



# VIGNAN ELECTRONICS (P) Ltd.

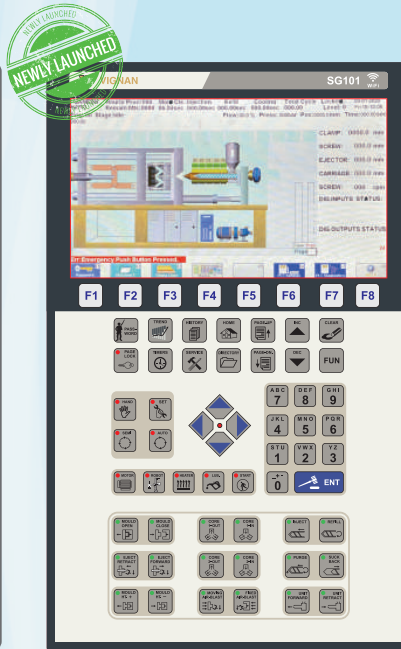
*Imagine. Inspire. Automate.*

Automation Solutions for  
Plastic Processing Machines

CATALOG 2020



**SV121**



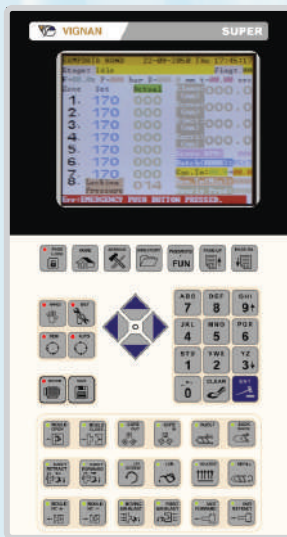
**SG101**



**SV84**



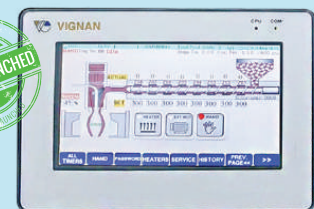
**SS57**



**SUPER**



**SSB**



**FLEXEM**



**28**

YEARS  
OF EXCELLENCE

Only company to make quality, reliable & user friendly  
PLC for injection/blow molding machines in India.

CONCEPTUALIZED, DESIGNED & MANUFACTURED IN INDIA

**ARM** POWERED

**Cortex**  
Intelligent Processors by ARM

Powered by ARM® Technology

**4.0**

# PROUDLY MADE IN INDIA

## SG101

For Injection Molding Machine



- Rich elegant graphics, color **10.1"** HMI wide screen for enhanced user interface.
- 16.2 million-colors, 1024\*600 resolution, 119 pixels/inch clarity.**
- WiFi/IoT enabled for remote monitoring, daily report management and in-depth SPC analysis**
- Visually appealing** real-time presentation of machine parameters like cycle times, digital inputs & outputs, flow, pressure, zone temperature, scale reading, hourly production & energy consumption.
- x32, x40 or x64 Outputs interface capability.** based on machine demands.
- Super ease to use MMI interface**
- Programmable** on-field digital & proportional outputs for each machine execution stage.
- USB port** for remote reprogramming, data transfer, machine calibration etc.
- Built-in Interface** for Pressure Transducer, Blowers, Encoder & Energy meter.
- Optional SD card storage** facility for last 10-year machine shots data, set data changes & errors.

- HMI with **5.7"** TFT 16 million colors, **640\*480** resolution, 142 pixels/inch clarity.
- Dual-processor hardware system based on **ARM® & PIC®** technology.
- Seamless integration with all servo drives, variable volume pumps & proportional valves.
- Suitable for Standard type, Double color, 2-station Slider, Insert/Rubber molding machines.
- x32 or x40** Outputs interface capability based on machine demands.
- Programmable on-field digital & proportional outputs for each machine execution stage.
- USB port** for remote reprogramming, data transfer, machine calibration etc.
- Built-in Interface for Pressure Transducer, Blowers, Encoder & Energy meter.
- Integrated control for Auto Tonnage feature control based on Pulse /Time & handling pick & place robot.
- Special functions include:** 2 Cores with priority, Intrugen, Thin-wall injection, Adaptive moldlocking correction, Mold-opening correction, Online power calculations Hourly/Job/Daily/Shift/Last 10 shots.
- Optional SD card storage facility for last **10-year** machine shots data, set data changes & errors.

## SS57

For Injection Molding Machine



### MMI TECHNICAL SPECIFICATIONS

HIGHLY INTEGRATED 3-PIECE SYSTEM	SYSTEM CONFIGURATION	HIGHLY INTEGRATED 3-PIECE SYSTEM
10.1"	SCREEN SIZE	5.7"
1024*600	SCREEN RESOLUTION	640*480
32-BIT ARM-CORTEX M3 EMBEDDED PROCESSOR	CPU CORE	32-BIT ARM-7 EMBEDDED PROCESSOR
LED-TYPE, DIGITALLY CONTROLLED CONTRAST	LCD BACKLIT	LED-TYPE, DIGITALLY CONTROLLED CONTRAST
64-WITH LED INDICATION FOR DIRECT FUNCTION CALL KEYS	NO. OF KEYS	55-WITH LED INDICATION FOR DIRECT FUNCTION CALL KEYS
1000 TIMES/SEC (~1MSEC)	MACHINE SCAN TIME	400 TIMES/SEC (~2.5MSEC)
1000 TIMES/SEC (~1MSEC)	MMI SCAN TIME	1000 TIMES/SEC (~1MSEC)
150	NO. OF MOLD PROGRAMS	120
1XUSB(2.0), 1XETHERNET OR RS232	COMMUNICATIONS PORTS	1XUSB(2.0), RS232
UTP CAT 6 CABLE, WITH REMOTE INTERFACE UPTO 5M	I/O BOARD INTERFACE	UTP CAT 6 CABLE, WITH REMOTE INTERFACE UPTO 5M
2GB, DATA RETENTION FOR MACHINE LIFETIME	HISTORY DATABASE MEMORY	2GB, DATA RETENTION FOR MACHINE LIFETIME
ELEGANT AESTHETICS, ABS BLEND ENCLOSURE, RUGGED-BUILD WITH SHOCK ABSORBING LINING	ERGONOMICS	ELEGANT AESTHETICS, ABS BLEND ENCLOSURE, RUGGED-BUILD WITH SHOCK ABSORBING LINING

### I/O BOARD TECHNICAL SPECIFICATIONS

I/O BOARD CORE CPU	16-BIT MICROCHIP DSP PROCESSOR
NO. OF DIGITAL INPUTS	32 (TYPE NPN-NO, MAX.SOURCE CURRENT 5MA)
NO. OF DIGITAL OUTPUTS	40 (EACH OF MAX. 2A CURRENT OUTPUT WITH SHORT CIRCUIT PROTECTION)
NO. OF HEATER OUTPUTS	UPTO 8 + 1 NOZZLE
DIGITAL OUTPUTS FEATURE	ON MACHINE-PROGRAMMABLE (SWITCHING, DELAYS & TRANSFER)
NO. OF ANALOG INPUTS	5 (4 LINEAR POT.+1 PRESSURE TRANSDUCER)
ANALOG INPUT RESOLUTION	12-BIT
NO. OF TEMPERATURE CHANNELS	8 (TYPE: RTD PT-100 ISOLATED/K-TYPE/J-TYPE THERMOCOUPLE)
TEMPERATURE CONTROL ACCURACY	+1 TO -2 °C OF SET VALUE
TYPE OF TEMP. CONTROL	ADVANCED ADAPTIVE PID CONTROL (SELF-TUNING)
LINEAR POTENTIOMETER STROKE ACCURACY	±0.1MM IN 500MM LENGTH STROKE
PRESSURE TRANSDUCER SIGNAL INTERFACE	0-10 VDC OUTPUT TYPE (ON-BOARD POWER SUPPLY PROVIDED)
NO. OF PWM OUTPUTS	4 NOS, DIGITALLY USER CALIBRATED
PWM O/P VOLTAGE RANGE	-10 TO +10VOLTS WITH 16-BIT RESOLUTION
ERGONOMICS	SINGLE BOARD FORM WITH LED INDICATION FOR MAINTENANCE EASE & SHEET METAL MOUNTING
POWER CONSUMPTION	6.25W MAX.(STANDBY)
DIMENSIONS(L*W*D)	(292*175*50)MM
WEIGHT	1970 GMS
MAX. OPERATING TEMPERATURE	60 °C





# PROUDLY MADE IN INDIA

## SV84

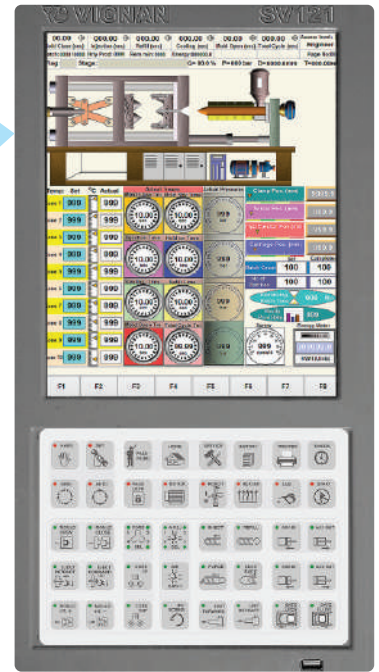
For Injection Molding Machine



- Rich-Graphics, bright-Windows® color 8.4" HMI screen for enhanced user interface.
- 16.2 million-colors, 800\*600 resolution, 119 pixels/inch clarity. Real-time machine graphics of machine parameters like flow, pressure, zone temperature, motion graphs, production & energy bar graphs.
- Seamless integration with all servo/AC drives, variable volume pumps & proportional valves.
- x32, x40 or x64 Outputs interface capability based on machine demands.
- Features 4-Cores control with upto 12 industry sequences & with programmable core IN/OUT priorities.
- Facility of 4-Air Ejector control & Unscrew motor.
- Provision of heating control based on linear SSR for power saving.
- Included Automatic Safety gate & 2 Aux cylinder controls.
- Has 10 dedicated Heating zones + Nozzle + Hydraulic oil control.
- Upto 8 individual blowers can be set & controlled.
- Dedicated Robot, Energy meter & Accumulator digital inputs for seamless integration.

## SV121

For Injection Molding Machine



- Rich color TOUCH SCREEN in 12.1" portrait format.
- 16.2 million-colors, 800\*600 resolution, 119 pixels/inch clarity.
- Resistive type touch screen for rugged industrial environments. Included 40 keys with LED indications for safe & interface easy machine operations.
- x32, x40 or x64 Outputs interface capability based on machine demands.
- Features 4-Cores control with upto 12 industry sequences & with programmable core priorities.
- Facility of 4-Air Ejector control & Unscrew motor.
- Provision of heating control based on linear SSR for power saving.
- Included Automatic Safety gate & 2 Aux cylinder controls.
- Has 10 dedicated Heating zones + Nozzle + Hydraulic oil control.
- Upto 8 individual blowers can be set & controlled.
- Dedicated Robot, Energy meter & Accumulator digital inputs for seamless integration.

### MMI TECHNICAL SPECIFICATIONS

HIGHLY INTEGRATED 3-PIECE SYSTEM	SYSTEM CONFIGURATION	HIGHLY INTEGRATED 3-PIECE SYSTEM
8.4"	SCREEN SIZE	12.1"(RESISTIVE TOUCH)
800*600	SCREEN RESOLUTION	800*600
32-BIT ARM-CORTEX M3 EMBEDDED PROCESSOR	MMI CPU CORE	32-BIT ARM-CORTEX M3 EMBEDDED PROCESSOR
LED-TYPE, DIGITALLY CONTROLLED CONTRAST	LCD BACKLIT	LED-TYPE, DIGITALLY CONTROLLED CONTRAST
64-WITH LED INDICATION FOR DIRECT FUNCTION CALL KEYS	NO. OF KEYS	40-WITH LED INDICATION FOR DIRECT FUNCTION CALL KEYS
1000 TIMES/SEC (~1MSEC)	MACHINE SCAN TIME	1000 TIMES/SEC (~1MSEC)
1000 TIMES/SEC (~1MSEC)	MMI SCAN TIME	1000 TIMES/SEC (~1MSEC)
150	NO. OF MOLD PROGRAMS	150
1XUSB(2.0), RS232	COMMUNICATIONS PORTS	1XUSB(2.0), RS232
UTP CAT 6 CABLE, WITH REMOTE INTERFACE UPTO 5M	I/O BOARD INTERFACE	UTP CAT 6 CABLE, WITH REMOTE INTERFACE UPTO 5M
2GB, DATA RETENTION FOR MACHINE LIFETIME	HISTORY DATABASE MEMORY	2GB, DATA RETENTION FOR MACHINE LIFETIME
ELEGANT AESTHETICS, ABS BLEND ENCLOSURE, RUGGED-BUILD WITH SHOCK ABSORBING LINING	ERGONOMICS	ELEGANT AESTHETICS, ABS BLEND ENCLOSURE, RUGGED-BUILD WITH SHOCK ABSORBING LINING

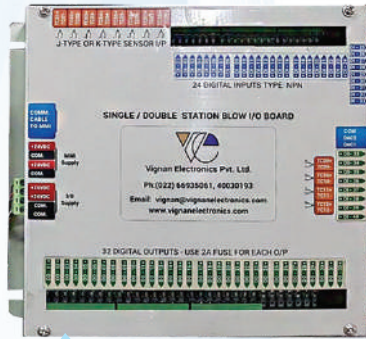
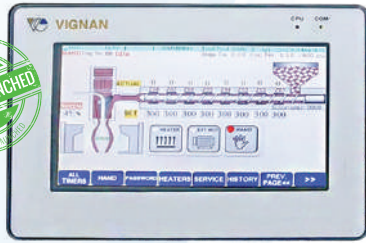
### I/O BOARD TECHNICAL SPECIFICATIONS

I/O BOARD CORE CPU	32-BIT ARM-CORTEX M4 EMBEDDED PROCESSOR
NO. OF DIGITAL INPUTS	32 (TYPE NPN-NO, MAX.SOURCE CURRENT 5MA)
NO. OF DIGITAL OUTPUTS	52(EACH OF MAX. 2A CURRENT OUTPUT WITH SHORT CIRCUIT PROTECTION)
NO. OF HEATER OUTPUTS	12 – DEDICATED
DIGITAL OUTPUTS FEATURE	ON MACHINE-PROGRAMMABLE (SWITCHING, DELAYS & TRANSFER)
NO. OF ANALOG INPUTS	8 (4 LINEAR POT.+4 PRESSURE TRANSDUCER)
ANALOG INPUT RESOLUTION	16-BIT
NO. OF TEMPERATURE CHANNELS	11 (TYPE: RTD PT-100 ISOLATED/K-TYPE/J-TYPE THERMOCOUPLE)
TEMPERATURE CONTROL ACCURACY	+1 TO -2 °C OF SET VALUE
TYPE OF TEMP. CONTROL	ADVANCED ADAPTIVE PID CONTROL (SELF-TUNING)
LINEAR POTENTIOMETER STROKE ACCURACY	±0.1MM IN 500MM LENGTH STROKE
PRESSURE TRANSDUCER SIGNAL INTERFACE	-10 TO +10VOLTS WITH 16-BIT RESOLUTION
NO. OF PWM OUTPUTS	8 NOS. DIGITALLY USER CALIBRATED TO TUNE OF HUNDRETH OF A FRACTION
PWM O/P VOLTAGE RANGE	-10 TO +10VOLTS WITH 16-BIT RESOLUTION
ERGONOMICS	SINGLE BOARD FORM WITH LED INDICATION FOR MAINTENANCE EASE & ABS MOUNTING
POWER CONSUMPTION	7.2W MAX.(STANDBY)
DIMENSIONS(L*W*D)	(338*225*60)MM
WEIGHT	1370GMS
MAX. OPERATING TEMPERATURE	60 °C



## FLEXEM

For Blow Molding Machine

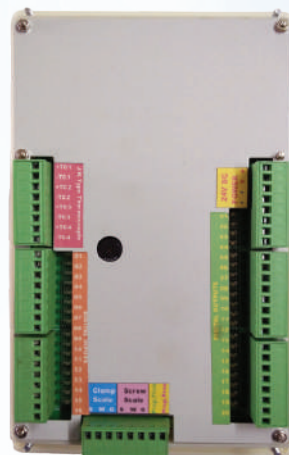


- 7.0" TFT with resistive touch screen for intuitive interface.
- 16.2 million-colors, 800\*480 pixel resolution, 128 pixels/inch clarity.
- HAND mode touch buttons with LED indication for safe, easy & conventional machine operation.
- Suitable for Single & Double Station type with parison control.
- Quickest & reliable blow sequence execution control system in market.
- Mold & Carriage position control based on linear potentiometers or regular timers.
- In-built ready to use flow & pressure proportional control.
- x32, x40 Outputs interface capability based on machine requirements.

## SSB

For Injection & Blow Molding Machine

- FOR SMALL-MEDIUM HORIZONTAL/VERTICAL MACHINES
- SUITABLE FOR SLIDER, ROTATORY TABLE & INSERT MOLDING MACHINES



Variant	DI	DO	Zones	Scales	PWM
A	✓	✓	✓	✗	✗
B	✓	✓	✓	✗	✓
C	✓	✓	✓	✓	✗
D	✓	✓	✓	✓	✓

### MMI TECHNICAL SPECIFICATIONS

SYSTEM CONFIGURATION	HIGHLY INTEGRATED 2-PIECE SYSTEM
SCREEN SIZE	7.0"
SCREEN RESOLUTION	800*480 PIXELS
MMI CPU CORE	32-BIT ARM-CORTEX M3 EMBEDDED PROCESSOR
MACHINE SCAN TIME	400 TIMES/SEC (~2.5MSEC)
MMI SCAN TIME	1000 TIMES/SEC (~1MSEC)
NO. OF MOLD PROGRAMS	120
COMMUNICATIONS PORTS	1XUSB(2.0)
I/O BOARD INTERFACE	FULL DUPLEX RS485, WITH REMOTE INTERFACE UPTO 5M
HISTORY DATABASE MEMORY	UNLIMITED
ERGONOMICS	ABS BLEND ENCLOSURE

### I/O BOARD TECHNICAL SPECIFICATIONS

I/O BOARD CORE CPU	32-BIT ARM7 EMBEDDED PROCESSOR
NO. OF DIGITAL INPUTS	UPTO 32 (TYPE NPN-NO, MAX.SOURCE CURRENT 5MA)
NO. OF DIGITAL OUTPUTS	UPTO 40(EACH OF MAX. 2A CURRENT OUTPUT WITH SHORT CIRCUIT PROTECTION)
NO. OF HEATER OUTPUTS	UPTO 12
DIGITAL OUTPUTS FEATURE	ON MACHINE-PROGRAMMABLE (SWITCHING, DELAYS & TRANSFER)
NO. OF ANALOG INPUTS	UPTO 2 LINEAR POT.
ANALOG INPUT RESOLUTION	12-BIT
NO. OF TEMPERATURE CHANNELS	12 (TYPE: K-TYPE/J-TYPE THERMOCOUPLE)
TEMPERATURE CONTROL ACCURACY	+1 TO -2 °C OF SET VALUE
TYPE OF TEMP. CONTROL	ADVANCED ADAPTIVE PID CONTROL (SELF-TUNING)
NO. OF PWM OUTPUTS	2 NOS. DIGITALLY USER CALIBRATED
PWM O/P VOLTAGE RANGE	0 TO +10VOLTS WITH 16-BIT RESOLUTION
ERGONOMICS	SINGLE BOARD FORM WITH LED INDICATION FOR MAINTENANCE EASE & SHEET METAL MOUNTING
POWER CONSUMPTION	4.3W MAX.(STANDBY)
DIMENSIONS(L*W*D)	(206*185*40)MM
WEIGHT	1300 GMS
MAX. OPERATING TEMPERATURE	60 °C

### SYSTEM TECHNICAL SPECIFICATION

SYSTEM CONFIGURATION	ULTRA COMPACT SINGLE PIECE SYSTEM
MMI CPU CORE	32-BIT ARM-7 EMBEDDED PROCESSOR
DISPLAY	4*20 CHARACTER DISPLAY WITH WHITE ON BLUE BACKGROUND
LCD BACKLIT	LED TYPE WITH BRIGHTNESS CONTROL
NO. OF KEYS	32 - WITH LED INDICATION FOR DIRECT FN. CALL KEYS
MACHINE SCAN TIME	400 TIMES/SEC (~2.5MSEC)
MMI SCAN TIME	1000 TIMES/SEC (~1MSEC)
NO. OF MOULD PROGRAM	32
NO. OF DIGITAL INPUT	16 (TYPE NPN-NO, MAX.SOURCE CURRENT 5MA)
NO. OF DIGITAL OUTPUT	20(EACH OF MAX. 2A CURRENT OUTPUT WITH SHORT CIRCUIT PROTECTION)
DIGITAL OUTPUT FEATURE	ONSITE PROGRAMMABLE FOR EACH STAGE
NO. OF ANALOG INPUTS	2 LINEAR POT. [VERSION C & D]
NO. OF TEMP. SENSORS	4 (TYPE J/K THERMOCOUPLE)
ANALOG INPUT RESOLUTION	12-BIT
TEMP. MEASURING ACCURACY	0.25 °C
TEMP. CONTROL ACCURACY	+1 TO -2 °C OF SET VALUE
TYPES OF TEMP. CONTROL	ADVANCED ADAPTIVE PID CONTROL (SELF-TUNING)
NO. OF PWM OUTPUT	2 NOS. DIGITALLY USER CALIBRATED [VERSION B & D]
PWM O/P VOLTAGE RANGE	0 TO +10 VOLTSWITH 12- BIT RESOLUTION
POWER CONSUMPTION	3.25W MAX (STANDBY)
MAX. OPERATING TEMPERATURE	60 °C
OPERABILITY	EASE OF SETUP, OPERATION & FAULT DIAGNOSIS
MECHANICAL DIMENSION (L*W*D)	(154*254*40)MM

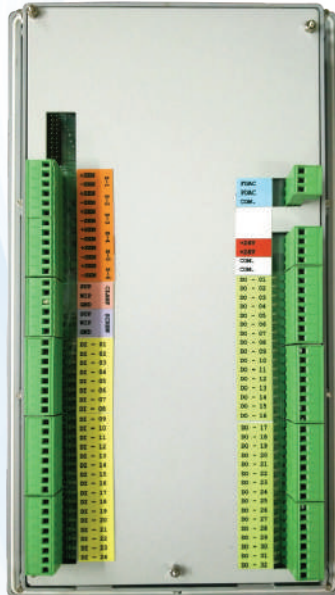
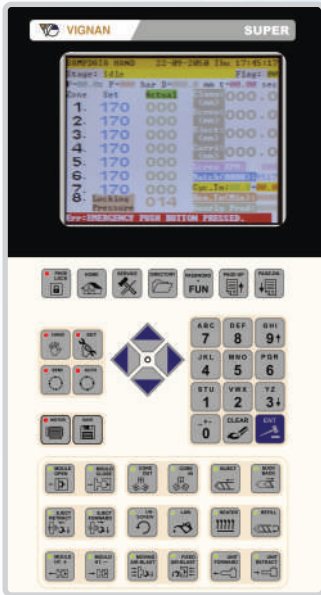


PROUDLY MADE IN INDIA

## SUPER

For Injection Molding Machine

- FOR SMALL-MEDIUM HORIZONTAL/VERTICAL MACHINES
- SUITABLE FOR SLIDER, ROTATORY TABLE & INSERT MOLDING MACHINES



### SYSTEM TECHNICAL SPECIFICATIONS

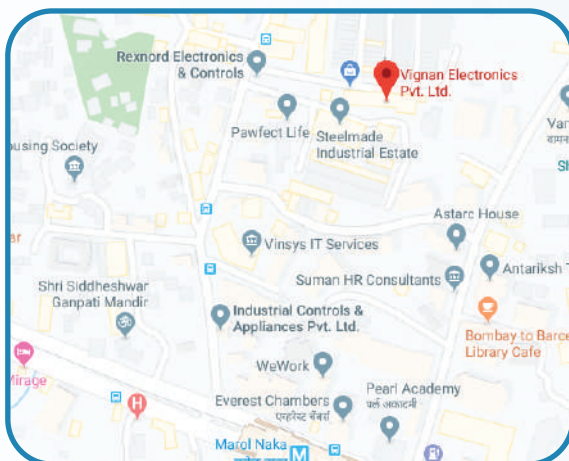
SYSTEM CONFIGURATION	ULTRA COMPACT 2-PIECE SYSTEM
MMI CPU CORE	32-BIT ARM-7 EMBEDDED PROCESSOR
DISPLAY GRAPHICAL LCD	DISPLAY WITH 5.7 TFT 640*480 PIXEL RESOLUTION
LCD BACKLIT	LED TYPE FOR LCD LONG LIFE
NO. OF KEYS	57- WITH LED INDICATOR FOR DIRECT FN. CALL KEYS
MACHINE SCAN TIME	400 TIMES/SEC (~2.5MSEC)
MMI SCAN TIME	1000 TIMES/SEC (~1MSEC)
NO. OF MOULD PROGRAMS	30
COMMUNICATION CHANNELS	USB V2.0 (BACK)
NO. OF DIGITAL INPUTS	24 (TYPE NPN-NO, MAX SOURCE CURRENT 5MA)
DIGITAL INPUT FEATURE	CAN BE CONFIGURED AS HIGH SPEED COUNTER
NO. OF DIGITAL OUTPUT	32 (MAX. CURRENT OUTPUT OF 2A FOR EACH O/P)
DIGITAL OUTPUT FEATURE	ONSITE PROGRAMMABLE FOR EACH STAGE
NO. OF ANALOG INPUTS	2 LINEAR POT.
NO. OF TEMP. SENSOR	6 (TYPE: RTD PT- 100 ISOLATED)
ANALOG INPUT RESOLUTION	12-BIT
TEMP. MEASURING ACCURACY	0.25 °C
TYPE OF TEMP. CONTROL	ADVANCED ADAPTIVE PID CONTROL
NO. OF PWM OUTPUTS	2 NOS. DIGITALLY USER CALIBRATED
PWM O/P VOLTAGE RANGE	0 TO +10 VOLTS WITH 12 BIT RESOLUTION
POWER CONSUMPTION	3.25W MAX. (STANDBY)
MAX. OPERATING TEMPERATURE	60 °C

## ADDRESS

VIGNAN ELECTRONICS PVT. LTD.  
F-36 MAROL NANDDHAM IND. ESTATE,  
MAROL MAROSHI ROAD, MAROL NAKA,  
ANDHERI(E), MUMBAI, INDIA 400059

## CONTACT

MR. L.N.RAO, MANAGING DIRECTOR.  
TELEPHONE: +91 22 66935061  
EMAIL: [vignanmumbai@gmail.com](mailto:vignanmumbai@gmail.com)  
[vignan@vignanelectronics.com](mailto:vignan@vignanelectronics.com)  
WEBSITE: [www.vignanelectronics.com](http://www.vignanelectronics.com)



## QUERIES & SERVICES

10AM-10PM (MON-SAT)

### PHONE NUMBER

- +91 9820040470
- +91 9322040472
- +91 9167450150
- +91 9820953762
- +91 22 66935061
- +91 9824061676

CONCEPTUALIZED, DESIGNED & MANUFACTURED IN INDIA



**VIGNAN ELECTRONICS (P) Ltd.**  
*Imagine. Inspire. Automate.*

PLC Solutions for Injection & Blow Molding Machines  
Scalable Hardware & Innovative Software for All IMM & BMM

## WHY VIGNAN??



28 YEARS OF EXCELLENCE

**AFFORDABLE SERVICES  
FOR 15+ YEARS EVEN  
AFTER PRODUCT END OF LIFE**

HIGH QUALITY PRODUCTS

EASE OF USE

MADE IN INDIA



COMPACT



RELIABLE



PRECISE



EFFICIENT



FLEXIBLE



SUSTAINABLE