MURR ELEKTRONIK

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Cube67 and Cube20

Cost-Effective Decentralization

| Independent

| Modular

| Universal

cube67⁺

Your plus for more flexibility.

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DECENTRALIZED INSTALLATION
INNOVATIVE SOLUTIONS WITH CUBE67+

A PLUS FOR INCREASED FLEXIBILITY

Cube67 stands for efficient and economic solutions. The innovative fieldbus system from Murrelektronik has radically simplified and modernized decentralized installation. Now we present Cube67+ with a plus for increased flexibility.
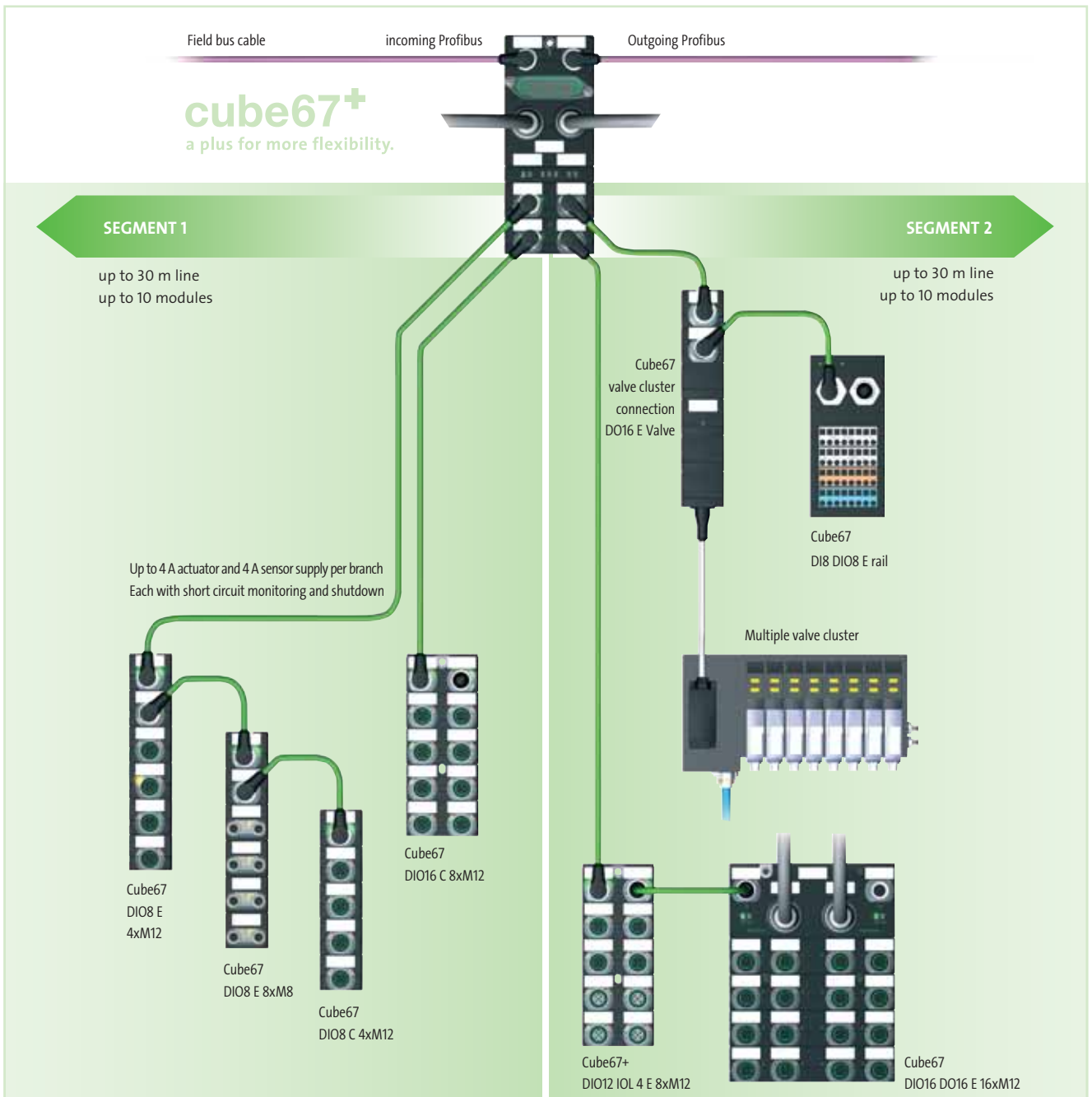
Cube67+ is a new, innovative bus node. With this module Murrelektronik expands its tried and tested Cube67 system. It allows fieldbus installations to be even more application-oriented.

Cube67+: the plus stands for…

+ an increased number of modules, up to 2 x 10 modules
+ increased cable lengths for installations up, to 2 x 30 meters
+ modules that can be installed at any position on the hybrid cable
+ daisy chaining of the power supply at the bus node

Cube67+: the plus stands for increased flexibility in decentralized installation technology with even more modules, longer cables, and higher performance.

Cube67+

cube67+
a plus for more flexibility.

Field bus cable   incoming Profibus   Outgoing Profibus

SEGMENT 1

up to 30 m line
up to 10 modules

SEGMENT 2

up to 30 m line
up to 10 modules

Cube67
valve cluster
connection
DO16 E Valve

Cube67
DI8 DIO8 E rail

Up to 4 A actuator and 4 A sensor supply per branch
Each with short circuit monitoring and shutdown

Multiple valve cluster

Cube67
DIO8 E
4xM12

Cube67
DIO8 E 8xM8

Cube67
DIO8 C 4xM12

Cube67
DIO16 C 8xM12

Cube67+
DIO12 IOL 4 E 8xM12

Cube67
DIO16 DO16 E 16xM12

SYSTEM DESCRIPTION CUBE67+		SINGLE-CHANNEL DIAGNOSTIC	
■ Number of modules per bus node	*20*	Display per PIN	*- Sensor short-circuit*
■ Number of modules per segment	*10*		*- Actuator short-circuit*
■ Addressing	*automatic*		*- Under voltage*
■ Connection	*hybrid line*		*- Wrong connection*
■ Max. system connection			*- DESINA diagnostic*
per segment	*30 m*	**DISPLAY**	
■ Topology	*Star/Line*	■ Module OK	*green*
■ Data security	*Hamming distance 6*	■ Initialization/	
■ Transmission type	*Change of State*	no data exchange	*green blinking*
		■ Diagnostic	*red*
		■ Signal status	*yellow*

CUBE67

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Profibus
DeviceNet
CANopen
EtherNet IP
Profinet

Incoming bus

Outgoing bus

Power distributor

Up to 16 I/O modules
per bus coupler

Sensor

Valve plug
MSUD

Separated supply for actuators
and sensors/system

up to 4 A

separate
actuator supply
(or from
power supply))

Up to 4 A actuator and 4 A
sensor supply per branch

up to 64 I/Os
per branch

Each with short circuit
monitoring and shutdown

T-Stück

Cube67
DI16 C 8xM12

Cube67
DIO16 E 8xM12

Cube67
DIO16 C 8xM12

Up to 10 m
up to 4 modules per branch *

Coils A and B driven
by one cable

Cube67
DIO8 C 4xM12

Cube20
BN-C DIO8

Cube20
DI32

Cube20
DO32

Cube20
DI16 DO16

Valve with central connector

SYSTEM DESCRIPTION CUBE67

- Number of modules per bus node — *16*
- Number of modules per branch — *4*
- Addressing — *automatic*
- Connection — *hybrid line*
- Max. distance between
  bus coupler and end of branch — *10 m*
- Topology — *Star/Line*
- Data security — *Hamming distance 6*
- Transmission type — *Change of State*

* Pay attention to projecting hints

SINGLE-CHANNEL DIAGNOSTIC

Display per PIN
- *Sensor short-circuit*
- *Actuator short-circuit*
- *Under voltage*
- *Wrong connection*
- *DESINA diagnostic*

DISPLAY

- Module OK — *green*
- Initialization/
  no data exchange — *green blinking*
- Diagnostic — *red*
- Signal status — *yellow*

ECONOMICAL DISTRIBUTION
MODULAR, COMPACT AND ROBUST

- The I/O layer is where you need it – right in the machine and close to the sensors and actuators, instead of occupying one large area or being concentrated in the control cabinet
- The minimal dimensions allow compact construction of the machine
- LEDs close to each sensor/actuator
- Easily expandable
- Shortest sensor and actuator cabling
- Reduces wiring costs, eliminates junction boxes
- Saves space in the machine or the control cabinet
- Can be combined with Murrelektronik Cube20

BECOME INDEPENDENT OF THE PLC PROTOCOL
CHANGE THE BUS INSTEAD OF THE SYSTEM
– YOU CHANGE ONLY THE BUS COUPLER

This makes the machine installation independent of the controls and the fieldbus, which means that the application can be adapted to the end user's PLC specifications without you having to modify the I/O periphery.
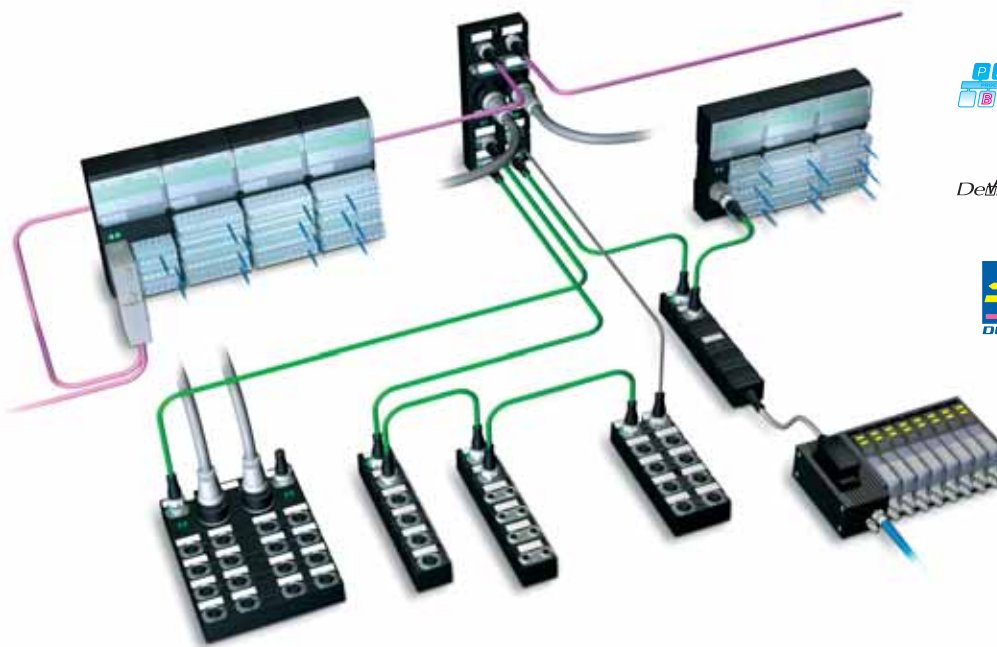
- Standardization of the installation
- Possibility of flexible response to all specifications from end users
- Configure the machine only once
- Create the documentation only once
- System skills needed only once
- Minimizes inventory

BUS NODES

MULTIFUNCTIONAL I/O MODULES

"DON'T LOOK FOR ERRORS – FIND THEM" – TOTAL DIAGNOSTIC

That means detailed information on type and location of the fault or error.

- Single-channel diagnostic and shut down
- Detailed message to controls
- Monitoring and shut down of the Cube67 system connection

Errors are found more quickly, while the system can even continue to operate. Downtimes are reduced, start-ups accelerated, remote maintenance is possible. And in case of error the complete module is not shut down, but only the plug position concerned.
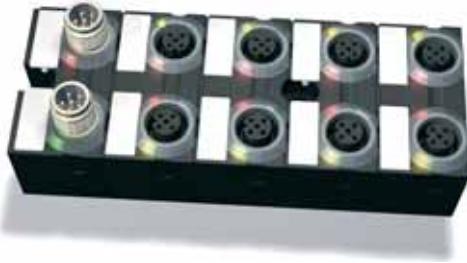
VALVE CLUSTER INTERFACES

SAFETY OUTPUTS
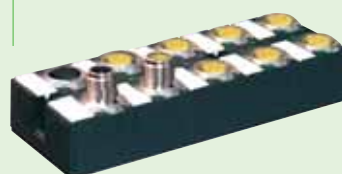
TERMINAL BLOCK MODULES

| CUBE67
FEATURES AND BENEFITS

Highest flexibility
through multifunctional I/Os

Both signals on each port can be configured independently, whether input, diagnostic input or output.

• Avoiding unused reserves
• Connecting double valves via one plug

"Don't look for errors, find them"–
Total diagnostic

Detailed information on type and location of the fault or error.

• Only the "affected" plug position shuts down
• Minimizes system downtime
• Makes remote maintenance possible
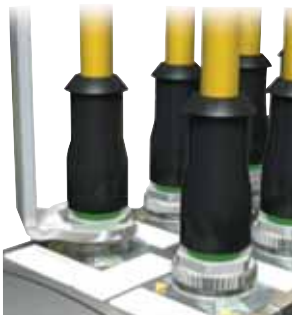
"Assemble and plug in – that's all"

Elaborate wiring replaced by quick, simple plugging.

• Avoids wiring errors
• Shortens commissioning time
• Quick swapping of cables

SIMPLIFIED INSTALLATION

Cube67 is the new benchmark in automation technology. Small, multi-functional I/O modules and the variety of different interfaces are the key to simplified installation. Assembly can take place in close proximity to sensors and actuators. This saves time during installation and offers advantages in service due to easy trouble-shooting.

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CUBE20
INNOVATIVE INSTALLATION TECHNOLOGY

Cube20 is a fieldbus I/O station with modular expandability, which can be integrated along with the Cube67 I/O system. Cube20 is designed to meet the requirements of modern control cabinet wiring. High costs caused by handling many individual components can be reduced by implementing Cube20, thanks to the compact design with a high channel density of 32 channels per I/O module. With 488 channels on 90 cm, Cube20 can help to save space and provide more flexibility. In addition, Cube20 comes with maintenance free plug terminals for single wire installations which are typical for control cabinets.

Practical Applications

Cube20 I/O modules are galvanically separated and have an integrated power-supply terminal. This simplifies the implementation of different potential groups.
Of course, Cube20 provides the convenient diagnostics already known from Cube67. This facilitates troubleshooting and thus minimizes downtimes.

Convenient Channel Diagnostics

- Signal status and error display directly at the connecting terminal
- Rapid failure localization
- Channel-related status display
- Reduced downtimes
- Increased productivity

NEW CONCEPTS FOR RATIONAL INSTALLATIONS

- Easier handling with a reduced number of individual components
- Save space with to high channel density and compact design
- I/O connections with maintenance-free connecting terminals
- Integrated power-supply terminals for practical applications

| OVERVIEW

	Name				Art.-No.	Page
Bus nodes	**Profibus-DP**	Cube20	BN-P		**56001**	26
	Profibus-DP	Cube67	BN-P		**56501**	12
	Profibus-DP	Cube67	BN-P für DESINA®/ECOFAST®		**56531**	12
	Profibus-DP	Cube67+	BN-P		**56521**	12
	DeviceNet	Cube67	BN-DN		**56507**	13
	CANopen	Cube67	BN-C		**56504**	13
	EtherNet-IP	Cube67	BN-E		**56505**	13
	ProfiNet-IO	Cube67	BN-PNIO		**56506**	13
Digital inputs	**C** *Compact*	Cube67	DI16	C 8xM12	**56602**	14
		Cube67	DI8	C 4xM12	**56612**	14
		Cube67	DI8	C 8xM8	**56622**	14
	E *Extension*	Cube67	DI16	E 8xM12	PNP **56603**	14
					NPN **56606**	14
		Cube67	DI8	E 4xM12	PNP **56613**	14
					NPN **56616**	14
		Cube67	DI8	E 8xM12	PNP **56623**	14
					NPN **56626**	14
		Cube20	DI32		**56112**	27
Digital inputs/outputs	**C** *Compact*	Cube67	DIO16	C 8xM12	**56600**	15
		Cube67	DIO8	C 4xM12	**56610**	15
		Cube67	DIO8	C 8xM8	**56620**	15
		Cube67	DIO16	C 8xM12 1,6 A	**56640**	15
	E *Extension*	Cube67	DIO8	E 4xM12 1 A	**56631**	15
		Cube67	DIO16	E 8xM12	**56601**	16
		Cube67	DIO8	E 4xM12	**56611**	16
		Cube67	DIO16/DO16	E 16xM12 1,6/2 A	**56641**	16
		Cube67	DIO8	E 8xM8	**56621**	16
		Cube67	DIO8	E Cable	**56661**	17
		Cube67	DIO16	E Cable	**56662**	17
		Cube67	DI16 DO16	E Cable	**56671**	17
		Cube67	DIO8/DI8	E TB Box	**56681**	24
		Cube67	DIO8/DI8	E TB Box	**5668100**	24
		Cube67	DIO8/DI8	E TB Rail	**56691**	24
		Cube67	DIO8	E M16 0,5 A	**56663**	17
		Cube67	DIO8	E Cable M12 ID	**5666500**	17
		Cube20	BN-C DIO8	system connection	**56450**	26
		Cube20	DI16 DO16		**56168**	28
Digital outputs	**E** *Extension*	Cube67	DO7 E Cable M12 Modlight		**5665503**	18
		Cube67	DO8 E Valve		**56655**	18
		Cube67	DO8 E Valve for FESTO CPV		**5665500**	18
		Cube67	DO8 E Valve for FESTO CPV (SUB-D9)		**5665501**	18
		Cube67	DO8 E Valve for FESTO MPA		**5665502**	18
		Cube67	DO16 E Valve		**56651**	18
		Cube67	DO16 E Valve for FESTO CPV		**5665100**	18
		Cube67	DO16 E Valve for PARKER serie V		**5665101**	18
		Cube67	DO16 E Valve for NORGREN V20/22		**5665110**	18
		Cube67	DO16 E Valve for NORGREN VM10		**566111**	18
		Cube67	DO16 E Valve for NORGREN V20/22B		**566112**	18

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		Name			Art.-No.	Page
		Cube67	DO16 E Valve	for SMC serie SV/VQ	**5665113**	18
		Cube67	DO16 E Valve	for SMC serie VQC (M27)	**5665114**	18
		Cube67	DO16 E Valve	for NORGREN V20/220	**5665115**	18
		Cube67	DO16 E Valve	for MAC VALVES	**5665116**	18
		Cube67	DO16 E Valve	for FESTO MPA	**5665118**	18
		Cube67	DO16 E Valve	for FESTO VTSA	**5665105**	18
		Cube67	DO16 E Valve	for FESTO CPV-SC (SUB-D15)	**5665102**	18
		Cube67	DO16 E Valve	for FESTO CPV-SC (SUB-D26)	**5665103**	18
		Cube67	DO32 E Valve		**56656**	18
		Cube67	DO32 E Valve	for NORGREN VM10	**5665600**	18
		Cube67	DO32 E Valve	for FESTO MPA	**5665601**	18
		Cube67	DO32 E Valve	for BOSCH HF03	**5665602**	18
		Cube67	DO32 E Valve	for NORGREN VM10	**5665603**	18
		Cube67	DO32 E Valve	for SMC serie SV	**5665604**	18
		Cube67	DO32 E Valve	for FESTO CPA	**5665605**	18
		Cube67	DO32 E Valve	for BOSCH HF04/HF03-LG	**5665606**	18
		Cube67	DO32 E Valve	for SMC serie VQC (M27)	**5665607**	18
		Cube67	DO32 E Valve	for SMC serie VQC (SUB-D25)	**5665614**	18
		Cube67	DO32 E Valve	for MAC VALVES	**5665609**	18
		Cube67	DO32 E Valve	for FESTO VTSA	**5665613**	18
		Cube67	DO32 E Valve	for VESTA (SUB-D37)	**5665610**	18
		Cube67	DO32 E Valve	for VESTA (SUB-D25)	**5665611**	18
		Cube20	DO32		**56118**	27
Safety outputs	**C** *Compact*	Cube67	DO16	C Valve K3	**56650**	19
	E *Extension*	Cube67	DO6/DO6	E 6xM12 K3	**56605**	19
Analog inputs	**C** *Compact*	Cube67	AI4	C 4xM12 (I)	**56730**	20
		Cube67	AI4	C 4xM12 (U)	**56700**	20
		Cube67	AI4	C 4xM12 RTD	**56740**	20
		Cube67	AI4	C 4xM12 TH	**56748**	20
		Cube67	AI4	C 4xM12 TH	**56945**	20
		Cube67	AI4	C 4xM12 TH	**56946**	20
	E *Extension*	Cube67	AI4	E 4xM12 (U)	**56701**	20
		Cube20	AI4	U/I	**56200**	29
		Cube20	AI4	RTD	**56230**	30
		Cube20	AI4	TH	**56240**	30
Analog inputs/outputs		Cube20	AI2 AO2	U/I	**56210**	29
Analog outputs	**C** *Compact*	Cube67	AO4	C 4xM12 (I)	**56720**	21
		Cube67	AO4	C 4xM12 (U)	**56710**	21
		Cube20	AO4	U/I	**56220**	29
Function modules		Cube67+	DIO12 IOL4	E 8xM12	**56752**	22
		Cube67	Logic	E 4xM12	**56771**	22
		Cube67	CNT 2	C 4xM12	**56750**	23
		Cube67	DIO4 RS485E	3xM12	**56760**	23

CUBE67 BUS NODES

Protection IP67

Cube67+ BN-P

Ordering data	Approvals	Art.-No.
	cULus pending	**56521**
Connections		
Field bus	M12 male/female, B-coded, 5-pole	
Supply voltage sensor/system/actuator	7/8" male/female, 5-pole, max. 9 A	
Cube67 system connection	M12 female, A-coded, 6-pole, max. 4 A	
Field bus		
Supply voltage	24 V DC (18...30.2 V), to EN61131-2	
Transfer protocol	Profibus-DP	
Addressing	0...99 via rotary switch	
Transfer rate	up to 12 Mbit/s	
System connection		
Plugs	4	
Module diagnostic		
Field bus	LED, according to standards	
Under voltage sensor/system/actuator	per system plug U_S < 18 V (red LED)/U_A < 18 V (red LED)	
Peripheral faults	port-related LED (red)	
Dimensions H x W x D	40.5 x 151 x 62 mm	

Protection IP67

Cube67 BN-P

Cube67 BN-P for DESINA®/ECOFAST®

Ordering data	Approvals	Art.-No.	Approvals	Art.-No.
	cULus	**56501**	–	**56531**
Connections				
Field bus	M12 male/female, B-coded, 5-pole		hybrid connector, CU	
Supply voltage sensor/system/actuator	7/8" male, 5-pole, max. 9 A		hybrid connector, max. 9 A	
Cube67 system connection	M12 female, A-coded, 6-pole, max. 4 A			
Field bus				
Supply voltage	24 V DC (18...30.2 V), to EN61131-2			
Transfer protocol	Profibus-DP			
Addressing	0...99 via rotary switch			
Transfer rate	up to 12 Mbit/s			
System connection				
Plugs	4			
Module diagnostic				
Field bus	LED, according to standards			
Under voltage sensor/system/actuator	per system plug U_S < 18 V (red LED)/U_A < 18 V (red LED)			
Peripheral faults	port-related LED (red)			
Dimensions H x W x D	50.7 x 151 x 50 mm		59 x 151 x 50 mm	

CUBE67 BUS NODES

Protection IP67

Protection IP67	Cube67 BN-DN *DeviceNet*		Cube67 BN-C **CAN**open	

Ordering data	Approvals	Art.-No.	Approvals	Art.-No.
	cULus	56507	cULus	56504
Connections				
Field bus	M12 male/female, A-coded, 5-pole			
Supply voltage sensor/system/actuator	7/8" male, 5-pole, max. 9 A			
Cube67 system connection	M12 female, A-coded, 6-pole, max. 4 A			
Field bus				
Supply voltage	24 V DC (18...30.2 V), to EN61131-2			
Transfer protocol	DeviceNet to ODVA		CANopen	
Addressing	0...63 via rotary switch		1...99 via rotary switch	
Transfer rate	125, 250 and500 kbit/s		10, 20, 50, 125, 250, 500, 800, 1000 kbit/s	
System connection				
Plugs	4			
Module diagnostic				
Field bus	LED, according to standards			
Under voltage sensor/system/actuator	per system plug U_S < 18 V (red LED)/U_A < 18 V (red LED)			
Peripheral faults	port-related LED (red)			
Dimensions H x W x D	50.7 x 151 x 50 mm			

Protection IP67

Protection IP67	Cube67 BN-E *EtherNet/IP conformance tested*		Cube67 BN-PNIO	

Ordering data	Approvals	Art.-No		Art.-No
	cULus	56505		56506
Connections				
Field bus	M12 male, D-coded, 4-pole			
Supply voltage sensor/system/actuator	7/8" male, 5-pole, max. 9 A			
Cube67 system connection	M12 female, A-coded, 6-pole			
Field bus				
Supply voltage	24 V DC (18...30.2 V), to EN61131-2			
Transfer protocol	EtherNet/IP® to ODVA, conformance tested		ProfiNet-I/O	
Addressing	DHCP; BOOTP; IP address via rotary switch		DCP	
Transfer rate	100 Mbit/s			
System connection				
Plugs	4			
Module diagnostic				
Field bus	LED, according to standards			
Under voltage sensor/system/actuator	per system plug U_S < 18 V (red LED)/U_A < 18 V (red LED)			
Peripheral faults	port-related LED (red)			
Dimensions H x W x D	50.7 x 151 x 50 mm			

CUBE67 DIGITAL INPUTS

Protection IP67	Cube67 DI16 C 8xM12		Cube67 DI8 C 4xM12		Cube67 DI8 C 8xM8	
Ordering data	Approvals	Art.-No.	Approvals	Art.-No.	Approvals	Art.-No.
	cULus	**56602**	cULus	**56612**	cULus	**56622**
System connection						
Communication and supply voltage	via system hybrid cable					
Terminator	built-in					
I/O plugs						
Sensor supply	24 V DC (18...30.2 V), to EN61131-2, ≤ 200 mA per M8/M12 female					
PIN 2	input/diagnostic input				–	
PIN 4	input					
Inputs						
Type	for 3-wire sensors or mechanical switches, PNP, EN61131-2 compatible					
Diagnostic inputs						
Type / function	EN61131-2 compatible / 24 V = high = OK (LED off); 0 V = low = error (red LED)				–	
Module diagnostic						
Under voltage sensor/system	U_S < 18 V (red LED)					
Peripheral faults	port-related LED (red)					
Dimensions H x W x D	34.5 x 126 x 50 mm		34.5 x 126 x 30 mm			

Protection IP67	Cube67 DI16 E 8xM12		Cube67 DI8 E 4xM12		Cube67 DI8 E 8xM8	
Ordering data	Approvals	Art.-No.	Approvals	Art.-No.	Approvals	Art.-No.
PNP	cULus	**56603**	cULus	**56613**	cULus	**56623**
NPN	cULus	**56606**	cULus	**56616**	cULus	**56626**
System connection						
Communication and supply voltage	via system hybrid cable					
I/O plugs						
Sensor supply	24 V DC (18...30.2 V), to EN61131-2, ≤ 200 mA per M8/M12 female					
PIN 2	input/diagnostic input (only at PNP)				–	
PIN 4	input					
Inputs						
PNP/NPN	for 3-wire sensors or mechanical switches, EN61131-2 compatible					
Diagnostic inputs (only at PNP)						
Type / function	EN61131-2 compatible / 24 V DC = high = OK (LED off); 0 V DC = low = error (red LED)				–	
Module diagnostic						
Under voltage sensor/system	U_S < 18 V (red LED)					
Peripheral faults	port-related LED (red)					
Dimensions H x W x D	34.5 x 126 x 50 mm		34.5 x 151 x 30 mm			
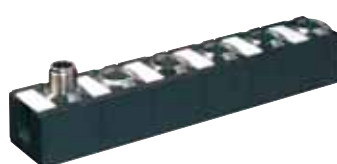
CUBE67 DIGITAL INPUTS/OUTPUTS

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Multi functional, user-configurable

Protection IP67

Ordering data	Cube67 DIO16 C 8xM12		Cube67 DIO8 C 4xM12		Cube67 DIO8 C 8xM8	
	Approvals	**Art.-No.**	**Approvals**	**Art.-No.**	**Approvals**	**Art.-No.**
	cULus	**56600**	cULus	**56610**	cULus	**56620**
System connection						
Communication and supply voltage	via system hybrid cable					
Terminator	built-in					
I/O plugs						
Sensor supply	24 V DC (18...30.2 V), to EN61131-2, ≤ 200 mA per M8/M12 female					
PIN 2	input/output/diagnostic input				–	
PIN 4	input/output					
Inputs						
Type	for 3-wire sensors or mechanical switches, PNP, EN61131-2 compatible					
Diagnostic inputs						
Type / function	EN61131-2 compatible / 24 V = high = OK (LED off); 0 V = low = error (red LED)				–	
Outputs						
Actuator supply	24 V DC (18...30.2 V), to EN61131-2 via system connection (∑ max. 4 A) and additional supply					
Output load	0.5 A, short-circuit and overload protection					
Module diagnostic						
Under voltage sensor/system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)					
Peripheral faults	port-related LED (red)					
Dimensions H x W x D	34.5 x 126 x 50 mm		34.5 x 126 x 30 mm			

Multifunctional, user-configurable

Power outputs

Protection IP67

Ordering data	Cube67 DIO16 C 8xM12 1.6 A	Cube67 DIO8 E 4xM12 1 A
	Art.-No.	**Art.-No.**
	56640	**56631**
System connection		
Communication and supply voltage	via system hybrid cable	
I/O plugs		
Sensor supply	24 V DC (18...30.2 V), to EN61131-2, ≤ 200 mA per M12 female	
PIN 2	input/output/diagnostic input	
PIN 4	input/output	
Inputs		
Type	for 3-wire sensors or mechanical switches, PNP, EN61131-2 compatible	
Diagnostic inputs		
Type / Function	EN61131-2 compatible / 24 V = high = OK (LED off); 0 V = low = error (red LED)	
Outputs		
Actuator supply	24 V DC (18...30.2 V), to EN61131-2 via system connection (∑ max. 4 A)	
Output load	1.6 A, short-circuit and overload protection	1.0 A, short-circuit and overload protection
Module diagnostic		
Under voltage sensor/system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)	
Peripheral faults	port-related LED (red)	
Dimensions H x W x D	34,5 x 126 x 50 mm	34,5 x 151 x 30 mm

CUBE67 DIGITAL INPUTS/OUTPUTS

- multifunctional I/O
- digital outputs

Protection IP67

Cube67 DIO16 DO16 16xM12 (1.6/2A)

Ordering data	Approvals	Art.-No.
	cULus	**56641**
System connection		
Communication and supply voltage	via system hybrid cable	
I/O plugs		
Sensor supply	24 V DC (18...30.2 V), to EN61131-2, ≤ 200 mA per M8/M12 female	
PIN 2 (8x M12 left side)	input/output/diagnostic input	
PIN 4 (8x M12 left side)	input/output	
PIN 2 (8x M12 right side)	set on output	
PIN 4 (8x M12 right side)	set on output	
Input		
Type	for 3-wire sensors or mechanical switches, PNP, EN61131-2 compatible	
Diagnostic inputs		
Type / function	EN61131-2 compatible / 24 V = high = OK (LED off); 0 V = low = error (red LED) –	
Outputs		
Actuator supply	24 V DC (18...30.2 V), to EN61131-2 via round plug connector 7/8" (∑ max. 2x 9 A)	
Output load (8x M12 left side)	1.6 A short-circuit and overload protection (coincidence factor 50% per port)	
Output load (8x M12 right side)	2 A short-circuit and overload protection (coincidence factor 50% per port)	
Module diagnostic		
Under voltage sensor/system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)	
Peripheral faults	port-related LED (red)	
Dimensions H x W x D	35 x 151 x 115 mm	

- multifunctional,
- user-configurable

Protection IP67

	Cube67 DIO16 E 8xM12		**Cube67 DIO8 E 4xM12**		**Cube67 DIO8 E 8xM8**	
Ordering data	Approvals	Art.-No.	Approvals	Art.-No.	Approvals	Art.-No.
	cULus	**56601**	cULus	**56611**	cULus	**56621**
System connection						
Communication and supply voltage	via system hybrid cable					
I/O plugs						
Sensor supply	24 V DC (18...30.2 V), to EN61131-2, ≤ 200 mA per M8/M12 female					
PIN 2	input/output/diagnostic input				–	
PIN 4	input/output					
Inputs						
Type	for 3-wire sensors or mechanical switches, PNP, EN61131-2 compatible					
Diagnostic inputs						
Type / function	EN61131-2 compatible / 24 V = high = OK (LED off); 0 V = low = error (red LED)				–	
Outputs						
Actuator supply	24 V DC (18...30.2 V), to EN61131-2 via system connection (∑ max. 4 A)					
Output load	0.5 A, short-circuit and overload protection					
Module diagnostic						
Under voltage sensor/system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)					
Peripheral faults	port-related LED (red)					
Dimensions H x W x D	34.5 x 126 x 50 mm		34.5 x 151 x 30 mm			

CUBE67 DIGITAL INPUTS/OUTPUTS

- multifunctional,
- user-configurable

Protection IP67

Ordering data	**Cube67 DI08 E M16 0.5A** Art.-No.	**Cube67 DI08 E Cable M12 ID** Art.-No.
	56663	**5666500**
System connection		
Communication and supply voltage	via system hybrid cable	
I/O plug		**for EUCHNER ID system type CIT 3PL1M30-STR**
I/O channels	input/output	
Inputs		**for EUCHNER ID system type CIT 3PL1M30-STR**
Sensor supply	1,6 A	
Type	for 3-wire sensors or mechanical switches, PNP, EN61131-2 compatible	
Outputs		**for EUCHNER ID system type CIT 3PL1M30-STR**
Actuator supply	24 V DC (18...30,2 V), to EN61131-2, ∑ max. 4 A (internal system connection)	
Output load	max. 70 mA	
Module diagnostic		
Under voltage sensor/system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)	
Peripheral faults	combined LED (red)	
Connection cable		
Type	2 m PUR cable; M16 male, straight, Art.-No. 7000-16751-9620200	PUR-OB; 0,5 m, M12 female 8-pole
	2 m PUR cable; M16 male, 90°, Art.-No. 7000-16851-9620200	
Dimensions H x W x D	34.5 x 151 x 30 mm	

- multifunktional I/O
- digital inputs
- digital outputs

Protection IP67

Ordering data	**Cube67 DI08 E Cable** Art.-No.	**Cube67 DI016 E Cable** Art.-No.	**Cube67 DI16 DO16 E Cable** Art.-No.
	56661	**56662**	**56671**
System connection			
Communication and supply voltage	via system hybrid cable		
I/O-Leitung			
Single wires	input/output		
Inputs			
Sensor supply	1.6 A	0.5 A	0.2 A
Type	for 3-wire sensors or mechanical switches, PNP, EN61131-2 compatible		
Outputs			
Actuator supply	24 V DC (18...30.2 V), to EN61131-2, ∑ max. 4 A (internal system connection)		
Output load	max. 70 mA	0.5 A	0.5 A
Module diagnostic			
Under voltage sensor/system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)		
Peripheral faults	combined LED (red)		
Connection cable			
Type	10 x 0.34 mm² PVC	20 x 0.14 mm² PUR	36 x 0.14 mm² PVC
Length	0.5 m		
Connection	single wires		
Dimensions H x W x D	34.5 x 151 x 30 mm		

CUBE67 DIGITAL OUTPUTS

Modlight interface

Protection IP67

Cube67 DO7 E Cable M12 Modlight

Ordering data		Art.-No.
With pre-wired M12 round plug connector, 8-pole	for Modlight70 connecting element base (Art.-No. 4000-75070-1500002, Art.-No. 4000-75070-1500003)	**5665503**
System connection		
Communication and supply voltage	via system hybrid cable	
Outputs		
Actuator supply	24 V DC (18...30,2 V), to EN 61131-2, ∑ max. 4 A (internal system connection)	
Output load	0,5 A, short-circuit and overload protection	
Module diagnostic		
Under voltage system/actuator	U_S < 18 V (LED red)/U_A < 18 V (LED red)	
Peripheral faults	combined LED (red)	
Connection cable		
Type	8 x 0,25 mm² PUR-OB, M12 female, 8-pole	
Length	0,5 m	
Dimensions H x W x D	34,5 x 151 x 30 mm	

Valve cluster interface

Protection IP67

Cube67 DO8 E Valve   **Cube67 DO16 E Valve**   **Cube67 DO32 E Valve**

Ordering data	Approvals	Art.-No.	Approvals	Art.-No.	Approvals	Art.-No.
With open ended wire	cULus	56655	cULus	56651	cULus	56656
With pre-wired multipole connector	for FESTO CPV	5665500	for FESTO CPV	5665100	for NORGREN VM10	5665600
	for FESTO CPV (SUB-D9)	5665501	for PARKER serie V	5665101	for FESTO MPA	5665601
			for NORGREN V20/22	5665110	for BOSCH HF03	5665602
			for NORGREN VM10	5665111	for NORGREN VM10	5665603
			for NORGREN V20/22B	5665112	for SMC serie SV	5665604
			for SMC serie SV/VQ	5665113	for FESTO CPA	5665605
			for SMC serie VQC (M27)	5665114	for BOSCH HF04/HF03-LG	5665606
			for NORGREN V20/220	5665115	for SMC serie VQC (M27)	5665607
			for MAC Valves (output load: 0.5 A)	5665116	for MAC Valves	5665609
			for FESTO MPA	5665118	for FESTO VTSA	5665613
			for FESTO VTSA	5665105	for VESTA (Sub-D37)	5665610
			for FESTO CPV-SC (Sub-D15)	5665102	for VESTA (Sub-D25)	5665611
			for FESTO CPV-SC (Sub-D26)	5665103	for SMC serie VQC (Sub-D25)	5665614
System connection						
Communication and supply voltage	via system hybrid cable					
Outputs						
Actuator supply	24 V DC (18...30.2 V), to EN61131-2, ∑ max. 4 A (internal system connection)					
Output load	max. 70 mA, short-circuit and overload protection				0.5 A, short-circuit and overload protection	
Module diagnostic						
Under voltage system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)					
Peripheral faults	combined LED (red)					
Connection cable						
Type	10 x 0.34 mm² PUR-OB		18 x 0.25 mm² PVC		36 x 0.14 mm² PVC	
Length	0.5 m		0.5 m		0.5 m	
Dimensions H x W x D	34.5 x 151 x 30 mm					

CUBE67 SAFETY OUTPUTS

Valve cluster interface

- Safety outputs
- EN954-1, category 3

Protection IP67

Cube67 DO16 C Valve K3

Ordering data		Art.-No.
With pre-wired multipole connector	for FESTO CPV	**56650**
System connection		
Communication and supply voltage	via system hybrid cable	
Actuator supply	5 m, Art.-No. 7000-15101-1380500	
	10 m, Art.-No. 7000-15101-1381000	
Outputs		
Actuator supply	24 V DC (18...30.2 V), to EN61131-2, $\sum$ max. 4 A (separate cable, cross-link safe)	
Safety actuator circles	4	
Output load	0.5 A	
Module diagnostic		
Under voltage system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)	
Peripheral faults	combined LED (red)	
Connection cable		
Type	cross-link safe	
Length	0.5 m	
Dimensions H x W x D	34.5 x 151 x 30 mm	

- Safety outputs
- EN954-1, category 3

Protection IP67

Cube67 D06 D06 E 6xM12 K3
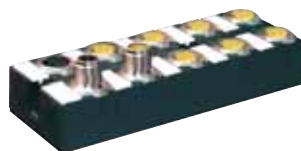
Ordering data	Approvals	Art.-No.
	cULus	**56605**
System connection		
Communication and supply voltage	via system hybrid cable	
I/O plugs		
PIN 2	output	
PIN 4	output	
Outputs		
Actuator supply	24 V DC (18...30.2 V), to EN61131-2 (2 voltage circles $\sum$ each 4 A max.)	
Safety actuator circles	2	
Output load	1.6 A, short-circuit and overload protection	
Module diagnostic		
Under voltage system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)	
Peripheral faults	port-related LED (red)	
Dimensions H x W x D	34.5 x 126 x 50 mm	

CUBE67 ANALOG INPUTS
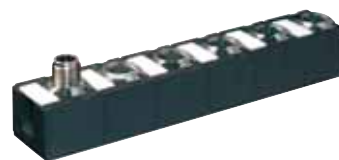
For current and voltage	Cube67 AI4 C 4xM12 (I) Current		Cube67 AI4 C 4xM12 (U) Voltage		Cube67 AI4 E 4xM12 (U) Voltage	

Protection IP67

Ordering data	Approvals	Art.-No.	Approvals	Art.-No.	Approvals	Art.-No.
	cULus	**56730**	cULus	**56700**	cULus	**56701**
System connection						
Communication and supply voltage	via system hybrid cable					
Inputs						
Sensor supply	24 V DC (18...30.2 V), ≤ 200 mA					
PIN 2	current input (+)		voltage input (+)			
PIN 4	current input (−)		voltage input (−)			
Inputs current/voltage						
No. of channels	4					
Input resistor	approx. 300 Ohm, difference input		approx. 1 MOhm, difference input			
Input range	0...20 mA, 4...20 mA		± 10 V DC, 0...10 V DC			
Resolution	15 bit		15 bit + sign			
Conversion time	approx. 4 ms per channel					
Module diagnostic						
Under voltage sensor/system	U_S < 18 V (red LED)					
Peripheral faults	port-related LED (red)					
Dimensions H x W x D	34.5 x 126 x 30 mm				34.5 x 151 x 30 mm	

For temperature converter	Cube67 AI4 C 4xM12 RTD PT100	Cube67 AI4 C 4xM12 TH Thermo elements

Protection IP67

Ordering data		Art.-No.		Art.-No.
		56740		**56748**
Compensation plug M12 straight				**56945**
Compensation plug M12 90°				**56946**
System connection				
Communication and supply voltage	via system hybrid cable			
Inputs				
Connection technology	2-, 3-, 4-wire		2-wire	
No. of channels	4		4	
Accuracy (ambient temperature 0...50 °C)	≤ ± 0.5 %		≤ ± 0.5 %, cold junction compensation	
Technical data				
Sensor types	Pt 100, 200, 500, 1000, Ni 100, 120, 200, 500, 1000, R 0...3000 Ω		K, N, J, E, R	
Conversion time	approx. 58 ms per channel		approx. 65 ms per channel	
Data format	15 bit + sign			
Module diagnostic				
Under voltage sensor	U_S < 18 V (red LED)			
Wire-break, upper/low limit	red LED per channel			
Dimensions H x W x D	34.5 x 126 x 30 mm			

CUBE67 ANALOG OUTPUTS

For current and voltage

Protection IP67

Cube67 AO4 C 4xM12 (I)
Current

Cube67 AO4 C 4xM12 (U)
Voltage

Ordering data	Approvals	Art.-No.	Approvals	Art.-No.
	cULus	**56720**	cULus	**56710**
System connection				
Communication and supply voltage	via system hybrid cable			
Outputs				
Sensor supply	≤ 1.6 A per M12 female via actuator supply			
PIN 4	current output		voltage output	
Outputs current/voltage				
No. of channels	4			
Load	≤ 500 Ohm		≥ 500 Ohm	
Range	0...20 mA, 4...20 mA		± 10 V DC, 0...10 V DC	
Resolution	11 bit		11 bit + sign	
Conversion time	approx. 2 ms per channel			
Module diagnostic				
Under voltage system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)			
Peripheral faults	port-related LED (red)			
Dimensions H x W x D	34.5 x 126 x 30 mm			

CUBE67 FUNCTION MODULES

- multifunctional,
- user-configurable

IO Link Master

Protection IP67

⊘ **IO**-Link

Cube67+ DIO12 IOL4 E 8xM12

Ordering data	Approvals	Art.-No.
	cULus pending	**56752**
Systemverbindung		
Communication and supply voltage	via system hybrid cable	
I/O plugs		
Sensor supply	24 V DC (18...30.2 V), to EN61131-2, ≤ 200 mA M12 female 0-3, ≤ 700 mA M12 female 4-7	
PIN 2	input/output/diagnostic input	
PIN 4	Einput/output M12 female 0-3, IO-Link Master M12 female 4-7	
IO Link		
Port type	A (B possible without galvanic separation of US and UA)	
Operating mode	SIO, COM1, COM2, COM3	
Inputs		
Type	for 3-wire sensors or mechanical switches, PNP, EN61131-2 compatible	
Diagnostic inputs		
Type / function	EN61131-2 compatible / 24 V = high = OK (LED off); 0 V = low = error (red LED)	
Outputs		
Actuator supply	24 V DC (18...30.2 V), to EN61131-2, ∑ max. 4 A (internal system connection)	
Output load	1.6 A, short-circuit and overload protection	
Module diagnostic		
Under voltage sensor/system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)	
Peripheral faults	port-related LED (red)	
Dimensions H x W x D	34.5 x 126 x 50 mm	

Logic module,
pre-processing

Protection IP67

Cube67 Logic E 4xM12
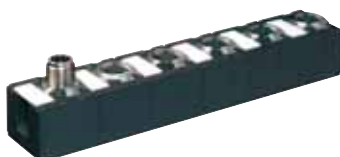
Ordering data		Art.-No.
		56771
System connection		
Communication and supply voltage	via system hybrid cable	
Logical function		
Inputs	3 M12 plugs with 2 inputs per plug	
Outputs	1 M12 plug with 2 outputs per plug	
Logical function	AND/NOR; AND; XOR user-configurable	
Inputs		
Sensor supply	24 V DC (18...30.2 V), to EN61131-2, ≤ 200 mA per M12 plug	
PIN 2/PIN 4	for 3-wire sensors or mechanical switches, PNP, EN61131-2 compatible	
Outputs		
Actuator supply	24 V DC (18...30.2 V), to EN61131-2, ∑ max. 4 A (internal system connection)	
Output load	0.5 A, short-circuit and overload protection	
Module diagnostic		
Under voltage sensor/system/actuator	U_S < 18 V (red)/U_A < 18 V (red)	
Peripheral faults	port-related LED (red)	
Dimensions H x W x D	34.5 x 151 x 30 mm	

CUBE67 FUNCTION MODULES

**Counter module,
pre-processing**

Protection IP67

Cube67 CNT 2 C 4xM12

Ordering data	Art.-No.
	56750
System connection	
Communication and supply voltage	via system hybrid cable
Counter function	
Counter frequency	max. 300 kHz
Counter inputs	2, to EN61131-2
Count depth	32 bit (31 bit + sign)
Inputs	
Sensor supply	24 V DC (18...30.2 V), to EN61131-2, ≤ 200 mA per M12 plug
PIN 2/PIN 4	for 3-wire sensors or mechanical switches, PNP, EN61131-2 compatible
Outputs	
Actuator supply	24 V DC (18...30.2 V), to EN61131-2, ∑ max. 4 A (internal system connection)
Outputs	2, (1 output per counter)
Output load	1.6 A, short-circuit and overload protection
Module diagnostic	
Under voltage sensor/system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)
Peripheral faults	port-related LED (red)
Dimensions H x W x D	34.5 x 126 x 30 mm

**Multifunctional,
user-configurable**

Serial interface

Protection IP67

Cube67 DIO4 RS485 E 3xM12

Ordering data	Art.-No.
	56760
System connection	
Communication and supply voltage	via system hybrid cable
I/O plugs	
PIN 2	input/output/diagnostic input
PIN 4	input/output
Inputs	
Sensor supply	24 V DC (18...30.2 V), to EN61131-2, ≤ 200 mA per M12 female
Type	for 3-wire sensors or mechanical switches, PNP, EN61131-2 compatible
Diagnostic inputs	
Sensor supply	24 V DC (18...30.2 V), to EN61131-2, ≤ 200 mA per M12 female
Type / function	EN61131-2 compatible / 24 V = high = OK (LED off); 0 V = low = error (red LED)
Outputs	
Actuator supply	24 V DC (18...30.2 V), to EN61131-2, ∑ max. 4 A (internal system connection)
Output load	0.5 A, short-circuit and overload protection
RS485	
Type	RS485, galvanically separated, M12 female, 5-pole, difference signal
Transfer parameters	9600 baud, half douplex, 8 bit, even parity, 1 stop bit
Compatibility	SEW MOVIMOT® (PLC function blocks available via www.murrelektronik.com)
Module diagnostic	
Under voltage sensor/system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED), if outputs are parameterized
Peripheral faults	port-related LED (red)
Dimensions H x W x D	34.5 x 126 x 30 mm

CUBE67 DIGITAL INPUTS/OUTPUTS

Terminal connections

**Multifunctional,
user-configurable**

Ordering data	Cube67 DIO8/DI8 E TB Box Protection IP65 Art.-No.	Cube67 DIO8/DI8 E TB Rail Protection IP20 Art.-No.
	56681	**56691**
with additional common terminals	**5668100**	
System connection		
Communication and supply voltage	via system hybrid cable	
I/O terminals		
Terminals X 0 (8 channels)	input	
Terminals X 1 (8 channels)	input/output	
Terminals X 2 (sensor supply)	24 V DC (18...30.2 V), to EN61131-2, 8 x ≤ 200 mA	
Terminals X 3 (Potential)	0 V	
Terminals X 4 (potential free)	(only Art.-No. 5668100)	–
Inputs		
Type	for 3-wire sensors or mechanical switches, PNP, EN61131-2 compatible	
Outputs		
Actuator supply	24 V DC (18...30.2 V), to EN61131-2 via system connection (∑ max. 4 A)	
Switching current per output	0.5 A, short-circuit and overload protection	
Module diagnostic		
Under voltage sensor/system/actuator	U_S < 18 V (red LED)/U_A < 18 V (red LED)	
Peripheral faults	I/O channel-related LED (red)	
Dimensions H x W x D	81 x 130 x 94 mm	45 x 113 x 54 mm

CUBE67 SYSTEM ACCESSORIES

Power distributor

Protection IP67

Cube67 PD 7/8"

Ordering data		Art.-No.
		56955
Voltage input		
Supply voltage	24 V DC (18...30.2 V), to EN61131-2	
Connection technology	7/8" male, 5-pole	
Current load	max. 9 A	
Voltage output		
Number	4	
Connection technology	M12 female, 6-pole	
Current-carrying capacity	max. 4 A	
Short-circuit protection	electronic	
Module diagnostic		
Supply voltage	M12 port-related LED (green)	
Peripheral faults	M12 port-related LED (red)	
Dimensions H x W x D	34.5 x 151 x 30 mm	

Isolation plug connector for system cable

Protection IP65

	Cube67 FSC Pin M12	Cube67 FSC Socket M12 Mount	Cube67 FSC Socket M12
Ordering data	Art.-No.	Art.-No.	Art.-No.
	56947	**56948**	**56949**
Technical data			
Supply voltage	24 V DC		
Supply current	4 A		
Connection	M12 female 6-pole, Han-Brid® male, 6-pole	M12 male 6-pole, Han-Brid® female, 6-pole	
Insertion cycles Han-Brid®	≥ 500		
Dimensions H x W x D	74 x 33.5 x 28.5 mm	80.5 x 40 x 40 mm	80.5 x 34 x 32 mm

CUBE67/CUBE20 – MODULARE I/O-STATION

Bus node

Cube20 BN-P DI8
Profibus-DP

Ordering data		Art.-No.
		56001
Fieldbus		
Nominal voltage	24 V DC (18 ...30,2 V), acc. to EN61131-2	
Current consumption	max. 150 mA	
Type	Profibus-DP Slave	
Transfer rate	up to 12 MBit/s	
Addressing	1...99 by rotary switch	
I/O capacity	modular expandability up to max. 16 Cube20 I/O modules	
Inputs/Outputs		
Nominal voltage	24 V DC (18 ... 30,2 V), acc. to EN61131-2	
Connection	Spring clamp plug-in terminals; ≤ 12 A, max. 2,5 mm^2	
Galvanic isolation	yes	
Digital inputs	8	
Sensor supply U$_S$	24 V DC (18 ... 30,2 V), acc. to EN61131-2 ≤ 700 mA per module, short-circuit and overload protected	
Diagnostics	module related monitoring of the actuator supply with diagnostic via the fieldbus and LED status display	
General data		
Dimensions H x W x D	117 x 56 x 47 mm	

Bus node

– multifunctional I/Os

Cube20 BN-C DIO8
Cube67 system connection

Ordering data		Art.-No.
		56450
Fieldbus		
Nominal voltage	24 V DC (18 ...30,2 V), acc. to EN61131-2	
Current consumption	max. 80 mA	
Type	Cube67 I/O module	
Addressing	automatic	
I/O capacity	modular expandability up to max. 4 Cube20 I/O modules	
Inputs/Outputs		
Nominal voltage	24 V DC (18 ... 30,2 V), acc. to EN61131-2	
Connection	spring clamp plug-in terminals; ≤ 12 A, max. 2,5 mm^2	
Galvanic isolation	yes	
Multifunctional channels	8 channels optional in-/output acc. EN61131-2, current carrying capacity of outputs up to 0.5 A/channel, short-circuit and overload protection	
Sensor supply U$_S$	24 V DC (18 ... 30,2 V), acc. to EN61131-2 ≤ 700 mA per module	
Diagnostic output	single channel diagnostic via the fieldbus and LED	
Diagnostic input	module related monitoring of the actuator supply with diagnostic via the fieldbus and LED status display	
General data		
Dimensions H x W x D	117 x 56 x 47 mm	

CUBE67/CUBE20 – MODULARE I/O-STATION

Input modules

– digital I/Os

Cube20 DI32

Ordering data	Art.-No.
	56112
Internal communication	
Module supply	via system connection
Current consumption	max. 25 mA
Inputs	
Number of channels	32
Sensor voltage U_I	24 V DC (18 ... 30,2 V), acc. to EN61131-2 via spring clamp plug-in terminals, max. 2,5 mm^2
Galvanic isolation	yes
Sensor supply U_S	24 V DC (18 ... 30,2 V), acc. to EN61131-2 ≤ 700 mA per module, short-circuit and overload protected
Type	PNP acc. to EN61131-2
Status indicator	yellow LED per input
Input filter	1 ms
Diagnostics	module related monitoring of the actuator supply with diagnostic via the fieldbus and LED status display
General data	
I/O connector	spring clamp plug-in terminals, max. 2,5 mm^2
Dimensions H x W x D	117 x 56 x 47 mm

Output modules

– digital I/Os

Cube20 DO32

Ordering data	Art.-No.
	56118
Internal communication	
Module supply	via system connection
Current consumption	max. 25 mA
Outputs	
Number of channels	32
Actuator voltage U_A	24 V DC (18 ... 30,2 V), acc. to EN61131-2 via spring clamp plug-in terminals ≤ 12 A, max. 2,5 mm^2
Galvanic isolation	yes
Load per output	0,5 A, short-circuit and overload protected
Lamp load	10 W
Max. switching frequency	resistive load 50 Hz, inductive load 5 Hz
Diagnostics	single channel diagnostic via the fieldbus and LED
General data	
I/O connector	spring clamp plug-in terminals, max. 2,5 mm^2
Dimensions H x W x D	117 x 56 x 47 mm

CUBE67/CUBE20 – MODULARE I/O-STATION IP67/IP20

Output modules
Input modules

– digital I/Os

Cube20 DI16 DO16

Ordering data	Art.-No.
	56168
Internal communication	
Module supply	via system connection
Current consumption	max. 25 mA
Inputs	
Number of channels	16
Sensor voltage U_I	24 V DC (18 ... 30,2 V), acc. to EN61131-2 via spring clamp plug-in terminals, max. 2,5 mm^2
Galvanic isolation	yes
Sensor supply U_S	24 V DC (18 ... 30,2 V), acc. to EN61131-2 ≤ 700 mA per module, short-circuit and overload protected
Type	PNP acc. to EN61131-2
Input filter	1 ms
Diagnostics input	module related monitoring of the actuator supply with diagnostic via the fieldbus and LED status display
Outputs	
Number of channels	16
Actuator voltage U_A	24 V DC (18 ... 30,2 V), acc. to EN61131-2 via spring clamp plug-in terminals, max. 2,5 mm^2
Galvanic isolation	yes
Load per output	0,5 A, short-circuit and overload protected
Lamp load	10 W
Max. switching frequency	resistive load 50 Hz, inductive load 5 Hz
Diagnostics	single channel diagnostic via the fieldbus and LED
General data	
I/O connector	spring clamp plug-in terminals, max. 2,5 mm^2
Dimensions H x W x D	117 x 56 x 47 mm

CUBE67/CUBE20 – MODULARE I/O-STATION IP67/IP20

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Input module
Input/output module
Output module

– analog I/Os

Cube20 AI4 U/I
Input module

Cube20 AO4 U/I
Output module

Ordering data	Art.-No.	Art.-No.
	56200	**56220**
Internal communication		
Module supply	via system connection	
Current consumption	30 mA from system, 105 mA external (U$_I$)	
Inputs/Outputs		
Number of channels	4 analog IN	4 analog OUT
Galvanic isolation	yes	
Supply voltage	24 V DC (18 ... 30,2 V), acc. to EN61131-2 via spring clamp plug-in terminals, max. 2,5 mm²	
Sensor supply	24 V DC (18 ... 30,2 V), acc. to EN61131-2 via spring clamp plug-in terminals, max. 2,5 mm²	
Input type	differencial voltage/current input	–
Voltage inputs		
Input resistance	≥ 1 MOhm acc. to EN 61131-2	–
Input range/resolution	-10 V...+10 V/ 10 bit + sign	–
Conversion time	≤ 2 ms per channel	–
Current inputs		
Load	≤ 300 Ohm acc. to EN 61131-2	–
Input range/resolution	0...20 mA, 4...20 mA/ 15 bit + sign	–
Conversion time	< 2 ms per channel	–
Voltage outputs		
Load resistance	–	≥ 1000 Ohm acc. to EN 61131-2
Input range/resolution	–	-10 V ... +10 V/ 11 bit + sign
Conversion time	–	≤ 1 ms per channel
Current outputs		
Load	–	≤ 600 Ohm acc. to EN 61131-2
Input range/resolution	–	0...20 mA, 4...20 mA/ 15 bit + sign
Conversion time	–	≤ 1 ms per channel
General data		
I/O connector	spring clamp plug-in terminals, max. 2,5 mm²	
Dimensions H x W x D	117 x 56 x 47 mm	

CUBE20 – MODULARE I/O-STATION

Input modules

– Temperature converter
– analog I/Os

Cube20 AI4 RTD
resistance temperature detectors

Cube20 AI4 TH
thermocouple

Ordering data		Art.-No.		Art.-No.
		56230		**56240**
Internal communication				
Module supply	via system connection			
Current consumption	25 mA from system, 70 mA external U_I		25 mA from system, 45 mA external U_I	
Analog Inputs				
Number of channels	4			
Resolution	15 bit + sign			
Inputs				
Measuring resistors	Pt100, 200, 500; Ni100, 120, 200, 500, 1000, R 0...3000 Ohm		–	
Conversion time	max. 600 ms per channel		max. 300 ms per channel	
Input type	3-wire; +Rx, RLx, -Rx		2-wire, integrated cold junction compensation	
Thermocouple	–		K, N, E, J, R	
Galvanic isolation	yes			
Supply voltage	24 V DC (18 ... 30,2 V), acc. to EN61131-2 via spring clamp plug-in terminals, max. 2,5 mm²			
General data				
I/O connector	spring clamp plug-in terminals, max. 2,5 mm²			
Dimensions H x W x D	117 x 56 x 47 mm			

ACCESSOIRES

Ordering data			Art.-No.
	Cube20 Common terminal block	brown/blue	**56109**
		blue/yellow	**56110**
		blue/yellow/brown/blue	**56111**
	System cable Cube20-MISR	1 m	**56301**
		2 m	**56302**
		3 m	**56303**
	Sheet with labels	40 labels per sheet	**56113**
	Cube20 terminal tool		**56114**
	Profibus-plug	Insulation displacement technology (for rigid cables)	**55585**
		with PG connection, Insulation displacement technology (for rigid cables)	**55586**
		Insulation displacement technology (for flexible cables)	**55587**
		with PG connection, Insulation displacement technology (for flexible cables)	**55588**

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