

Servo/Step Motor Indexers SMI30 and SMI31

SMI30 and SMI31 are programmable motor indexers which can operate with both servo- and step motors. SMI31 includes a module interface.

The Indexers are characterized by their ability to be controlled either via the RS232/485 interface, or via the general purpose inputs in connection with a downloaded program.

The Indexers generate a pulse train to a servo or step motor driver. This pulse train controls the speed and position of the connected motor. The speed, acceleration, deceleration and distance travelled can be controlled by single commands received via the RS232/485 or from the program that has been downloaded.

The indexers are equipped with 8 general purpose outputs. These can be configured, for example, to give a ready signal when the motor has reached its desired position, or an error signal if an obstruction occurs that prevents motor operation.

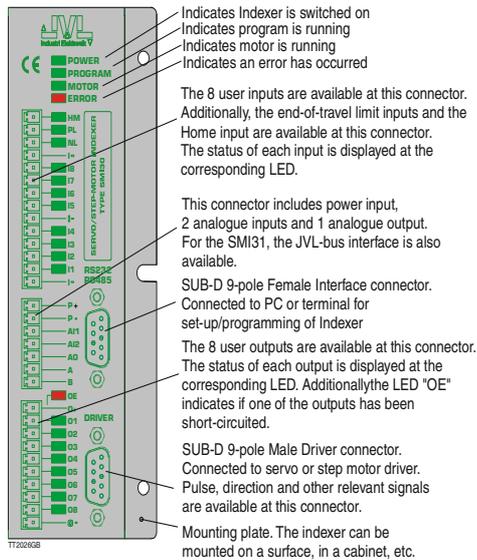
All general purpose inputs and outputs are optically isolated and protected against overloads.



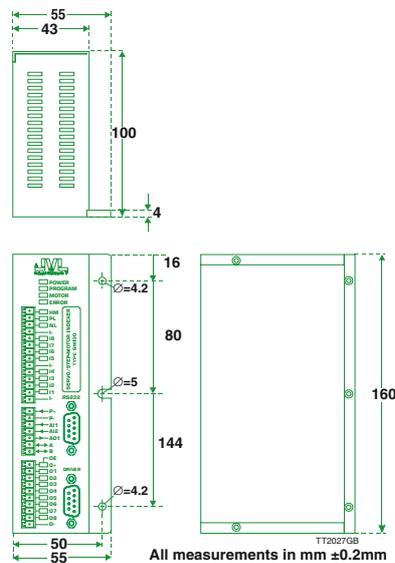
- Simple basic programming
- Setup/program stored in EEPROM
- Large speed range. 2 to 2,000,000 pulses/sec.
- Exact speed resolution +/- 0.5 pulse/sec.
- Connection of up to 32 indexers on the same RS232/485 interface bus
- EMC compliant construction - CE marked
- Absolute/Relative positioning
- 8 General purpose inputs
- 8 General purpose outputs
- 1 10bit Analogue output +0-5V
- 2 10bit Analogue inputs +0-5V
- End-of travel limit inputs
- High speed counter/encoder inputs
- Handshake signals to the servo/step driver
- All general purpose I/Os monitored by LEDs
- Small physical dimensions
- Pluggable Phoenix screw connectors
- Can be mounted on a surface

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Connections

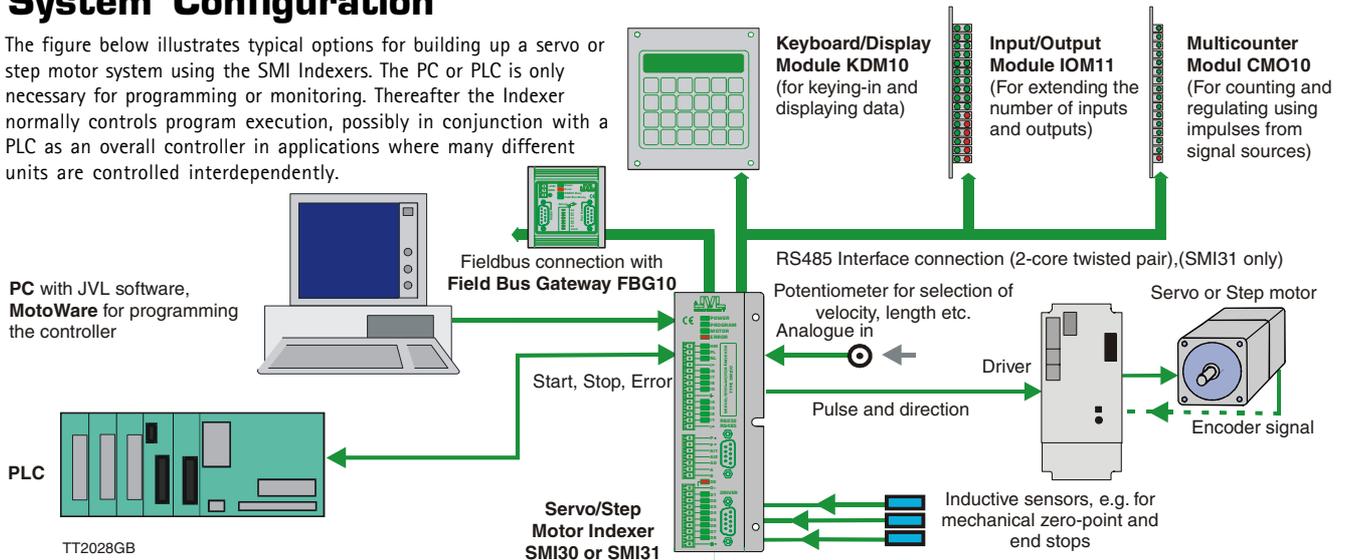


Physical Dimensions



System Configuration

The figure below illustrates typical options for building up a servo or step motor system using the SMI Indexers. The PC or PLC is only necessary for programming or monitoring. Thereafter the Indexer normally controls program execution, possibly in conjunction with a PLC as an overall controller in applications where many different units are controlled interdependently.



Technical Data

Description	Min.	Typ.	Max.	Units
Supply				
Supply Voltage	10		45	VDC
Power consumption		3		W
Driver Connector				
Output level (CLK;DIR)	0		5	V
Pulse frequency	0		2	MHz
User Inputs				
Input Impedance		1.5		kOhm
Logic "0"	-1		2.5	VDC
Logic "1"	4.5		30	VDC
User Outputs				
Supply Voltage	6		28	VDC
Loaded Current			250	mA
Analogue Input				
Input Voltage (nom.)	0		5	VDC
Input Impedance		10		kOhm
Various				
Operating Temp.	0		45	°C
Weight		500		g

Example of program:

```

WAIT IN1 = 1 ;Wait for Input1
OUT1 = 1 ;Activate Output1
SR = 10 000 ;Run motor 10 000 pulses
WAIT RS = 0 ;Wait for motor stopped
OUT1 = 0 ;Clear Output1
D = 100 ;Pause 1 sec.
J0 ;Jump to beginning of program
    
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