



Main

Range of product	Modicon Premium Automation platform
Product or component type	Electronic cam module
Number of cams	128
Number of tracks	32
Function of module	Elimination of axis backflash Generation of events Measurement capture Parts counter Position, monostable, brake Position recalibration Switching feedforward
I/O modularity	1 axis
Electrical circuit type	Incremental encoder with RS422 differential Incremental encoder with 10...30 V positive or negative Auxiliary inputs positive conforming to EN/IEC 61131 type 1

Complementary

Clock frequency	200 kHz SSI absolute encoder 8...25 P
Incremental encoder frequency x1	500 kHz
Incremental encoder frequency x 4	250 kHz
Power dissipation in W	7 W
Output refresh cycle	<= 50 µs 16 <= 200 µs 128 <= 100 µs 32
Input compatibility	Absolute encoder parallel output ABE7CPA11 Incremental encoder 5 V DC RS422/485 line emitter Incremental encoder 10...30 V totem pole Absolute encoder SSI serial output
Input voltage	24 V encoder with 10...30 V 24 V auxiliary inputs
Input current	8 mA auxiliary inputs 15.5 mA encoder with 10...30 V 10 mA RS422
Input voltage limits	19...30 V encoder with 10...30 V 19...30 V auxiliary inputs <= 5.5 V RS422
Voltage state1 guaranteed	>= 11 V encoder with 10...30 V >= 11 V auxiliary inputs > 3 V RS422
Current state 1 guaranteed	> 5.8 mA RS422 > 5 mA encoder with 10...30 V > 3 mA auxiliary inputs
Voltage state 0 guaranteed	<= -3 V RS422 < 5 V encoder with 10...30 V < 5 V auxiliary inputs
Current state 0 guaranteed	<= -5.8 mA RS422 < 2 mA encoder with 10...30 V < 1.5 mA auxiliary inputs
Response time	< 100 µs auxiliary inputs
Input impedance	3000 Ohm for nominal U auxiliary inputs 1500 Ohm for nominal U encoder with 10...30 V
Output type	Track output conforming to EN/IEC 61131-2
Output voltage	24 V DC

Nominal output current	0.5 A
[In] rated current	<= 0.6 A per output <= 6 A per connector <= 12 A per module
Output voltage limits	19...30 V
Output compatibility	Positive logic DC inputs (resistance <= 15 kOhm)
Tungsten load	10 W
Switching frequency	< 0.6/LI ² inductive
Preactuator voltage detection threshold	> 18 V OK state < 14 V fault state
Output overload protection	Current limiter Thermal circuit breaker
Output short-circuit protection	Current limiter Thermal circuit breaker
Output overvoltage protection	Zener diode
Reverse polarity protection	Reverse diode on power supply
Checks	Monitoring peactuator power supply
Local signalling	1 LED red processor or system fault (ERR) 1 LED red I/O module or configuration fault (I/O) 1 LED green processor running (RUN) 1 LED green channel diagnostics operative (CH0)
Electrical connection	1 connector SUB-D 15 for connecting incremental or absolute encoder 1 connector HE-10 20 pins for connecting the track outputs on group 2 and 3 1 connector HE-10 20 pins for connecting the track outputs on group 0 and 1 1 connector HE-10 20 pins for connecting the auxiliary inputs and the encoder power supply
Current consumption	15 mA 24 V DC 660 mA 5 V DC
Module format	Standard
Product weight	0.48 kg

Environment

Electromagnetic discharge time	< L/R s
Protective treatment	TC
Ambient air temperature for operation	0...60 °C
Ambient air temperature for storage	-25...70 °C
Relative humidity	5...95 % without condensation for storage 10...95 % without condensation for operation
Operating altitude	0...2000 m

Offer Sustainability

Sustainable offer status	Not Green Premium product
RoHS	Compliant - since 1038 - Schneider Electric declaration of conformity download declaration of conformity

Standard and Extendable Racks for Modules Mounting

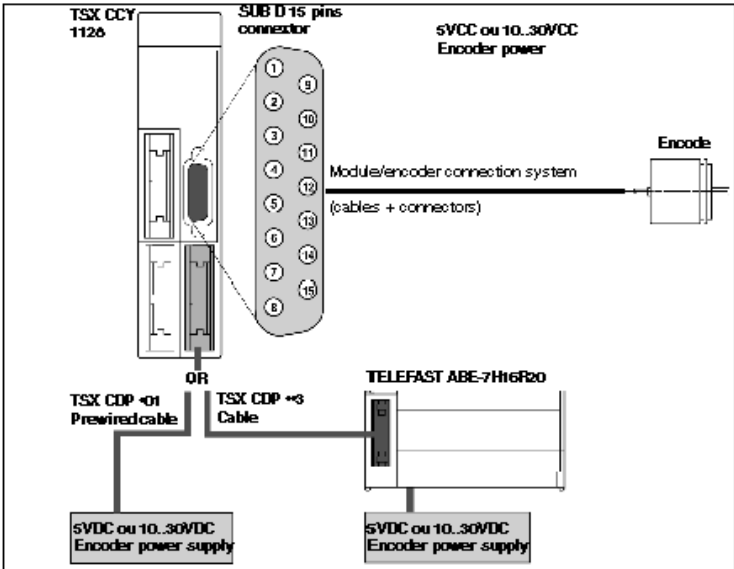
Dimensions of Modules and Racks



(1) With screw terminal block modules.

(2) Maximum depth for all types of modules and their associated connectors.

Connecting an Encoder to an Electronic Cam Module



Connecting an Incremental Encoder with RS422 Outputs

Pinouts of the Module's 15-pin SUB D Connector

Diagram (front view)	Pin No.	Signal	Designation
	1	A+ 5V	Encoder input, pulse A+ (5VDC)
2	A-	Encoder input, pulse A-	
3	-	-	
4	Z+ 5V	Encoder input, zero latch pulse Z+ (5VDC)	
5	Z-	Encoder input, zero latch pulse Z-	
6	-	-	
7	10...30 V	Encoder supply output (+ 10...30VDC)	
8	0 V	Encoder supply output (- 0VDC)	
9	-	-	

Diagram (front view)	Pin No.	Signal	Designation
10	B+	Encoder input, pulse B+ (5VDC)	
11	B-	Encoder input, pulse B-	
12	-	-	
13	EPSR	Positive encoder supply feedback input. Receives positive supply feedback from the encoder, which allows the module to verify the encoder's presence.	
14	-	-	
15	5 V	Encoder supply output (+ 5VDC)	

Connecting an Incremental Encoder with Totem Pole Outputs

Pinout Configuration of the Module's 15-pin SUB D Connector

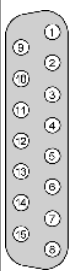
Diagram (front view)	Pin No.	Signal	Designation
	1	-	-
2	A-	Input to be connected to 0V encoder	
3	B+ 24V	Encoder input, pulse B+ (10... 30VDC)	
4	-	-	
5	Z-	Input to be connected to 0V encoder	
6	-	-	
7	10...30 V	Encoder supply output (+ 10...30VDC)	
8	0 V	Encoder supply output (- 0VDC)	
9	A+ 24V	Encoder input, pulse A+ (10... 30VDC)	
10	-	-	
11	B-	Input to be connected to 0V encoder	

Diagram (front view)	Pin No.	Signal	Designation
12	Z+ 24V	Encoder input, zero latch pulse Z+ (10... 30VDC)	
13	EPSR	Positive encoder supply feedback input. Receives positive supply feedback from the encoder, which allows the module to verify the encoder's presence.	
14	-	-	
15	5 V	Encoder supply output (+ 5VDC)	

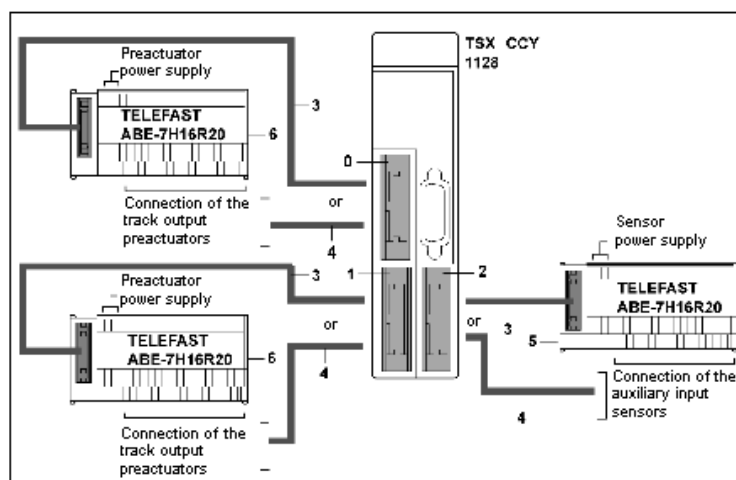
Connecting an Absolute SSI Encoder

Pinout Configuration of the Module's 15-pin SUB D Connector

Diagram (front view)	Pin No.	Signal	Designation
	1	positive SSI data	Encoder input, positive SSI data (5VDC)
	2	negative SSI data	
3	-	-	
4	-	-	
5	-	-	
6	CLK +	Encoder output, positive SSI CLK (5VDC)	
7	10...30 V	Encoder supply output (+ 10... 30VDC)	
8	0 V	Encoder supply output (- 0VDC)	
9	-	-	
10	-	-	
11	-	-	
12	-	-	
13	EPSR	Positive encoder supply feedback input. Receives positive supply feedback from the encoder, which allows the module to verify the encoder's presence.	

Diagram (front view)	Pin No.	Signal	Designation
14	CLK -	Encoder output, negative SSI CLK	
15	5 V	Encoder supply output (+ 5VDC)	

Connecting Auxiliary Inputs and Track Outputs



Connection of the Auxiliary Inputs

Pinout Configuration of the Module's HE10 Connector

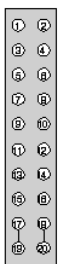
Diagram (front view)	Pin No.	Signal	Designation
	1	5 V	Encoder supply input +5 VDC
	2	0 V	Encoder supply input - 0VDC
	3	10..30V	Encoder supply input + 10...30VDC
	4	VRef	Reference input voltage for encoder supply monitoring
	5	IREC	Auxiliary adjustment input
	6	-	Not wired
	7	ICAPT0	Auxiliary capture input 0
	8	ICAPT1	Auxiliary capture input 1
	9	-	Not wired
	10	-	Not wired
	11	-	Not wired
	12	-	Not wired
	13	-	Not wired

Diagram (front view)	Pin No.	Signal	Designation
14	-	Not wired	
15		Not wired	
16		Not wired	
17	24 V	Sensor supply input + 24VDC	
18	0 V	Sensor supply input - 0VDC	
19	24 V	Sensor supply input + 24VDC	
20	0 V	Sensor supply input - 0VDC	

Connection of the Track Outputs

Wiring Diagram

