

# Product datasheet

Specifications



## PTO module - 2 channels - 4 input - 24 V DC - 4.3 mA - 2 connectors 28 pins

BMXMSP0200

### Main

Range of product	Modicon X80
Product or component type	PTO module
Number of channels	2
Number of inputs	4
Discrete input type	Current sink yes origin input conforming to IEC 61131-2 type 3 Current sink yes proximity input and limit switch input conforming to IEC 61131-2 type 3 Current sink or source counter in position input conforming to IEC 61131-2 type 3 Current sink or source drive ready, emergency input conforming to IEC 61131-2 type 3
Input compatibility	2-wire/3-wire proximity sensor 19.2...30 V conforming to IEC 947-5-2
Output compatibility	Signal converter (USIC) RS422, 7 mA input Source input, 5 V to 24 V
Output frequency	200 kHz <0.5 m with USIC and VW3M8210R05 100 kHz <5 m with the normal source input circuit 200 kHz <10 m with the RS422 compatible circuits

### Complementary

Operating threshold	> 12 V no error supply voltage > 8 V error supply voltage
Input voltage	24 V DC
Input current	4.3 mA
Voltage state 1 guaranteed	>= 11 V
Current consumption	35 mA at 24 V DC preactuator 150 mA at 3.3 V DC typical 200 mA at 3.3 V DC maximum
Current state 1 guaranteed	>= 2 mA
Voltage state 0 guaranteed	5 V
Current state 0 guaranteed	<= 1.5 mA
Response time	< 200 $\mu$ s for position completed input and drive ready input < 60 $\mu$ s for origin input and proximity input
Number of outputs	1 pulse output 2 auxiliary output
Preactuator voltage detection threshold	< 8 V error preactuator voltage auxiliary output < 8 V no error preactuator voltage auxiliary output > 14 V error preactuator voltage pulse output > 14 V no error preactuator voltage pulse output
Output voltage	24 V DC

<b>Output voltage limits</b>	19...30 V
<b>Discrete output current</b>	50 mA
<b>Current per channel</b>	0.4 A
<b>Maximum leakage current</b>	0.05 mA at state 0
<b>[Ures] residual voltage</b>	0.15 V at state 1
<b>Response time on output</b>	1.2...1.5 ms on appearance 1.2...1.5 ms on disappearance
<b>Load impedance ohmic</b>	15000 Ohm
<b>Output overload protection</b>	By current limiter and electronic circuit breaker
<b>Output short-circuit protection</b>	By current limiter and electronic circuit breaker
<b>Reverse polarity protection</b>	By reverse mounting diode on output Integrated on input
<b>Insulation between channels</b>	No insulated
<b>Insul btwn prim and second</b>	1500 Vrms
<b>Insulation resistance</b>	> 10 MOhm
<b>Local signalling</b>	1 LED (green) for module operating (RUN) 1 LED (red) for external fault (I/O) 1 LED (red) for internal fault, module failure (ERR) 1 LED (green) for download (DL) 8 LEDs (green) for channel status (CH00) 8 LEDs (green) for channel status (CH01)
<b>Electrical connection</b>	2 connectors with 28 pins
<b>Module format</b>	Standard
<b>Product certifications</b>	CE UL CSA RCM EAC Merchant Navy ATEX zone 2/22 IECEX zone 2/22

## Environment

<b>Ambient air temperature for operation</b>	-25...70 °C
<b>Derating factor</b>	Without
<b>Directives</b>	2014/35/EU - low voltage directive 2014/30/EU - electromagnetic compatibility 2014/34/EU - ATEX directive
<b>Standards</b>	EN/IEC 61131-2 EN/IEC 61010-2-201 UL 61010-2-201 CSA C22.2 No 61010-2-201 IACS E10 EN/IEC 61000-6-5, interface type 1 and type 2 EN/IEC 61850-3, location G EN/IEC 60079-0
<b>Environmental characteristic</b>	Hazardous location class I division 2

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Weight</b>	149.0 g
<b>Package 1 Height</b>	5.7 cm
<b>Package 1 width</b>	11.0 cm
<b>Package 1 Length</b>	11.6 cm

Unit Type of Package 2	S02
Number of Units in Package 2	15
Package 2 Weight	2.5 kg
Package 2 Height	15.0 cm
Package 2 width	30.0 cm
Package 2 Length	40.0 cm

## Offer Sustainability

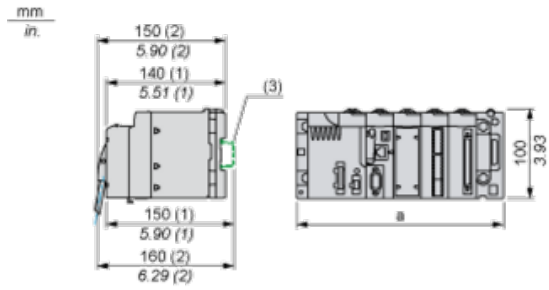
Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

## Contractual warranty

Warranty	18 months
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**Modules Mounted on Racks**

**Dimensions**



(1) With removable terminal block (cage, screw or spring).

(2) With FCN connector.

(3) On AM1 ED rail: 35 mm wide, 15 mm deep. Only possible with BMXXBP0400/0400H/0600/0600H/0800/0800H rack.

Rack references	a in mm	a in in.
BMXXBP0400 and BMXXBP0400H	242.4	09.54
BMXXBP0600 and BMXXBP0600H	307.6	12.11
BMXXBP0800 and BMXXBP0800H	372.8	14.68
BMXXBP1200 and BMXXBP1200H	503.2	19.81

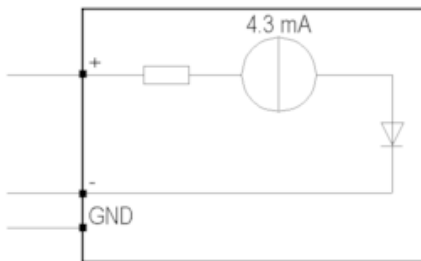
**PTO Module Wiring**

**Auxiliary Inputs for Each PTO Channel**

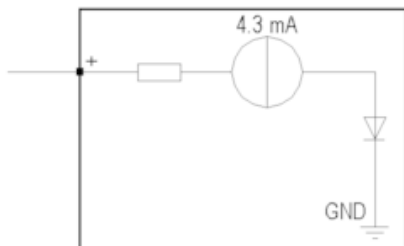
- Auxiliary Input 0: Drive\_Ready&Emergency
- Auxiliary Input 1: Counter\_in\_Position
- Auxiliary Input 2: Origin (Signal used only for homing mode)
- Auxiliary Input 3: Proximity&LimitSwitch

**Inputs Circuit Diagrams**

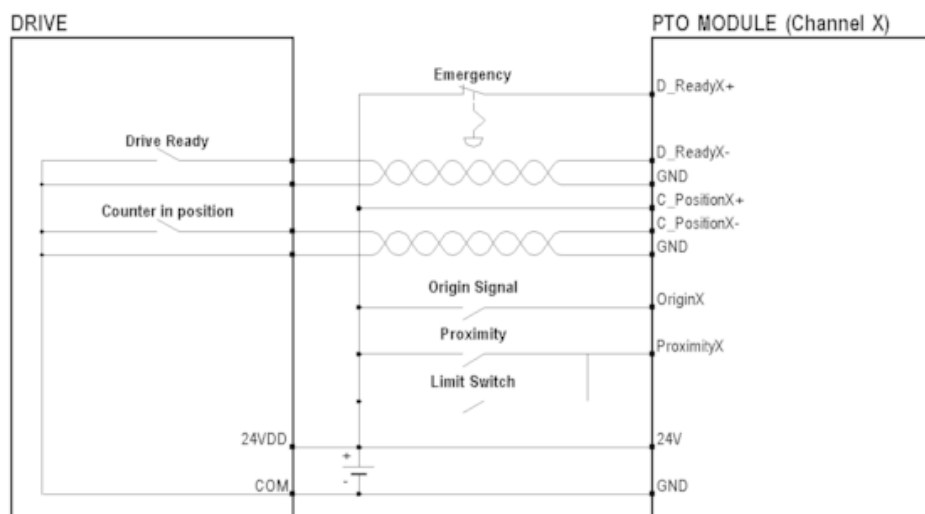
Drive\_Ready&Emergency inputs or Counter\_in\_Position (SINK/SOURCE input type):



Origin or Proximity&LimitSwitch inputs (SINK input type):

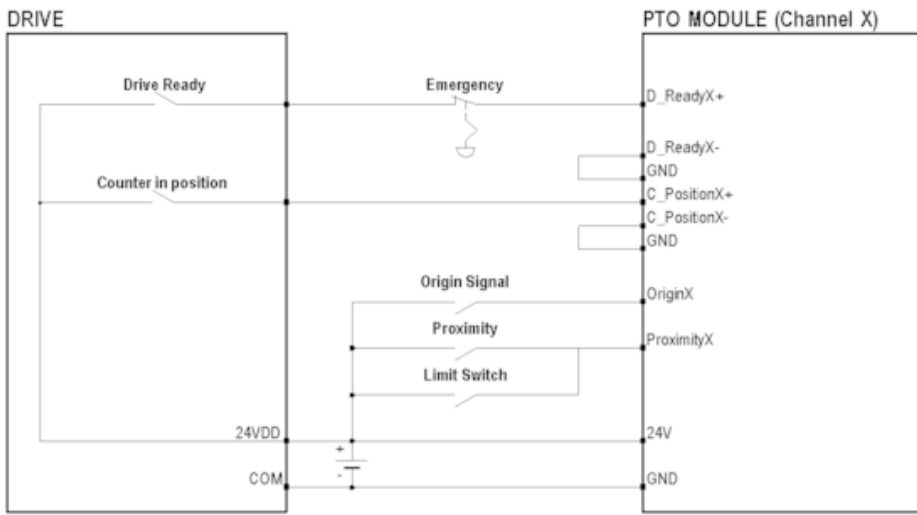


**Module Connection for Drive\_Ready&Emergency and Counter\_in\_Position of SINK type**



A twisted pair cable is necessary to connect the module to the drive.

## Module Connection for Drive\_Ready&Emergency and Counter\_in\_Position of SOURCE type



**NOTE:** In order to stop the PTO module when the PLC is set to STOP, connect the D\_ReadyX+ input to the PTO module via a BMXDRA0805 or a BMXDRA1605. This will make all outputs stop when the D\_Ready&Emergency input is set to 0.

## 28 Pin Terminal Block Arrangements

The terminal block is arranged as followed

