



## OPENrio SL - I/O Modules

**OPENrio SL** is a modular automation system for assembly on a 35mm mounting rail. By means of the peripheral modules with 2, 4 or 8 channels this system may properly be adapted matching to several automation tasks. The wiring complexity is low, because the 24V DC supply of the power section is integrated to the backplane bus and defective modules may be replaced with standing wiring.



The System OPENrio SL is designed and produced for:

- communication and process control
- general control and automation applications
- industrial applications
- installation into a cubicle

The OPENrio SL system is made by the following components:

- EtherCAT Bus coupler
- Periphery modules like digital and analog I/O
- Relay output module
- PWM output module
- Encoder input module



The **bus coupler** interface and power module are integrated in one casing.

As head module, via the integrated power module for power supply, the bus interface is supplied as well as the electronic of the connected periphery modules. The 24V DC power **supply** of the linked periphery modules is established via a further connection at the power module. By installing up to 64 periphery modules at the bus coupler, these are electrically connected and they are assigned to the backplane bus. The electronic modules are power supplied and each periphery module is connected to the 24V DC power section supply.

Each **periphery module** consists of a terminal and an electronic module:

- terminal module serves to carry the electronic module, contains the backplane bus with power supply for the electronic, the 24V DC power section supply and the staircase-shaped terminal for wiring
- the functionality of a OPENrio SL periphery module is defined by the electronic module, which is mounted to the terminal module by a safe sliding mechanism

In the OPENrio SL the power supply is established by power modules.

These are either integrated to the bus coupler or may be installed between the periphery modules.

## Technical Data

	OPENrio SL			
Fieldbus	EtherCAT			
Assembling	DIN rail mounting - modules connected with side contacts			
Dimensions (W x H x D)	15 x 109 x 76,5 mm			
I/O signals isolation	Electrically isolated			
Digital modules	8SMPM021-1BF00		8SMPM022-1BF00	
Number of I/O	8 Input		8 Output	
Current for each output	-		0,5A (max 4 A per module)	
Low level input signal	0÷5 VDC		-	
High level input signal	15÷28,8 VDC		-	
Power modules	8SMPM022-1BD20		8SMPM022-1HB10	
Number of I/O	4 Output		4 Relay Output	
Current for each output	2A (max 4A per module)		3A 30 VDC / 230 VAC	
Analog modules	8SMPM031-1BB40	8SMPM031-1BB70	8SMPM031-1BD70	8SMPM032-1BB70
Number of I/O	2 Input	2 Input	4 Input	2 Output
Input/Output field	0/4....20mA	±10VDC	±10VDC	±10VDC
Resolution	12 bit			
PWM Module	8SMPM022-1BB90			
Number of I/O	2 Output			
Current for each output	0,5A			
Switching frequency	Max. 40 kHz			
Encoder Input Module	8SMPM050-1BA10			
Input voltage for signal "0"	Differential RS422 signal			
Input voltage for signal "1"	Differential RS422 signal			
Maximum input frequency	500 kHz			
Input resistance	120 Ω			