

# Product data sheet

Specifications



## motion control module - for stepper motors - Unity Pro - 1 axis - 3.8 W

TSXCFY11

### Main

<b>Range of product</b>	Modicon Premium Automation platform
<b>Product or component type</b>	Motion control module
<b>Product specific application</b>	For stepper motors
<b>Software designation</b>	Unity Pro

### Complementary

<b>I/O modularity</b>	1 axis
<b>Maximum pulse frequency</b>	187 kHz
<b>Power dissipation in W</b>	3.8 W
<b>Input type</b>	Current sink auxiliary input EN/IEC 61131 type 2 Resistive amplifier input
<b>Discrete input logic</b>	Negative amplifier input Positive auxiliary input
<b>Input voltage</b>	24 V 7 mA auxiliary input 5 V 4.5 mA amplifier input
<b>Input voltage limits</b>	19...30 V auxiliary input
<b>Voltage state 1 guaranteed</b>	< 2 V amplifier input >= 11 V auxiliary input
<b>Current state 1 guaranteed</b>	>= 6 mA auxiliary input)
<b>Voltage state 0 guaranteed</b>	<= 5 V auxiliary input > 3.6 V amplifier input
<b>Current state 0 guaranteed</b>	<= 2 mA auxiliary input)
<b>Input impedance</b>	3400 Ohm auxiliary input
<b>Input immunity</b>	< 250 µs auxiliary input for homing cam and event inputs 15...30 µs amplifier input for loss of step input 3000...10000 µs auxiliary input for limit switch, emergency stop and external stop inputs 3000...16000 µs amplifier input for amplifier fault input
<b>Power supply monitoring</b>	0...14 V auxiliary input at fault state 18...24 V auxiliary input at OK state
<b>Maximum detection time</b>	< 30 ms auxiliary input from fault to OK state > 1 ms auxiliary input from OK to fault state
<b>Input compatibility</b>	With 2-wire/3-wire sensor auxiliary input
<b>Output type</b>	Open collector PNP brake output EN/IEC 61131-2 RS422, TTL 5 V open collector NPN compatible amplifier output
<b>Output differential voltage</b>	+/- 2 V <= 100 Ohm amplifier output

<b>Maximum output short-circuit current</b>	150 mA amplifier output
<b>Permissible common mode voltage</b>	7 V amplifier output
<b>Maximum permissible differential voltage</b>	12 V amplifier output
<b>Output voltage</b>	24 V DC 19...30 V brake output
<b>Nominal output current</b>	0.5 A <0.3 mA 0.625 A brake output
<b>Maximum voltage drop</b>	<1 V at state on brake output
<b>Switching time</b>	< 0.25 ms brake output
<b>Output compatibility</b>	Positive logic DC inputs (resistance ≤ 15 kOhm) brake output
<b>Short-circuit protection</b>	Thermal tripping via program or automatically brake output
<b>Output overload protection</b>	Current limiter brake output
<b>Output overvoltage protection</b>	Zener diode brake output
<b>Reverse polarity protection</b>	Brake output reverse mounted diode on supply
<b>Speed profile path</b>	Trapezoidal
<b>Operating mode</b>	OFF Manually Direct drive mode AUTO
<b>Checks</b>	Sensor power supply Amplifier, limits switches, emergency stop Short circuit (one signalling bit per channel) Correct execution by software position limits, loss of step Validity of parameters Consistency of commands
<b>Optional commands</b>	Boost Brake
<b>Local signalling</b>	Module operating (RUN) 1 LED green) External fault (I/O) 1 LED red) Internal fault, module failure (ERR) 1 LED red) Axis diagnostics available (CH.) 2 LEDs green)
<b>Electrical connection</b>	1 connector HE-10, 20 pins 1 connector SUB-D 15
<b>Current consumption</b>	510 mA 5 V DC 50 mA DC
<b>Module format</b>	Standard
<b>Net weight</b>	0.97 lb(US) (0.44 kg)

## Environment

<b>Ambient air temperature for operation</b>	32...140 °F (0...60 °C)
<b>Ambient air temperature for storage</b>	-13...158 °F (-25...70 °C)
<b>Relative humidity</b>	5...95 % without condensation
<b>Operating altitude</b>	≤ 2000 m

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	2.17 in (5.5 cm)
<b>Package 1 Width</b>	7.09 in (18.0 cm)
<b>Package 1 Length</b>	10.24 in (26.0 cm)

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<b>Package 1 Weight</b>	16.30 oz (462.0 g)
<b>Unit Type of Package 2</b>	S04
<b>Number of Units in Package 2</b>	12
<b>Package 2 Height</b>	11.81 in (30.0 cm)
<b>Package 2 Width</b>	15.75 in (40.0 cm)
<b>Package 2 Length</b>	23.62 in (60.0 cm)
<b>Package 2 Weight</b>	13.83 lb(US) (6.271 kg)

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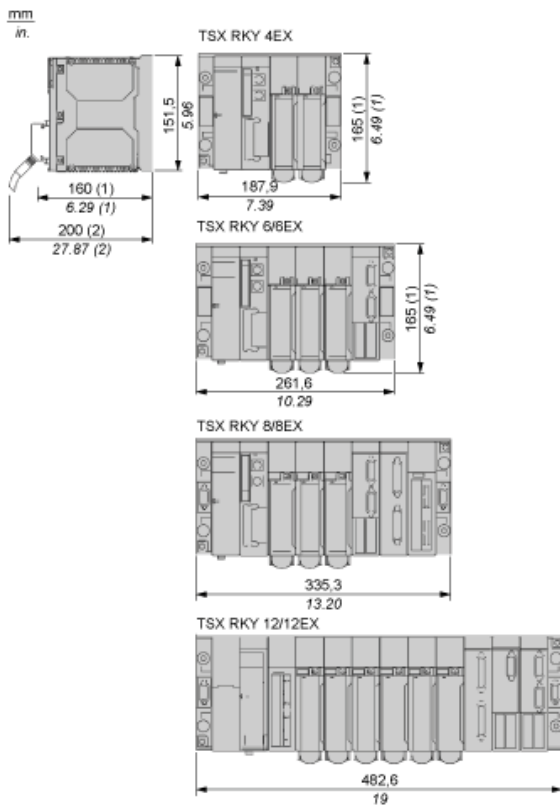
## **Contractual warranty**

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<b>Warranty</b>	18 months
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**Standard and Extendable Racks for Modules Mounting**

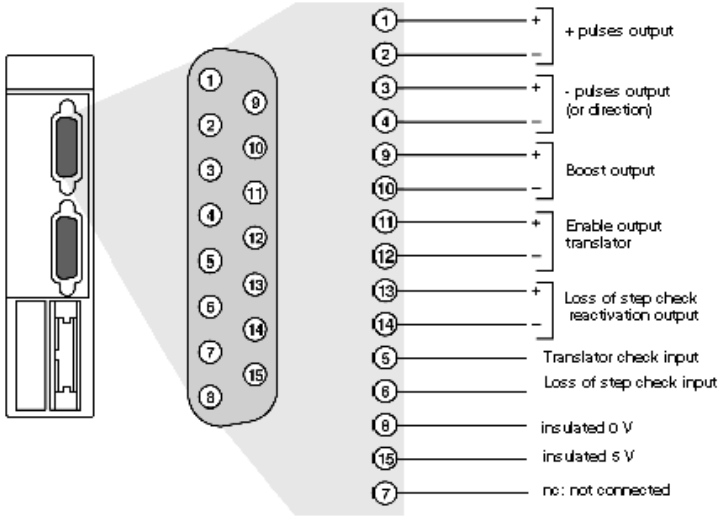
**Dimensions of Modules and Racks**



- (1) With screw terminal block modules.
- (2) Maximum depth for all types of modules and their associated connectors.

## Connection of Translator Signals

### Connector Pinout



**Connection of Sensors/Pre-Actuators**

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**Connector Pinout**

