RB

AUTOMATION

- **PLC**
- **HMI**
- **Scada**
- **Servo**
- **Stepper**
- **Control Panel**

Control System

About Us

We are a team of Passionate people whose goal is to improve everyone's life, through Innovative systems. We build great system to solve your business problems. Our systems are designed for companies willing to optimize their performance.

PROGRAMMABLE LOGIC CONTROLLER

Our range of PLCs has been design to meet various customer requirement, specifically on fit for purpose, easy throughout the whole life cycle, robustness & widely available every where.

Main features :

- Execution speed : 0.2 micro seconds/boolean instructions
- Program : 10 K list instructions
- Permanent memory : 3000 words
- Easy I/O expansion modules & cartridge facility

Technical Specification

Digital Input	9/14/24/36 (4 high speed)
Digital Output	7/10/16/24. (4 high speed)
Analog Input	2/4/8. (With 8/12/16 bit resolution)
Analog Output	2/4/8 (With 12 bit resolution)
Common Port	RS 232/RS485/Ethernet/Canopen
Power Supply	24 Vdc / 230 Vac

HUMAN MACHINE INTERFACE

Our range of touch screen panels is designed to provide just the right level of performance for communication with simple machines: non-critical functions have been reduced so as to offer easy-to-use products with the correct level of quality at an affordable cost.

Main features :

- Display of animated mimic
- Real time curves & trend curves with log
- Alarm display with log & management
- Recipe management & Data processing via java script
- Management of printer & barcode reader

Technical Specification

Basic Touch Panel

| Screen size & type	Number Of Ports	Memory capacity	Display resolution
7" wide, Color TFT screen	1.COM 1(RS 422/485) 1.USB mini-B	For application : 32 MB For Back up : 128 KB	800 X 480 Colour:65536
10" wide, Color TFT screen	1.COM 1(RS 422/485) 1.USB mini-B	For application : 32 MB For Back up : 128 KB	800 X 480 Colour:65536

Universal Touch Panel

Screen size & type	Number Of Ports	Memory capacity	Display resolution
7" wide, Color TFT screen	1 COM 1(RS 232C) 1COM2(RS422/485) 1.USB mini-B 1 USB A 1 Ethernet 10/100 Base-Tx	For application : 48 MB For Back up : 128 KB	800 X 480 Colour:65536
10" wide, Color TFT screen	1 COM 1(RS 232C) 1COM2(RS422/485) 1.USB mini-B 1 USB A 1 Ethernet 10/100 Base-Tx	For application : 48 MB For Back up : 128 KB	800 X 480 Colour:65536

HMI + PLC Combo

Screen size & type	Number Of Ports	Memory capacity	Display resolution
3.5" wide, Color TFT screen	1COM2(RS 422/485) 1.USB mini B 1 USB A 1 Ethernet 1 Canopen	For application : 128 MB For Back up : 128 KB	320x240 Colour:65536
5.7" wide, Color TFT screen	1 COM 1(RS 232C) 1COM2(RS422/485) 1.USB mini-B 1 USB A 1 Ethernet 10/100 Base-Tx	For application : 48 MB For Back up : 128 KB	320x240 Colour:65536

We are providing SCADA remote communications for efficient, cost-effective process automation. Modular construction and advanced features offer fast, easy and reliable configuration and operation in demanding applications..
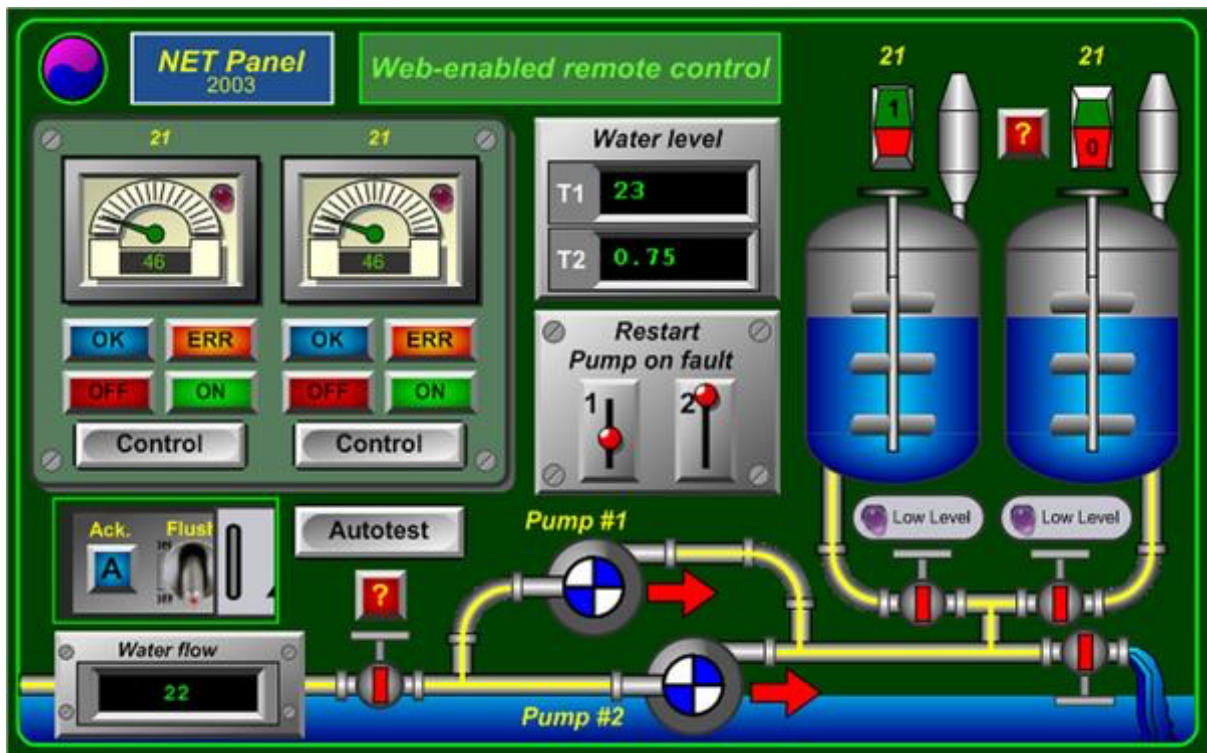
Main features :

- Reduce engineering
- Cut costs
- Simplify industry solutions
- Enable scalability
- Provide remote access
- Data record & Report generation

AC DRIVE

We always been paying great efforts in deeply understanding the Indian demands and characteristics so as to keep up with the market development in India. Therefore, aiming at providing simple OEMs with simple, reliable and cost-effective solutions in drives and controls, one multi functional mini type frequency converter is designed specifically for simple application.

Main features :

- A super mini type in compact design & Side by side mounting.
- The high start-up torque of 1.5 Hz/100 % and 3 Hz/150 %
- Over-excitation control to reduce the braking time. The capacity overload of 150 % 60 s.
- Modbus RTU is Standard.
- PC software and firmware updates (via Mini-USB port).
- Easy to operate and maintenance, removable fan, free cooling (not more than 1.5 kW).
- Structured parameter group for convenient commissioning.
- Automatic speed limiting and capture.
- Reinforced coating of circuit boards for dust-proof and anti-corrosion.

Technical Specification

Input	0.4 kw to 2.2 kw (1 phase 200…240 Vac) 0.4 kw to 200 kw (3 phase 380..480 Vac)
Output Frequency	0..400 Hz
Control Technology	V/F , SVC
Overload Capacity	150% , 60s
PID Functions	Inbuilt
Input / Output	2 A/I / 1 A/O / 4 D/I / 1 high speed input / 1 DO / 1 Relay O/P

Area Of Application

- HVAC
- Energy saving calculator
- Blower
- Winding
- CNC router

SERVO MOTOR & SERVO DRIVE

Our servo system range offers predefined combinations to suit the requirements of motion control applications and optimise the installation's performance.

The combinations of servo motors with servo drives are based on the power class: both the servo motor and servo drive have the same power class.

The bundled servo drive with its related servo motor is designed to cover a nominal power range from 0.05 kW/0.07 hp up to 4.5 kW/6.03 hp with 200..240 V mains supply voltage & servo drives have degree of protection IP 20.

Motors provide a nominal torque from 0.16 Nm to 28.6 Nm and a nominal speed from 1,000 to 3,000 rpm, depending on the model. They are suitable for a wide variety of applications due to the different levels of motor inertia offered.

Main features :

Automatic motor identification by the servo drive: the technical data related to the motor is provided from the motor to the drive via the encoder connection cable.

Filtering: Anti-vibration function for suppression of resonance frequencies in the power train connected with the moving mass of the application

Monitoring functions:

- Status monitoring, I/O monitoring
- Log function to memorize alarm and warning messages (in the drive)
- Reset function for alarms and warnings
- Monitoring of drive variables related to motor control and closed loop control

Technical Specification

Servo. Drive I/0	
Digital Input	2(high speed) and 8 (Normal)
Digital Output	5
Analog Input	2
Analog Output	2
Common Port	RS485
Power Supply	200…240 Vac

The stepper motor specially designed for accurate control of position and speed. The biggest characteristic of stepper motor is "Digital". For each pulse signal from controller, the stepper motor driven by its drive runs at fixed angle.

General Specification

Step Angle	1.8^0
Number of Phase	2
Number of lead	4
Step accuracy	0.5 % (synchronising, no load)
Ambient temperature	10^0 C to 50^0 C
Insulation Resistance	100MΩmin.500Vdc

Technical Parameters

Frame Size : 42mm

Model	Holding torque Nm	Rate Current A	Shaft Diameter (mm)	Motor body length (mm)
42A02	0.22	1.2	5	40
42A03	0.34	1.5	5	48
42A08	0.71	1.8	5	60

Frame Size : 57mm

Model	Holding torque Nm	Rate Current A	Shaft Diameter (mm)	Motor body length (mm)
57A09	0.9	2.8	6.35	55
57A1	1.3	2.8	6.35	76
57A2	2.2	4	8	80
57A3	3.0	4	8	100

Frame Size :86mm

Model	Holding torque Nm	Rate Current A	Shaft Diameter (mm)	Motor body length (mm)
86A3	3.5	2.8	9.5	65
86A4	4.5	4.2	12.7	80
86A8	8.5	4.9	12.7	118
86A12	12	4.9	15.8	156

Frame Size : 110mm

Model	Holding torque Nm	Rate Current A	Shaft Diameter (mm)	Motor body length (mm)
110A12	12	6	19	115
110A20	20	6	19	150
110A28	28	6.5	19	201

Frame Size : 130mm

Model	Holding torque Nm	Rate Current A	Shaft Diameter (mm)	Motor body length (mm)
130A27	27	6	19	227
130A45	45	7	19	283

Based on the new 32-bit DSP platform and adopting the micro stepping technology and PID current control algorithm design,Our R series stepper driver surpasses the performance of common analog stepper drive comprehensively.

• PID parameter adjustment function, meeting different types of load applications better

• Micro-stepping control algorithm, improving the stationarity of motor within each speed range

• Command smoothing function, enabling the smoother speed reduction process of motor

• Low speed vibration control, lowering down low speed vibration amplitude of motor by 80%

• Application Area : engraving machine, wirestripping machine, laser marking, cutting machine, die bonder, plotter, numerical control machine, automatic assembly equipment , labelling machine.

Description of R series drive function :

Input Mode

|	
Pulse sequence mode	Pulse + Direction Double Pulse (compatible with pulse level 3.3 - 24 vdc)
IO switching Mode	Fixed speed of IO , Fixed length of IO Speed regulation with a potentiometer
Communication command mode	485 communication
Customised drive	One-driving-two Three-into-one

Internal Processing

• Digital filtering of input pulse : enhancing the anti jamming capability

• Pulse command smoothing : enable the motor to reduce its speed more smoothly

• Anti-jittering of IO switching input :making the IO command more stable and reliable

• Internal micro-stepping : enable the current to be controlled better

• Low speed anti-resonance : reduce the low speed vibration of the motor

• Current loop PID control : reduce heating and increase the high speed torque

• Adaptive parameters of adaptive motor : enable the motor of perform better.

Technical Parameters

Model	Peak Current	Input Voltage	Micro-stepping Level number	Matching Motor
R42	2.2 A	24-48 VDC	200-25600	20,28,35,39,42
R60	5.6 A	24-50 VDC	200-25600	57,60
R86	7.2 A	18-80 VDC	400-51200	86
R130	8.0 A	110-240 VDC	400-60000	110 ,130
3R60	8.0 A	24-50 VDC	200-25600	Three phase 57 &60
3R86	8.0 A	18-80 VDC	400-51200	Three phase 86
3R130	8.0 A	110-240 VDC	400-60000	Three phase 110 & 130

The stepper servo motor specially designed based on the Cz optimised magnetic circuit and adopts stator and rotator materials of high magnetic density, featuring high energy efficiency. A built in high resolution encoder, Light size design, reducing the motor installation space, optional brake, and the matched Z axis moves.
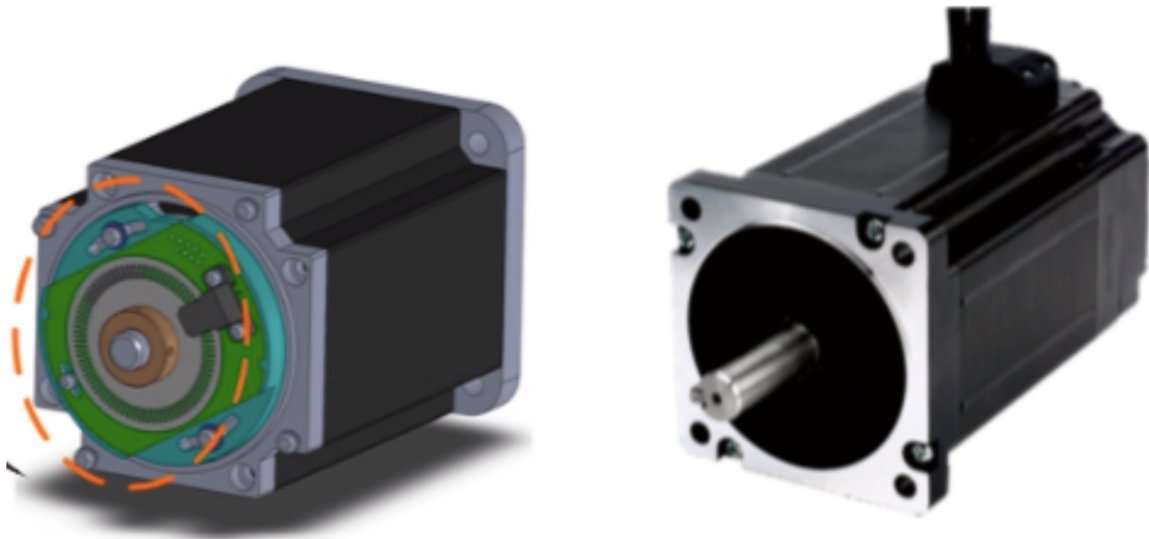
General Specification

Step Angle	1.8º
Number of Phase	2
Number of lead	4
Step accuracy	0.5 % (synchronising, no load)
Encoder resolution	1000 PPR / 2500 PPR
Insulation Resistance	100MΩmin.500Vdc

Technical Specification

Frame Size : 42mm

Model Number	Holding Torque Nm	Rate Current A	Shaft Diameter (mm)	Motor body length (mm)
42A03EC	0.3	2.0	8	69
42A08EC	0.8	2.8	8	85

Frame Size : 57mm

Model Number	Holding Torque Nm	Rate Current A	Shaft Diameter (mm)	Motor body length (mm)
57A1EC	1.0	3.5	8	73
57A2EC	2.0	4.0	8	93
57A3EC	3.0	4.0	8	119

Frame Size : 60mm

Model Number	Holding Torque Nm	Rate Current A	Shaft Diameter (mm)	Motor body length (mm)
60A2EC	0.3	2.0	8	69
60A3EC	0.8	2.8	8	85

Frame Size : 86mm

Model Number	Holding Torque Nm	Rate Current A	Shaft Diameter (mm)	Motor body length (mm)
86A4EC	4.0	6.0	14	98
86A8EC	8.0	6.0	14	136
86A12EC	12	6.0	14	172

STEPPER SERVO DRIVER

Based on the new 32-bit DSP platform and adopting the micro stepping technology and PID current control algorithm design, Our T & DS series stepper driver surpasses the performance of common analog stepper drive comprehensively.

- PID parameter adjustment function, meeting different types of load applications better
- Field-weakening control algorithm, enabling the motor to keep a steady power when operating at a high speed.
- Command smoothing function, enabling the smoother speed reduction process of motor
- Low speed vibration control, lowering down low speed vibration amplitude of motor by 80%
- Application Area : engraving machine, wire-stripping machine, laser marking, cutting machine, die bonder, plotter, numerical control machine, automatic assembly equipment , labelling machine.

Internal Processing

• Digital filtering of input pulse : enhancing the anti jamming capability

• Pulse command smoothing : enable the motor to reduce its speed more smoothly

• Anti-jittering of IO switching input making the IO command more stable and reliable

• Internal micro-stepping : enable the current to be controlled better

• Low speed anti-resonance : reduce the low speed vibration of the motor

• Current loop PID control : reduce heating and increase the high speed torque

• Adaptive parameters of adaptive motor : enable the motor of perform better.

Technical Specification

Model Number	Peak Current	Input Voltage	Micro Stepping Level number	Matching Motor
T60	5 A	24-50 Vdc	200-51200	20,28,35,39,42
T86	7 A	24-100 Vdc /18-80 Vac	200-51200	57,60
DS86	7 A	24-100 Vdc /18-80 Vac	200-65535	86
DS110	7 A	100-230 Vac	200-65535	110,130

1. Modbus RTU

NT60 is RS485 modbus high-performance driver.The driver based on 32-bit DSP platform. NT60 integrates intelligent motion controlling Function with build-in motion profile.Acceleration and Deceleration can be set separately. NT60 run Modbus/RTU protocol over RS485 network to control the driver and motor.

- Configurator interface : USB to Rs485
- Connect Up to 32 salve address
- Configurable Input & Output with RS485 (4 D/I and 2 D/O)
- Control mode : velocity/relative/ absolute
- Baud rate : 9600/19200/38400/115200
- Maximum current : 5A
- Power voltage : 24-50 Vdc.
- Application : production line, solar energy equipment,
  multiple stepper system, torque control mode.

EPR60 is based on Ethernet technology.the driver adopt MODBUS/TCP protocol with standard ethernet interface,10M/100M bps internet interface can be compatible.

• Configurator interface : USB port
• Connect Up to 255 salve address
• Configurable Input & Output(6 D/I and 2 D/O)
• Control mode : velocity/relative/ absolute
• Maximum current : 6A
• Power voltage : 24-50 Vdc.
• Application : production line, solar energy equipment,
  multiple stepper system, torque control mode.

EPR60 is based on EtherCAT field-bus technology.Its support COE(canopen over EtherCAT) protocol, confirm to CiA402 standard, and the field bus transmission rate can reach 100Mb/s, which can realise closed loop. The real time control and realtime transmission speed and high reliability communication.

• Open loop and close loop mode optional
• Configurable Input & Output (4 D/I and 2 D/O)
• Control mode : velocity/relative/ absolute
• Maximum current : 6A
• Power voltage : 24-50 Vdc.
• Application : production line, solar energy equipment,
   multiple stepper system, torque control mode.

SWITCH DRIVER

Our IO type switch driver is provided with inbuilt pulse train with acceleration/deceleration and triggers the motor start-stop only by normal switching value.

Compared with the speed-control motor,IO type switch stepper driver is featured with stable start-stop and uniform speed, Which can simplify electrical design.

- Control Mode : start stop and forward reverse / start stop and speed control / start stop with sensors input or limit switch.
- Signal level : 3.3 - 24 Vdc
- Specification of potentiometer : 10-100 k ohm
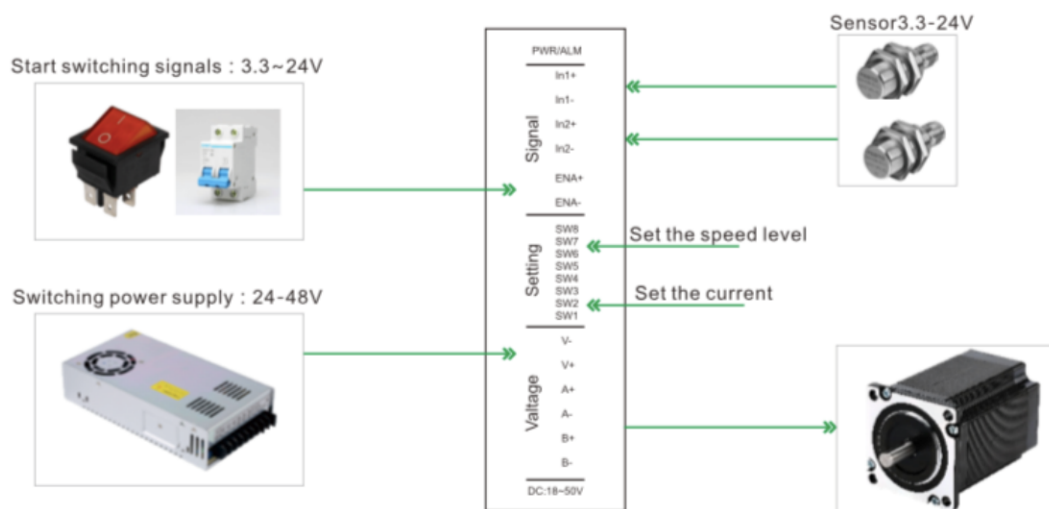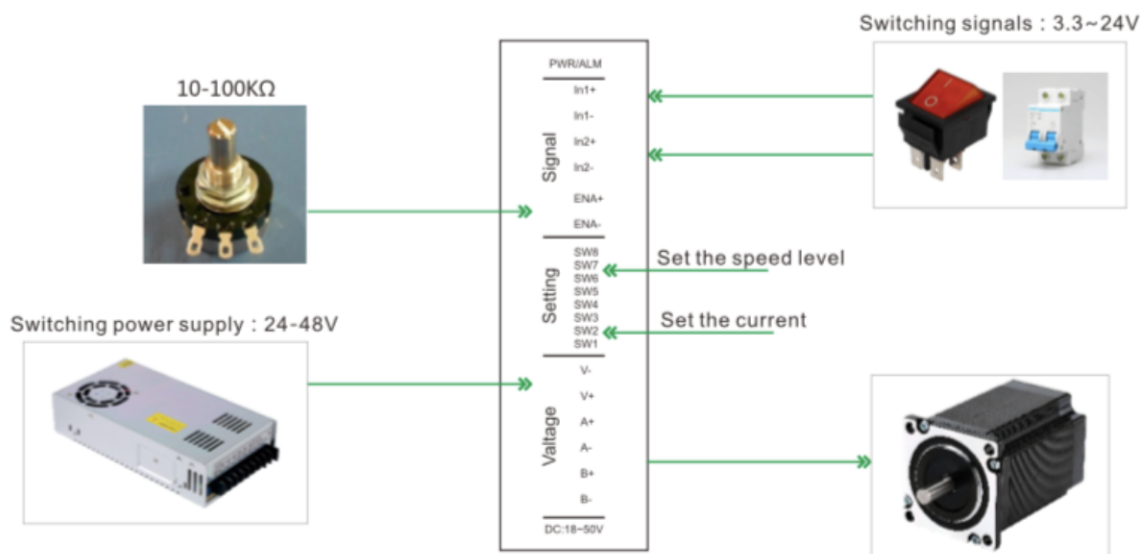
CONTROL PANEL

We are providing customised solution for control panel & power panel with installation & commissioning also cost-effective process automation. Modular construction and advanced features offer fast, easy and reliable configuration and operation in demanding applications..

Application :

- Pharmaceutical machine
- Chemical process plant
- Food & beverages
- Oil & Gas Field application
- Material Handling
- Power & energy
- Water treatment & management plant
- Bio Gas Plant
- Special purpose machine automation
- Cable manufacture industries
- Wood working machinery industries
- Plastic industries

Our Other Products

Process Instrumentation

Flow
Pressure
Level
Temperature

Object Detection

Proximity
Photoelectric
Fiber Optic
Gap
Encoder

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