS/TP Bus
Device Addressing	DIP switch set (128–254). Addresses 0–127, 255 are reserved	Not Required		DIP switch set (128–254). Addresses 0–127, 255 are reserved
Communications Bus	BACnet® MS/TP; 4-wire SA Bus (3 wires used)	USB connection to host module		BACnet® MS/TP; 4-wire SA Bus (3 wires used)
Mounting	35 mm DIN rail	Panel front 19" Rack	35 mm DIN rail	
Dimensions	116 x 32 x 166 mm	129 x 40.5 x 43 mm	116 x 32 x 166 mm	92 x 72 x 70 mm
Housing				
Plastic Housing, Plastic Material	PA6.6 25%GF	ABS + Polycarbonate UL94 5VB	PA6.6 25%GF	PC-GF10
Protection	IP20 (IEC529)			
Weight	JDB8010: 0.180 kg JDB8410: 0.240 kg JDB6410: 0.232 kg JAB0410: 0.180 kg JAB6610: 0.222 kg	JDB8020: 0.075 kg JDB8420: 0.105 kg JDB6420: 0.089 kg JAB0420: 0.102 kg	JDB8040: 0.132 kg JDB8440: 0.135 kg JDB6440: 0.133 kg JAB0440: 0.143 kg	JDB8451: 0.21 kg JDB6451: 0.20 kg JDB8051: 0.15 kg JAB0451: 0.240 kg JAB6651: 0.190 kg
Compliance ⊂ E	Johnson Controls, Inc., declares that these products are in compliance with the essential requirements and other relevant provisions of the EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC.			

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