

# Industrial Automation

IMI Norgren

NC Series IO-Link Masters  
and I/O Modules



Breakthrough  
engineering for  
a better world

# Contents

|   |   |
|---|---|
| Introduction                            | 2 |
| Complete Connectivity                   | 3 |
| NC Series – Optimising Your System      | 4 |
| Complete Pneumatic Automation Solutions | 6 |
| IO-Link Configuration Tool              | 7 |

## Breakthrough engineering for a better world

We create solutions for our customers which enable smarter, safer, more productive and sustainable factories, production lines and warehouse operations. Our pneumatic and electric motion systems help machine builders and end users around the world automate and optimise manufacturing and warehousing processes.

We have partnered with customers in industrial automation for over a century, applying our experience and innovation to create lasting value for their businesses. Our solutions support critical industries such as automotive, food and beverage, pharmaceuticals and even the space industry. We support the automation of precision manufacturing, product assembly, testing and packaging.

We use the latest digital technologies in our automation products and constantly innovate in close partnership with our customers. By applying our deep expertise, we can solve their toughest automation challenges, today and tomorrow. Through increased productivity, efficiency and safety, our customers can serve their own customers better, creating sustainable competitive advantage and delivering growth.

Our world-class product portfolio includes IMI Norgren, IMI Bimba, IMI Bahr and IMI Buschjost.

Breakthrough Engineering you can count on.

# Complete Connectivity

The requirements for modern Industrial Automation applications are becoming increasingly complex; it is therefore essential to select the best possible solution for each application.

IO-Link is revolutionising Industrial Automation by offering a standardised and seamless communication interface for all IO-Link devices, with simple installation and a complete range of diagnostics functionality.

IO-Link is a globally standardised (IEC 61131-9) communication system for connecting sensors and many other components, without any complex wiring, to a control system. A serial, bi-directional point-to-point communication between any compatible I/O system and field devices, which can be integrated into virtually any fieldbus or automation system. Put simply, IO-Link knows what is going on in your automation system.

IO-Link offers the perfect solution for manufacturers seeking remote diagnosis, simplified installation, automated parameter settings and an overall cost effective solution.

- Communication standard IEC61131-9
- Standardised, open and fieldbus independent technology
- Connects intelligent sensors and field devices to the PLC
- Uses advantages of available I/O interfaces
- Enables efficient production and cost savings thanks to minimised downtime
- Enables predictive and planned maintenance

## The right partner for your IO-Link needs

With established manufacturing and technical facilities globally, we have the capability to cope with the most demanding international projects. With a sales and service network in over 50 countries, we have the reach and capability to ensure continuity of supply and local support where it is needed.

We are a complete IO-Link system solution, which includes a wide range of IO-Link enabled devices, IO-Link Masters and I/O Modules (Hubs).

Alongside reliable, high performance and quality IO-Link products; we offer insight, technical excellence, and a collaborative approach, to help our customers forge a brighter future of possibility.



# NC Series – Optimising Your System

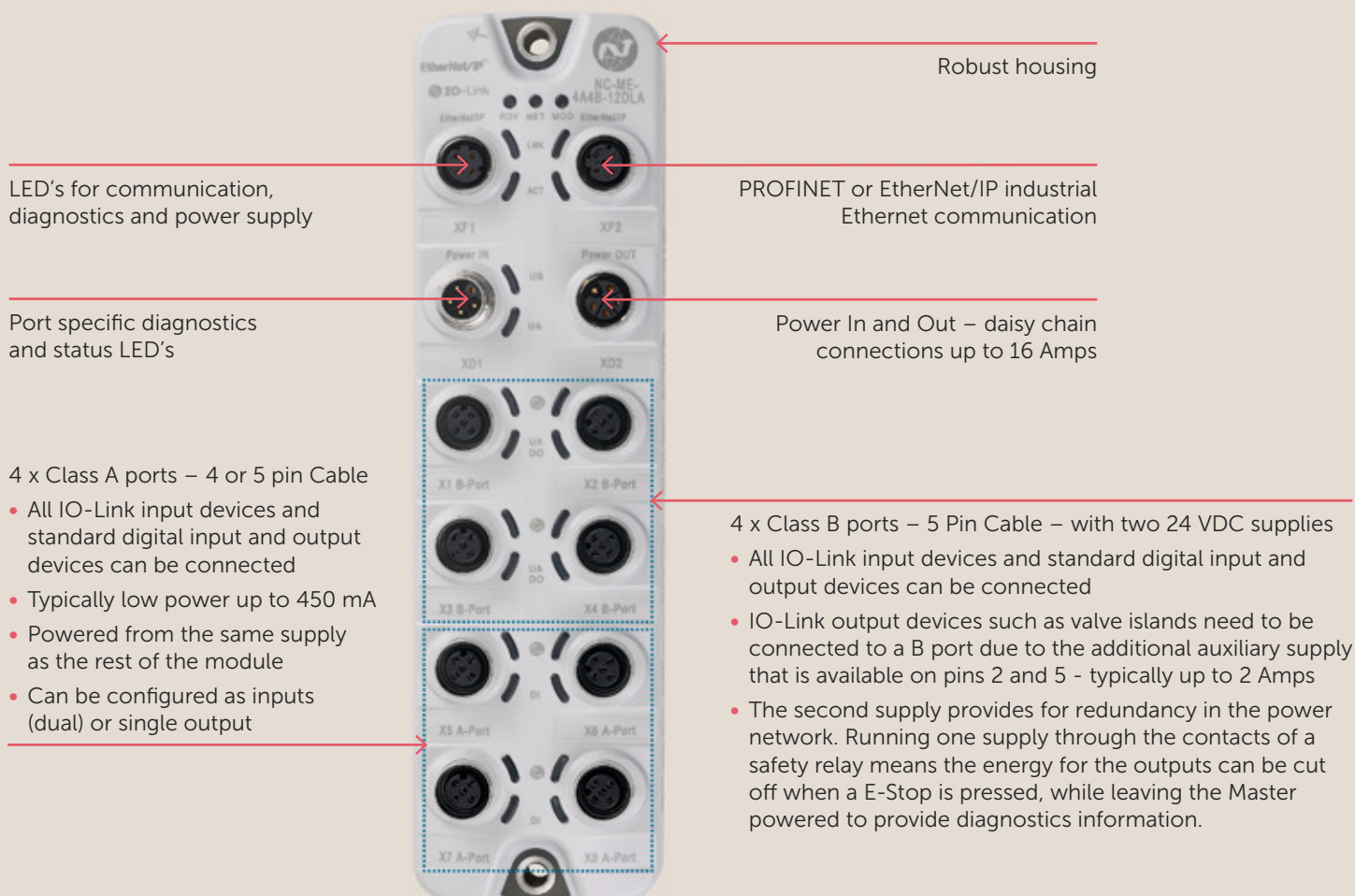
The IMI Norgren NC series includes IO-Link Masters, I/O Modules (Hubs) and a wide range of cables and connectors. The IO-Link Masters for field applications are gateways for the connection of up to eight IO-Link devices to the higher-level industrial Ethernet communication system. The master transmits machine data, process parameters and diagnostic data to the controller over various networks, making the data accessible for immediate action or long-term analysis via an industrial information system (PLC, HMI, etc.)

The product range includes interfaces to PROFINET or EtherNet/IP.

All the features of the NC series ensure maximum flexibility, together with reduced cabling and installation time, and the building blocks for a complete connected solution.

- **Connected** – PROFINET, EtherNet/IP
- **Expandable** – I/O Modules (Hubs) can be easily added – acting as an IO-Link device
- **Easy Installation** – cables are premade, plug and socket, making it all plug and play
- **Simple Design** – standard building blocks make system design modular and simple. Electrical design is simplified as I/O Modules can be configured depending on the input and output requirement.
- **Diagnostics** – pinpoint faults in the whole network quickly and precisely

## IO-Link Master

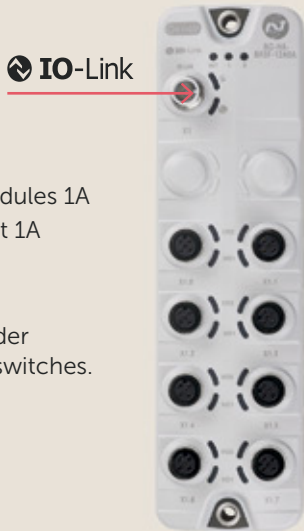


# I/O Modules – two options

I/O Module without auxiliary power - power is supplied via the connected Ethernet Master IO-Link port

Max. current per modules 1A  
Max. current per port 1A

Typical Applications  
Connection of cylinder switches, proximity switches.



I/O Module with auxiliary power - power is supplied via the connected Ethernet Master IO-Link port plus an additional auxiliary power supply to support solenoid valve outputs

Max. current per M12 connector: 1.8A  
Max. current per group of four: 1.8A  
Max. current per module: 3.6A

Typical Applications  
Connection of cylinder switches, proximity switches and solenoid valve outputs.  
Auxiliary supply for outputs can be supplied via safety contacts as part of E-Stop circuit.



# Cable types – A-Coded, D-Coded and L-Coded

Ethernet  
M12 D-code



Power  
M12 L-code



Inputs and Outputs  
M12 A-code – IO-Link Devices



# Complete Pneumatic Automation Solutions

We offer a complete IO-Link system solution, which includes a wide range of IO-Link enabled devices, IO-Link Masters and I/O Modules (Hubs), enabling us to provide a complete connectivity package for industrial applications.

## Example system layout

**PROFI<sup>®</sup>  
NET**

**EtherNet/IP<sup>™</sup>**

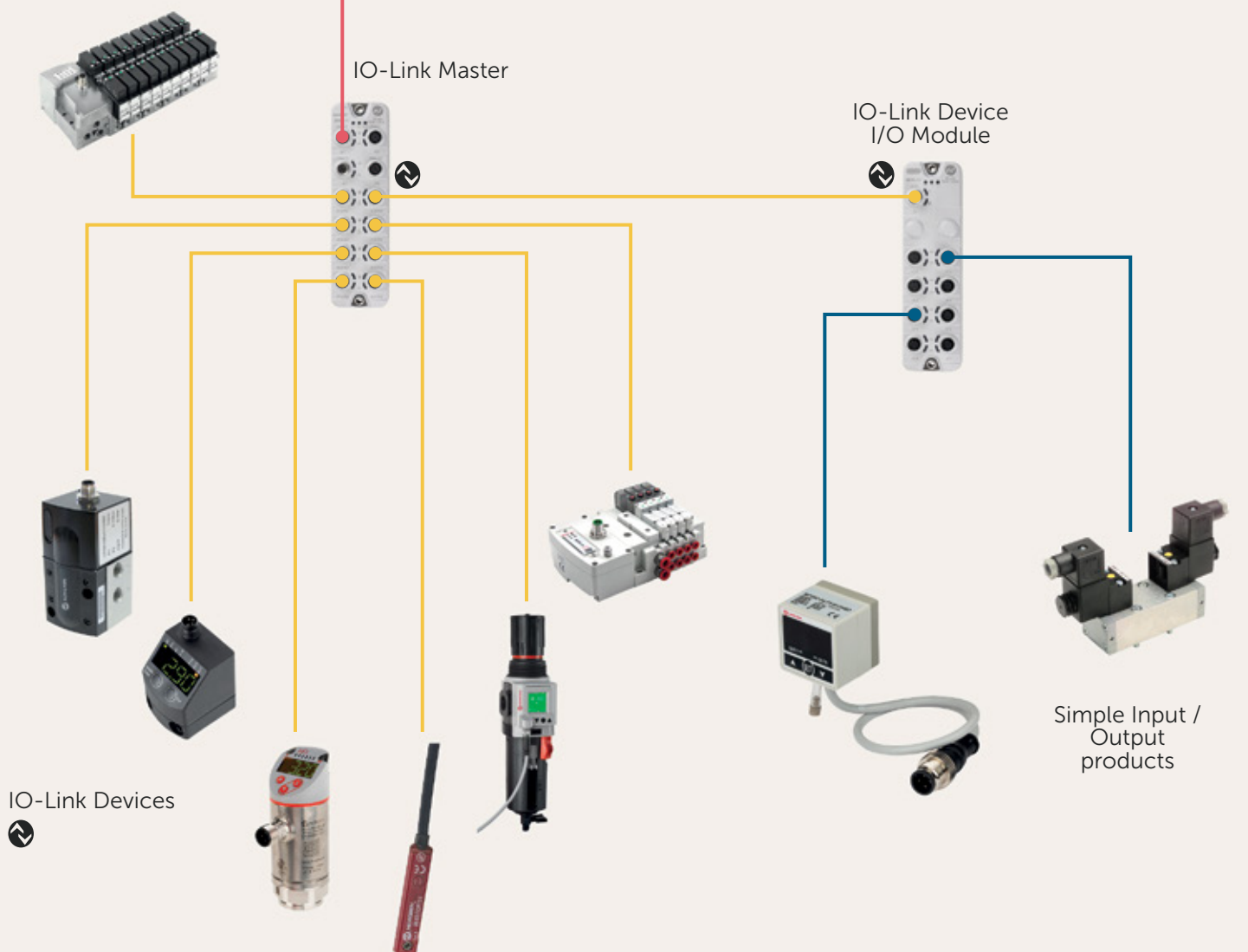
Industrial Ethernet

PLC



IO-Link Master

IO-Link Device  
I/O Module



IO-Link Devices

Simple Input /  
Output  
products



# IO-Link Configuration Tool

Our IO-Link Configuration Tool provides easy and fast parameter setting for IMI Norgren masters. The free version provides automatic identification (download of IODD files) of all IO-Link devices and viewing of all device parameters.

It also includes a real time and historical trend view and data export of device process data, making it easy to check how the device is performing. Parameter sets can be saved and loaded. Upgrade to the full version to be able to write device parameter data.

## Features

- Graphic visualisation of the process values
- Faster set-up time
- Optimised device replacement process
- Paperless recording of parameter sets
- Online and offline parameter setting
- Supports all IO-Link devices

Find out more  
[www.imiplc.com/industrial-automation](http://www.imiplc.com/industrial-automation)

Our Industrial Automation sector operates four global centres of technical excellence and a sales and service network in 50 countries, as well as manufacturing capability in Europe, Americas and Asia Pacific.

Supported by distributors worldwide.

For further information, scan this QR code or visit

[www.imiplc.com/industrial-automation](http://www.imiplc.com/industrial-automation)



# Industrial Automation

IMI Norgren

IMI Bimba

IMI Bahr

IMI Buschjost

The information in this brochure is provided for informational and promotional purposes only and is provided "as is" and without warranties of any kind, whether express or implied, including but not limited to implied warranties of satisfactory quality, fitness for a particular purpose and/ or correctness.

Any specifications, features, pricing, or availability contained in this brochure are subject to change without prior notice. IMI plc does not represent or warrant that the information and/or specification in this brochure are accurate, complete, or current and therefore make no warranties or representation regarding the use of the content. IMI plc or one of its subsidiaries own all images, logos, product brands, and trademarks mentioned in this brochure. Unauthorised use, reproductions, or modification of this content is prohibited.

© Copyright IMI plc. All rights reserved.

z10335BR en/12/24

Selected Images used under license  
from Shutterstock.com

