

i³B Intelligent Control Station



- 160 x 128 Graphical display
- High Resolution Resistive Touch Screen
- Addressable function keys
- Real Time Clock
- 2 Communication Port (RS 232/RS 485)
- 10 - 30 VDC Power Supply
- 256 KB RAM (Program), 1MB (Graphical)
- Free Configuration Software
- RS 232 Programming Cable
- IP65(NEMA4)
- Remote IO Communication
- Optional: MicroSD upto 2GB
 Modem (SMS, GSM, GPRS)
 Ethernet Expansion Card

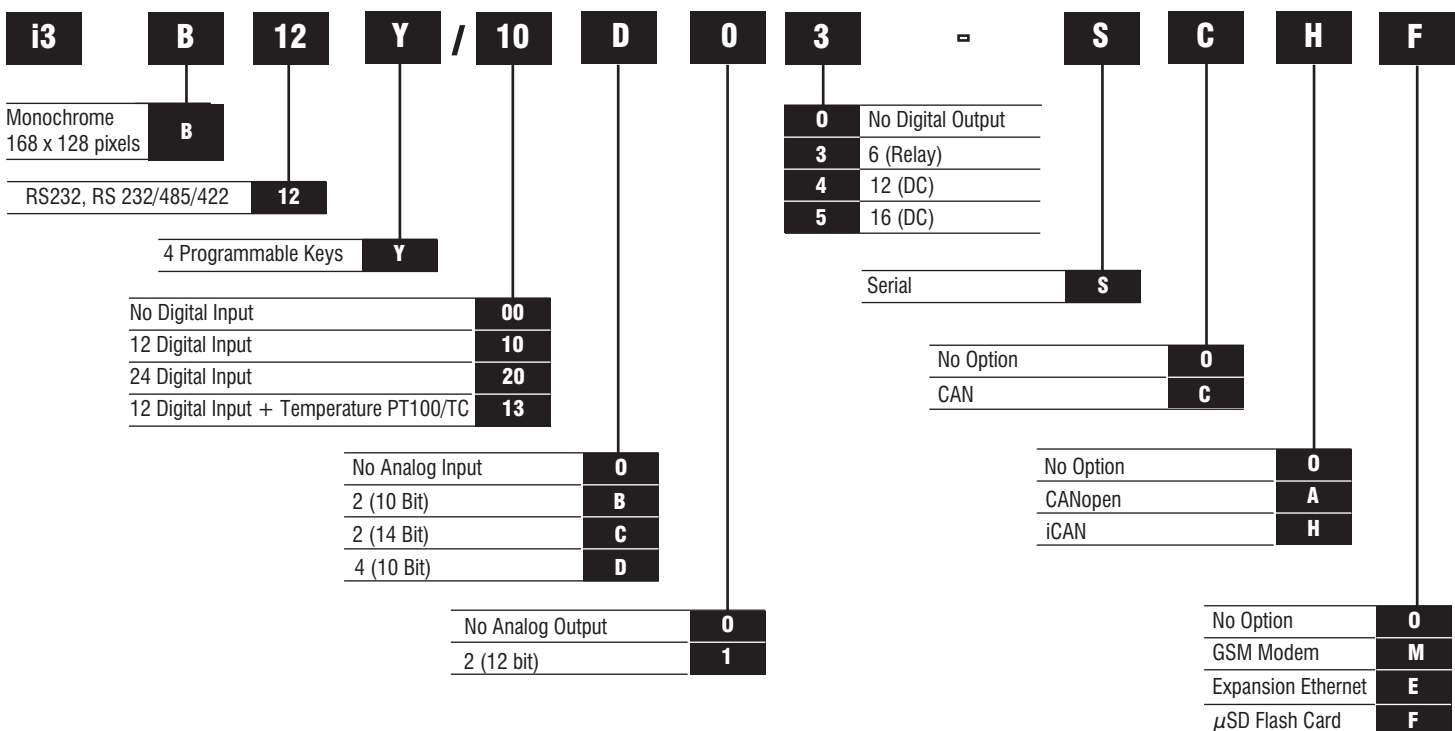


General Specification

Required Power (Steady State)	130 mA @ 24 VDC
Primary Power Range	10 - 30VDC
Relative Humidity	5 to 95% Non-condensing
Clock Accuracy @20°C	(+/-7 Minutes per Month)
Operating Temperature	-10°C to +60°C
Terminal Type	Screw Type, 5mm Removable
Weight	12.5 oz. (354.36g)
Approved	CE, UL

Options & Ordering Codes

Standard Options	DI	DO	AI	AO
I3B12Y/10D03-SCHF	12	6 Relay	4	-
I3B12Y/13C14-SCHF	12	12	2	2
I3B12Y/20B05-SCHF	24	16	4	-



Technical Specifications

Digital DC Inputs	
Absolute Max. Voltage	35 VDC Max.
Input Impedance	10kΩ
HSC Max. Switching Rate	10 KHz Totalizer / Pulse, Edges 5 kHz Frequency / Pulse, Width 2.5 kHz Quadrature
Input Voltage Range	12VDC/24VDC
Absolute Max Voltage	35VDC
Time Response	1 ms
Max Upper Threshold	8VDC
Min Lower Threshold	3VDC

Digital Outputs	
Output Type	Sourcing / 10K Pull Down
Output Protection	28VDC Max
Max. Output Current Per Point	0.5A
Max. Total Current	4A Continuous
Max. Output Supply Voltage	30VDC
Minimum Output Supply Voltage	10VDC
Max. Voltage Drop at Rated Current	0.25VDC
Max. Inrush Current	650mA Per Channel
OFF to ON / ON to OFF response	1ms
Output Characteristics	Current Sourcing (Positive Logic)

Analogue Inputs - Medium Resolution	
Input Ranges	0 - 10VDC
	0 - 20mA
	4 - 20mA
Safe input voltage range	-0.5V to +12V
Nominal Resolution	10 Bits
%AI full scale	32,000 counts
Max. Over-Current	35mA
Max. Error at 25°C 4-20mA	1.00%
Max. Error at 25°C 0-20mA	1.00%
Max. Error at 25°C 0-10VDC	1.50%
Filtering	160Hz Hash Noise Filter

Digital Relay Outputs	
Max. Output Current per Relay	3A at 250 VAC, resistive
Max. Total Output Current	5A continuous
Max. Output Voltage	275 VAC, 30 VDC
Max. Switched Power	1250VA, 150W
Contact Isolation to i3 ground	1000VAC
Max. Voltage Drop at Rated Current	0.5V
Expected Life at No load	5,000,000
At Rated load	100,000
Max. Switching Rate at no load	300 CPM
At rated load	20 CPM
Type	Mechanical Contact
Response Time	One update per ladder scan plus 10ms

Analogue Outputs	
Output Range	0-10V, 0-20mA
Nominal Resolution	12 bits
Maximum Load at 20mA	500W
Minimum Load at 10V	1000W
Maximum Error at 25°C	0.10%

Analogue Inputs - High Resolution	
Input Ranges	0 - 10VDC
	0 - 20mA
	100mV
	4 - 20mA
	J,K,N,T,E,R,S,B Thermocouples PT100 RTD
Safe input voltage range	10VDC: -0.5V to +15V
	20mA: -0.5V to +6V
	RTD/TC: +/- 24VDC
Nominal Resolution	10V, 20mA, 100mV : 14 Bits
	RTD. Thermocouples : 16 Bits
Input Impedance	Current Mode : 100W, 35mA Max
	Voltage Mode : 500kW, 35mA Max
%AI full scale	32,000 counts, RTD/TC : 20 counts / °C
Max. Over-Current	35mA
Open Thermocouple Detect Current	50nA
Thermocouple Temp. range : B/R/S	2912°F to 32°F (1600°C to 0°C)
	E 1652°F to -328°F (900°C to -200°C)
	T 752°F to -400°F (400°C to -240°C)
	J 1382°F to -346°F (750°C to -210°C)
	K/N 2498°F to -400°F (1370°C to -240°C)
Thermocouple Common	+/-10V
Mode Range	
Max. Error at 25°C (4(0)-20mA, 0-10VDC)	+/-0.1%
Max. Error at 25°C PT100	+/-1.0°C
Max. Error at 25°C 0-100mV	+/-0.05%
Max. Error after 1Hr Warmup TC	+/- 0.2%
RTD Excitation Current	250MA

Communication Ports

MJ1 Serial Port Pin Assignments

Pin	Signal	Signal Description
8	TD1	RS-232 Transmit Data
7	RD1	RS-232 Receive Data
6	0V	Ground
5	5	+5 VDC max
4	RTS1	RS-232 Request to Send
3	CTS1	RS-232 Clear to Send
2	RX/TX-	Receive / Transmit Negative
1	RX/TX+	Receive / Transmit Positive

Communication Ports

MJ2 Serial Port Pin Assignments

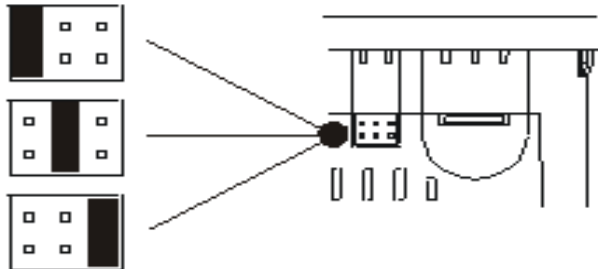
Pin	Signal	Signal Description
8	TD1	RS-232 Transmit Data
7	RD1	RS-232 Receive Data
6	0V	Ground
5	+5	+5 VDC 60mA max
4	TX-	RS-485 Transmit Negative
3	TX+	RS-485 Transmit Positive
2	RX-	RS-485 Receive Negative
1	RX+	RS-485 Receive Positive

External Jumper Configuration

Factory Use

RS 485 Termination
For MJ2

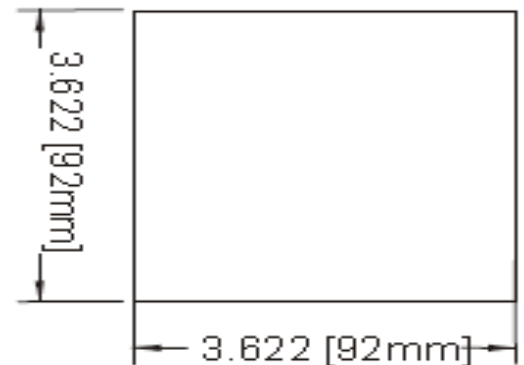
RS 485 Termination
for MJ1



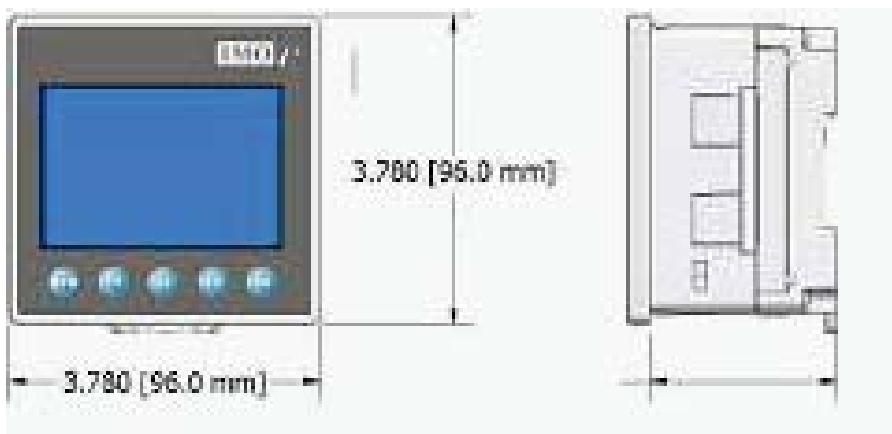
Dimension without Modem



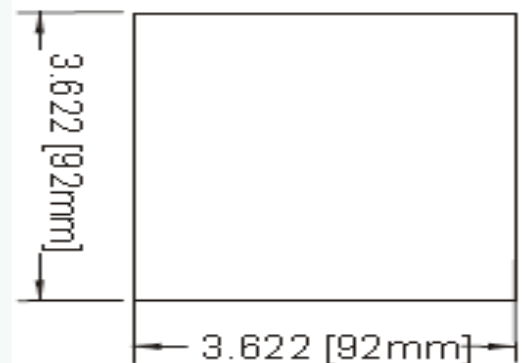
Panel Cut out



Dimension with Modem



Panel Cut out



Accessory Products

1. Communication Cable: RS 232 Serial Communication Cable for programming and i3 Controllers, Part No. i3PC45.



2. USB to RS232 Converter for PC's without a serial Com port to communicate with the controllers, Part No. PC501.



Add - ins

1. Ethernet Expansion Card - Link an i3 to an ethernet network. Program, debug and monitor and even run i3 as a Modbus TCP Server, Part No. i3-E



2. GSM Modem Expansion Card - Send and receive SMS messages via the i3, dial up connection over GSM data link for remote programming, debugging etc. Or use a GPRS always-on data connection ideal for programming, debugging, monitoring and connection to a SCADA package for constant data logging and remote control, Part No. i3M.



3. ODIN OPC SERVER with LOKI Data Logger - ODIN can be used with LOKI to log either to an excel spreadsheet or an access database, with no tag limit and 30+ protocols to choose from (including IMO products, Mitsubishi, Allen Bradley and Siemens), Part No. IMO-OPC-Server.



4. Panel Point SCADA Lite - A powerful graphical editor, and a VB-based scripting language. Panel Point allows a PC to become the central data hub of an application, with no tag limit and 30+ protocols to choose from (including IMO products, Mitsubishi, Allen Bradley, Siemens), Part No. PANELPOINT (Developer) - Part No. PANELPOINT (Runtime)

