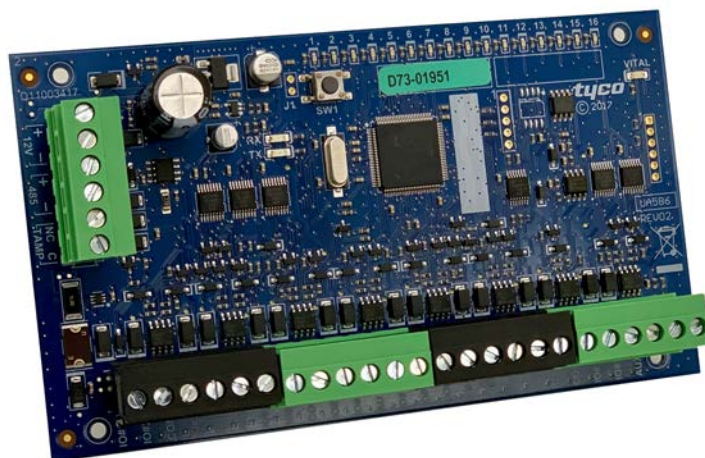**tyco**®

Data Sheet

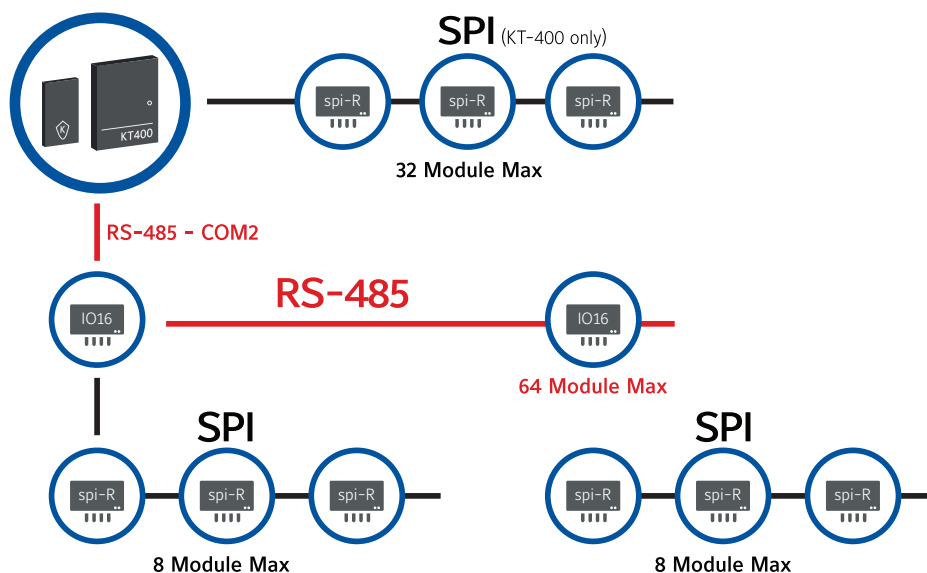# Kantech RS-485 Input/Output Module

Features That Make a Difference

- Provides cost-effective expansion of input and output capacity
- Small, modular size requires minimal panel space
- Sixteen (16) terminals for use as inputs/ outputs or elevator control
- Sixteen (16) LED indicators offering visual status of each terminal enable quick diagnostics and troubleshooting
- Total of 256 inputs and 256 outputs per KT controller
- Dedicated tamper input included on each module
- Reduces length of sensor and control wiring
- Compatible with KT-1 and KT-400 door controllers
- Supervised between KT door controller and module
- Fully compatible with EntraPass Security Management Software v8.10 and higher

A 2-in-1 Input and Output Module

The Kantech RS-485 Input/Output Module provides a flexible, cost-effective means to expand the input and output functionality of any KT-1 or KT-400 door controller. Featuring 16 terminals for use as inputs and outputs (configurable in lots of 4), this single unit module eliminates the need to have additional lines of input/ output modules linked to a system.
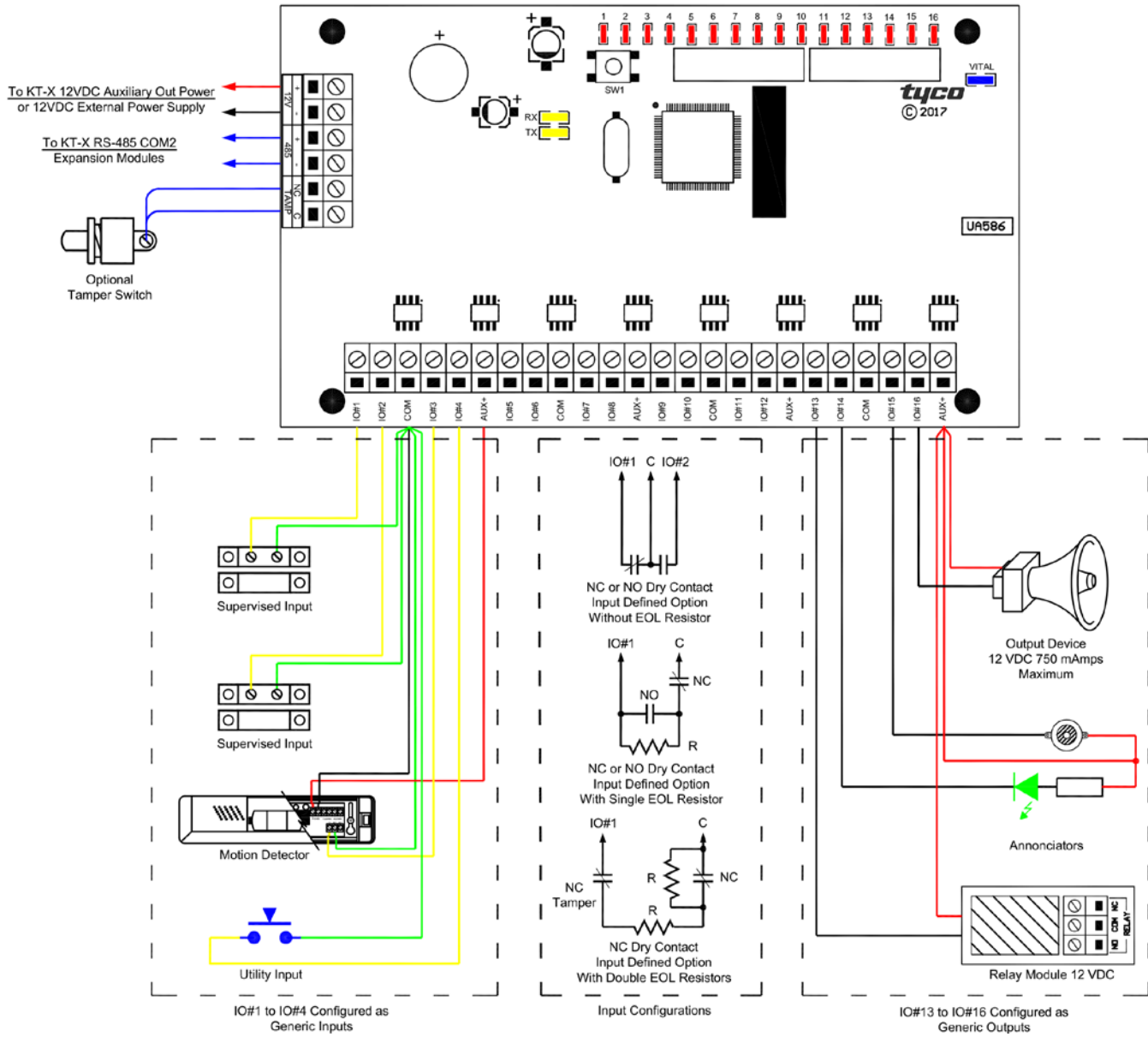
Additionally, the module is configurable from and fully compatible with all versions of EntraPass Security Management Software v8.10 and higher, enabling the management of common applications including alarm monitoring and elevator control.

Johnson Controls

Specifications

Dimensions (H x W x D)	31.5 x 146 x 82.6 mm (1.25 x 5.75 x 3.25 in)
Weight	118 g (0.25 lb)
Operating Temperature	2° to 40°C (35° to 104°F)
Operating Humidity	0 to 95% non-condensing
Input Voltage	9.5 VDC to 15 VDC
Current Consumption	Typical: 500 mA @ 12 VDC (25 mA per terminal) Max: 1.6 A @ 12 VDC (45 mA per terminal)
RS-485 LED Indicators	2 LEDs for the RS-485 communication (RX, TX)
Vital LED Indicator	Module status
Inputs/ Outputs	16 Inputs/ Outputs (configurable in lots of 4)
Inputs	Inputs/ Outputs that are configured as inputs support normally closed (NC) and normally open (NO) contacts. They support no end-of-line, single end-of-line and double end-of- line zone loops.
Outputs	Inputs/ Outputs that are configured as outputs (open-drain outputs) can sink up to 750 mA each.
Input/ Output LED Indicators	16 LEDs for the Input/ Output status
Aux Power Outputs	4 terminals wired together to supply up to 1.5 A out of the input power. Outputs are supervised and current limited.
SPI Port	Inputs/ Outputs #9 to #12 that are configured as SPI ports can support a daisy-chained SPI bus that is made up of 8 KT-MOD-REL8 modules. Each of these modules can provide 8 Form C relay outputs.
Terminal Blocks	Removable type, color coded, supports 12-30 AWG wires
Tamper	NC Input (NEOL)
Mounting	PCB in a compatible cabinet (KT-MOD-CAB recommended)
Communication	RS-485 AES-128
RS-485 Cabling	2 twisted pairs, unshielded, up to 1200 m (4000 ft)
Input Wiring	Up to 600 m (2000 ft)
Firmware	Field upgradable via RS-485. To verify the firmware version of the KT-MOD-IO16, refer to the relevant software user manual.
Certifications	FCC, CE, RoHS, WEEE
Connections per Controller	Up to 62 modules per KT door controller using RS-485 COM2
Warranty	Limited lifetime

Basic Wiring Diagram

To KT-X 12VDC Auxiliary Out Power or 12VDC External Power Supply

To KT-X RS-485 COM2 Expansion Modules

Optional Tamper Switch

SW1

RX
TX

VITAL

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UA586

IO#1 IO#2 COM IO#3 IO#4 AUX+ IO#5 IO#6 COM IO#7 IO#8 AUX+ IO#9 IO#10 COM IO#11 IO#12 AUX+ IO#13 IO#14 COM IO#15 IO#16 AUX+

Supervised Input

Supervised Input

Motion Detector

Utility Input

IO#1 to IO#4 Configured as Generic Inputs

IO#1 C IO#2

NC or NO Dry Contact Input Defined Option Without EOL Resistor

IO#1 C

NO
NC
R

NC or NO Dry Contact Input Defined Option With Single EOL Resistor

IO#1 C

NC
Tamper
R
NC
R

NC Dry Contact Input Defined Option With Double EOL Resistors

Input Configurations

Output Device 12 VDC 750 mAmps Maximum

Annonciators

NO COM NC
RELAY

Relay Module 12 VDC

IO#13 to IO#16 Configured as Generic Outputs

Ordering Information

Model Number	Description
KT-MOD-IO16	RS-485 Input/Output Module; compatible with KT-400 and KT-1 controllers
Accessories	
KT-MOD-CAB	Cabinet for up to 6 expansion modules, including lock, keys and 92 cm (36 in) SPI cable
KT-1-CAB-M	Black metal cabinet; fits KT-1-PCB (H x W x D) 29.9 x 28.8 x 7.7 cm (11 3/4 x 11 3/8 x 3 in)
KT-400-CAB	Black metal cabinet with lock and keys

About Johnson Controls

Johnson Controls is a global diversified technology and multi-industrial leader serving a wide range of customers in more than 150 countries. Our 120,000 employees create intelligent buildings, efficient energy solutions, integrated infrastructure and next generation transportation systems that work seamlessly together to deliver on the promise of smart cities and communities. Our commitment to sustainability dates back to our roots in 1885, with the invention of the first electric room thermostat.

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