

# DIASYS Netmation 4S

The Force for your benefit.

DIASYS Netmation 4S (Force), while retaining the user-friendly monitoring and maintenance tools of DIASYS Netmation, features significantly improved hardware reliability as certified to Functional Safety Standards (IEC61508:2010).

## Merits *Safety*

Complying with the Functional Safety Standards (IEC61508:2010), it contributes toward improving the Safety of your facility.

## *Smartness*

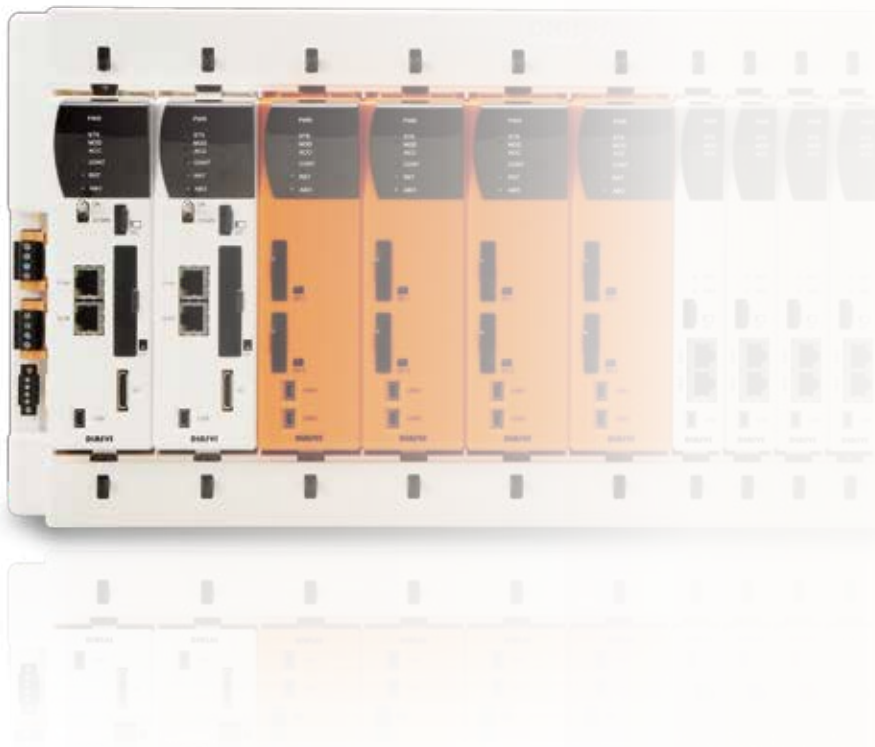
It reduces maintenance costs with functions excelling in maintainability such as Visio-based simple engineering and extensive analytical tools, which have long been used for power plant operations.

## *Scalability*

With integrated process control and safety instrumented systems, system configuration can be flexibly designed according to your needs. All modules are available in a single and redundant configuration.

## *Stability*

The system achieves higher operating ratio and greater stability than the conventional model with functions such as the newly developed D-Ring Network, improved self-diagnosis and the emulation of control programs.



## Approved Standards

### Functional Safety

- IEC 61508 : 2010
- IEC 61511
- IEC 62061 : 2005
- ISO 13849-1 : 2006
- ISO 13849-2 : 2006



### European Directives

- 2006 / 42 / EC

### Product Standards

- IEC 61131-2 : 2007
- IEC 61131-6 : 2012

### Electrical Safety

- EN 50178 : 1997
- EN 60204-1 : 2006

### IP Code Testing

- EN 60529 / A1 : 2000

### EMC

- EN 61000-6-2 : 2006
- EN 61000-6-4 : 2006
- IEC 61326-3-1 : 2008
- EC 61326-3-2 : 2008
- EN 55011 : 2009 / A1 : 2010

### Application Standard

- EN 50156-1 : 2004
- EN 230 : 2005
- EN 298 : 2012
- EN 54-2 : 1997 + A1 : 2007
- NAMUR NE43

# Hardware Lists

## Regular modules

Item	Type	Specification
Network adapter	LSNAM01	Gigabit Ethernet 100BASE-TX
I/O scanner	LSIOS01	Gigabit Ethernet 1000BASE-TX, GbE-LVDS communication bridge
Analog input module	LSAIM00	Analog inputs, Multi range 8ch
	LSAIM01	Analog inputs 4-20mA/0-20mA 8ch
	LSAIM02	Transmitter inputs 4-20mA 8ch
	LSAIM03	Analog inputs 1-5V/0-5V 8ch
	LSAIM04	Thermocouple inputs -20-80mV 7ch
	LSAIM05	RTD inputs Pt100/Cu10 4ch
Analog output module	LSAOM01	Analog outputs 4-20mA/0-20mA 8ch
Digital input module	LSDIM01	Digital inputs 16ch
Digital output module	LSDOM01	Digital outputs 8ch
	LSDOM02	Digital outputs 16ch, Source output (Plus common)
	LSDOM03	Digital outputs 16ch, Sink output (minus common)
IOA module	LSIOA01	Gigabit Ethernet 1000BASE-T
Scanner Gateway module	LSSCG01	Gigabit Ethernet 1000BASE-T Bridge unit for D-Ring (For optical communication expansion)
	LSSCG02	Gigabit Ethernet 1000BASE-T Bridge unit for D-Ring (For MPS communication)

## Functional safety modules

Item	Type	Specification
Logic solver	SCLSM01	Logic solver, Freescale QorIQ P2020 1.2Ghz
Analog input module	SCAIM01	Analog inputs 4-20mA 8ch
	SCAIM02	Transmitter inputs 4-20mA 8ch
	SCAIM03	Analog inputs DC1-5V 8ch (under development)
	SCAIM04-A-UP	Thermocouple inputs -14-80m 7ch, Burn-up
	SCAIM04-A-DW	Thermocouple inputs -14-80m 7ch, Burn-down
Analog output module	SCAOM01	Analog outputs 4-20mA 8ch (under development)
Digital input module	SCDIM01	Digital inputs 8ch
	SCMDI01	Machine safety module, Digital inputs DC24V 4ch (under development)
Digital output module	SCDOA01	Digital outputs DC24V 8ch, Dry/Form-A contact
	SCDOW01	Digital outputs DC24V 4ch, Wet/Form-A contact (under development)
	SCDOW02	Digital outputs DC110V 4ch, Wet/Form-A contact
	SCDOW03	Digital outputs DC220V 4ch, Wet/Form-A contact (under development)
	SCMDO01	Machine safety module, Digital outputs 4ch, Dry/Form-A contact (under development)
Function module	SCIRS01	Infrared flame detector control 1ch
	SCLCM01	Light curtain interface inputs 8ch (under development)
Turbine module	SCVIM01	Vibration interface inputs 4ch (under development)
	SCEOS01	Turbine EOST control, Turbine speed input 1ch, EOST inputs 2ch

## Accessories

Item	Type	Specification
IO backplane module	LSLSB01	Backplane for SCLSM01/LSNAM01/LSIOS01
	LSADB01	I/O Adapter, SCG module backplane (Installable 2 modules)
	LSIOB01	Single type I/O module backplane (Installable 8 I/O modules)
	LSIOB02	Redundant correspondence type I/O module backplane (Installable 8 I/O modules)
IO backplane connector	LSACT01	Screw type, 0.2-2.5mm <sup>2</sup> , Lock & Release latch, 18pin
	LSACT02	Screw type, 0.2-2.5mm <sup>2</sup> , Screw latch, 18pin
	LSACT03	Spring type (Push IN), 0.2-2.5mm <sup>2</sup> , Lock & Release latch, 18pin
	LSACT04	Spring type (Push IN), 0.2-2.5mm <sup>2</sup> , Screw latch, 18pin
	LSACT05	Spring type (Push IN), 0.2-2.5mm <sup>2</sup> , Lock & Release latch, 18pin
	LSACT06	Spring type (Push IN), 0.2-2.5mm <sup>2</sup> , Screw latch, 18pin
	LSACT07	Screw type, 0.2-1.5mm <sup>2</sup> , Lock & Release latch, 18pin
	LSACT08	Screw type, 0.2-1.5mm <sup>2</sup> , Screw latch, 18pin
	LSACT09-R	Screw type, 0.25-2.5mm <sup>2</sup> , Screw latch, 8 point fuse type, 16pin
	LSACT09-L	Screw type, 0.25-2.5mm <sup>2</sup> , Screw latch, 8 point fuse type, 16pin
	LSACT10-R	Screw type, 0.25-2.5mm <sup>2</sup> , Screw latch, 32pin type, 32pin
	LSACT10-L	Screw type, 0.25-2.5mm <sup>2</sup> , Screw latch, 32pin type, 32pin
	LSACT11-R	Connector type, D-sub, Screw latch, Dsub connector type, 37pin
LSACT11-L	Connector type, D-sub, Screw latch, Dsub connector type, 37pin	
LSACT12-R	Screw type, 0.25-2.5mm <sup>2</sup> , Screw latch, Both disconnection type, 16pin	
LSACT12-L	Screw type, 0.25-2.5mm <sup>2</sup> , Screw latch, Both disconnection type, 16pin	
LSACT13-R	Screw type, 0.3-2.0mm <sup>2</sup> , Screw latch, Ring Terminal type, 17pin	
LSACT13-L	Screw type, 0.3-2.0mm <sup>2</sup> , Screw latch, Ring Terminal type, 17pin	

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