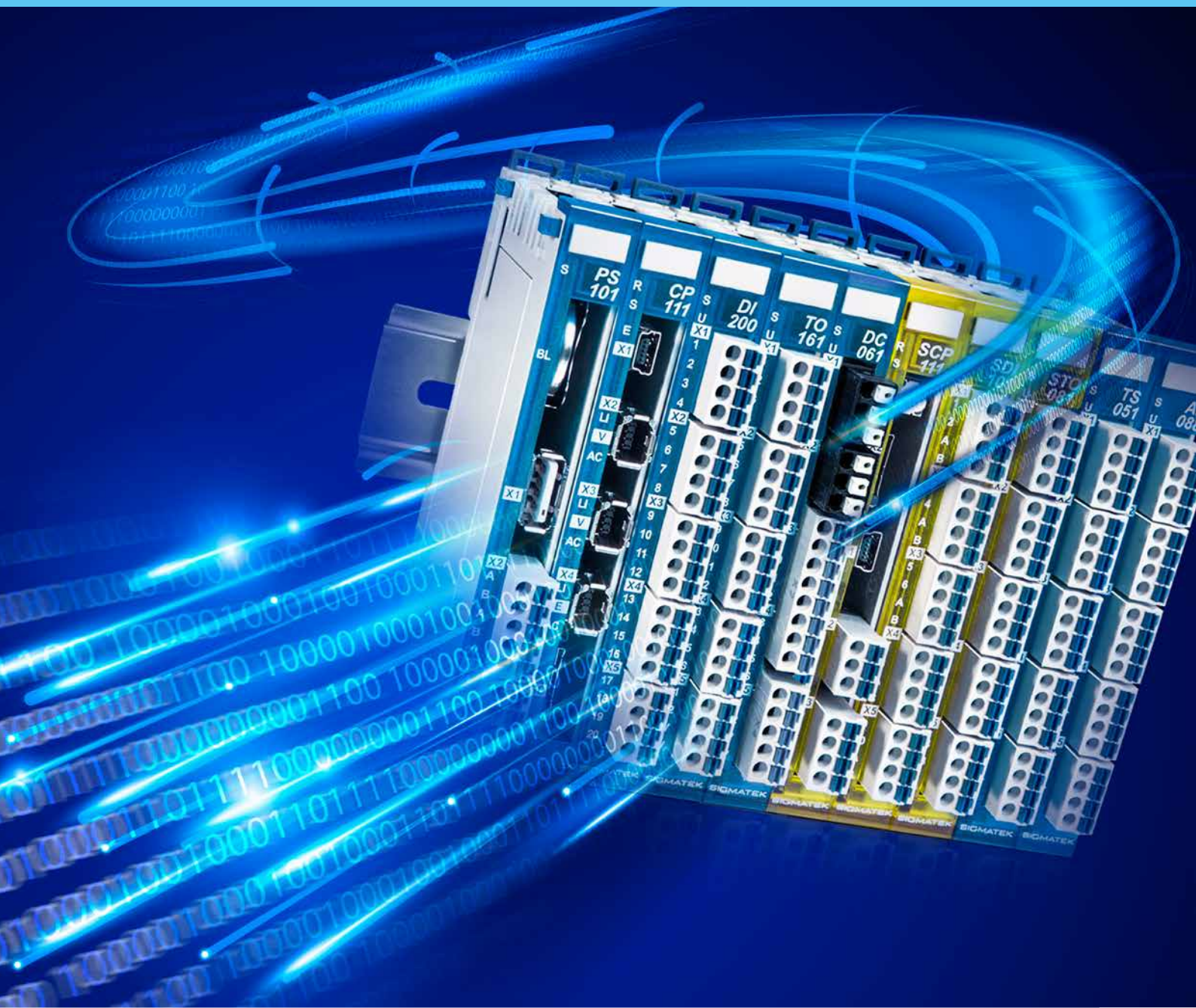


# CONTROL SYSTEM S-DIAS



# ONE SYSTEM – MANY FUNCTIONS

CONTROL, I/O, MOTION AND SAFETY IN POCKET FORMAT

Fast signal processing, comfortable handling, high vibration resistance – and that in a super-compact form. Furthermore, Safety is included as an integral system component. The S-DIAS system is best equipped for the most varying automation 4.0 tasks.

Up to 20 channels are packed into one S-DIAS DIN rail module. With this package density, you save significant space in the control cabinet.

## For any Application

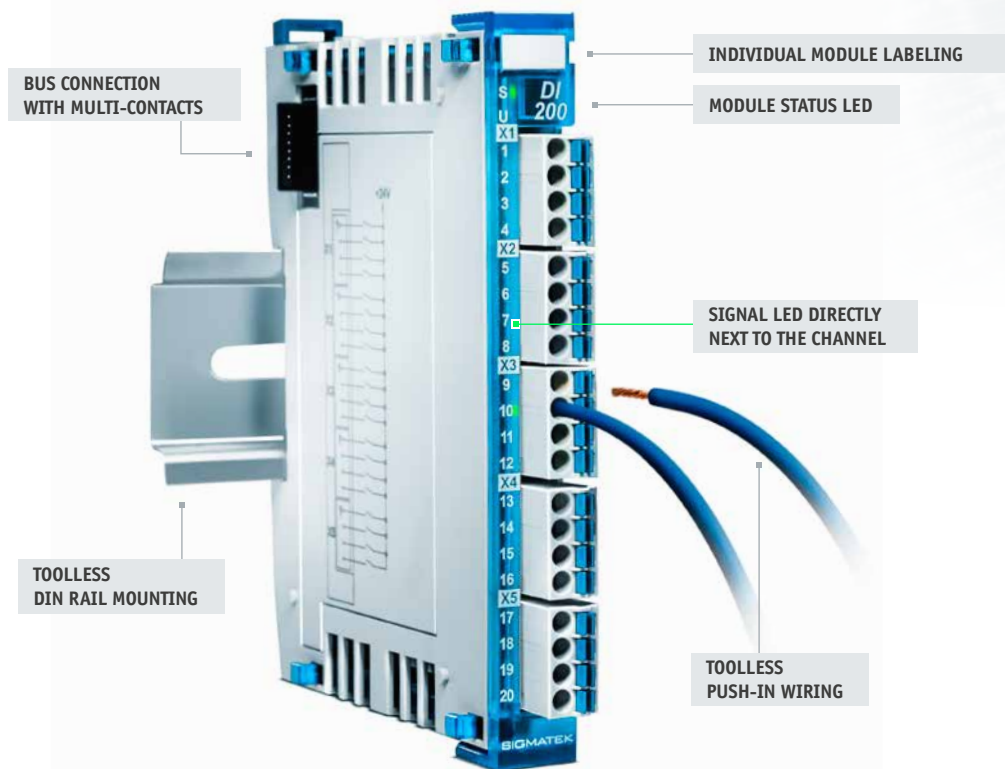
Thanks to the powerful and high mechanical stability, S-DIAS can be used in the most varying applications – even in places where until now, only special board-based

solutions with or without limited expandability could be used because of space restrictions.

## Module Variety

From a versatile, modular system toolkit, the CPUs, digital and analog I/Os, motion, Safety and special function modules can be combined and configured as needed.

Dimensions: 12.5 x 104 x 72 mm (WxHxD)





## SUPER COMPACT

Up to 20 I/Os in a module size of only 12.5 x 104 x 72 mm

## SMART

Complete module solution, signal LEDs directly next to the channels, Push-in wiring, toolless mounting

## FAST

100-Mbit/s bus speed

## STABLE

High mechanical reliability, vibration resistance

## SAFE

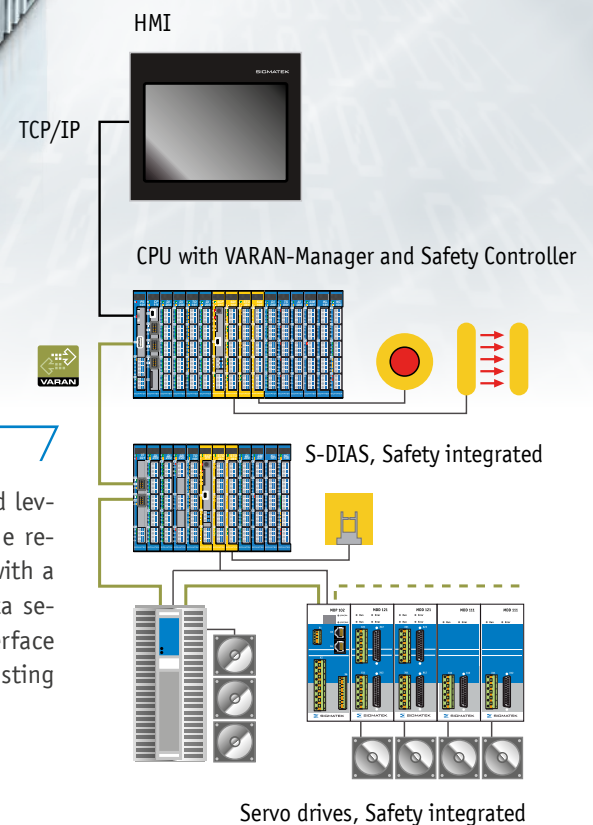
Safety fully integrated



## FLEXIBLE SYSTEM DESIGN

S-DIAS is modularly structured and optimally suited as a system solution for central and decentralized automation designs. You can flexibly combine standard and Safety components and have a high degree of freedom in the design of the system. Especially for modular machine 4.0 concepts, an integrated and flexible

network from the control to the field level plays an important role. Here, the real-time Ethernet bus VARAN scores with a high user data rate, guaranteed data security and hot-plug capability. Interface modules enable integration into existing systems and production lines.



# MANY BENEFITS THIN ON A RAIL

EFFICIENCY IN EVERY RESPECT

The S-DIAS series provides a large portion of user benefits in the smallest installation space.

Up to 20 channels per module are possible and this with dimensions of only 12.5 mm width, 104 mm height and 72 mm depth. The S-DIAS achieves therewith, a unique package density of only 63 mm<sup>2</sup> per channel. In addition to this compactness, there are further advantages with which the efficient system solution convinces:

## SAVES SPACE IN CONTROL CABINET



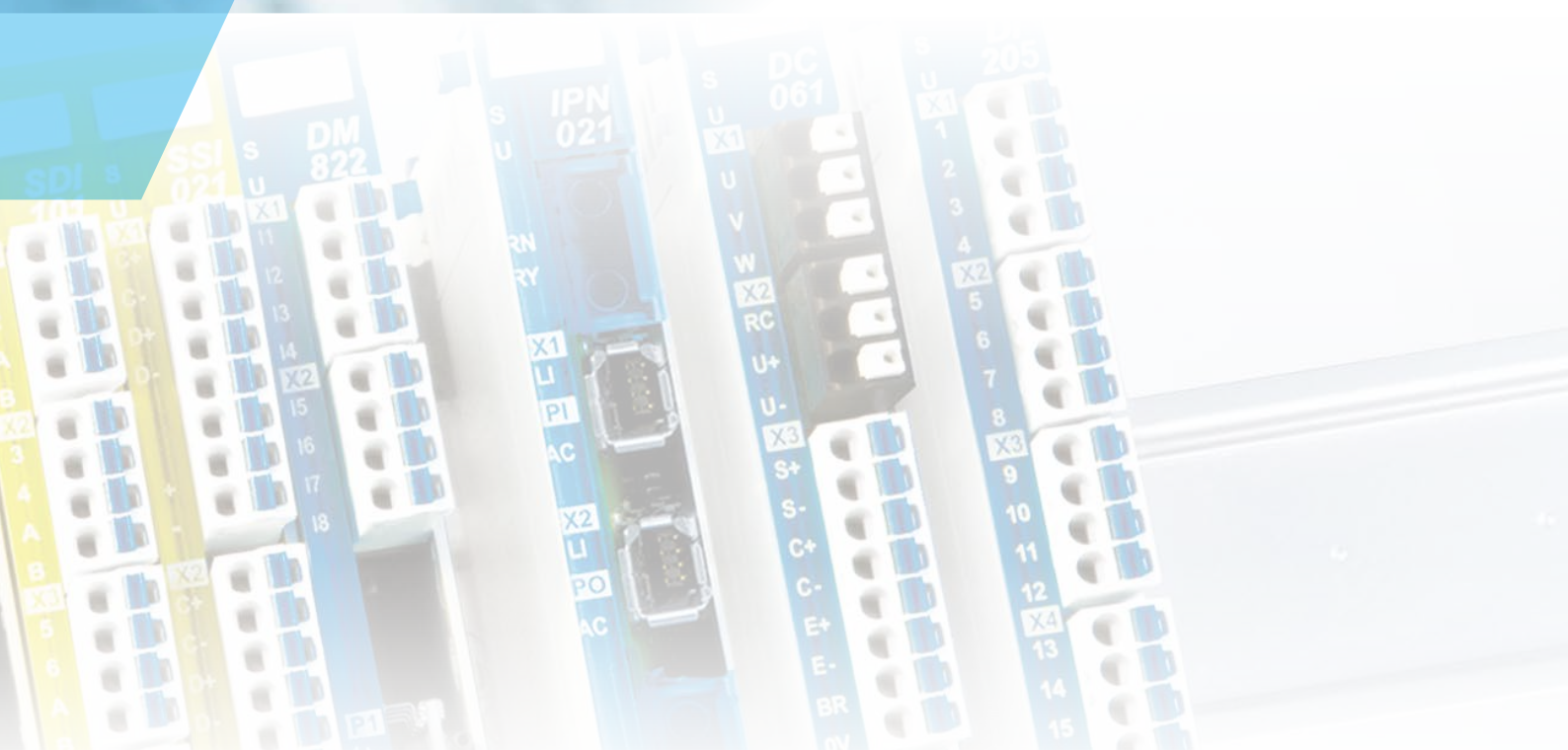
## ROBUST AND VIBRATION PROOF



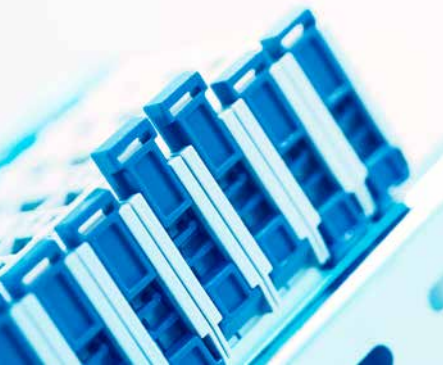
With up to 20 I/Os per module, S-DIAS sets new standards when it comes to package density. For you, this miniaturization means: more function in less space. Within an 80 cm width, 64 modules with up to 1,280 I/Os can be installed. Even when the complexity of your machines increases, with S-DIAS, the control cabinet volume is reduced. That is an essential aspect, since control cabinet space is unavoidably linked to costs.

S-DIAS is consciously designed as a complete module solution. Electronics, bus and DIN rail mount are combined in one stable housing – extra connections are eliminated and the stability of the application increased. The module supply, as well as bus connection is provided over a robust multi-contact plug. A unique feature is the mechanical interlocking – it creates a form-fitting, vibration resistant connection of the modules.





### OPERATION READY



The modules are delivered to you ready to use - including standard connectors with push-in spring terminals. The I/Os can therefore be wired quickly and without tools, pre-assembled into blocks and mounted on the DIN rail. 1, 2 or 3 wire connection technology is possible – up to a cross-section of 1.5 mm<sup>2</sup>. The smart complete module solution also simplifies ordering and storage, since only one component must be ordered, unpacked and installed.

### CHANNEL-SPECIFIC DIAGNOSIS



S-DIAS scores with clear module allocation. The status LEDs provide information on the communication status. In addition, next to the connection point of each individual channel, a signal LED is located that provides information on the status of the contact point. A fast and above all, clear identification and diagnosis are achieved and service simplified. The module labeling enables individual marking. This increases clarity in the control cabinet.

### REAL-TIME COMMUNICATION



The S-DIAS series communicates over the hard real-time Ethernet bus VARAN with a speed of 100 Mbit/s and is therefore perfectly suited for very fast, dynamic applications. Individual I/O modules can be accessed within 1.12  $\mu$ s. Per CPU module or VARAN bus interface, 64 participants with up to 1,280 I/Os can be connected; the update time is under 60  $\mu$ s. With splitter and interface modules (VARAN, Ethernet, CAN, Profinet), the S-DIAS system can be integrated into a system bundle of different manufacturers.



## THE RIGHT CPU FOR ANY APPLICATION

### CPU MODULES: GROW WITH THE TASK

The CPUs in S-DIAS format with high-performance EDGE2 Technology processors are the right choice for versatile control and motion tasks. You can tune the processor performance exactly to your application: from the economic single-CPU to the high-performance dual-core CPU (2x 800 MHz).

Depending on the module, various interfaces such as VARAN bus, Ethernet, EtherCAT Drive Controller, CAN and USB are integrated. The network connection is made with industrial Mini I/O connector plugs. With their 2-point contact principle, these standard connectors provide an exact, vibration resistant connection.



The CP 731 with a high-performance Intel® Atom™ dual-core processor.

### HIGH-PERFORMANCE CPU UNITS FOR THE DIN RAIL

The CPU units, equipped with high-performance processors, are the right choice for complex control, regulation and motion control tasks.

The CP 731 convinces with an Intel® Atom™ dual-core processor (2x 1.75 GHz) and 2 GB of RAM as well as two VARAN Managers that can be operated in parallel, thus providing flexibility.

With an Intel® Celeron dual-core processor (2x 2.2 GHz) and 2 to 8 GB of RAM, the IPC 221 is even more powerful.

The robust CPU units, which can also be used as a central control platform for decentralized multi-CPU concepts, provide numerous interfaces conveniently located on the front: VARAN Out, Ethernet, CAN and USB.

The bus interface is located on the side, so that S-DIAS I/O modules can be connected directly.

### INTELLIGENCE 4.0



To design machine controls more flexibly, distributed intelligences are a smart approach: The machine or system is divided into mechatronic function units and equipped with processing intelligence directly on-site. With the S-DIAS system, multi-CPU concepts can be easily implemented. You have the advantage of being able to flexibly adapt your control system to customer requirements at any time – whether power, configuration variants or expansions. And: All CPUs speak OPC UA.





S-DIAS modules can be directly connected to the IPC 221.

## EPLAN MACROS



Electro planning made easy: For the S-DIAS product family, EPLAN macros are available for simple integration into the control cabinet.

## MOTION IN POCKET FORMAT

The S-DIAS motion modules provide full functionality in the smallest package.

### Servo Functionality

The super compact, fully integrated servo amplifier of the S-DIAS DC series, with a rated power of nearly 300–480 W, is designed to control synchronous servo motors with up to 6 A or 10 A of continuous current at 48 V DC (peak current 15 A or 20 A). A standard resolver (DC 061/101) or incremental encoder input (DC 062/102) for position feedback, a +24 V DC output for controlling a holding brake and a

2-channel enable input. It can be used to implement the safety function STO (SIL 3, PL e).

The modules SR 011/012 are available for control and regulation of economic DC brush motors with a phase current of up to 5 A and a 15 A (SR 011) or 10 A (SR 012) peak current. The SR 011 is equipped with an integrated brake chopper and a switchable incremental encoder, the SR 012 has four digital inputs that can be used as limited switches.

### Stepper Motor Card

The ST 151 is used to control 2-phase stepper motors. Up to 5 A continuous current is possible. The stepper motor output stage can be operated in full, half or micro steps (64). An incremental encoder interface for position control, as well as two digital inputs (+24 V DC, 10 μs) are already on board. These can be used as an end switch, a position latch or for reference profiles. The integrated two-channel enable input allows the implementation of STO (SIL 3, PL e).

## STO INTEGRATED



Integrated two-channel inputs allow the implementation of the Safety functions STO (Safe Torque Off) for applications up to SIL 3 (EN 62061) and Category. 4, PL e (EN ISO 13849-1/2).



## SAFETY: SLIM, FLEXIBLE AND FREELY PROGRAMMABLE

With future-oriented machine concepts, a programmable, integrated Safety solution is a must. With the S-DIAS Safety system, Safety technology can be flexibly and very economically integrated into the standard system.

### ☞ Safety Under Control

The modular, easily configurable Safety solution consists of a Safety controller in combination with safe I/Os. The 12.5 mm wide SCP 111 Safety controller monitors and controls the application. Furthermore

it provides the bus interface for the safe I/O modules. In addition to various Safety I/Os, a relay, an SSI absolute value encoder and an incremental encoder module are available. The safety data is transmitted via VARAN, TCP/IP and wireless networks (WiFi) according to the Black Channel principle.

### ☞ Integrated or Stand-alone

Through complete integration, the shortest reaction times are achieved for signal processing – which are in the range

of a few milliseconds. The S-DIAS Safety system is TÜV-certified (SIL 3 in accordance with IEC 62061 and EN ISO 13849-1/-2, Cat. 4, PL e) and can also be used as a stand-alone solution.

With the Safety Input Box SIB 061, Safety signals can be read decentrally. The module can be easily mounted – whether directly in the machine, an operating console or on the back of the ETT multi-touch operating panels.

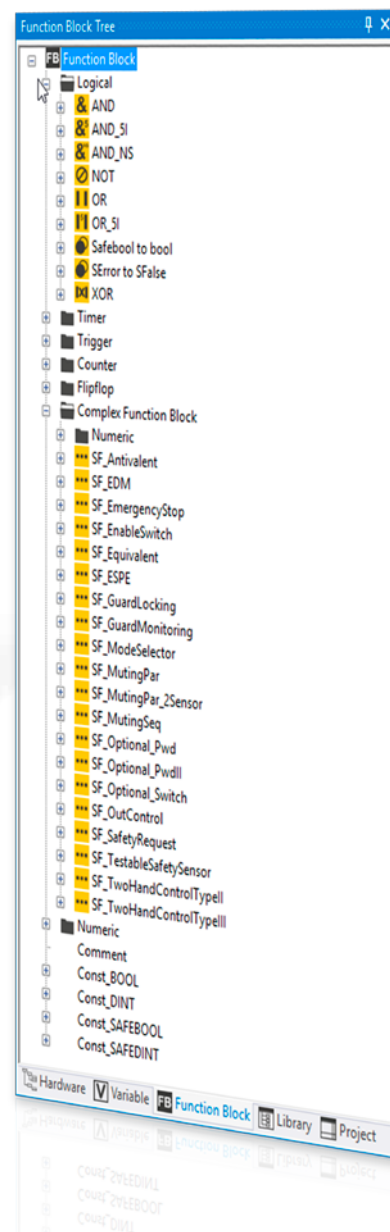


### MINI SOLUTION



Within a 25-mm width, a mini Safety solution can be implemented – whether for emergency stop, door contact or light grids: the Safety controller SCP 111, combined with the digital mix module SDM 081 with 6 inputs and 2 outputs.

Comfortably create the Safety application: In the LASAL SAFETY Designer, function blocks based on PLCopen are available.





## HIGH-PRECISION MEASURING TECHNOLOGY

Record measurement values quickly and precisely: The S-DIAS measurement technology series has the right module for any task. The selection of products includes I/O cards for measuring:

- Current
- Voltage
- Frequency
- Temperature (PT 100/PT 1000)
- Strain gauge load cells
- Absolute and differential pressure
- SSI absolute value encoder
- Energy recording (predictive maintenance)
- IEP analysis (condition monitoring)

Through the modular construction, you can configure the measurement values specifically for your application. You save costs and profit from a perfectly tuned system solution with the smallest space. That is Efficiency.



The highly compact S-DIAS measurement modules are optimally suited for diverse areas of applications in the industry.

## EFFICIENT ENGINEERING

Project development and programming are also user-friendly with the object-oriented engineering tool LASAL. Control, visualization, motion control, Safety, service and remote maintenance are combined in an integrated platform (according to IEC 61131-3 Norm).

LASAL supports a modular, mechatronic approach to machine design. Machine components are simulated in the software objects. Code and data are combined into logical units (objects).

The graphical representation provides

high clarity and via object orientation, the highest modularity and reusability are achieved. This contributes to a significant reduction of development times and costs.

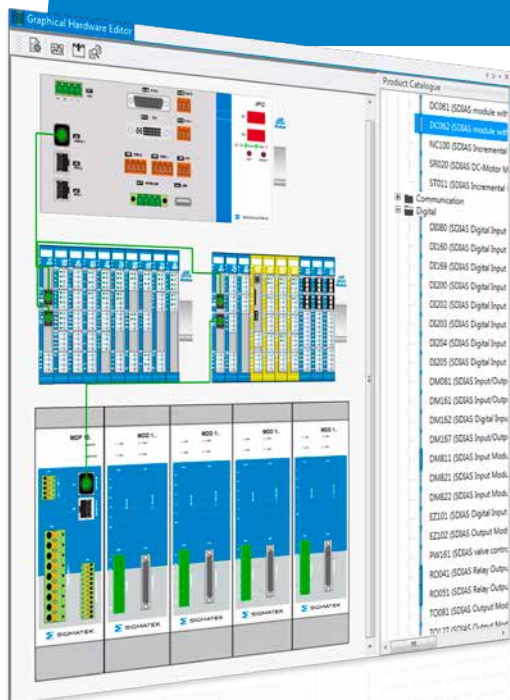
The graphical hardware editor supports you in project development, parameterization and diagnostics. Even Safety projects can be comfortably designed in the LASAL SAFETY Designer.

## FLEXIBLE SAFETY



With Safety Hot Swap, modular machines and system units can be flexibly grouped and reconfigured.

◀ In the graphical hardware editor, the S-DIAS modules can be easily programmed, parameterized and diagnosed.



# COMPLETE OVERVIEW

## S-DIAS MODULES

### CPU & BUS CONNECTION

CP 102	EDGE2 Technology processor, 1x Ethernet, 1x CAN, 1x USB OTG (On-the-Go)
CP 111/PS 101	EDGE2 Technology processor, microSD, 1x Ethernet, 2x VARAN Out, 1x CAN, 1x USB Device, 1x USB Host
CP 112/PS 101	EDGE2 Technology processor, microSD, 2x Ethernet, 1x VARAN Out, 1x CAN, 1x USB Device, 1x USB Host
CP 311	EDGE2 Technology processor, microSD, 1x Ethernet, 2x VARAN Out, 1x CAN, 1x USB Host, 1x USB OTG, voltage supply integrated
CP 312	EDGE2 Technology processor, microSD, 2x Ethernet, 1x VARAN Out, 1x CAN, 1x USB Host, 1x USB OTG, voltage supply integrated
CP 313	EDGE2 Technology processor, microSD, 2x Ethernet, 1x EtherCAT Drive Controller, 1x VARAN Out, 1x CAN, 1x USB Host, 1x USB OTG, voltage supply integrated
CP 731	Intel® Atom™ dual-core processor, microSD, 2x Ethernet, 2x VARAN Manager, 1x CAN, 1x USB 3.0, 1x USB Device 2.0
CP 733	Intel® Atom™ dual-core processor, microSD, 1x Ethernet, 2x VARAN Manager, 1x CAN, 1x USB 3.0, 1x USB 2.0, 1x EtherCAT Drive Controller
VI 021	Bus connection, 1x VARAN In, 1x VARAN Out, +24 V DC supply
IPC 221	Intel® Celeron 1020E processor, 2x Ethernet, 2x VARAN Out, 2x CAN, 1x USB 2.0, 1x S-DVI
EC 121	1x EtherCAT In, 1x EtherCAT Out, +24 V DC supply

### INTERFACES & SPLITTERS

ICA 011	1x CAN
ICA 012	1x CAN (galvanically separated)
IIO 041	4x SDCI ports according to IEC 61131-9 (IO-link), 4 digital inputs +24 V DC, 0.5 ms
IPN 021	1x Profinet I/O In, 1x Profinet I/O Out
ISE 021	1x RS232, 1x RS485
ISE 031	1x RS232, 1x RS485, 1x TTY
SE 051	Ethernet-Switch (RJ45), 1x In, 4x Out
SE 052	Ethernet-Switch (Tyco Mini I/O), 1x In, 4x Out
SV 141	1x VARAN In, 4x VARAN Out
SV 142	1x VARAN In (Tyco Mini I/O), 4x VARAN Out (Tyco Mini I/O)

### DIGITAL INPUT

DI 080	8 inputs +24 V DC, 5 ms
DI 160	16 inputs +24 V DC, 5 ms
DI 169	16 counter inputs, GND switching, +24 V DC, 50 µs
DI 200	20 inputs +24 V DC, 5 ms
DI 202	4 counter inputs +24 V DC, 10 µs, 16 inputs +24 V, 0.5 ms
DI 203	20 inputs +24 V DC, 0.5 ms
DI 205	20 inputs, GND switching, +24 V DC, 5 ms









### DIGITAL OUTPUT

TO 081	8 outputs +24 V DC, 0.5 A, short-circuit proof
TO 127	12 outputs +24 V DC, 1.7 A, short-circuit proof, outputs separated by optic coupler
TO 161	16 outputs +24 V DC, 0.5 A, short-circuit proof
PW 022	2 PWM outputs +18-30 V DC, +24 V-switching, pulse width modulation, adjustable frequency 30.5 Hz - 20 kHz
PW 161	16 outputs +18-52 V DC, GND switching, 0.5 A, pulse width modulation, frequency 20 kHz
RO 041	4 relay outputs +230 V AC, 6 A or +24 V AC, 6 A (closer contacts)
RO 051	5 relay outputs +115 V AC, 6 A or +24 V AC, 6 A (changeover contacts)

### DIGITAL MIX

DM 046	4 inputs +24 V DC, 5 ms, 4 outputs +24 V DC, 1.7 A, short-circuit proof, galvanically separated
DM 081	4 inputs +24 V DC, 5 ms, 4 outputs +24 V DC, 0.5 A, short-circuit proof
DM 161	8 inputs +24 V DC, 5 ms, 8 outputs +24 V DC, 0.5 A, short-circuit proof
DM 162	4 inputs +24 V DC, 5 ms, 4 inputs with counter function/time measurement, 8 outputs +24 V, 0.5 A, short-circuit proof
DM 167	8 inputs +24 V DC, 5 ms, 8 outputs +24 V DC, 1.7 A, short-circuit proof, outputs separated with optic coupler

### ANALOG INPUT

AI 022	2 strain gauge inputs (24 bits)	
AI 023	2 inputs PT100/PT1000/KTY	
AI 031	3 inputs 0-5 A AC (12 bits)	
AI 040	4 inputs for vibration sensors with IEPE interface, condition monitoring	
AI 043	4 inputs PT100/PT1000/KTY	
AI 046	4 inputs ±11 V DC or ±1.1 V DC (18 bits)	
AI 047	4 inputs 0-22 mA or 4-22 mA (18 bits)	
AI 075	6 inputs ±10 V DC (16 bits), 1 KTY/PT1000 temperature input	
AI 0812	8 inputs PT1000/KTY (16 bits)	
AI 084	8 inputs 0-20 mA (16 bits)	
AI 088	8 thermal element inputs 0-40 mV (16 bits)	



ANALOG OUTPUT		
AO 026	2 outputs ±10 V DC or 0-20 mA (16 bits), switchable per channel	
AO 046	4 outputs ±10.8 V DC or 0-21.6 mA (16 bit), switchable per channel	
AO 081	8 outputs ±10 V DC (12 bits)	
ANALOG MIX		
AM 221	2 inputs ±10 V DC (16 bits), 2 outputs ±10 V DC (12 bits), 1 reference output +10 V DC, max. 5 mA	
AM 222	2 inputs 0-20 mA (16 bits), 2 outputs 0-20 mA (12 bits)	
AM 441	4 inputs ±10 V (16 bits), 4 outputs ±10 V (12 bits), 1 reference output +10 V, max. 10 mA	
AM 442	4 inputs 0-20 mA (16 bits), 4 output 0-20 mA (12 bits)	
DIGITAL ANALOG MIX		
IO 011	6 digital inputs (0.5 ms), 8 digital outputs (0.5 A), 1 analog input (±10 V DC), 1 analog current input (0-20 mA)	
IO 011S	6 digital inputs (1 µs), 8 digital outputs (0.5 A), 1 analog input (±10 V DC), 1 analog current input (0-20 mA)	
COUNTER & POSITION RECORDING		
BC 031	Gyroscope sensor, 1x Ethernet, 1x RS485	
DI 204	2 ABR counter, TTL signal, 10 µs, 14 digital inputs +24 V DC, 0.5 ms	
FC 021	2 digital RS422 inputs, 2 digital TTL inputs galvanically separated, 2 digital HTL inputs galvanically separated, all inputs with counter function	
NC 100	Incremental encoder, 1 ABR counter, TTL/RS422, encoder supply 5 V, 4 digital inputs +24 V, 10 µs, 4 digital outputs +24 V, 2 A	
SI 021	2 SSI absolute encoders (up to 32 bits)	
TS 041	Transsonar module for 4 distance measurement systems, DPI/IP protocol	
TS 051	Transsonar module for 5 distance measurement systems, DPI/IP protocol	
MOTION		
DC 061-1	Servo motor output stage, resolver, 6 A continuous / 15 A peak current, +48 V DC, holding brake, STO	
DC 062	Servo motor output stage, incremental encoder, 6 A continuous / 15 A peak current, +48 V DC, holding brake, STO	
DC 101	Servo motor output stage, resolver, 10 A continuous / 20 A peak current, +48 V DC, holding brake, STO	
DC 102	Servo motor output stage, incremental encoder, 10 A continuous / 20 A peak current, +48 V DC, holding brake, STO	
SR 011	DC motor output stage, incremental encoder RS422/TTL, 5 A continuous / 15 A peak current, brake chopper, 2 enable inputs, 1 digital output	
SR 012	DC motor output stage, 5 A continuous / 10 A peak current, brake chopper, 2 enable inputs, 4 digital inputs, 1 digital output	
SR 020	DC motor current controller, 12-30 V DC supply, 0-3.5 A, power LED output 0-350 mA	
SR 022	DC motor current controller, 12-30 V DC supply, 0-3.5 A, 1 incremental encoder, 3 digital inputs	
ST 011	Stepper/servo motor power component control, 1 incremental encoder, 2 digital inputs, 2 potential-free digital outputs	
ST 151	Stepper motor output stage, +50 V DC, 5 A, incremental encoder, 2 enable inputs (STO), 2 latch/digital inputs	
SPECIAL FUNCTIONS		
CO 041	4 current-controlled outputs / pulse-signal outputs for valve control, 4 digital inputs +5 V	
DEE 021	3 voltage inputs, 12 current inputs, 1x VARAN In, 1x VARAN Out (optional Ethernet), 1x CAN, energy recording	
DM 811	1 absolute pressure input 0-1600 mbar, 1 PT100, 8 digital inputs +24 V DC, 0.5 ms	
DM 822	2 differential pressure inputs -2068 mbar ... +2068 mbar, 8 digital inputs +24 V DC, 0.5 ms	
EE 121	Energy recording, 3 voltage inputs (0-600 V AC, 16-bits), 12 current inputs (0-2 A AC, 16-bits), power grid synchronization	
EZ 101	10 digital inputs for implementing Euromap interface	
EZ 102	10 digital outputs for implementing Euromap interface	
EZ 122	12 digital outputs for implementing Euromap interface	
KL 090/KL 091	Potential distribution 9x 0 V (ground), 9x +24 V DC (supply), current limited; difference: connector layout	
KL 180	Potential distribution 18x 0 V ground	
KL 181	Potential distribution 18x +24 V DC (supply)	
PL 221	2 outputs RGB pixel LED strips (24 bits), 2 outputs +24 V PWM LED strips	
PSB 001	Expansion supply	
RC 001	1x real-time clock	
VA 011	VARAN Analyzer, 1x VARAN In (RJ45), 1x VARAN Out (RJ45), 1x Gigabit Ethernet 10/100/1000	
BL 011	Placeholder for expansions	
SAFETY		
SCP 111	Safety controller, 1x USB device, microSD slot	
SDI 101	10 safe digital inputs +24 V DC, 0.5 ms	
SIB 061	Safety Input Box for decentrally reading Safety signals, 6 safe digital inputs +24 V DC, 0.5 ms	
STO 081	8 safe digital outputs +24 V DC, max 2 A, short-circuit proof	
SDM 081	6 safe digital inputs +24 V DC, 0.5 ms, 2 safe digital outputs +24 V DC, max 2 A	
SRO 021	2 safe relay outputs max. +30 V DC, max. 6 A	
SRO 022	2 safe relay outputs max. +230 V DC, max. 6 A	
SSI 021	Evaluation of 2 SSI absolute encoder signals (up to 32 bits)	
SNC 021	Evaluation of 2 incremental encoder signals (up to 12 bits), encoder supply +5 V, counter frequency 3 MHz	

## INTERNATIONAL



### AUSTRIA – CORPORATE HEADQUARTERS

SIGMATEK GmbH & Co KG  
5112 Lamprechtshausen  
Sigmatekstraße 1  
Tel. +43 6274 43 21-0  
Fax +43 6274 43 21-18  
www.sigmatek-automation.com  
office@sigmatek.at



### CHINA

SIGMATEK Automation CO., Ltd  
315040 Ningbo · Room 805,  
Building A, No. 555, Jingjia Road  
Tel. +86 574 87 75 30 85  
Fax +86 574 87 75 30 65  
www.sigmatek-automation.cn  
office@sigmatek-automation.cn



### GERMANY

SIGMATEK GMBH  
76829 Landau  
Marie-Curie-Straße 9  
Tel. +49 6341 94 21-0  
Fax +49 6341 94 21-21  
www.sigmatek-automation.com  
office@sigmatek.de



### BELGIUM

SigmaControl B.V.  
2992 LC Barendrecht  
Tel. +32 329 770 07  
www.sigmacontrol.eu  
office@sigmacontrol.eu



### FINLAND

SARLIN Oy Ab  
01610 Vantaa  
Tel. +358 105 50 40 00  
www.sarlin.com  
asiakaspalvelu@sarlin.com



### INDIA

SIGMA CONTROLS  
411045 Pune  
www.sigmatek-automation.in  
office@sigmatek-automation.in



### ITALY

SIGMA MOTION SRL  
36075 Montecchio Maggiore (VI)  
Tel. +39 0444 60 75 75  
www.sigmamotion.it  
info@sigmamotion.it



### GREAT BRITAIN

SIGMATEK Automation UK Limited  
24 Old Queen Street  
London, SW1H 9HP  
Tel. +44 115 922 24 33  
www.sigmatek-automation.co.uk  
office@sigmatek-automation.co.uk



### KOREA

SIGMATEK Automation Korea CO., Ltd  
08500 Seoul · 4th floor, Digital Industrial Bldg 169-28  
Gasan digital 2-ro Geumcheon-gu  
Tel. +82 2 867 15 66  
Fax +82 70 82 44 44 88  
www.sigmatek-automation.kr  
office@sigmatek-automation.kr



### SWITZERLAND

SIGMATEK Schweiz AG  
8308 Illnau-Effretikon  
Schmittestrasse 9  
Tel. +41 52 354 50 50  
Fax +41 52 354 50 51  
www.sigmatek-automation.ch  
office@sigmatek.ch



### JAPAN

SUMITOMO HEAVY INDUSTRIES, LTD.  
Mechatronics Division  
141-6025 Tokyo  
Tel. +81 3 67 37 25 32  
www.shi-mechatronics.jp  
ryuji.nakajima@shi-g.com



### NETHERLANDS

SigmaControl B.V.  
2992 LC Barendrecht  
Tel. +31 180 69 57 77  
www.sigmacontrol.eu  
office@sigmacontrol.eu



### PORTUGAL

Plasdan Automation & Add-On Systems  
2430-379 Marinha Grande  
Tel. +351 244 57 21 10  
www.plasdan.pt  
info@plasdan.pt



### SWEDEN

SIGBI Automation AB  
254 64 Helsingborg  
Tel. +46 42 654 00  
www.sigmatek.se  
info@sigmatek.se



### USA

SIGMATEK U.S. Automation, Inc.  
44133 North Royalton, Ohio  
10147 Royalton Rd., Suite N.  
Tel. +1 440 582 12 66  
Fax +1 440 582 14 76  
www.sigmatek-automation.us  
office@sigmatek.us



### SOUTH AFRICA

Anytech (PTY) Ltd.  
2169  
Tel. +27 11 708 19 92  
www.anytech.co.za  
info@anytech.co.za



### THAILAND

SCM Allianz Co. Ltd.  
10400 Bangkok  
Tel. +66 2 615 48 88  
www.scma.co.th  
contact@scma.co.th



### TURKEY

Dedem Mekatronik  
35477 Menderes – İzmir  
Tel. +90 232 47 21 848  
www.dedemmekatronik.com  
satis@dedemmekatronik.com