

Automation Product Range



Solutions with **you** in mind



It makes sense to switch to IMO

We put more in, so you get more out...

- Wide range of products from Limit Switches to HMI's & PLC's.
- The knowledge and experience to deliver the ultimate solutions.
- Peace of mind with a 3 Year Warranty as standard.

i³ Intelligent Controller



IMO's new i³ controller reduces equipment costs and build time by intergrating PLC, HMI and open Bus communications technology into a single, easy to mount unit.

i³H All-In-One HMI



The i³H Colour-Touch series features a fast, powerful logic engine and SVGA resolution touch screens. The i³H is a robust, reliable control product that combines a traditional controller, programmed in ladder logic, an operator interface and networking into an integrated, all-in-one unit.

iSmart Intelligent Relay



Easy to use and highly cost-effective controller for small automation applications. Offering 10 to 44 I/O, with Modbus option modules for even greater expandability, the iSmart has the same capability as a small plc.

I/Os

A range of compact DIN rail mounting remote I/O conforming to the most popular fieldbus standards.

XGB PLC



The XGB is the micro PLC that offers maximum automation at an affordable price. With its high performance, functionality and communication features, the XGB can control the most complex of tasks in many different types of applications.

Photoelectric Sensors



High performance Photoelectric sensors offering accurate and repeatable detection of true colour, presence and position for print, label, assembly and packaging applications, to provide cost effective and simple alternative to mechanical guarding.

IMO Automation Product Range

IMO's Automation products continue to deliver innovation and efficiency worldwide...

IMO's range of automation products has been designed specifically to meet the demanding needs of today's designers and engineers whose requirements range from a simple limit switch through to the most advanced HMIs IMO has ever produced.

The range is allowing these designers and engineers globally to deliver significant technological advances, greater efficiency, reliability and performance to their daily operations, in a wide range of applications from a simple wood working machine to the most demanding and complex integrated systems.

IMO's new generation of automation products includes NEW programmable logic controllers, NEW human machine interfaces and improved iSmart intelligent relays packed full of new functions. Our NEW range of sensing and signal conditioning products offer cost effective, high quality solutions to a broad range of processes. With over 35 years experience of servicing the automation market you can be confident that IMO have the products, skills and know-how to help our customers achieve the optimum solution.

... and is Where Technology and Engineering Excellence Come Together.



Proximity Sensors & Level Controller

IMO's vast range of Inductive Sensors are available in many sizes and varying sensing distances suitable for most applications.



IMO Din mountable liquid level controller is easy to install with its many additional functions.



Signal Conditioning

IMO's signal conditioning range of devices has products from 7.6mm wide to give isolation and conditioning to all types of non-hazardous field signals.



Limit Switches

IMO Limit Switches include features such as safety interlock, bifurcated contacts, high speed actuators and changeable turret positions. A wide variety of actuators complete one of the most comprehensive ranges in the market.



Temperature Controllers

Offering a compact front panel arrangement that combines a digital display with a basic tactile panel, the IMO Temperature Controllers are ideal for industrial environments where the space occupied by large control panels is seen as non-productive and expensive.



i³ Intelligent Control Station



Common i³ Features

- Addressable Function Keys
- Dual Serial Communication Ports
- CAN Port
- Up to 24 digital inputs (direct)
- Up to 4 analogue inputs (direct)
- up to 16 digital outputs (direct)
- Up to 2 analogue outputs (direct)
- High Speed counter
- Stepper control (PWM)
- Modem interface
- CAN and Modbus Based Remote IO
- PID Control
- Alarm Function
- Real time clock
- IP65 (NEMA 4X)
- Free Software
- Voltage range: (10-30VDC)
- CE, UL, cUL Approved

Key Features i³A

- 128 x 64 LCD Display
- 20 Function Keys
- Monochrome Screen
- MicroSD Removable Media 2GB
- Optional Ethernet Addon Card

Key Features i³B

- 160 x 128 Touch Display
- 5 Function Keys
- Monochrome Screen
- MicroSD Removable Media 2GB
- Optional Ethernet Addon Card

Key Features i³C

- 320 x 240 Touchscreen 5.7" Display
- 6 Function Keys
- High Resolution Touch Screen
- MicroSD Removable Media 2GB
- Built in / Optional Addon Ethernet Port
- 32768 Colours
- Ethernet Based Remote IO*

Key Features i³C Mini

- 320 x 240 Touchscreen 3.5" Display
- 5 Function Keys
- High Resolution Touch Screen
- MicroSD Removable Media 32GB
- Built In Ethernet Port
- 65535 Colours
- Ethernet Based Remote IO
- Modem (Optional)
- USB Port for Flash Drives upto 2TB

Key Features i³D

- 640 x 480 Touchscreen 10.4" Display
- 7 Function Keys
- High Resolution Touch Screen
- MicroSD Removable Media 2GB
- Built In Ethernet Port
- 32768 Colours
- Ethernet Based Remote IO

Key Features i³E

- 800 x 480 Touchscreen 7" Display
- 6 Function Keys
- High resolution Touch Screen
- MicroSD™ Removable Media upto 32GB
- 2 Built in Ethernet Ports
- 2 Built in CAN Ports
- USB Port for Flash Drives upto 2TB
- 65535 Colours
- Ethernet Based Remote IO

IMO's new i³ controller reduces equipment costs and build time by integrating PLC, HMI and Openbus communications technology into a single, easy to mount unit.

Available with a combination of Digital and Analogue I/O – including Remote I/O – and integrating T/C and PT100 inputs, the i³ controller is ideal for both process control and factory automation applications; especially as it is backed by IMO's unique 3-year warranty.

Although measuring just 96mm² by 57.5mm deep, the i³ nevertheless packs in levels of functionality that makes the unit the most flexible and cost effective in its class. In addition to digital and analogue I/O, and integral HMI, the i³ integrates advanced controls such as PID for process control, PWM for stepper motor control, GSM MODEM or Ethernet, Recipe, Alarm, Timer, micro SD, High Speed Counter functions, web server and FTP, all of which are supported by FREE Software.

The i³ is the no-compromise solution for all-in-one display, control and communication.



| | i ³ A | i ³ B | i ³ C | i ³ C Mini | i ³ D | i ³ E |
|----------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Supply Voltage | 10-30VDC | 10-30VDC | 10-30VDC | 10-30VDC | 10-30VDC | 10-30VDC |
| Colours | 2 | 2 | 32768 | 65535 | 32768 | 65535 |
| Screen | 128 x 64 F-Key | 160 x 128 Touch | 320 x 240 Touch | 320 x 240 Touch | 640 x 480 Touch | 800 x 480 |
| Analogue input Resolution | 10 Bit (V/mA) / 14 Bit (TC/RTD/V/mA)* | 10 Bit (V/mA) / 14 Bit (TC/RTD/V/mA)* | 10 Bit (V/mA) / 14 Bit (TC/RTD/V/mA)* | 12 Bit (V/mA) / 14 Bit (TC/RTD/V/mA)* | 10 Bit (V/mA) / 14 Bit (TC/RTD/V/mA)* | 12 Bit (V/mA) / 14 Bit (TC/RTD/V/mA)* |
| Analogue Output Resolution | 12 Bit (V/mA) | 12 Bit (V/mA) | 12 Bit (V/mA) | 12 Bit (V/mA) | 12 Bit (V/mA) | 14 Bit (V/mV) |
| Function Keys | 20 | 5 | 6 | 5 | 7 | 6 |
| Serial Ports | 2 | 2 | 2 | 2 | 2 | 3 |
| USB Port | No | No | Yes | Yes | Yes | 2 |
| CAN Port | * | 1 | 1 | 1 | 1 | 2 |
| Ethernet Ports | # | # | # | 1 | 1 | 2 |

* Model dependent # Model dependent / additional option card

Product Specification

| i ³ A | DI | Do | AI | AO |
|-------------------|----|---------|-------|----|
| i3A12X/10A01-SOOF | 12 | 6 Relay | 1 | - |
| i3A12X/10B04-SCHF | 12 | 12 | 2 | - |
| i3A12X/10D03-SCHF | 12 | 6 Relay | 4 | - |
| i3A12X/13C14-SOHF | 12 | 12 | 2 UAI | 2 |
| i3A12X/20B05-SOHF | 24 | 16 | 2 | - |

| i ³ B | DI | Do | AI | AO |
|-------------------|----|---------|-------|----|
| i3B12Y/10D03-SCHF | 12 | 6 Relay | 4 | - |
| i3B12Y/13C14-SCHF | 12 | 12 | 2 UAI | 2 |
| i3B12Y/20B05-SCHF | 24 | 16 | 2 | - |

| i ³ C | DI | Do | AI | AO |
|--------------------|----|---------|-------|----|
| i3C12Z/10D03-SCHF* | 12 | 6 Relay | 4 | - |
| i3C12Z/13C14-SCHF* | 12 | 12 | 2 UAI | 2 |
| i3C12Z/20B05-SCHF* | 24 | 16 | 2 | - |
| i3C12Z/00000-SCHF* | - | - | - | - |

* NB: Replacing SCHF with SEHF includes an embedded Ethernet port

| i ³ C Mini | DI | Do | AI | AO |
|-----------------------|----|---------|-------|----|
| i3CM12Y/10B04-SEHF | 12 | 12 | 2 | - |
| i3CM12Y/10D03-SEHF | 12 | 6 Relay | 3 | - |
| i3CM12Y/13C14-SEHF | 12 | 12 | 2 UAI | 2 |
| i3CM12Y/20B05-SEHF | 24 | 16 | 2 | - |
| i3CM12Y/00000-SEHF | - | - | - | - |

| i ³ D | DI | Do | AI | AO |
|-------------------|----|---------|-------|----|
| i3D12Z/10D03-SEHF | 12 | 6 Relay | 4 | - |
| i3D12Z/13C14-SEHF | 12 | 12 | 2 UAI | 2 |
| i3D12Z/20B05-SEHF | 24 | 16 | 2 | - |
| i3D12Z/00000-SEHF | - | - | - | - |

| i ³ E | DI | Do | AI | AO |
|-------------------|----|---------|-----|----|
| i3E14Z/10B04-SEHF | 12 | 12 | 2 | - |
| i3E14Z/10D03-SEHF | 12 | 6 Relay | 4 | - |
| i3E14Z/13C14-SEHF | 12 | 12 | UAI | 2 |
| i3E14Z/20B05-SEHF | 24 | 16 | 2 | - |
| i3E14Z/00000-SEHF | - | - | - | - |



i³C Mini : The All-In-One Controller from IMO provides a 3.5" QVGA Colour Touchscreen, Embedded Ethernet, 32Gb Datasorage, Web server, PLC, HMI, I/O and Networking, all in one single compact product.

Accessories

| | |
|---------|--------------------------|
| i3-MA | GSM Modem with Antenna |
| i3-E | Ethernet Expansion |
| i3-PC45 | Programming Cable |
| PC501 | USB to Serial Adapter |
| i3-PS | Profibus Slave Expansion |

iSmart - v3 Intelligent Relays



- Digital, Analogue and Temperature inputs
- Relay, Transistor and Analogue Outputs
- Powerful control logic in Ladder or Functional Block Diagram
- Available with or without Text HMI screen including programmable function keys
- PID control (up to 30 loops)
- Maths Functions
- Retentive Data Registers
- High Speed Inputs and PWM Outputs
- Link Function
- Multi-language Selectable
- Expansion modules for more I/O and more communication



IMO's iSmart V3 is a flexible, easy to use and highly cost-effective controller for small automation applications. Offering digital I/O from 10 to 44, up to 12 analogue I/O, Modbus and Ethernet options modules for even greater expandability. The iSmart V3 has the same capability as a small plc, but with reduced complexity and cost, higher switching capability (8 amps), free of charge software and the security of a 3-year guarantee.

Available in AC or DC versions, the iSmart is an ideal controller for OEM applications, such as packaging machines, vending machines, conveyors and automatic door systems. The range is expandable and can be either blind (without display or keypad), or with HMI. All models have multi-language capability (English, German, French, Italian, Spanish, Portuguese, Chinese, Russian, Polish and Turkish) enabling OEM's to closely tailor the iSmart V3 package to suit their ideal cost/control requirements. This is made even easier by the competitive nature of the pricing for the iSmart, with list prices starting at below £60 for a 10 I/O unit.

Easily adapted to all types of machines, the iSmart is a simplified, modular range of intelligent relays, comprising base modules of either 10, 12 or 20 I/O points. These are expandable up to 44 digital I/O (including twelve analogue) by adding a maximum of eight modules. In addition, the highly functional iSmart V3 package also includes up to 30 PID loops, two 1-kHz High speed inputs, a real time clock, one pulse width modulation output (pmw) for position control, 8 AMP switching outputs, a memory module option (particularly useful for OEMs), a communication interface to IMO HMI's or Computers and a Modbus High Speed Data Link that enables the linking of remote I/O.

Speedy, time saving programming and set-up of the iSmart is guaranteed by the use of industry standard programming languages: Relay Ladder (300 lines, 1200 steps 6 instructions/ per line) or Function Block Diagram (260 function blocks). The controller can be programmed via a PC, or the integral keypad, using SMT Client, IMO's free-of-charge software. The SMT Client software provides program simulation for Windows 98, 2000, XP, Vista, Windows 7 and Windows 8, enabling designs to be verified and tested at a desk level. In addition, the iSmart SMT Client also provides on-line monitoring in both ladder and function block modes to enable rapid fault recognition and diagnosis.

iSmart Base Units

| | AC Models | DC Models |
|----------------------------|---------------------------|----------------------------|
| Supply Voltage | 85-264 or 19.6-28.8VAC | 19.6-28.8V or 10.2-13.8VDC |
| | 8A RELAY, 0.5A TRANSISTOR | |
| Timers | 31 (Ladder) or 250 (FBD) | |
| Counters | 31 (Ladder) or 250 (FBD) | |
| Analogue Input Resolution | N/A | 12 bit (0.01V) |
| Analogue Output Resolution | N/A | 12 bit V/mA |
| Function Keys* | 8 | 8 |
| High Speed Inputs | None | 2 |

* Not in blind version

Product Specification

| | Supply | DI | Relay Out | AI* | Screen |
|-----------------|--------|----|-----------|-----|--------|
| SMT-EA-R10-V3 | AC | 6 | 4 | - | Y |
| SMT-EA-R20-V3 | AC | 12 | 8 | - | Y |
| SMT-ED-R12-V3 | DC | 8 | 4 | 2 | Y |
| SMT-ED-R20-V3 | DC | 12 | 8 | 4 | Y |
| SMT-ED12-R12-V3 | 12VDC | 8 | 4 | 2 | y |
| SMT-BA-R10-V3 | AC | 6 | 4 | - | N |
| SMT-BA-R20-V3 | AC | 12 | 8 | - | N |
| SMT-BD-R12-V3 | DC | 8 | 4 | 2 | N |
| SMT-BD-R20-V3 | DC | 12 | 8 | 4 | N |
| SMT-CD-R20-V3 | DC | 12 | 8 | 4 | Y |

* Analogue inputs use (0-10V) type in main units

Accessories

| | Supply | DI | Relay Out | Trn Out | AI | AO | PT100 |
|-------------|----------|----|-----------|---------|----|----|-------|
| SMT-MA-R8 | 100-240V | 4 | 4 | - | - | - | - |
| SMT-MD-R8 | 24VDC | 4 | 4 | - | - | - | - |
| SMT-MD-T8 | 24VDC | 4 | - | 4 | - | - | - |
| SMT-MD-4AI | 24VDC | - | - | - | 4 | - | - |
| SMT-4PT | 24VDC | - | - | - | - | - | 4 |
| SMT-2AO | 24VDC | - | - | - | - | 2 | - |
| PC501 | - | - | - | - | - | - | - |
| SMT-USB | - | - | - | - | - | - | - |
| SMT-PC03 | - | - | - | - | - | - | - |
| SMT-PM04-V3 | - | - | - | - | - | - | - |

NB: Other devices are available, please call for information

iText

- Can be used with a range of PLC'S
- 4.3" monochromic display, 192 x 64 pixels, olivine background
- 24 Addressable function keys
- Support Modbus RTU protocol
- 2 Communication Port (RS 232/RS 422/RS 485)
- 20.4 - 26.4 VDC Power Supply
- Free Configuration Software
- RS 232 Programming Cable

iText programmable text monitor can be used with a range of PLCs. It offers low to medium HMI interface. It can easily be configured by using the free software available as a download on the IMO website, www.imopc.com.

The 4.3" mono chrome display has 192 x 64 pixels and the unit comes with 24 addressable function keys. The two comms ports can handle any of the RS 232/RS 422/RS 485.



Ordering Codes

| | |
|-------------|-------------------------|
| iText | HMI |
| iText-RS232 | iText Programming Cable |
| SMT-PC03 | iText to iSmart Cable |
| PC501 | USB to Serial Adapter |

XGB Programmable Logic Controllers



Common Features

- Max. 5-Ch Communication with built-in functions and expansion modules
- Enhanced user interface with XG5000 / XG-PD
- Various monitoring functions
- Network diagnosis and monitoring
- Batteryless back-up
- Powerful communication: Built-in RS-232C / 485, 2 Expansions for communication
- Network configuration via Ethernet and Cnet I/F

XBC / XEC

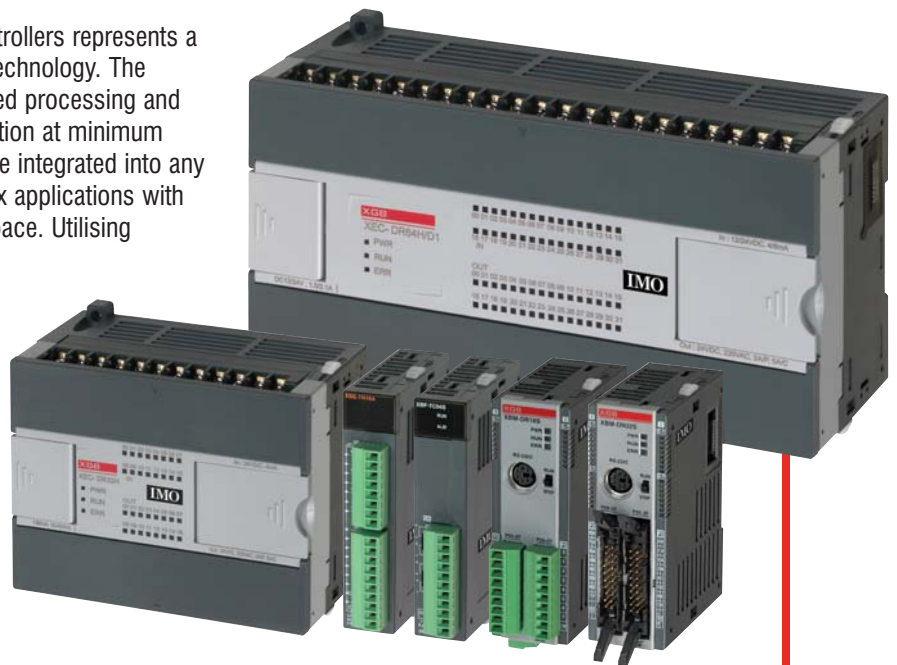
- 83ns/Step processing speed and floating-point arithmetic with on-board CPU
- Max 10 expansion modules, Max. 384 I/O point control: PLC systems for small and medium-scale applications

XBM

- 160ns/Step processing speed and floating-point arithmetic with on-board CPU
- Max 7 expansion modules, max. 256 I/O point control: PLC Systems for small and medium-scale applications

IMO's new XGB range of programmable logic controllers represents a considerable leap forward in next generation plc technology. The compact design, increased functionality, high speed processing and improved performance delivers maximum automation at minimum cost. The flexibility of the XGB means that it can be integrated into any solution with ease, from simple control to complex applications with the choice of two footprint styles depending on space. Utilising expansion cards, which are compatible with either style, the I/O can reach a maximum of 384 points, 5 communication ports and a scan speed of 83ns/step.

The powerful new software's enhanced user interface allows easy network diagnosis plus a variety of monitoring functions. The batteryless back-up guarantee's security of the program throughout the XGB's life cycle



XGB PLC Main Units

| | XBM | XBC | XEC |
|------------------------------|--------------|--------|---------------------|
| Supply Voltage | 24VDC | | 24VDC or 100-240VAC |
| Relay Output Rating | 2A Resistive | | 2A Resistive |
| Transistor Output Rating | 0.2A / point | | 0.5A / point |
| Program Capacity | 10k steps | | 15k steps |
| Max I/O Points | 240/256* | | 352/384* |
| Analogue Input Resolution** | 14 Bit | | 14 Bit |
| Analogue Output Resolution** | 14 Bit | | 14 Bit |
| PID Control | Yes | | Yes |
| Programming Languages | Ladder | Ladder | IEC61131 |
| High Speed Inputs | Yes | | Yes |
| Positioning | Yes | | Yes |

* Main unit I/O + Maximum Expansion I/O

** When using Analogue Expansion Units

Product Specification

| | DI | RO (2A) | DO (0.2A) |
|----------------|----|------------|--------------|
| XBM-DR16S | 8 | 8 | - |
| XBM-DN32S* | 16 | - | 16 |
| XBC-DR32H | 16 | 16 | - |
| XBC-DR64H | 32 | 32 | - |
| XBC-DR32H/DC | 16 | 16 | - |
| XBC-DR64H/DC | 32 | 32 | - |
| XEC-DR32H | 16 | 16 | - |
| XEC-DR32H/DC-E | 16 | 16 | - |
| XEC-DR64H | 32 | 32 | - |
| XEC-DR64H/DC-E | 32 | 32 | - |

Expansion Units & Accessories

| | DI | RELAY OUT | DO (0.2A) | AI | AO | RTD | TC |
|----------------|----|--------------|--------------|----|----|-----|--------------------------|
| XBE-DC08A | 8 | - | - | - | - | - | - |
| XBE-DC16A | 16 | - | - | - | - | - | - |
| XBE-DC32A* | 32 | - | - | - | - | - | - |
| XBE-RY08A | - | 8 | - | - | - | - | - |
| XBE-RY16A | - | 16 | - | - | - | - | - |
| XBE-TN08A | - | - | 8 | - | - | - | - |
| XBE-TN16A | - | - | 16 | - | - | - | - |
| XBE-TN32A* | - | - | 32 | - | - | - | - |
| XBE-TP08A | - | - | 8 | - | - | - | - |
| XBE-TP16A | - | - | 16 | - | - | - | - |
| XBE-TP32A* | - | - | 32 | - | - | - | - |
| XBE-DR16A | 8 | 8 | - | - | - | - | - |
| XBF-AD04A | - | - | - | 4 | - | - | - |
| XBF-AH04A | - | - | - | 2 | 2 | - | - |
| XBF-DV04A | - | - | - | - | 4 | - | - |
| XBF-DC04A | - | - | - | - | 4 | - | - |
| XBF-RD04A | - | - | - | - | - | 4 | - |
| XBF-TC04S | - | - | - | - | - | - | 4 |
| XBL - EMT A | | | | | | | Ethernet comms module |
| PMC - 310 S | | | | | | | Serial programming cable |
| USB - 301 A | | | | | | | USB programming cable |
| XBC-XECBATTERY | | | | | | | Replacement Battery |
| XB0-M1024A | | | | | | | Program EEPROM |
| XEL-BSSA | | | | | | | Modbus TCP IO System |

* Please contact IMO in order to correctly specify the required break-out cables and terminal boards.

Breakout Parts

| Part Number | Description | Suits | Length if applicable, m |
|--------------------|--|-----------|-------------------------|
| R40H/20HH-05S-XBM3 | Cable link to break out unit TG7-1H40S | XBM | 0.5 |
| C40HH-05SB-XBI | Cable link to break out unit TG7-1H40S | XBE | 0.5 |
| C40HH-10SB-XBI | Cable link to break out unit TG7-1H40S | XBE | 1 |
| TG7-1H40S | Screw I/O termination | XBM & XBE | |

i³ Operator Interface (HMI)



- PID Control
- Alarm Function
- Real Time Clock
- IP 65 (NEMA 4X)
- Free Software
- Voltage Range (10-30VDC)
- CE, UL, cUL Approved

The i³ Colour-Touch operator interface series features a fast, powerful logic engine and high resolution touch screen. The i³ is a robust, reliable control product that combines a traditional controller, programmed in ladder logic or IEC 61131, an operator interface and networking into an integrated, all-in-one unit using a single software package.

The i³ Operator Interface has seven screen sizes to choose from (3.5", 5.7", 8.4", 10.4", 12.1", 15" and 22") and a typical logic scan rate of 0.2mS/K. In addition, the i³ has third party protocols for enhanced PLC connectivity plus embedded Ethernet and supports many Internet capabilities such as remote data access, programming, hosting HTML-based Web pages and FTP sites.

A choice of Ethernet, Modbus, CAN remote IO options are available for the i³ Operator interface to add the IO system to enhance the control solution.

A built-in removable media function allows users to easily store machine or process data . Programs can be updated and loaded through the memory card, a real advantage for OEMs or those supporting distant sites. i³ units provide control, operator interface, and communication functionality. This modularity allows the i³ to be more precisely tailored to meet application requirements.



Specifications

| | i3CM12Y/00000-SEHF | i3C12Z/00000-SEHF * | i3D12Z/00000-SEHF | i3X15/00000-SEHD | i3X22/00000-SEHD | i3H** | i3E14Z/00000-SEHF |
|-----------------|--------------------|---------------------|-------------------|--------------------|--------------------|----------|-------------------|
| Supply Voltage | 10-30VDC | 10-30VDC | 10-30VDC | 10-30VDC | 10-30VDC | 24VDC | 10-30VDC |
| Colours | 65535 | 32768 | 32768 | 65535 | 65535 | 32768 | 65535 |
| Screen | 3.5" QVGA | 5.7" TFT | 10.4" VGA | 15" XGA TFT | 22" 1080p TFT | SVGA TFT | WVGA TFT |
| Removable Media | 32 GB MSD | 2GB MSD | 2GB MSD | 4 x USB 2.0 Drives | 4 x USB 2.0 Drives | 2GB CF | 32GB MicroSD |
| Function Keys | 5 | 6 | 7 | 7 | 7 | 8 | 6 |
| Serial Ports | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
| USB Port | Yes | Yes | Yes | Yes | Yes | No | 2 |
| CAN Port | Yes | Yes | Yes | Yes | Yes | No | 2 |
| Ethernet Port | 1 | 1 | 1 | 2 | 2 | 1 | 2 |

* No Ethernet version available. Please contact IMO for more details

** Please contact IMO for more Details

Remote I/O

- For use with i³ A, B, C, C Mini, X, H and XGB
- Analogue and Digital I/O modules
- Up to 16 bit resolution
- Configurable DC Voltage or Current inputs
- 2kV isolation
- 24VDC supply
- Removable screw terminals
- Configurable TC and RTD inputs

The IMO range of Remote I/O delivers a total choice for each application depending on available space, performance and price per I/O point. For high accuracy on analogues, the iOS and Smart I/O have up to 16 bit resolution, plus a mix of digital I/O also by utilising IMO's iSmart intelligent relay for all other applications, there is a solution perfect for everyone.

iOS Remote I/O system uses serial communications to achieve a high speed and reliable interface between controller and the location of inputs and outputs. Configurable directly from the i³ Integrated Controller, iOS offers a flexible and fast solution to systems requiring a high quantity of mixed I/O types not supported by conventional PLC systems. Removable terminals facilitate simple installation and maintenance while 2kV isolated I/O points ensure accurate and noise free integration of analogue signals.

| Remote I/O Solutions | | | | | | | |
|----------------------------|-----------------|---|---|-----------|---------|-----------|-----------|
| Supply Voltage | | 24VDC | | | | | |
| Resolution | | 14 Bit or 16 Bit* -10 Bit on iSmart | | | | | |
| Comms Options | | Serial/iCan/MODBUS | | | | | |
| I/O Options | | | | | | | |
| | | DI | DO | AI | AO | RTD | TC |
| iOS - Serial/Modbus | iOS/M04IPX-D1 | - | - | - | - | 4 (0.01C) | - |
| | iOS/M08ICX-D1 | - | - | 8x mA* | - | - | - |
| | iOS/M08IVX-D1 | - | - | 8x V* | - | - | - |
| | iOS/M08ITX-D1 | - | - | - | - | - | 8 (0.01C) |
| | iOS/M040XA-D1 | - | - | - | 4x V/mA | - | - |
| | iOS/M080XV-D2 | - | - | - | 8x V | - | - |
| | iOS/M08BDR-D1 | 4x NPN | 4x 2A Relay | - | - | - | - |
| | iOS/M12BDD-D2 | 4x NPN | 8x NPN | - | - | - | - |
| | iOS/M12IDX-D2 | 12x NPN | - | - | - | - | - |
| Smart I/O - Serial or iCAN | GSL-DT4A | 16x 24VDC | 16 | - | - | - | - |
| | GSL-RY2A | - | 16x 2A Relay | - | - | - | - |
| | GSL-D24A | 32x 24VDC | - | - | - | - | - |
| | GCL-A21-A | - | - | 12x V/mA | - | - | - |
| | GCL-AT1-A | - | - | 8x V/mA | 4x V/mA | - | - |
| | GCL-DT4A | 16x 24VDC | 16 | - | - | - | - |
| | GCL-RY2A | - | 16x 2A Relay | - | - | - | - |
| | GCL-D24A | 32x 24VDC | - | - | - | - | - |
| | iCAN / CAN OPEN | XCL-BSSA | All the expansion units of the XGB range can be used. | | | | |
| XOL-BSSA | | All the expansion units of the XGB range can be used. | | | | | |
| iSmart - Modbus | SMT-CD-R20-V3 | 12 | 8x 8A Relay | 4x 0-10V* | - | - | - |
| | SMT-MD-R8 | 4 | 4x 8A Relay | - | - | - | - |
| | SMT-MD-T8 | 4 | 4 | - | - | - | - |
| | SMT-MD-4AI | - | - | 4x 0-10V | - | - | - |
| | SMT-4PT | - | - | - | - | 4x PT100 | - |
| | SMT-2AO | - | - | - | 2x V/mA | - | - |
| Modbus - TCP | XEL-BSSA- | All the expansion units of the XGB range can be used. | | | | | |



* Please contact IMO for more details

Photoelectric Sensors



- Infra-red, visible red light and red light laser
- PNP/NPN and analogue outputs
- NO/NC selectable
- Transparent object detection
- Metal and plastic detection
- Models with or without sensitivity adjustment
- IP67 protection

IMO's recently enhanced detection range offers an easy choice of sensor for a wide variety of applications. The addition of the new QC range compliments the QB series with increased sensing distance, precise measurement and colour detection. The table below gives a small selection of IMO's extensive range of photocells. Please visit www.imopc.com for information on IMO's full range of Photoelectric Sensors.

| Photoelectric Sensors | | | | | |
|-----------------------------|------------------|--|-------------|-------------|--------|
| | Part Number | Type | Source | Distance | Output |
| Compact (50 x 50) | QCRN/OP-OE | Retro-Reflective | Visible LED | 5.5m | PNP |
| | QCLP/OP-OE | Retro-Reflective | Laser | 12m | PNP |
| | QCRA/OP-OE | Diffuse - BGS | Visible LED | 0.3m | PNP |
| | QCLB/OP-OE | Diffuse - BGS | Laser | 150mm | PNP |
| | QCIC/OP-OE | Diffuse - BGS | Laser | 0.6m | PNP |
| | QCLA/OP-OE | Diffuse - BGS | Laser | 0.3m | PNP |
| | QCIS/XO-OE | Through Beam - Emitter | Visible LED | - | - |
| | QCIR/OP-OE | Through Beam - Receiver | Visible LED | 15m | PNP |
| | QCL3/OA-OE | Diffuse - Measurement | Laser | 45 to 85mm | 0-10V |
| | QCL4/OA-OE | Diffuse - Measurement | Laser | 45 to 85mm | 0-10V |
| | QCLD/OR-OE | Diffuse - Measurement | Laser | 80 to 300mm | 0-10V |
| QCW5/OP-OE | Diffuse - Colour | Visible LED | 32mm | 3 x PNP | |
| Miniature (20 x 32 x 12) | QBLL/OP-OE | Diffuse - Contrast | Laser | 150mm | PNP |
| | QBR6/OP-OE | Diffuse | Visible LED | 0.3m | PNP |
| | QBLA/OP-OE | Diffuse - BGS | Laser | 60mm | PNP |
| | QBRB/OP-OE | Diffuse - BGS | Visible LED | 100mm | PNP |
| | QBLC/OP-OE | Diffuse - BGS | Laser | 110mm | PNP |
| | QBID/OP-OE | Diffuse - BGS | Infrared | 150mm | PNP |
| | QBR3/OA-OE | Diffuse - B & FGS | Visible LED | 80mm | 0-10V |
| | QBRG/OP-OE | Retro - Reflective (Transparent Objects) | Visible LED | 0.5m | PNP |
| | QBLM/OP-OE | Retro - Reflective | Laser | 1m | PNP |
| | QBRN/OP-OE | Retro - Reflective | Visible LED | 2.5m | PNP |
| | QBRP/OP-OE | Retro - Reflective | Visible LED | 4m | PNP |
| | QBR5/OO-OE | Through Beam - Emitter | Visible LED | - | - |
| | QBRR/OP-OE | Through Beam - Receiver | Visible LED | 6m | PNP |
| | M18 Barrel | FA17/BP-OE | Diffuse | Infrared | 0.4m |
| FA14/BP-OE | | Diffuse | Infrared | 0.2m | PNP |
| FAIC/BP-OE | | Retro - Reflective | Infrared | 4m | PNP |
| FAIH/OO-OE | | Through Beam - Emitter | Infrared | - | - |
| FAID/OP-OE | | Through Beam - Receiver | Infrared | 20m | PNP |



In addition to this IMO also offers an extensive range of cables, reflectors and Bracket's to suit all our sensors

Proximity Sensors



- Shielded & Unshielded Versions
- Standard and Long Sensing
- LED Indication, 360° visible
- IP67 Nickel plated brass housing / stainless steel

IMO inductive proximity sensors range from 3mm in diameter to M30 and a small selection of the more popular types is listed below. The standard body is made of nickel plated brass and stainless steel is available in the smaller devices and optional in the bigger sizes. Most devices are available as pre-cabled (2m standard, other lengths possible) or with M12/M8 connector. In addition IMO also offers a range of cables to suit all sensors. Please visit www.imopc.com for information on IMO's full range of Proximity Sensors.



Proximity Sensors

| Barrel Size | Type | Standard | | Long Distance | | Length (mm) |
|-------------|------------|------------|---------------|---------------|---------------|-------------|
| | | Range (mm) | Part Number | Range (mm) | Part Number | |
| M8 | Shielded | 1.5 | PB0801/DSAP-H | 2 | PB0802/DSAP-H | 45 |
| | Unshielded | 2 | PB0802/DUAP-H | 4 | | |
| M12 | Shielded | 2 | PB1202/DSAP-H | 4 | PB1204/DSAP-H | 50 |
| | Unshielded | 4 | PB1204/DUAP-H | 7 | PB1207/DUAP-H | |
| M18 | Shielded | 5 | PB1805/DSAP-H | 8 | PB1808/DSAP-H | 50 |
| | Unshielded | 8 | PB1808/DUAP-H | 12 | PB1812/DUAP-H | |
| M30 | Shielded | 10 | PB3010/DSAP-H | 15 | PB3015/DSAP-H | 60 |
| | Unshielded | 15 | PB3015/DUAP-H | 22 | PB3022/DUAP-H | |

Products shown here are PNP, NO, M12 connector style. Many more available in stock, please contact IMO for more details

Level Detection

- Level monitoring of conductive liquids
- Multifunction
- Secure isolation of the measuring circuit
- Output, one changeover contacts
- Width 35mm
- Din mountable
- UL & cUL

IMO DIN mountable liquid level controller is easy to install and with its additional functions, one can set On Delay and or Off Delay timing. The probe SK1-140 designed for use with the unit is insulated and can be mounted at the required level in the metal tank by using a suitable insulated cable of the right length. The design of the probe will allow it to be touching the tank without making electrical contact but ensuring contact with the fluid. (Ultrasonic options are also available, please contact IMO for more information).

In addition to this IMO also offers an extensive range of cables, reflectors and Bracket's to suit all our sensors



Fluid Level Monitoring Relay

| Part Number | Type | Timing Function | Relay Switching Capacity |
|-------------|--------|------------------------|--------------------------|
| WLC-110VAC | 110VAC | On Delay and Off Delay | 1250VA AC1 at 250VAC |
| WLC-230VAC | 230VAC | On Delay and Off Delay | 1250VA AC1 at 250VAC |

single probe to suit: SK1-140

Limit Switches



- Bifurcated contacts for low resistance and high reliability
– suitable for switching low-level electronic currents
- 10A 500VAC/600VDC rated
- Turret head position rotatable in 90° increments
- Centre-position indicator arrow – lever actuators
- Wide range of actuators
- Single, dual and triple cable entry models
- Removable contact block for ease of wiring
- Metal or plastic housing options
- IP67 according to BS EN 60947-1

IMOs Limit Switches are being installed and used daily in every type of industrial machinery, in all types of weather conditions and in many different industry sectors including Wood, Metal, Plastic, Automotive, Packaging and Lifting.

The IMO Limit Switch is available in eight basic body styles, dozens of contact blocks and hundreds of actuators. That equals over 3,000 configurations which means so much variety that we are only able to show a fraction of the range here.

The popular FR range of limit switches has been specially designed to meet the increasing complexity of modern machinery, with an operating temperature range of -25°C to +80°C (-40°C on request), adjustable heads which move in 10° steps. The FR range can be supplied with industry standard entries such as PG13.5 or others including M12 for faster connectivity.

IMO's Limit Switch range delivers an extremely flexible and competitive package that has the exact limit switch for your application requirements.





Limit Switches

Standard Range

| Cable Entry | PG13.5 (Others available on request) | | | | |
|--------------------------------|--|--------|--------|--------|--------|
| Contacts | 1NO/1NC Snap (Others available on request) | | | | |
| | Plastic | | | Metal | |
| | Entry | Single | Double | Single | Double |
| Short Piston Plunger | | FR501 | FX501 | FM501 | FZ501 |
| One-Way Roller (Top Actuated) | | FR502 | FX502 | FM502 | FZ502 |
| One-Way Roller (Side Actuated) | | FR505 | FX505 | FM505 | FZ505 |
| One-Way Roller (Adjustable) | | FR507 | FX507 | FM507 | FZ507 |
| Piston Plunger (Sealed) | | FR508 | FX508 | FM508 | FZ508 |
| M12 Piston Plunger | | FR510 | FX510 | FM510 | FZ510 |
| M18 Roller Piston Plunger | | FR513 | FX513 | FM513 | FZ513 |
| 11mm Roller Plunger | | FR515 | FX515 | FM515 | FZ515 |
| Coil Spring & Rod (Sealed) | | FR520 | FX520 | FM520 | FZ520 |
| Cats Whiskers | | FR521 | FX521 | FM521 | FZ521 |
| Coiled Spring (Sealed) | | FR525 | FX525 | FM525 | FZ525 |
| Roller Lever | | FR531 | FX531 | FM531 | FZ531 |
| Lever Rod (Square) | | FR533 | FX533 | FM533 | FZ533 |
| Lever Rod (Round) | | FR550 | FX550 | FM550 | FZ550 |
| Large Offset Roller Lever | | FR551 | FX551 | FM551 | FZ551 |
| Roller Lever Long | | FR552 | FX552 | FM552 | FZ552 |
| Offset Roller Lever | | FR554 | FX554 | FM554 | FZ554 |
| Adjustable Roller Lever | | FR555 | FX555 | FM555 | FZ555 |
| Lever Rod (Glass Fibre) | | FR569 | FX569 | FM569 | FZ569 |



Safety Limit Switches



- Available with a wide choice of contact block configurations
- Single, double and triple conduit entry types
- Heavy duty, die-cast metal alloy housing models
- Impact resistant, self-extinguishing, glass-reinforced thermoplastic housing models
- Standard and compact sizes
- Dimensions in accordance with EN50047 and EN50041
- IP66 or IP67 protection
- Conform to BSEN60204-1 and BS EN1088

IMO's range of Safety Limit Switches are specially designed to match the increasing complexity of modern machinery, particularly in processes that require high operator intervention such as pick and place or assembly machines.

The comprehensive range consists of exciting model variants. Between them, the models provide solutions for rope switch actuation, rotating head and lever switching for open guard sensing and high-speed key entry switching that protects against damage caused by slamming guards. The safety switches can operate at 3600 operations per hour and have bifurcated gold plated contacts that offer longer life and better signal transfer. Contact change at 6° means that the switches give an early indication of an open guard. They come with PG13.5 or optional M20 conduit entry, an IP65-rated terminal chamber and eight contact block configurations.

Within the IMO range of safety products the FR family offers compact size and low cost to the machine builder whilst maintaining a comprehensive range of operation options.



Safety Limit Switches

| Part Number | Type | Contact Arrangement | Key Type |
|---------------|--|---------------------|---------------------|
| FR692-D-K70 | Key operated safety interlock with M12 plug exit | NO+NC | Flat |
| FD1878 | Rope operated stop switch | NO+NC | - |
| FR692-D1 | Key operated safety interlock | NO+NC | 90 Degree |
| FS2096D024-F | Solenoid key operated safety interlock | NO+2NC | Flat |
| FR2092-D2 | Key operated safety interlock | NO+2NC | Flexible |
| FS2096D024-F1 | Solenoid key operated safety interlock | NO+2NC | 90 Degree |
| FD693-F2 | Key operated safety interlock | NO+NC | Flexible |
| FR692-D | Key operated safety interlock | NO+NC | Flat |
| FS2096D024-F3 | Solenoid key operated safety interlock | NO+2NC | Adjustable flexible |
| FR992-D | Key operated safety interlock | 2NC | Flat |

Temperature Controllers

Offering a compact front panel arrangement that combines a digital display with a basic touch panel, IMO Temperature Controllers are ideal for industrial environments where the space occupied by large control panels is seen as non-productive and expensive.

Bringing users significant cost savings, the controllers employ a 'reduced' front panel which provides real-time viewing as well as the ability to override communications and make manual adjustments locally. IMO Temperature Controllers come in a range of standard DIN sizes, from 24 x 48mm (1/32 DIN) to 96 x 96mm (1/4 DIN). The range also includes a unique blind controller which comes in a 22.5mm slim DIN rail casing with dual 4-digit display

The complete range has multi-selectable input, including a large range of thermocouples, RTD's, current (4-20mA) and voltage (0-10V) inputs. PID with auto tune, PD or on/off modes can be selected on all models and a selection of outputs are available, such as relay, signal voltage, 4-20mA or 0-10V DC. One alarm comes as standard on all models. The units have IP66 protection for the front cover and a wide operating voltage of 100-240VAC or 24VAC/DC.

A wide range of options is also available. A second alarm option gives flexibility of control and the heater burnout alarm option gives more protection to the controlling system. Other options include Heat/Cool outputs, 2 Set point selection, RS485 communications with Modbus or IMO protocol and Master/Slave capabilities.



| Temperature Controllers | | | | | | |
|-------------------------|--|--|--|--|--|--|
| | DTP40 | TP20 | TP40 | TP80 | TP90 | DT170 |
| Supply Voltage | 20-28VAC/DC, 85-264VAC | 20-28VAC/DC, 85-264VAC | 20-28VAC/DC, 85-264VAC | 20-28VAC/DC, 85-26VAC | 20-28VAC/DC, 85-264VAC | 20-28VAC/DC, 85-264VAC |
| Dimensions | 22.5 x 75 x 100 | 48 x 24 x 110 | 48 x 48 x 110 | 48 x 96 x 96 | 96 x 96 x 110 | 96 x 48 x 110 |
| Input / Sensor Type | Multi Input for Thermocouple, RTD, mA/Volt | Multi Input for Thermocouple, RTD, mA/Volt | Multi Input for Thermocouple, RTD, mA/Volt | Multi Input for Thermocouple, RTD, mA/Volt | Multi Input for Thermocouple, RTD, mA/Volt | Multi Input for Thermocouple, RTD, mA/Volt |
| Control Action | On/Off, PD, PID or PID with Auto-tuning | On/Off, PD, PID or PID with Auto-tuning | On/Off, PD, PID or PID with Auto-tuning | On/Off, PD, PID or PID with Auto-tuning | On/Off, PD, PID or PID with Auto-tuning | Process/Temperature Display |
| Standard Options | | | | | | |
| Outputs | Relay, SSR, 4-20mA, 0-10VDC | Relay, SSR, 4-20mA, 0-10VDC | Relay, SSR, 4-20mA, 0-10VDC | Relay, SSR, 4-20mA, 0-10VDC | Relay, SSR, 4-20mA, 0-10VDC | - |
| Advanced Options | | | | | | |
| Second Alarm | - | - | Yes | Yes | Yes | 3 Alarms |
| Loop Break Alarm | - | - | Yes | Yes | Yes | - |
| 2 Set Points | - | Yes | Yes | Yes | Yes | - |
| RS485 Comms | Yes | Yes | Yes | Yes | Yes | Yes |
| Heater Burnout Alarm | 5A/10A | - | 5A/10A | 5A/10A | 5A/10A | - |
| Cooling Output Alarm | - | - | Yes | Yes | Yes | - |
| Cooling Output SSR | - | - | Yes | Yes | Yes | - |
| Cooling Output Signal | - | - | Yes | Yes | Yes | - |
| Cooling Output 4-20mA | - | - | Yes | Yes | Yes | - |
| Isolated Power Output | - | - | - | - | - | 24VDC |
| Current Re Transmission | - | - | - | - | - | 0-20mA |
| Voltage Re Transmission | - | - | - | - | - | 0-10VDC |

Signal Conditioning



IMO's Signal Conditioners accept a wide range of inputs including 4-20mA, thermocouple, RTD temperature sensor and voltage signals. The units convert this input into isolated high level DC output, either as a voltage of 0-10V or current of 4-20mA.

These units provide full 3-port isolation as standard and incorporate an isolated transmitter supply that can be used to power any standard two-wire 4-20mA transmitter loop. The user, via simple DIP switches located on or inside the unit, can configure input type and range. All RTD and thermocouple inputs can be fully linearised. The new signal converters are very easy to use, with non-interactive zero and span controls making adjustments quick and simple.

The single output Slimcon unit is only 7.2mm wide and the twin output DUALCON gives the user a signal splitting capability allowing, for example, simultaneous transmission of isolated 4-20mA to a PLC and 0-10V to an inverter.

There are two power supply options available: a wide ranging AC version allows the unit to operate from any supply from 90 to 264V AC, while the DC version operates from 12-32V AC and 12-36V DC.

| | SLIMCON | ISOCON | ISOCON-TC | DUALCON | TRIP | |
|---------------|----------|--------|-----------|---------|--------|-----|
| Supply | 24VDC | Yes | Yes | Yes | Yes | |
| | 240VAC | | Yes | Yes | | |
| Isolation (V) | 1000 | 1000 | 1000 | 1000 | | |
| Width (mm) | 7.2 | 12.5 | 12.5 | 17.5 | 30 | |
| Outputs | 1 | 1 | 1 | 2 | upto 2 | |
| Input | 0-10mA | Yes | Yes | - | Yes | - |
| | 0-20mA | Yes | Yes | - | Yes | - |
| | 4-20mA | Yes | Yes | - | Yes | Yes |
| | +/-5mA | - | Yes | - | Yes | - |
| | +/- 10mA | - | Yes | - | Yes | - |
| | 0-10V | Yes | Yes | - | Yes | Yes |
| | 1-5V | Yes | Yes | - | Yes | - |
| | 2-10V | Yes | Yes | - | Yes | - |
| | +/-5V | - | Yes | - | Yes | - |
| | +/-10V | - | Yes | - | Yes | - |
| | TC | - | Yes | Yes | Yes | Yes |
| | RTD | - | Yes | - | Yes | Yes |
| | 2W Pot | - | Yes | - | Yes | - |
| | 3W Pot | - | Yes | - | Yes | - |
| Digital | - | - | - | - | - | |
| Output | 0-10mA | Yes | Yes | - | Yes | - |
| | 0-20mA | Yes | Yes | - | Yes | - |
| | 4-20mA | Yes | Yes | Yes | Yes | Yes |
| | 0-10V | Yes | Yes | Yes | Yes | - |
| | 0-5V | Yes | Yes | - | Yes | - |
| | 2-10V | - | Yes | - | Yes | - |
| | 1 Relay | - | - | - | - | Yes |
| | 2 Relay | - | - | - | - | Yes |
| | Digital | - | - | - | - | - |
| | RS232 | - | - | - | - | - |
| RS485 | - | - | - | - | - | |

Other options are available, please contact IMO for further details



Automation Support Products

Not only can IMO offer its customers an extensive range of Automation products, we can also offer a number of additional products to compliment the range. These include the market leading Jaguar Drive with its no-quibble five-year warranty and a range of DIN Rail Mountable Power Supplies that provide today's engineers with multiple choices for all low powered electrical or electronic devices commonly used in automation machinery.

Jaguar AC Variable Speed Drives

- Better diagnostics - easy programme in many languages
- Faster CPUs, opto-isolation, multi-layer PCBs, short circuit protected
- Quicker response to dynamic load changes
- Improved low-speed performance
- Latest generation IGBTs
- More application options
- Robust self-monitoring power supplies and gate drives with soft switching



Power Supplies

- Universal input voltage
- High efficiency
- Short circuit protection
- Internal input filter
- PFC function available
- Parallel function
- Compact design



To find out more...



Jaguar AC Variable Speed Drives



0.37-710kW (0.5-950HP)

- Better diagnostics - easy programme in many languages
- Faster CPUs, opto-isolation, multi-layer PCBs, short circuit protected
- Quicker response to dynamic load changes
- Improved low-speed performance
- Latest generation IGBTs
- More application options
- Robust self-monitoring power supplies and gate drives with soft switching

From our market leading CUB, VXR, VXG, VXH and VXA range of drives with varying functionality and power, IMO has the right frequency inverter to meet the needs of your application, whatever it might be. From a simple small pump or fan through to the most complex large scale hoists, you can be assured that IMO has the drive and the knowledge to meet your application needs.

The IMO CUB features a full range of functions, a compact body, simple operation, wide model variations and global compatibility. It will meet the needs of higher performance machines and equipment such as conveyors, fans, pumps, centrifugal separators and food processing machines, as well as the needs of system integration, energy saving, labour saving and total cost reduction.

With an extended range of functions, the IMO VXR features connectivity, compact body, wide model variations and global compatibility. The VXR with Dynamic Torque Vector Control sets new standards for vector controlled drives. It will meet the needs of high performance machines and equipment such as pumps, fans, conveyors, material handling machines, packaging, special machines and textile machines.

The Building Services specific VXH drive has been designed with energy saving in mind. It can be used as part of a BMS system with its many inputs and outputs, or as a stand-alone solution with its 4 PID controllers, PLC and real time clock functions.

The VXA or "AQUA" drive has been designed to suit the demands of the water industry with its application specific functions such as cascading pump control, anti jam and dry pump detection.

The high performance VXG multi function inverter boasts state-of-the-art technology, with control performance that has evolved to a new dimension. Control methods now include: PG Vector control, sensorless vector control, dynamic torque vector control and V/F Control. It meets the need of the most demanding drives applications such as hoisting, packaging, material handling, wood, textile and process machinery.

The IMO Jaguar range is ready to answer your needs, providing the highest performance levels in the industry and redefining the common sense of general purpose inverters.



CUB Micro Inverters IP20

| | Nominal Power kW | HP | Nominal Input Voltage | Rated Output Current (Amps) |
|-----------|---------------------|-----|--------------------------|-----------------------------------|
| CUB3A-1# | 0.4 | 0.5 | 200-240v 1ph 50-60Hz | 3 |
| CUB5A-1# | 0.75 | 1 | 200-240v 1ph 50-60Hz | 5 |
| CUB8A-1# | 1.5 | 2 | 200-240v 1ph 50-60Hz | 8 |
| CUB11A-1# | 2.2 | 3 | 200-240v 1ph 50-60Hz | 11 |
| CUB1A5-4# | 0.4 | 0.5 | 380-480v 3ph 50-60Hz | 1.5 |
| CUB2A5-4# | 0.75 | 1 | 380-480v 3ph 50-60Hz | 2.5 |
| CUB3A7-4# | 1.5 | 2 | 380-480v 3ph 50-60Hz | 3.7 |
| CUB5A5-4# | 2.2 | 3 | 380-480v 3ph 50-60Hz | 5.5 |
| CUB9A-4# | 4 | 5.5 | 380-480v 3ph 50-60Hz | 9 |

#E=EMC Filter



VXR Compact Inverters IP20

| Part Number | Nominal Power kW | HP | Nominal Input Voltage | Rated Output Current (Amps) |
|----------------|---------------------|-----|--------------------------|-----------------------------------|
| VXR3A-1# | 0.4 | 0.5 | 200-240v 1ph 50-60Hz | 3 |
| VXR5A-1# | 0.75 | 1 | 200-240v 1ph 50-60Hz | 5 |
| VXR8A-1# | 1.5 | 2 | 200-240v 1ph 50-60Hz | 8 |
| VXR11A-1# | 2.2 | 3 | 200-240v 1ph 50-60Hz | 11 |
| VXR1A5-4# | 0.4 | 0.5 | 380-480v 3ph 50-60Hz | 1.5 |
| VXR2A5-4# | 0.75 | 1 | 380-480v 3ph 50-60Hz | 2.5 |
| VXR3A7-4# | 1.5 | 2 | 380-480v 3ph 50-60Hz | 3.7 |
| VXR5A5-4# | 2.2 | 3 | 380-480v 3ph 50-60Hz | 5.5 |
| VXR9A-4# | 4 | 5.5 | 380-480v 3ph 50-60Hz | 9 |
| VXR13A-4 | 5.5 | 7.5 | 380-480v 3ph 50-60Hz | 13 |
| VXR18A-4 | 7.5 | 10 | 380-480v 3ph 50-60Hz | 18 |
| VXR24A-4 | 11 | 15 | 380-480v 3ph 50-60Hz | 24 |
| VXR30A-4 | 15 | 20 | 380-480v 3ph 50-60Hz | 30 |

#E=EMC Filter



VXG Torque Vector Inverters. IP40/IP00

| Part Number | Nominal Power | | | | Nominal Input Voltage | Rated Output Current (Amps) | |
|--------------|---------------|------|------|------|-----------------------|-----------------------------|------|
| | CT | HP | VT | HP | | CT | VT |
| VXG1A5-4E | 0.4 | 0.55 | 0.4 | 0.55 | 380-480v 3ph 50-60Hz | 1.5 | - |
| VXG2A5-4E | 0.75 | 1 | 0.75 | 1 | 380-480v 3ph 50-60Hz | 2.5 | - |
| VXG4A-4E | 1.5 | 2 | 1.5 | 2 | 380-480v 3ph 50-60Hz | 4 | - |
| VXG5.5A-4E | 2.2 | 3 | 2.2 | 3 | 380-480v 3ph 50-60Hz | 5.5 | - |
| VXG9A-4E | 4 | 5.5 | 4 | 5.5 | 380-480v 3ph 50-60Hz | 9 | - |
| VXG16A5L-4E | 5.5 | 7.5 | 7.5 | 10 | 380-480v 3ph 50-60Hz | 13.5 | 16.5 |
| VXG23AL-4E | 7.5 | 10 | 11 | 15 | 380-480v 3ph 50-60Hz | 18.5 | 23 |
| VXG30A5L-4E | 11 | 15 | 15 | 20 | 380-480v 3ph 50-60Hz | 24.5 | 30.5 |
| VXG37AL-4E | 15 | 20 | 18.5 | 25 | 380-480v 3ph 50-60Hz | 32 | 37 |
| VXG45AL-4E | 18.5 | 25 | 22 | 30 | 380-480v 3ph 50-60Hz | 39 | 45 |
| VXG60AL-4E | 22 | 30 | 30 | 40 | 380-480v 3ph 50-60Hz | 45 | 60 |
| VXG75AL-4E | 30 | 40 | 37 | 50 | 380-480v 3ph 50-60Hz | 60 | 75 |
| VXG91AL-4E | 37 | 50 | 45 | 60 | 380-480v 3ph 50-60Hz | 75 | 91 |
| VXG112AL-4E | 45 | 60 | 55 | 75 | 380-480v 3ph 50-60Hz | 91 | 112 |
| VXG150AL-4E | 55 | 75 | 75 | 100 | 380-480v 3ph 50-60Hz | 112 | 150 |
| VXG176AL-4E | 75 | 100 | 90 | 125 | 380-480v 3ph 50-60Hz | 150 | 176 |
| VXG210AL-4E | 90 | 125 | 110 | 150 | 380-480v 3ph 50-60Hz | 176 | 210 |
| VXG253AL-4E | 110 | 150 | 132 | 180 | 380-480v 3ph 50-60Hz | 210 | 253 |
| VXG304AL-4E | 132 | 180 | 160 | 218 | 380-480v 3ph 50-60Hz | 253 | 304 |
| VXG377AL-4E | 160 | 218 | 200 | 270 | 380-480v 3ph 50-60Hz | 304 | 377 |
| VXG415AL-4E | 200 | 270 | 220 | 300 | 380-480v 3ph 50-60Hz | 377 | 415 |
| VXG520AL-4E | 220 | 300 | 280 | 380 | 380-480v 3ph 50-60Hz | 415 | 520 |
| VXG650AL-4E | 280 | 380 | 315 | 425 | 380-480v 3ph 50-60Hz | 520 | 650 |
| VXG740AL-4E | 315 | 425 | 355 | 475 | 380-480v 3ph 50-60Hz | 585 | 740 |
| VXG840AL-4E | 355 | 475 | 400 | 530 | 380-480v 3ph 50-60Hz | 650 | 840 |
| VXG960AL-4E | 400 | 530 | 500 | 670 | 380-480v 3ph 50-60Hz | 740 | 960 |
| VXG1170AL-4E | 500 | 670 | 630 | 840 | 380-480v 3ph 50-60Hz | 960 | 1170 |
| VXG1370AL-4E | 630 | 840 | 710 | 950 | 380-480v 3ph 50-60Hz | 1170 | 1370 |

VXH / VXA Variable Torque inverters. IP55/IP21/IP00

| HVAC Part Number | AQUA Part Number | Nominal Power | | Nominal Input Voltage | Rated Output Current (Amps) |
|------------------|------------------|---------------|-----|-----------------------|-----------------------------|
| | | kW | HP | | |
| VXH2A5-4E | VXA2A5-4E | 0.75 | 1 | 380-480v 3ph 50-60Hz | 2.5 |
| VXH4A1-4E | VXA4A1-4E | 1.5 | 2 | 380-480v 3ph 50-60Hz | 4.1 |
| VXH5A5-4E | VXA5A5-4E | 2.2 | 3 | 380-480v 3ph 50-60Hz | 5.5 |
| VXH9-4E | VXA9-4E | 4 | 5.5 | 380-480v 3ph 50-60Hz | 9 |
| VXH13A5-4E | VXA13A5-4E | 5.5 | 7.5 | 380-480v 3ph 50-60Hz | 13.5 |
| VXH18A5-4E | VXA18A5-4E | 7.5 | 10 | 380-480v 3ph 50-60Hz | 18.5 |
| VXH24A5-4E | VXA24A5-4E | 11 | 15 | 380-480v 3ph 50-60Hz | 24.5 |
| VXH32-4E | VXA32-4E | 15 | 20 | 380-480v 3ph 50-60Hz | 32 |
| VXH39-4E | VXA39-4E | 18.5 | 25 | 380-480v 3ph 50-60Hz | 39 |
| VXH45-4E | VXA45-4E | 22 | 30 | 380-480v 3ph 50-60Hz | 45 |
| VXH60-4E | VXA60-4E | 30 | 40 | 380-480v 3ph 50-60Hz | 60 |
| VXH75-4E | VXA75-4E | 37 | 50 | 380-480v 3ph 50-60Hz | 75 |
| VXH91-4E | VXA91-4E | 45 | 60 | 380-480v 3ph 50-60Hz | 91 |
| VXH112-4E | VXA112-4E | 55 | 75 | 380-480v 3ph 50-60Hz | 112 |
| VXH150-4E | VXA150-4E | 75 | 100 | 380-480v 3ph 50-60Hz | 150 |
| VXH176-4E | VXA176-4E | 90 | 125 | 380-480v 3ph 50-60Hz | 173 |
| VXH210-4E | VXA210-4E | 110 | 150 | 380-480v 3ph 50-60Hz | 210 |
| VXH253-4E | VXA253-4E | 132 | 180 | 380-480v 3ph 50-60Hz | 253 |
| VXH304-4E | VXA304-4E | 160 | 218 | 380-480v 3ph 50-60Hz | 304 |
| VXH377-4E | VXA377-4E | 200 | 270 | 380-480v 3ph 50-60Hz | 377 |
| VXH415-4E | VXA415-4E | 220 | 300 | 380-480v 3ph 50-60Hz | 415 |
| VXH520-4E | VXA520-4E | 280 | 375 | 380-480v 3ph 50-60Hz | 520 |
| VXH585-4E | VXA585-4E | 315 | 425 | 380-480v 3ph 50-60Hz | 585 |
| VXH650-4E | VXA650-4E | 355 | 475 | 380-480v 3ph 50-60Hz | 650 |
| VXH740-4E | VXA740-4E | 400 | 530 | 380-480v 3ph 50-60Hz | 740 |
| VXH960-4E | VXA960-4E | 500 | 670 | 380-480v 3ph 50-60Hz | 960 |
| VXH1170-4E | VXA1170-4E | 630 | 840 | 380-480v 3ph 50-60Hz | 1170 |
| VXH1370-4E | VXA1370-4E | 710 | 950 | 380-480v 3ph 50-60Hz | 1370 |

Note: CANOPEN, Modbus TCP, Modbus RTU with i³, XGB PLCs available

Power Supplies



- Universal input voltage
- High efficiency
- Short circuit protection
- Internal input filter
- PFC function available
- Parallel function
- Compact design

IMO's DPS range of AC/DC DIN Rail mounted power supplies has been designed especially for the Control and Automation market. Offering the benefits of slim lines, universal input, AC/DC operation and the security of IMO's 3-year warranty, the DPS range provides multiple choices for all low power electrical or electronic devices commonly used in automation machinery.

The DPS range provides a reliable power source for components such as sensors, relays, contactors, timers, temperature controllers, PLC's, process controllers and HMI's, all of which are also available from IMO.

Offering high efficiency up to 89%, the DPS range is short-circuit protected and has its own integrated internal input filter. It includes 5W, 10W and 18W class 2 power supplies all of which are slim-line units just 22.5mm wide, and mounted in plastic enclosures. These units are complemented by larger power supplies in metal enclosures: the 30W and 60W units are 40.5mm, 120W units are 63.5mm, 240W units are 83mm and the 480W, 20A units are 175mm wide.

The DPS power supply offers the advantage of a universal input voltage range, of 85 – 265VAC as standard and 24VDC output; 5V, 12V and 48V versions are also available.



actual size

DPS - Options & Ordering

| Part Number | Input | Current | Output | |
|--------------|--------------|---------|--------|---------|
| | | | Power | Voltage |
| DPS-005-24DC | 90 - 265 VAC | 0.21A | 5 W | 24 VDC |
| DPS-010-24DC | 90 - 265 VAC | 0.42 A | 10 W | 24 VDC |
| DPS-018-24DC | 90 - 265 VAC | 0.75 A | 18 W | 24 VDC |
| DPS-030-24DC | 85 - 264 VAC | 1.25 A | 30 W | 24 VDC |
| DPS-060-24DC | 85 - 264 VAC | 2.5 A | 60 W | 24 VDC |
| DPS-120-24DC | 93 - 264 VAC | 5 A | 120 W | 24 VDC |
| DPS-240-24DC | 93 - 264 VAC | 10 A | 240 W | 24 VDC |
| DPS-480-24DC | 90 - 264 VAC | 20 A | 480 W | 24 VDC |

Also Available From IMO

Training

IMO Offers in-house or on site training for all its HMI, PLC and Drives products. The training modules can be standard or higher level, tailored to the customers requirement. They are designed to familiarise customers with the use and programming of IMO intelligent products. Each module is usually based on one product range. IMO is flexible in offering a training program that best suit's the requirements of its customer.

| Training | | | |
|----------------------|---|--------------------|-------------------|
| Part Number | Description | Where | Duration |
| SOFTWARE-ENGINEERING | Software & Engineering Support Services | In House | Project dependent |
| AUTOTRAIN1 | Automation Technical Training | On site / In House | 1 Day |
| AUTOTRAIN2 | Automation Technical Training | On site / In House | 1/2 Day |
| VSDTRAIN1 | Inverter Technical Training | On site / In House | 1 Day |
| VSDTRAIN2 | Inverter Technical Training | On site / In House | 1/2 Day |



Products

The IMO Automation and Controls range fully addresses the sense, control and switch demands of today's factory automation and control environment. In terms of choice, the IMO line-up is peerless, offering everything today's engineer needs, from circuit protection and panelware to PLCs and AC drives. The first company in Europe to do so, IMO gives a no-quibble three year warranty on the majority of its electronics based control components and a five year warranty on its successful range of IMO Jaguar Drives.

IMO Electronics is at the leading edge of electro-mechanical PCB component technology, with a range of highly specified products designed to meet the most demanding applications. The company offers one of the most competitive, high quality and comprehensive PCB relay and Terminal Block connector ranges available, supported by sophisticated IT systems and infrastructure. The Electronics Division at IMO is perfectly positioned to meet all vendor and administration reduction requirements.

All products are manufactured to IMO's defined specification applying rigorous quality assurance and reliability standards. IMO products are built to comply with all relevant international approvals.



- Cam Switches
- Din Terminals
- Enclosures
- Isolators & Switch Fuses
- MCB, RCCD & RCBO
- Motor Circuit Breakers
- Motor Control Gear
- Panel Meters
- Power Supplies
- Relays
- Signal Conditioning
- Sockets
- Timers



- Fieldbus remote I/O
- HMI
- Intelligent Relays
- Limit Switches
- Photoelectric Switches
- PLCs
- Proximity Switches
- Safety Limit Switches
- Signal Conditioning
- Temperature Controls



- Jaguar VXG 0.37-710kW
- Jaguar VXR 0.4-15kW
- Jaguar CUB 0.4-4kW
- Jaguar VXH 0.75-710kW
- Jaguar AQUA 0.75-710kW



- Audible devices
- PCB Terminal blocks
- Relays - automotive
- Relays - power
- Relays - signal



- DC Isolators
- High Isolation Relays
- Junction Boxes
- Terminals
- Solar Connectors



IMO Precision Controls Limited

1000 North Circular Road
Staples Corner,
London NW2 7JP
United Kingdom

Tel: +44 (0)20 8452 6444
Fax: +44 (0)20 8450 2274
Email: imo@imopc.com
Web: www.imopc.com

IMO Automazione

Via Ponte alle Mosse, 61
50144 Firenze (FI),
Italia

Tel: 800 930872
Fax: 8000 452 6445
Email: imo-it@imopc.com
Web: www.imopc.it

IMO Russia

Office No. 4063
9, Zemlyanoy Val, 105064,
Moscow
Russia

Tel: 8 800 100 8540
7 (495) 9679322
Fax: 8 800 100 8541
+44 208 450 2274
Email: sales@imopc.com
Web: www.imopc.com

IMO Jeambrun Automation SAS

Centre D'Affaires Rocroy
30, Rue de Rocroy
94100 Saint-Maur-Des-Fosses
France

Tel: +8000 912 712
0 1 45 13 27 81
Fax: +8000 452 6445
+44 208 450 2274
Email: imo-fr@imopc.com
Web: www.imojeambrun.fr

IMO Canada

Unit 32 - B-North
18 Stratheam Avenue, Brampton
Brampton, ON L6T 4Y2
Canada

Tel: +905 799 9237
Fax: +905 799 0450
Email: imo-ca@imopc.com
Web: www.imopc.com

IMO Pacific Pty Ltd

1/34 Fallon Road
Landsdale
Perth, WA 6065
Australia

Tel: +61 (0)8 9302 5246
Fax: +61(0)8 9303 9908
Email: sales@imopacific.com.au
Web: www.mopacific.com.au