

IndraControl L – controller-based automation systems and control components

IndraControl L allows easy and consistent automation for all centralized and distributed architectures. This technically and economically optimized control design offers a great number of benefits, both for the machine manufacturer and the end user.

IndraControl L is the flexibly configurable hardware platform for open control architectures. Whether you intend to implement a motion control, a CNC or a PLC application – it is always the same hardware you use. Your application is only defined by the software. To ensure that it matches your application in the best way possible, our control platform is available in various performance classes. Its open architecture, in combination with many different function modules, facilitates integration in heterogeneous system topologies.

Configurable fieldbus interfaces allow use as a master or as

a slave in distributed control architectures.

- ▶ Scalable hardware platform
- ▶ Standardized communication interfaces
- ▶ Optional extension through function and technology modules
- ▶ Ideal for centralized and distributed control topologies
- ▶ Individually extendable with high-grade visualization components
- ▶ Modular I/O units



IndraControl L – modular, controller-based control hardware allowing any desired, future-proof factory automation

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Scalable, future-proof and flexible

- ▶ Individual control platform for any topology
- ▶ Standardized communication interfaces
- ▶ Scalable performance and function



IndraControl L – compact control platform



IndraControl L is the compact control platform for easy DIN-rail mounting, requiring less wiring effort. It is available in various performance classes with many extension options. In combination with our PLC system IndraLogic or our motion solutions IndraMotion, IndraControl L provides a maximum of flexibility and openness for the most varying system designs.

- ▶ Uniform hardware platform for all controller-based Rexroth controls
- ▶ Performance and function with flexible scalability
- ▶ Individual extension capability through visualization and I/O components
- ▶ Quick assembly and installation without any tools
- ▶ Open through standardized communication interfaces

IndraControl L – function modules



A range of function modules (fieldbus interfaces and technology modules) are available to integrate the IndraControl L into heterogeneous control topologies. The modules use the high-speed system bus to communicate with the control processor – this ensures that the high requirements for performance and functionality are met. Partial implementation of functions into the modules reduce the load on the controller CPU.

- ▶ Easy extension of the functions of the IndraControl L controls
- ▶ Many communication and technology interfaces
- ▶ Flexible combination options
- ▶ Ergonomic design

IndraControl L – control overview and short description

Performance



Connectivity



IndraControl L10

Entry-level compact controller for simple PLC applications.

- ▶ Communication: Ethernet TCP/IP
- ▶ On-board I/O: 8 high-speed inputs, 4 high-speed outputs
- ▶ I/O extension: up to 63 Inline I/O modules

Performance



Connectivity



IndraControl L20

Mid-range compact controller for standard PLC applications.

- ▶ Communication: Ethernet TCP/IP, PROFIBUS, RS232
- ▶ On-board I/O: 8 high-speed inputs, 8 high-speed outputs
- ▶ I/O extension: up to 63 Inline I/O modules

Performance



Connectivity



IndraControl L25

Mid-range compact controller for standard PLC and motion applications.

- ▶ Communication: Ethernet TCP/IP, sercos III
- ▶ Function modules: up to 2
- ▶ I/O extension: up to 63 Inline I/O modules



Performance



Connectivity



IndraControl L40

High-performance compact controller for demanding PLC, motion and CNC applications.

- ▶ Communication: Ethernet TCP/IP, PROFIBUS, RS232, sercos II
- ▶ Function modules: up to 4
- ▶ On-board I/O: 8 high-speed inputs, 8 high-speed outputs
- ▶ I/O extension: up to 63 Inline I/O modules

Performance



Connectivity



IndraControl L45

High-performance compact controller for demanding PLC motion applications and CNC applications.

- ▶ Communication: Ethernet TCP/IP, PROFIBUS, sercos III, PROFINET IO, EtherNet/IP
- ▶ Function modules: up to 4
- ▶ On-board I/O: 8 high-speed inputs, 8 high-speed outputs
- ▶ I/O extension: up to 63 Inline I/O modules

Performance



Connectivity



IndraControl L65

High-performance compact controller for high-end PLC motion applications and CNC applications.

- ▶ Communication: Ethernet TCP/IP, PROFIBUS, sercos III, PROFINET IO, EtherNet/IP
- ▶ Function modules: up to 4
- ▶ On-board I/O: 8 high-speed inputs, 8 high-speed outputs
- ▶ I/O extension: up to 63 Inline I/O modules

Performance



Connectivity



IndraControl L85

High-performance compact controller for high-end CNC applications.


- ▶ Communication: Ethernet TCP/IP, PROFIBUS, sercos III, PROFINET IO, EtherNet/IP
- ▶ Function modules: up to 4
- ▶ On-board I/O: 8 high-speed inputs, 8 high-speed outputs
- ▶ I/O extension: up to 63 Inline I/O modules

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IndraControl L10 – technical data

Technical data	IndraControl L10	Legend
		
CPU	SH4 compatible	
RAM	32 MB	
Retentive memory	32 kB	
Removable storage medium	CF card/128 MB	1
Diagnostis	Temperature monitoring, watchdog, power-fail	
Real-time clock	–	
Display	–	
Protection category	IP20	
Dimensions (H x W x D)	121 x 123 x 71 mm	
Interfaces		
I/O modules	Inline	
Communication interfaces	1 x Ethernet TCP/IP (RJ45, 10/100 Base-T)	4
Inputs/outputs (digital)	8 DC-decoupled inputs (with interrupt capability)	2
	4 DC-decoupled outputs	2
I/O extension ¹⁾	Up to 63 Inline I/O modules with up to 128 I/O (16 bytes)	3
Function modules	–	
Power supply		
Nominal value	24 V DC	
Tolerance	-15/+20% (without residual ripple)	
Residual ripple	±5%	
U _{max}	30 V DC	
U _{min}	19.2 V DC	
Power consumption from U _{LS}	Max. 1.25 A	
Power consumption from U _M + U _S	Max. 8 A	
Environmental conditions		
Ambient temperature (operation)	+5 to +55°C	
Ambient temperature (transport/storage)	-25 to +70°C	
Relative humidity	RH-2; 5 to 95% acc. to DIN EN 61131-2, no dewing	
Atmospheric pressure (operation)	Up to 2,700 m above sea level acc. to DIN 60204	
Atmospheric pressure (transport/storage)	Up to 3,000 m above sea level acc. to DIN 60204	
Mechanical strength		
Vibration/shock resistance	Tested according to EN 60068-2-6/EN 60068-2-27	
EMC immunity	Tested according to EN 61000-6-2/EN 61000-6-4/EN 61131-2	
Availability		
Automation system	IndraLogic	

¹⁾ The total current of the logic supply U_L of the Inline modules must not exceed 0.8 A. If this value is exceeded, an additional infeed module is required.

IndraControl L20 – technical data

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Technical data	IndraControl L20	Legend
CPU	SH4 compatible	
RAM	16 MB	
Retentive memory	64 kB	
Removable storage medium	CF card/128 MB	①
Diagnosis	Temperature monitoring, watchdog, power-fail	
Real-time clock	Integrated	
Display	1 line, 4 operator keys	⑦
Protection category	IP20	
Dimensions (H x W x D)	120 x 175 x 76 mm	
Interfaces		
I/O modules	Inline	
Communication interfaces	1 x Ethernet TCP/IP (RJ45, 10/100 Base-T)	④
	1 x RS232	⑤
	1 x PROFIBUS master/slave	⑥
Inputs/outputs (digital)	8 DC-decoupled inputs (with interrupt capability)	②
	8 DC-decoupled outputs	②
I/O extension	Up to 63 Inline I/O modules with up to 256 I/O (32 bytes)	③
Function modules	–	
Power supply		
Nominal value	24 V DC	
Tolerance	-15/+20% (without residual ripple)	
Residual ripple	±5%	
U_{max}	30 V DC	
U_{min}	19.2 V DC	
Power consumption from $U_{I,S}$	Max. 3 A	
Power consumption from $U_M + U_S$	Max. 8 A	
Environmental conditions		
Ambient temperature (operation)	+5 to +55°C	
Ambient temperature (transport/storage)	-25 to +70°C	
Relative humidity	RH-2; 5 to 95% acc. to DIN EN 61131-2, no dewing	
Atmospheric pressure (operation)	Up to 2,700 m above sea level acc. to DIN 60204	
Atmospheric pressure (transport/storage)	Up to 3,000 m above sea level acc. to DIN 60204	
Mechanical strength		
Vibration/shock resistance	Tested according to EN 60068-2-6/EN 60068-2-27	
EMC immunity	Tested according to EN 61000-6-2/EN 61000-6-4/EN 61131-2	
Availability		
Automation system	IndraLogic	



IndraControl L25 – technical data

Technical data	IndraControl L25	Legend
CPU	SH4 compatible	
RAM	128 MB	
Retentive memory	256 kB	
Removable storage medium	CF card/1 GB	1
Diagnosis	Temperature monitoring, watchdog, power-fail	
Real-time clock	Integrated	
Display	1 line, 4 operator keys	9
Protection category	IP20	
Dimensions (H x W x D)	120 x 175 x 76 mm	
Interfaces		
Communication interfaces (standard)	1 x Ethernet TCP/IP (RJ45, 10/100 Base-T)	4
	1 x single-pole ready contact	5
Communication interfaces (optional)	1 x sercos III (2 x RJ45), 1 x PROFINET IO controller/device (2 x RJ45), 1 x EtherNet/IP scanner/adaptor (2 x RJ45), 1 x PROFIBUS master/slave	6
I/O extension	Up to 63 Inline I/O modules with up to 512 I/O (64 bytes)	3
Function modules	Up to 2	
Power supply		
Nominal value	24 V DC	
Tolerance	-15/+20% (without residual ripple)	
Residual ripple	±5%	
U_{max}	30 V DC	
U_{min}	19.2 V DC	
Power consumption from U_{LS}	Max. 3 A	
Power consumption from $U_M + U_S$	Max. 8 A	
Environmental conditions		
Ambient temperature (operation)	+5 to +55°C	
Ambient temperature (transport/storage)	-25 to +70°C	
Relative humidity	RH-2; 5 to 95% acc. to DIN EN 61131-2, no dewing	
Atmospheric pressure (operation)	Up to 2,700 m above sea level acc. to DIN 60204	
Atmospheric pressure (transport/storage)	Up to 3,000 m above sea level acc. to DIN 60204	
Mechanical strength		
Vibration/shock resistance	Tested according to EN 60068-2-6/EN 60068-2-27	
EMC immunity	Tested according to EN 61000-6-2/EN 61000-6-4/EN 61131-2	
Availability		
Automation system	IndraMotion MLC, IndraLogic XLC	



IndraControl L40 – technical data

Technical data	IndraControl L40	Legend
CPU	x86 compatible, 500 MHz	
RAM	64 MB	
Retentive memory	128 kB	
Removable storage medium	CF card/128 MB	1
Real-time clock	Integrated	
Display	1 line, 4 operator keys	9
Protection category	IP20	
Dimensions (H x W x D)	120 x 175 x 76 mm	
Interfaces		
I/O modules	Inline	
Communication interfaces (standard)	1 x Ethernet TCP/IP (RJ45, 10/100 Base-T)	4
	1 x serial RS232	5
	1 x PROFIBUS master/slave	6
Communication interfaces (optional)	1 x sercos II	7
	1 x single-pole ready contact	8
Inputs/outputs (digital)	8 DC-decoupled inputs (with interrupt capability)	2
	8 DC-decoupled outputs	2
I/O extension	Up to 63 Inline I/O modules with up to 512 I/O (64 bytes)	3
Function modules	Up to 4	
Power supply		
Nominal value	24 V DC	
Tolerance	-15/+20% (without residual ripple)	
Residual ripple	±5%	
U_{max}	30 V DC	
U_{min}	19.2 V DC	
Power consumption from U_{LS}	Max. 3 A	
Power consumption from $U_M + U_S$	Max. 8 A	
Environmental conditions		
Ambient temperature (operation)	+5 to 55°C, if the ambient temperature exceeds 45°C, the optional fan must be installed	
Ambient temperature (transport/storage)	-25 to +70°C	
Relative humidity	RH-2; 5 to 95% acc. to DIN EN 61131-2, no dewing	
Atmospheric pressure (operation)	Up to 2,700 m above sea level acc. to DIN 60204	
Atmospheric pressure (transport/storage)	Up to 3,000 m above sea level acc. to DIN 60204	
Mechanical strength		
Vibration/shock resistance	Tested according to EN 60068-2-6/EN 60068-2-27	
EMC immunity	Tested according to EN 61000-6-2/EN 61000-6-4/EN 61131-2	
Availability		
Automation system	IndraLogic, IndraMotion MLC, IndraMotion MTX compact	



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IndraControl L45 – technical data

Technical data	IndraControl L45	Legend
CPU	x86 compatible/500 MHz	
RAM	512 MB	
Retentive memory	256 kB	
Removable storage medium	CF card/1 GB	1
Real-time clock	Integrated	
Display	1 line, 4 operator keys	9
Protection category	IP20	
Dimensions (H x W x D)	120 x 175 x 97.5 mm	
Interfaces		
I/O modules	Inline	
Communication interfaces (standard)	1 x Ethernet TCP/IP (RJ45, 10/100 Base-T)	4
	1 x single-pole ready contact	5
Communication interfaces (optional)	1 x PROFIBUS master/slave	8
	1 x sercos III (2 x RJ45)	6
	1 x PROFINET IO controller/device (2 x RJ45)	7
	1 x EtherNet/IP scanner/adapter (2 x RJ45)	7
Inputs/outputs (digital)	8 DC-decoupled inputs (with interrupt capability)	2
	8 DC-decoupled outputs	2
I/O extension	Up to 63 Inline I/O modules with up to 512 I/O (64 bytes)	3
Function modules	Up to 4	
Power supply		
Nominal value	24 V DC	
Tolerance	15/+20% (without residual ripple)	
Residual ripple	±5%	
U_{max}	30 V DC	
U_{min}	19.2 V DC	
Power consumption from U_{LS}	Max. 3 A	
Power consumption from $U_M + U_S$	Max. 8 A	
Environmental conditions		
Ambient temperature (operation)	+5 to +55°C	
Ambient temperature (transport/storage)	-25 to +70°C	
Relative humidity	RH-2; 5 to 95% acc. to DIN EN 61131-2, no dewing	
Atmospheric pressure (operation)	Up to 2,700 m above sea level acc. to DIN 60204	
Atmospheric pressure (transport/storage)	Up to 3,000 m above sea level acc. to DIN 60204	
Mechanical strength		
Vibration/shock resistance	Tested according to EN 60068-2-6/EN 60068-2-27	
EMC immunity	Tested according to EN 61000-6-2/EN 61000-6-4/EN 61131-2	
Availability		
Automation system	IndraMotion MLC, IndraMotion MTX, IndraLogic XLC	

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IndraControl L65 – technical data

Technical data	IndraControl L65	Legend
CPU	x86 compatible/1000 MHz	
RAM	512 MB	
Retentive memory	256 kB	
Removable storage medium	CF card/1 GB	1
Real-time clock	Integrated	
Display	1 line, 4 operator keys	9
Protection category	IP20	
Dimensions (H x W x D)	120 x 175 x 97.5 mm	
Interfaces		
I/O modules	Inline	
Communication interfaces (standard)	1 x Ethernet TCP/IP (RJ45, 10/100 Base-T)	4
	1 x single-pole ready contact	5
Communication interfaces (optional)	1 x PROFIBUS master/slave	8
	1 x sercos III (2 x RJ45)	6
	1 x PROFINET IO controller/device (2 x RJ45)	7
	1 x EtherNet/IP scanner/adaptor (2 x RJ45)	7
Inputs/outputs (digital)	8 DC-decoupled inputs (with interrupt capability)	2
	8 DC-decoupled outputs	2
I/O extension	Up to 63 Inline I/O modules with up to 512 I/O (64 bytes)	3
Function modules	Up to 4	
Power supply		
Nominal value	24 V DC	
Tolerance	-15/+20% (without residual ripple)	
Residual ripple	±5%	
U_{max}	30 V DC	
U_{min}	19.2 V DC	
Power consumption from U_{LS}	Max. 3 A	
Power consumption from $U_M + U_S$	Max. 8 A	
Environmental conditions		
Ambient temperature (operation)	+5 to +55°C	
Ambient temperature (transport/storage)	-25 to +70°C	
Relative humidity	RH-2; 5 to 95% acc. to DIN EN 61131-2, no dewing	
Atmospheric pressure (operation)	Up to 2,700 m above sea level acc. to DIN 60204	
Atmospheric pressure (transport/storage)	Up to 3,000 m above sea level acc. to DIN 60204	
Mechanical strength		
Vibration/shock resistance	Tested according to EN 60068-2-6/EN 60068-2-27	
EMC immunity	Tested according to EN 61000-6-2/EN 61000-6-4/EN 61131-2	
Availability		
Automation system	IndraMotion MLC, IndraMotion MTX, IndraLogic XLC	



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IndraControl L85 – technical data

Technical data	IndraControl L85	Legend
		
CPU	Intel Core2Duo with 1.2 GHz	
RAM	512 MB	
Retentive memory	256 kB	
Removable storage medium	CF card/1 GB	1
Real-time clock	Integrated	
Display	1 line, 4 operator keys	9
Protection category	IP20	
Dimensions (H x W x D)	120 x 175 x 97.5 mm	
Interfaces		
I/O modules	Inline	
Communication interfaces (standard)	1 x Ethernet TCP/IP (RJ45, 10/100 Base-T)	4
	1 x single-pole ready contact	5
Communication interfaces (optional)	1 x PROFIBUS master/slave	8
	1 x sercos III (2 x RJ45)	6
	1 x PROFINET IO controller/device (2 x RJ45)	7
	1 x EtherNet/IP scanner/adaptor (2 x RJ45)	7
Inputs/outputs (digital)	8 DC-decoupled inputs (with interrupt capability)	2
	8 DC-decoupled outputs	2
I/O extension	Up to 63 Inline I/O modules with up to 512 I/O (64 bytes)	3
Function modules	Up to 4	
Power supply		
Nominal value	24 V DC	
Tolerance	-15/+20% (without residual ripple)	
Residual ripple	±5%	
U_{max}	30 V DC	
U_{min}	19.2 V DC	
Power consumption from U_{LS}	Max. 3 A	
Power consumption from $U_M + U_S$	Max. 8 A	
Environmental conditions		
Ambient temperature (operation)	+5 to +55°C	
Ambient temperature (transport/storage)	-25 to +70°C	
Relative humidity	RH-2; 5 to 95% acc. to DIN EN 61131-2, no dewing	
Atmospheric pressure (operation)	Up to 2,700 m above sea level acc. to DIN 60204	
Atmospheric pressure (transport/storage)	Up to 3,000 m above sea level acc. to DIN 60204	
Mechanical strength		
Vibration/shock resistance	Tested according to EN 60068-2-6/EN 60068-2-27	
EMC immunity	Tested according to EN 61000-6-2/EN 61000-6-4/EN 61131-2	
Availability		
Automation system	IndraMotion MTX	

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IndraControl L – function module overview and short description



PROFIBUS master
PROFIBUS master
Fieldbus interface



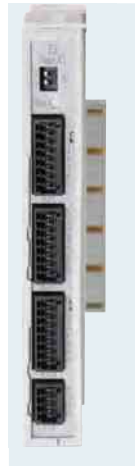
sercos III
Fieldbus interface
sercos III
For implementation of the
Ethernet-based real-time
communication as
interface to drives,
I/O peripherals or control
cross communication



Cross communication
Fieldbus interface
sercos II
For communication with
drives in real-time or
redundant control cross
communication



**Programmable limit
switch**
Function interface,
programmable limit switch
with 16 high-speed
outputs
For implementation of
high-speed cams for
motion control
applications



Fast I/O
Function interface, high-
speed inputs and outputs
for short response times
For implementation of
I/O with very short
response times;
8 inputs, 8 outputs and
8 user-configurable inputs
or outputs.
The inputs can be used as
probes with a resolution of
1 µs.



**Real-time Ethernet and
PROFIBUS**
Fieldbus interface
RT Ethernet
(PROFINET RT,
EtherNet/IP) and
PROFIBUS



SRAM module
Memory module with 8 MB
SRAM, battery-buffered
For implementation of
additional storage capacity
for CNC and motion
control applications



IndraControl L function modules – technical data

Technical data		sercos III CFL01.1-R3	Cross communication CFL01.1-Q2	Real-time Ethernet/ PROFIBUS CFL01.1-TP	PROFIBUS master CFL01.1-P1
Protection category		IP20	IP20	IP20	IP20
Dimensions (H x W x D)	[mm]	120 x 20 x 70	120 x 20 x 70	120 x 20 x 70	120 x 20 x 70
Adjustable ring cycle time	[ms]	–	2, 4, 8	–	–
Max. number of slaves		–	15, 31, 63	–	–
Power supply					
Internal		System bus	System bus	System bus	System bus
Internal power consumption	[W]	2.05	2.3	1.65	1.65
External	[V DC]	–	–	–	–
External power consumption	[W]	–	–	–	–
Environmental conditions					
Ambient temperature (operation)	[°C]	+5 to +55			
Ambient temperature (transport/storage)	[°C]	-25 to +70			
Relative humidity		RH-2; 5 to 95% acc. to DIN EN 61131-2, no dewing			
Atmospheric pressure (operation)		Up to 2,700 m above sea level acc. to DIN 60204			
Atmospheric pressure (transport/storage)		Up to 3,000 m above sea level acc. to DIN 60204			
Mechanical strength					
Vibration/shock resistance		Tested according to EN 60068-2-6, EN 60068-2-27			
EMC immunity		Tested according to EN 60000-6-2, EN 61000-6-4			
Availability					
Automation system		IndraMotion MLC, IndraLogic XLC	IndraMotion MLC	IndraMotion MLC, IndraLogic XLC	IndraMotion MLC, IndraLogic



Technical data	Programmable limit switch CFL01.1-N1	Fast I/O CFL01.1-E2	SRAM CFL01.1-Y1
Protection category	IP20	IP20	IP20
Dimensions (H x W x D) [mm]	120 x 20 x 70	120 x 20 x 70	120 x 20 x 70
Memory [MB]	-	-	8 (SRAM)
Buffer time	-	-	Min. 4 years
Battery type	-	-	CR2450 3 V Lithium battery (CAP01.1-B2)
Power supply			
Internal	System bus	System bus	System bus
Internal power consumption [W]	2.8	0.3	1.0
External [V DC]	24	24	-
Tolerance (without residual ripple) [%]	-15/+20	-15/+20	-
Residual ripple [%]	±5	±5	-
U _{max} [V]	30	30	-
U _{min} [V]	19.2	19.2	-
Power consumption (max.) [A]	4	4	-
Digital inputs			
Number	-	Max. 16 (of which 8 are fixed and 8 can be bitwise configured as input or output)	-
Connection method	-	1-wire	-
Potential isolated from logic voltage	-	Yes	-
Reverse polarity protection	-	Yes	-
Input voltage at "0"/"1" [V DC]	-	-3 to +5/+11 to +30	-
Sensor supply [V DC]	-	24	-
Digital outputs			
Number	16	Max. 16 (of which 8 are fixed and 8 can be bitwise configured as input or output)	-
Connection method	1-wire	1-wire	-
Output type	Semiconductor, no retaining	Semiconductor, no retaining	-
Output voltage, nominal [V]	24	24	-
Rated output current [A]	0.5	0.5	-
Lamp load at 8 Hz [W]	5	5	-
Inductive load at 1 Hz [W]	6.2 (SG 1)	6.2 (SG 1)	-
Environmental conditions			
Ambient temperature (operation) [°C]	+5 to +55		
Ambient temperature (transport/storage) [°C]	-25 to +70		
Relative humidity	RH-2; 5 to 95% acc. to DIN EN 61131-2, no dewing		
Atmospheric pressure (operation)	Up to 2,700 m above sea level acc. to DIN 60204		
Atmospheric pressure (transport/storage)	Up to 3,000 m above sea level acc. to DIN 60204		
Mechanical strength			
Vibration/shock resistance	Tested according to EN 60068-2-6, EN 60068-2-27		
EMC immunity	Tested according to EN 61000-6-2, EN 61000-6-4		
Availability			
Automation system	IndraMotion MLC, IndraLogic XLC	IndraMotion MLC, IndraLogic, IndraLogic XLC	IndraMotion MLC, IndraMotion MTX

Note: The various function modules are not entirely supported by every system. For information on which function modules are supported by the system version used, please refer to the appropriate system-specific manual.



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IndraControl L – ordering data

Ordering data for hardware

Description	Type code
IndraControl L10	CML10.1-NN-210-NB-NNNN-NW
IndraControl L20, PROFIBUS	CML20.1-NP-120-NA-NNNN-NW
IndraControl L25, sercos III	CML25.1-3N-400-NN-NNC1-NW
IndraControl L25, configurable fieldbus interface	CML25.1-PN-400-NN-NNC1-NW
IndraControl L40, PROFIBUS	CML40.2-NP-330-NA-NNNN-NN
IndraControl L40, PROFIBUS, sercos II	CML40.2-SP-330-NA-NNNN-NN
IndraControl L45, configurable fieldbus interface	CML45.1-NP-500-NA-NNNN-NW
IndraControl L45, sercos III, configurable fieldbus interface	CML45.1-3P-500-NA-NNNN-NW
IndraControl L45, sercos III, configurable fieldbus interface, 8 MB SRAM	CML45.1-3P-504-NA-NNNN-NW
IndraControl L65, configurable fieldbus interface	CML65.1-NP-500-NA-NNNN-NW
IndraControl L65, sercos III, configurable fieldbus interface	CML65.1-3P-500-NA-NNNN-NW
IndraControl L65, sercos III, configurable fieldbus interface, 8 MB SRAM	CML65.1-3P-504-NA-NNNN-NW
IndraControl L85, sercos III, configurable fieldbus interface, 16 MB SRAM	CML85.1-3P-705-NA-NNNN-NW

Ordering data for function modules

Description	Type code
Real-time Ethernet/PROFIBUS	CFL01.1-TP
sercos III	CFL01.1-R3
Cross communication (sercos II with FO)	CFL01.1-Q2
PROFIBUS master	CFL01.1-P1
Programmable limit switch (16 high-speed outputs)	CFL01.1-N1
Fast I/O (8 inputs, 8 outputs, 8 user-configurable inputs or outputs)	CFL01.1-E2
SRAM module (8 MB, battery-buffered)	CFL01.1-Y1

Ordering data for accessories

Description	Type code
Fan for IndraControl L40	CAL01.1-F1
Fan for IndraControl L45/L65	CAL01.1-F2
Spare battery for SRAM module CFL01.1-Y1	CAP01.1-B2
Connector set for IndraControl L	R-IB IL CML S01-PLSET
Connector set for IndraControl L (continuous numbering)	R-IB IL CML S04-PLSET
Connector set for IndraControl L10 (sectioned numbering)	R-IB IL CML S03-PLSET
Labeling field, narrow	R-IB IL FIELD 2
Labeling field, wide	R-IB IL FIELD 8

Ordering data for documentation

Description	Type code
Project planning manual for IndraControl L10	DOK-CONTRL-IC*L10*****-PRxx-DE-P
Project planning manual for IndraControl L20	DOK-CONTRL-IC*L20*****-PRxx-DE-P
Project planning manual for IndraControl L25	DOK-CONTRL-IC*L25*****-PRxx-DE-P
Project planning manual for IndraControl L40	DOK-CONTRL-IC*L40*****-PRxx-DE-P
Project planning manual for IndraControl L45, L65, and L85	DOK-CONTROL-ICL45L64L85L-IS
Project planning manual for IndraControl L function modules	DOK-CONTRL-IC*L*FM*****-PRxx-DE-P

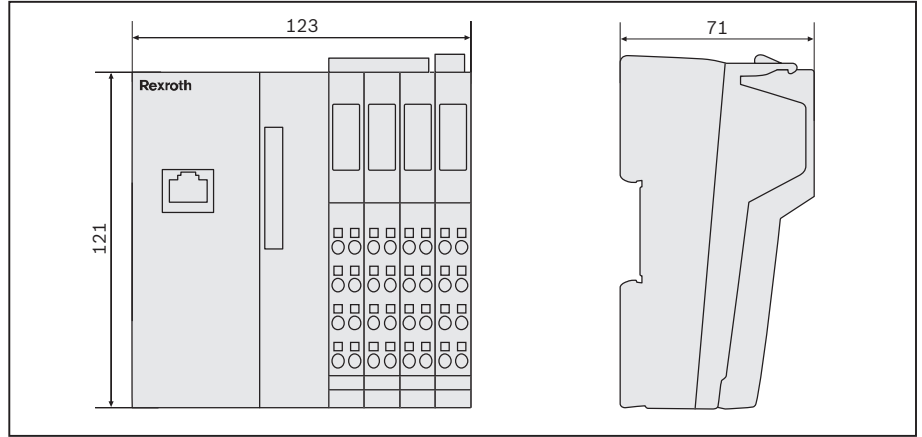
xx = software/firmware version, device version

Bosch Rexroth AG, 72 604 EN/2012-04

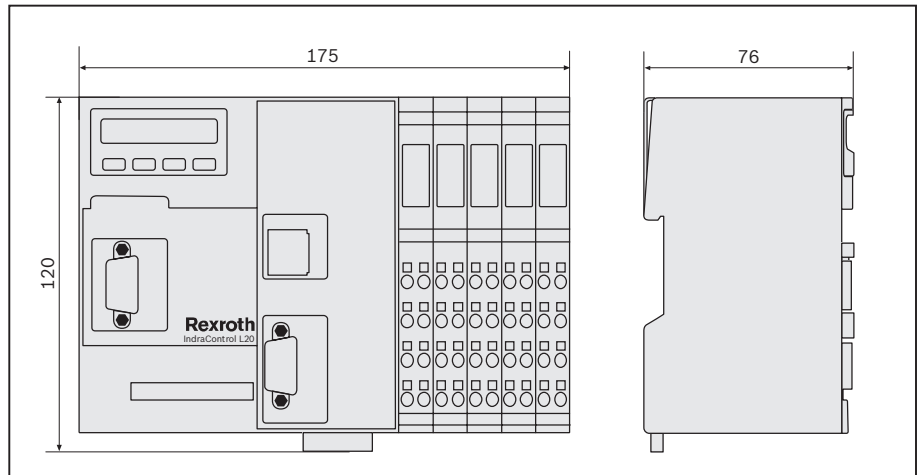


IndraControl L10, L20, and L25

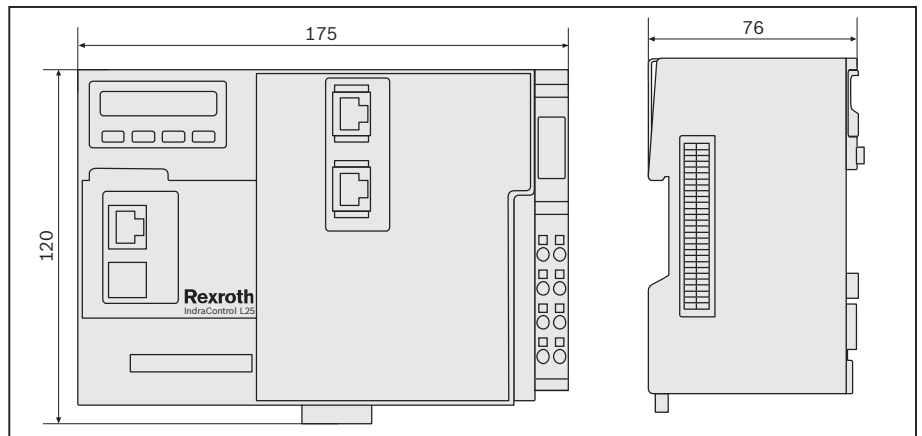
IndraControl L10



IndraControl L20



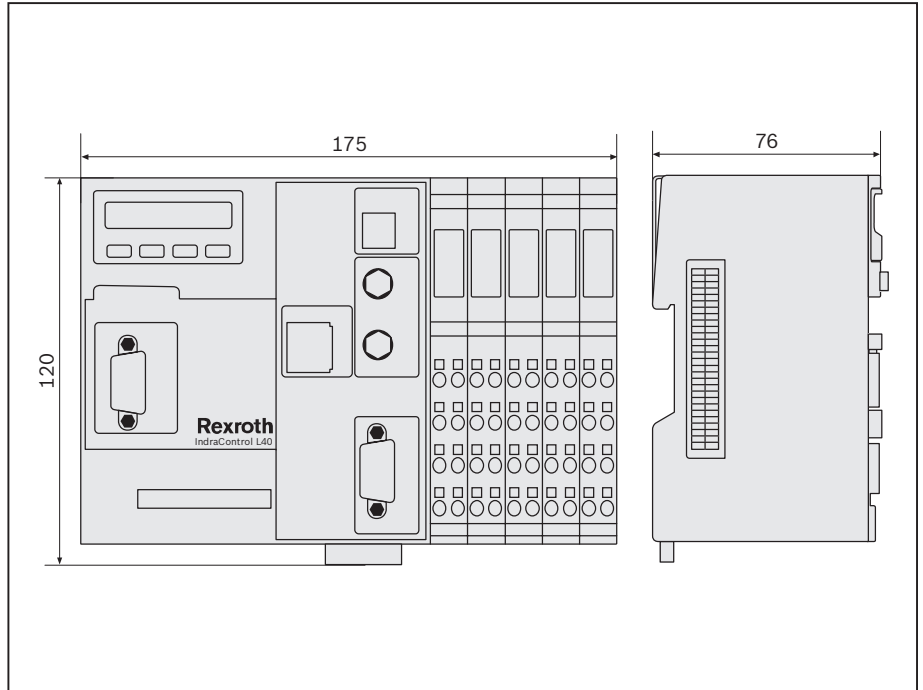
IndraControl L25





IndraControl L40, L45, L65, and L85

IndraControl L40



IndraControl L45, L65, and L85

