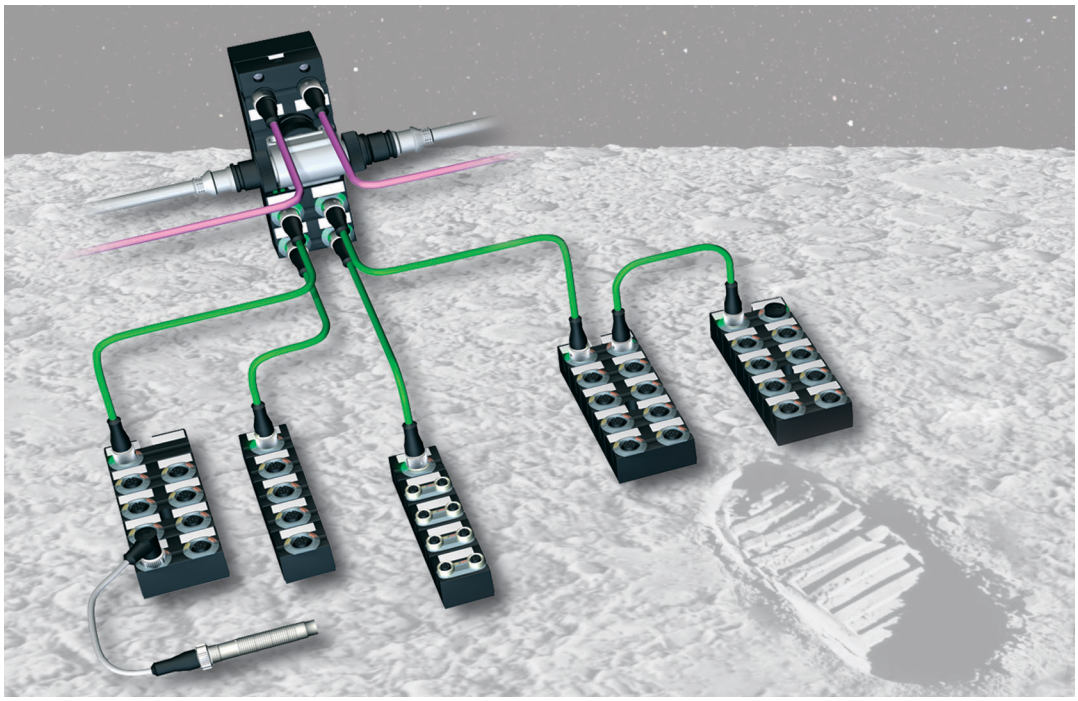
Cube67 – the flexible IP67 bus system



Only a small step for you, but…
… a great leap forward for the rationalization of your installation

- **Simplified planning**
- **Reduced cost of installation in time and money**
- **Shorter commissioning**
- **Simplifies fault searches**
- **Minimized machine downtime**

RATIONIK

Following our RATIONIK® principle, this leads to a more efficient way of creating your application, and lowers the total cost of the system.

Cube67 – that's the innovative IP67 protection I/O system for the most common field bus systems. The innovation is seen partly in a distributed, modular concept, partly in the new technologies such as multifunctional I/Os and the comprehensive diagnosis functionality.

Assemble, plug in – that's it!

Distributed, modular concept means that, starting with a field bus coupler, the I/O layer is distributed right in the machine, connected by just one hybrid cable for supply and communication. The individual I/O modules are independent from the fieldbus, and are initialized automatically, i.e. no separate addressing. Assemble, plug in – that's it!

Bus change instead of system change

The bus coupler establishes the connection to the field bus. The entire machine installation is thus independent of the field bus system used, and can be configured as a universal standard for all variants of the machine with their different controls. This opens up potential for cost savings, because separate engineering, documentation, etc. are no longer necessary.

Multifunctional I/Os

Multifunctional I/Os, and the free parameterization of the plug positions, whether input, output or debugging input, give a maximum of flexibility. You can choose which plug position you need for an input or output, for 2 signals per M12 socket. Separate modules for inputs and outputs are no longer needed. The number of variants is minimized, storage costs are reduced, and modifications to the configuration e.g. during commissioning are no problem. With the 2 signals per socket, for example, valves with central plugs can be directly addressed with only one cable without having to assign an extra plug position. This saves space and reduces costs.

Cube67 – the flexible IP67 bus system

The compact, robust construction of the fully encapsulated Cube67 modules allows them to be used right where the process happens. This results in the shortest of I/O lines to the sensors and actuators. Yards of cable in wide conduits are a thing of the past, and cables can be swapped in an instant.
With the comprehensive debugging functionality of the system, giving detailed information on type and location of the machine fault, errors can be found and fixed quickly. This reduces machine down times and shortens commissioning.

Distributed, modular, compact, robust

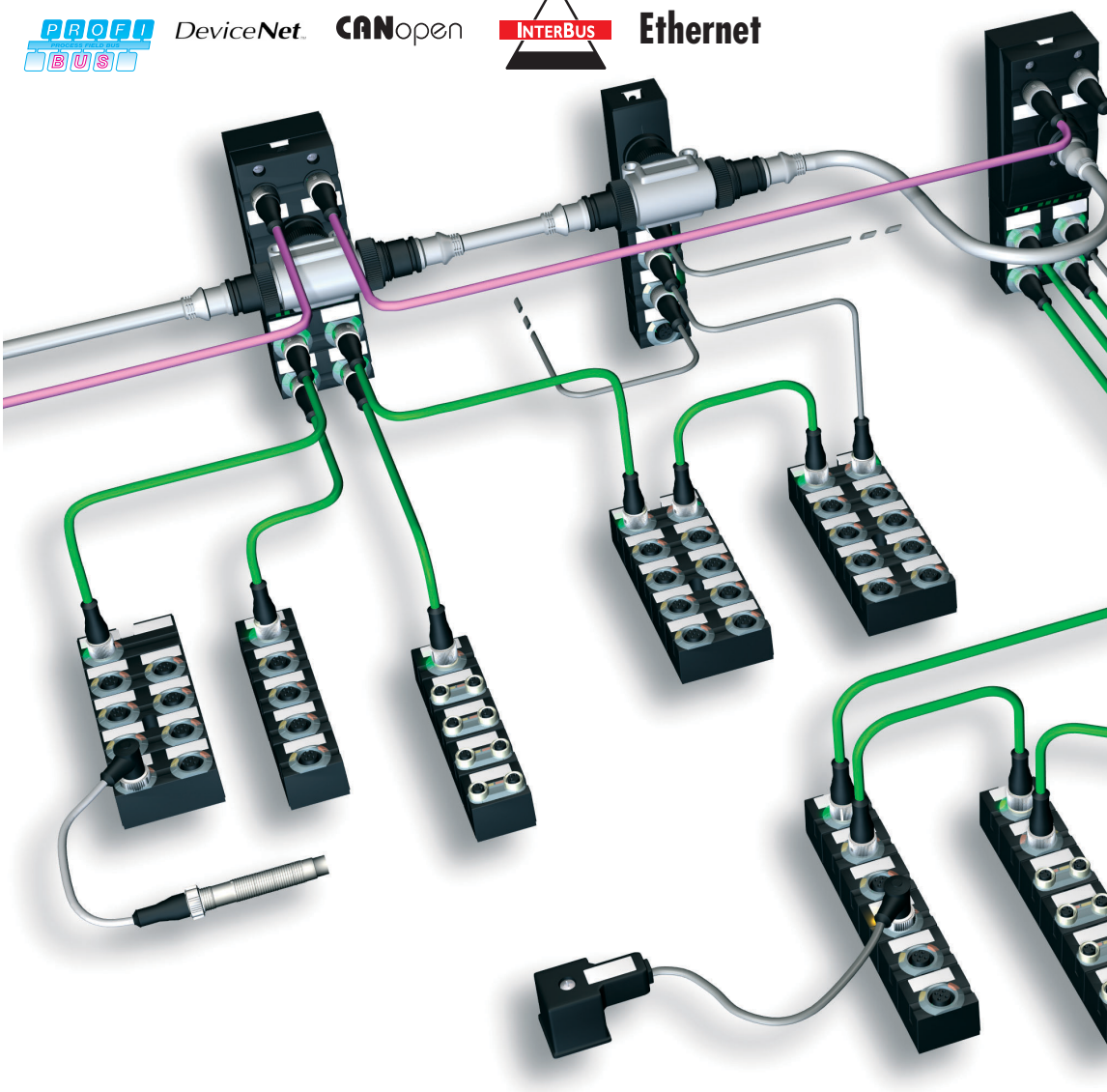
Don't look for errors – find them!

Application areas of Cube67

- **mechanical engineering for cutting**
- **forming/sheet metal working**
- **assembly and handling technology**
- **wood processing**
- **warehouse and transfer technology**
- **packaging technology**
- **textile**

Cube67 - Features and Benefits

PROFIBUS DeviceNet CANopen INTERBUS Ethernet



Economical distribution…
… modular, compact, 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 – space problems are a thing of the past
- LED close to the affected sensor/actuator
- Flexible extendibility
- The shortest of I/O lines

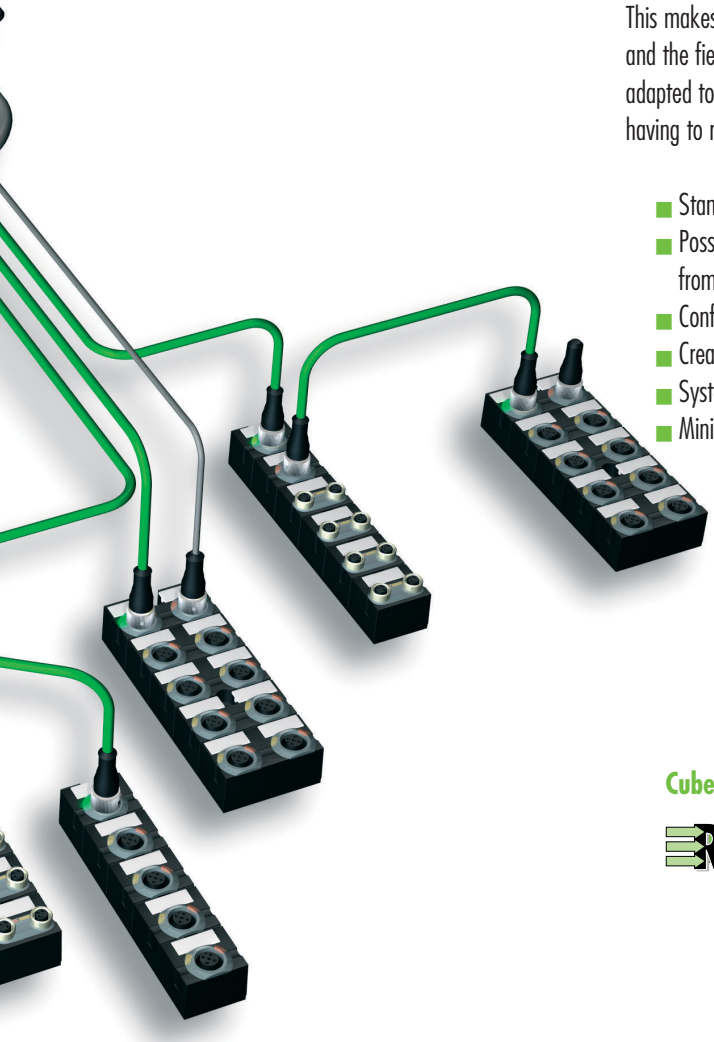
→ Lowers cabling costs
→ Saves space in the machine or the control cabinet
→ Switching matrices are no longer needed

Highest flexibility …
… through multifunctional I/Os

That means free parameterization of the two signals on each plug position, whether input, debugging input, or output

→ Application optimized I/O modules
→ No more unused I/Os
→ No separate input and output modules
→ Reduced number of variants, minimizing the storage costs
→ Highest flexibility for system modifications
→ Exclusive-OR sensors or double valves with central plug take up only one plug position, thus lowering costs, and saving space (plug positions with blind plugs are no longer required)

Cube67 - Features and Benefits



"Free yourself from the controls" - Change the bus instead of the system – you change only the bus coupler.

This makes the machine installation independent of the controls and the field bus, which means that the application can be adapted to the final customer's SPC 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 storage costs

Cube67 a product line featuring

RATIONIK

"Don't look for errors – find them!" – Total diagnosis

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

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

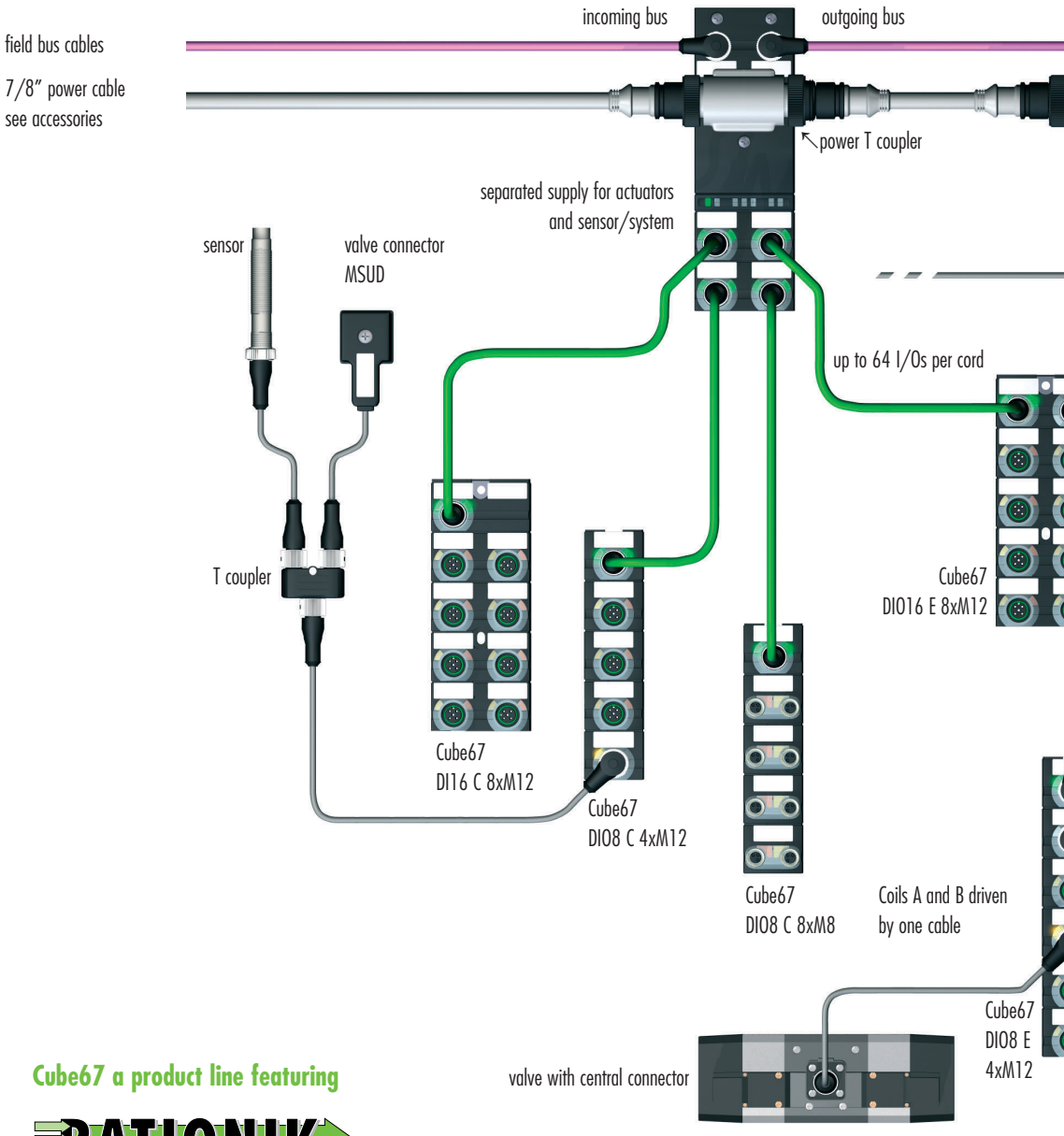
→ Errors are found more quickly, systems may be able to continue operation
→ Minimizes system down times
→ Shortens time for commissioning
→ Makes remote maintenance possible for the first time
→ Only the "affected" plug position shuts down, not the whole module

Assemble and plug in – that's all!

- Elaborate parallel and single-core wiring replaced by quick, simple plugging
- Only one hybrid cable instead of wide cable conduits
- No addressing or separate parameterization of individual I/O modules
- Ready-made cables in different lengths

→ Shortens commissioning time
→ Reduces cabling costs
→ Avoids wiring errors
→ Quick swapping of cables

Cube67 - System description



Cube67 a product line featuring

RATIONIK

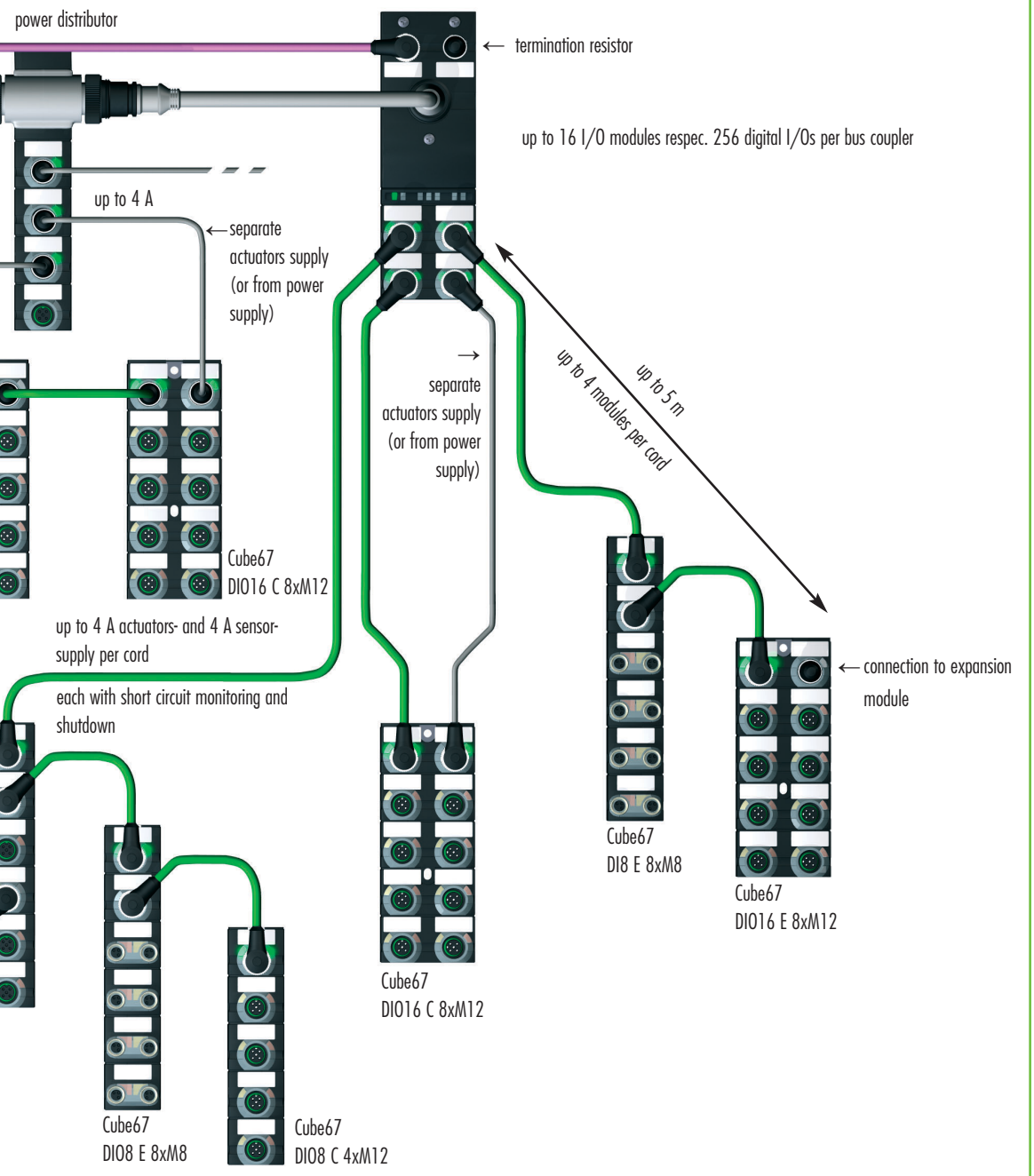
Explanation

To make it easier for you to find your way about, we have structured the product designations in our Cube67 range "mnemonically"

Example: **Cube67** **DIO16** **C** **8xM12**

- 8xM12 – 8 M12 plug positions
- C – C = compact module, E = extension module
- DIO16 – 16 channels freely parameterizable (input, output and debugging input)
- Cube67 – product family

Cube67 - System description



System description

■ Number of I/Os per bus node	256 digital
■ Number of modules per bus node	16
■ Number of modules per string	4
■ Addressing	automatic
■ Connection	one line
■ Max. distance between bus coupler and end of string	5 m
■ Topology	Star/Line
■ Data security	Hamming – distance 6
■ Transmission type	Change of state

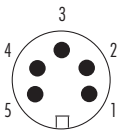
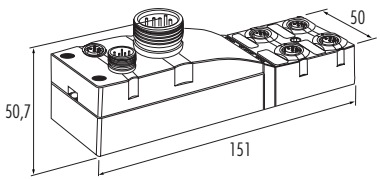
Single-channel diagnosis

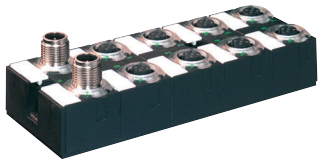
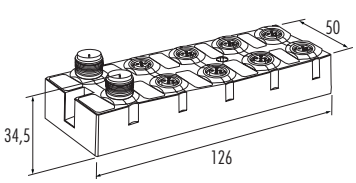
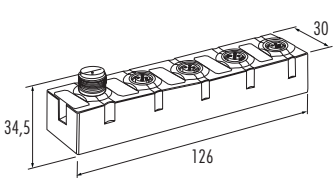
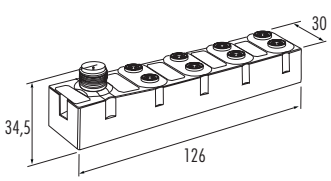
Display per PIN
- Sensor short circuit
- Actuator short circuit
- Undervoltage
- Actuator warning
- Wrong connection

Display

■ Module OK	= green
■ Initialization/no data exchange	= green flashing
■ Diagnosis	= red
■ Signal status	= amber

Cube67 - Bus nodes

Bus nodes	**Cube67 BN-P**	**Cube67 BN-DN**
IP 67 Protection	PROFIBUS	DeviceNet CONFORMANCE TESTED
		
Contact layout		
POWER male  	PIN 1: GND PIN 2: GND PIN 3: PE PIN 4: sensor supply PIN 5: actuator supply	
BUS IN male  	**BUS OUT female**  	PIN 1: 5 V PIN 2: A wire (green) PIN 3: 0 V PIN 4: B wire (red) PIN 5: shield Compression gland: shielded
		BUS IN male 
		BUS OUT female 
		PIN 1: shield PIN 2: V+ PIN 3: V– PIN 4: CAN_H PIN 5: CAN_L
Ordering data	**Art.-No.**	**Art.-No.**
	56501	**56502**
Technical data **Module**		
Temperature range	0…+ 55 °C (storage temperature - 20…+ 75 °C)	
Mounting method	2-hole screw mounting	
Dimensions H x D x W	50,7 x 151 x 50 mm	
Technical data **Field bus**		
Nominal voltage	24 V DC (18…30,2 V), to EN61131-2	
Module supply	via PIN 4 sensor supply (POWER)	via M12 bus connection
Current usage	80 mA	70 mA
Type	Profibus-DP-Slave	DeviceNet-Slave
Transfer protocol	Profibus-DP	DeviceNet to ODVA
Operating modes	Sync- and Freeze-Mode is supported	Polling; Change of State; Cyclic
Transfer rate	up to 12 MBit/s	125, 250 and 500 kBit/s
Status displays		
Communication to field bus	green static = O.K.; green blinking = no communication	MS – status of module, NS-Network status LED, to ODVA
Communication to field bus	red = configuration error	–
Sensor supply	green = O.K.; red = U < 18 V	
Actuator supply	green = O.K.; red = U < 18 V	
Internal communication US	green static = O.K.; green blinking = no data transfer	
Power supply unit		
Sensor supply	via 7/8" Power; max. 9 A	
Actuator supply	via 7/8" Power; max. 9 A	
Bridge internal system connection	each female having a max. of 4 A per PIN	
Dimensions drawing		
	 	
Accessories	**Art.-No.**	**Art.-No.**
Termination resistor	M12 B-coded **55356**	M12 A-coded **55319**
Notes		
	Accessories termination resistor, blind plug see page 19. All housing are potted. UL pending.	

Compact module **Digital input, output** **No configuration required** **IP 67 Protection**	**Cube67 DI016 C 8xM12**	**Cube67 DI08 C 4xM12**	**Cube67 DI08 C 8xM8**
			
Ordering data	**Art.-No.** **56600**	**Art.-No.** **56610**	**Art.-No.** **56620**
Technical data Module			
Temperature range	0…+ 55 °C (storage temperature - 20…+ 75 °C)		
Mounting method	4-hole screw mounting	2-hole screw mounting	
Dimensions H x D x W	34,5 x 126 x 50 mm	34,5 x 126 x 30 mm	
Technical data Internal comm.			
Module supply	via internal system connection		
Status display	U_S: sensor supply and internal power supply unit (green = O.K.); U_A: actuator supply (green = O.K.)		
Current usage	approx. 50 mA		approx. 30 mA
Configuration			
PIN 2	Input/Output/Diagnostics		–
PIN 4	Input/Output		Input/Output
Technical data Input			
Sensor supply	24 V DC (18…30,2 V), to EN61131-2, ≤ 200 mA per M12 female		≤ 200 mA per M8 female
Type	for 3-wire sensors or mechanical switches, PNP, IEC-1131-2 compatible		
Status display	LED yellow per input		
Input filter	1 ms		
Technical data Diagnostic input			
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, IEC-1131-2 compatible		–
Status display	LED red per input		–
Function	24 V = high = O.K. (LED off); 0 V = low = error (LED red)		–
Input filter	1 ms		–
Technical data Output			
Actuator supply	24 V DC (18…30,2 V), to EN61131-2		
Switching current per output	0,5 A short circuit protection and overload		
Filament lamp load	10 W		
Max. switching frequency	resistive load 50 Hz, inductive load 5 Hz		
Status display	output activated LED yellow; output short-circuited LED red		
Diagnostics			
Under voltage sensor	U_S < 18 V (red)		
Under voltage actuator	U_A < 18 V (red) (if parameterised as output)		
Communication to bus module	US blinking (green) if no data exchange		
Short circuit, actuator system	PIN 2 and/or PIN 4 LED (red) per output		PIN 4 LED (red) per output
Short circuit, sensor system	PIN 2 and PIN 4 LED (red) per input		PIN 4 LED (red) per input
Diagnostics to DESINA® (PIN 2)	PIN 2 diagnostic with LED red per M12 port		–
Actuator warning	PIN 2 and/or PIN 4 LED (red) per output		PIN 4 LED (red) per output
Dimensions drawing			
			
Notes			
	All housing are potted. UL pending.		

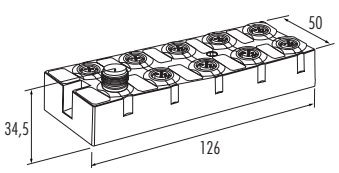
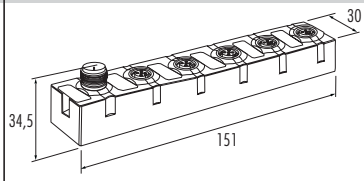
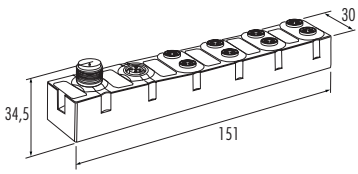
Cube67 - Expansion module

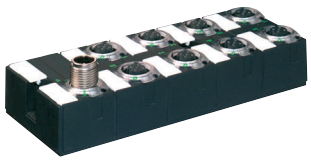
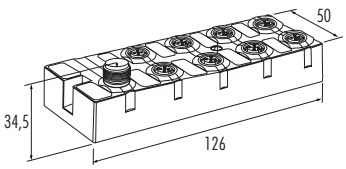
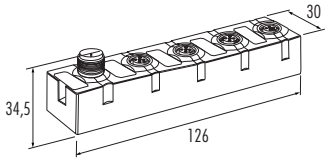
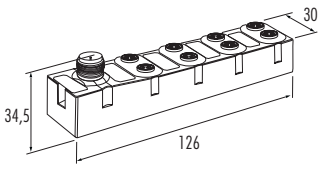
Expansion module

Digital input, output

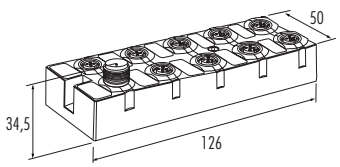
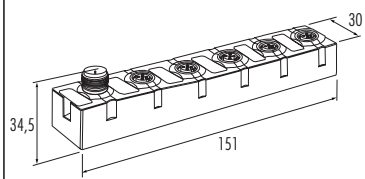
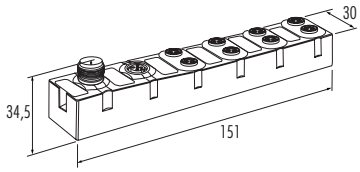
No configuration required

IP 67 Protection

	Cube67 DI016 E 8xM12	Cube67 DI08 E 4xM12	Cube67 DI08 E 8xM8
			
Ordering data	**Art.-No.**	**Art.-No.**	**Art.-No.**
available as of 1st quarter 2003	**56601**	**56611**	**56621**
Technical data Module			
Temperature range	0…+ 55 °C (storage temperature - 20…+ 75 °C)		
Mounting method	4-hole screw mounting	2-hole screw mounting	
Dimensions H x D x W	34,5 x 126 x 50 mm	34,5 x 151 x 30 mm	
Technical data Internal comm.			
Module supply	via internal system connection		
Status display	U_S: sensor supply and internal power supply unit (green = O.K.); U_A: actuator supply (green = O.K.)		
Current usage	approx. 50 mA		approx. 30 mA
Configuration			
PIN 2	Input/Output/Diagnostics		–
PIN 4	Input/Output		Input/Output
Technical data Input			
Sensor supply	24 V DC (18…30,2 V), to EN61131-2, ≤ 200 mA per M12 female		≤ 200 mA per M8 female
Type	for 3-wire sensors or mechanical switches, PNP, IEC-1131-2 compatible		
Status display	LED yellow per input		
Input filter	1 ms		
Technical data Diagnostic input			
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, IEC-1131-2 compatible		–
Status display	LED red per input		–
Function	24 V = high = O.K. (LED off); 0 V = low = error (LED red)		–
Input filter	1 ms		–
Technical data Output			
Actuator supply	24 V DC (18…30,2 V), to EN61131-2		
Switching current per output	0,5 A short circuit protection and overload		
Total current for all outputs	∑ max. 4 A (internal system connection)		
Filament lamp load	10 W		
Max. switching frequency	resistive load 50 Hz, inductive load 5 Hz		
Status display	output activated LED yellow; output short-circuited LED red		
Diagnostics			
Under voltage sensor	U_S < 18 V (red)		
Under voltage actuator	U_A < 18 V (red) (if parameterised as output)		
Communication to bus module	US blinking (green) if no data exchange		
Short circuit, actuator system	PIN 2 and/or PIN 4 LED (red) per output		PIN 4 LED (red) per output
Short circuit, sensor system	PIN 2 and PIN 4 LED (red) per input		PIN 4 LED (red) per input
Diagnostics to DESINA® (PIN 2)	PIN 2 diagnostic with LED red per M12 port		–
Actuator warning	PIN 2 and/or PIN 4 LED (red) per output		PIN 4 LED (red) per output
Dimensions drawing			
			
Notes			
	Accessories termination resistor, blind plug see page 19. All housing are potted. UL pending.		

Compact module	**Cube67 DI16 C 8xM12**	**Cube67 DI8 C 4xM12**	**Cube67 DI8 C 8xM8**
Digital input			
IP 67 Protection			
			
Ordering data	**Art.-No.**	**Art.-No.**	**Art.-No.**
available as of 1st quarter 2003	**56602**	**56612**	**56622**
Technical data Module			
Temperature range	0…+ 55 °C (storage temperature - 20…+ 75 °C)		
Mounting method	4-hole screw mounting	2-hole screw mounting	
Dimensions H x D x W	34,5 x 126 x 50 mm	34,5 x 126 x 30 mm	
Technical data Internal comm.			
Module supply	via internal system connection		
Status display	U_S: sensor supply and internal power supply unit (green = O.K.); U_A: actuator supply (green = O.K.)		
Current usage	approx. 50 mA		approx. 30 mA
Configuration			
PIN 2	Input/Diagnostics		–
PIN 4	Input		Input
Technical data Input			
Sensor supply	24 V DC (18…30,2 V), to EN61131-2, ≤ 200 mA per M12 female		≤ 200 mA per M8 female
Type	for 3-wire sensors or mechanical switches, PNP, IEC-1131-2 compatible		
Status display	LED yellow per input		
Input filter	1 ms		
Technical data Diagnostic input			
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, IEC-1131-2 compatible		–
Status display	LED red per input		–
Function	24 V = high = O.K. (LED off); 0 V = low = error (LED red)		–
Input filter	1 ms		–
Diagnostics			
Under voltage sensor	U_S < 18 V (red)		
Communication to bus module	U_S blinking (green) if no data exchange		
Short circuit, sensor system	PIN 2 and PIN 4 LED (red) per input		PIN 4 LED (red) per input
Diagnostics to DESINA® (PIN 2)	PIN 2 diagnostic with LED red per M12 port		–
Dimensions drawing			
			
Notes			
	Accessories termination resistor, blind plug see page 19. All housing are potted. UL pending.		

Cube67 - Expansion module

Expansion module	**Cube67 DI16 E 8xM12**	**Cube67 DI8 E 4xM12**	**Cube67 DI8 E 8xM8**
Digital input			
IP 67 Protection			
			
Ordering data	**Art.-No.**	**Art.-No.**	**Art.-No.**
available as of 1st quarter 2003	**56603**	**56613**	**56623**
Technical data Module			
Temperature range	0…+ 55 °C (storage temperature - 20…+ 75 °C)		
Mounting method	4-hole screw mounting	2-hole screw mounting	
Dimensions H x D x W	34,5 x 126 x 50 mm	34,5 x 151 x 30 mm	
Technical data Internal comm.			
Module supply	via internal system connection		
Status display	U_S: sensor supply and internal power supply unit (green = O.K.); U_A: actuator supply (green = O.K.)		
Current usage	approx. 50 mA		approx. 30 mA
Configuration			
PIN 2	Input/Diagnostics		–
PIN 4	Input		Input
Technical data Input			
Sensor supply	24 V DC (18…30,2 V), to EN61131-2, ≤ 200 mA per M12 female		≤ 200 mA per M8 female
Type	for 3-wire sensors or mechanical switches, PNP, IEC-1131-2 compatible		
Status display	LED yellow per input		
Input filter	1 ms		
Technical data Diagnostic input			
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, IEC-1131-2 compatible –		
Status display	LED red per input		–
Function	24 V DC = high = O.K. (LED off); 0 V DC = low = error (LED red)		–
Input filter	1 ms		–
Diagnostics			
Under voltage sensor	U_S < 18 V (red)		
Communication to bus module	U_S blinking (green) if no data exchange		
Short circuit, sensor system	PIN 2 oder PIN 4 LED (red) per input		PIN 4 LED (red) per input
Diagnostics to DESINA® (PIN 2)	PIN 2 diagnostic with LED red per M12 port		–
Dimensions drawing			
			
Notes			
	Accessories termination resistor, blind plug see page 19. All housing are potted. UL pending.		

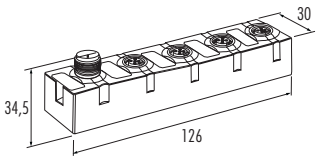
Compact module

Analog

IP 67 Protection

	Cube67 AI4 C 4xM12 (I)	**Cube67 AI4 C 4xM12 (U)**	**Cube67 AO4 C 4xM12 (I)**	**Cube67 AO4 C 4xM12 (U)**
	Input module Current input	Input module Voltage input	Output module Current output	Output module Voltage output

Ordering data	**Art.-No.**	**Art.-No.**	**Art.-No.**	**Art.-No.**
available as of 1st quarter 2003	**56730**	**56700**	**56720**	**56710**
Technical data **Module**				
Temperature range	0…+ 55 °C (storage temperature - 20…+ 75 °C)			
Mounting method	2-hole screw mounting			
Dimensions H x D x W	34,5 x 126 x 30 mm			
Internal communication				
Module supply	via internal system connection			
Status display	U_S: sensor supply and internal power supply unit (green = O.K.); U_A: actuator supply (green = O.K.)			
Current usage	50 mA			
In-/Output				
Sensor supply	24 V DC (18…30,2 V), ≤ 200 mA		≤ 1,6A per M12 port via actuator supply	
PIN 2	current input (+)	voltage input (+)	–	–
PIN 4	current input (–)	voltage input (–)	current output	voltage output
Voltage input				
Input resistor	–	approx. 1 MOhm, difference input	–	
Input range	–	± 10 V DC, 0…10 V DC	–	
Resolution	–	15 Bit + sign	–	
Conversion time	–	approx. 2 ms per channel	–	
Current inputs				
Load	approx. 300 Ohm, difference input	–		
Input range	0…20 mA, 4…20 mA	–		
Resolution	16 Bit	–		
Conversion time	approx. 2 ms per channel	–		
Current outputs				
Load	–		≤ 500 Ohm	–
Range	–		0…20 mA, 4…20 mA	–
Resolution	–		12 Bit	–
Conversion time	–		approx. 1 ms per channel	–
Voltage ouputs				
Load resistance	–			≥ 500 Ohm
Output range –			±10V, 0…10V,	
Resolution	–			11 Bit + sign
Conversion time	–			approx. 1 ms per channel
Diagnostics				
Under voltage sensor	U_S < 18 V (red)		U_A < 18 V (red)	
Communication	U_S blinking (green) if no data exchange			
Short circuit, sensor system	LED red at M12 port		–	
Overload/short circuit/cable break	LED red per channel			
Dimensions drawing				



Notes
All housing are potted. UL pending.

Cube67 - System connection

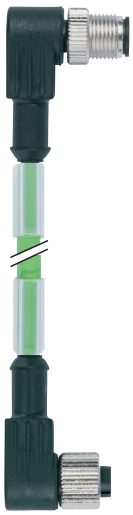
Round plug connector M12

With pre-wired cable

Hybrid cable for communication and supply

Male straight

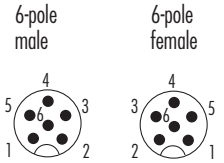
Male 90°



Female straight

Female 90°

Contact layout



PIN 1: actuator supply
PIN 2: sensor supply/ internal power supply unit
PIN 3: GND
PIN 4: internal system connection
PIN 5: internal system connection
PIN 6: GND

Ordering data		**Art.-No.**	**Art.-No.**
Connection cable	cable length		
PUR	0,3 m	**4213000**	**4213100**
	0,6 m	**4213001**	**4213101**
	1,0 m	**4213002**	**4213102**
	1,5 m	**4213003**	**4213103**
	2,0 m	**4213004**	**4213104**
	2,5 m	**4213005**	**4213105**
	3,0 m	**4213006**	**4213106**
	3,5 m	**4213007**	**4213107**
	4,0 m	**4213008**	**4213108**
	4,5 m	**4213009**	**4213109**
	5,0 m	**4213010**	**4213110**

Technical data	
Wire diameter	power supply unit 0,5 mm²
Max. current	4 A per PIN
Bend radius for flexible use	min. 10 x cable diameter
Movement speed	max. 2 m/s
Radius	10 m
Number of bend cycle	min. 5 Mio
Cable	suitable for drag chains
Approvals	UL pending

Notes

Other versions on request

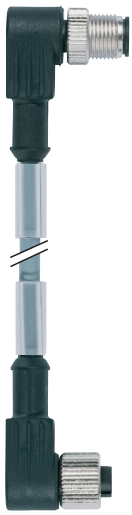
Round plug connector M12

With pre-wired cable

External actuator supply for Cube67 DIO16C 8xM12

Male straight

Male 90°



Female straight

Female 90°

Female straight

Female 90°

Contact layout

6-pole male

6-pole female

PIN 1: actuator supply
PIN 6: GND

6-pole female

PIN 1: brown actuator supply
PIN 6: blue GND

Ordering data		**Art.-No.**	**Art.-No.**	**Art.-No.**	**Art.-No.**
Connection cable	cable length				
PUR	0,3 m	**4213300**	**4213400**		
	0,6 m	**4213301**	**4213401**		
	1,0 m	**4213302**	**4213402**	**4213422**	**4213442**
	1,5 m	**4213303**	**4213403**		
	2,0 m	**4213304**	**4213404**	**4213424**	**4213444**
	2,5 m	**4213305**	**4213405**		
	3,0 m	**4213306**	**4213406**	**4213426**	**4213446**
	3,5 m	**4213307**	**4213407**		
	4,0 m	**4213308**	**4213408**	**4213428**	**4213448**
	4,5 m	**4213309**	**4213409**		
	5,0 m	**4213310**	**4213410**	**4213430**	**4213450**

Technical data	
Wire diameter	power supply unit 0,5 mm²
Max. current	4 A per PIN
Bend radius	min. 10 x cable diameter

Notes

Other versions on request.

Cube67 - Accessories

Round plug connector

For field bus and power cable

Male M12 straight
shielded, B-coded

Male M12 straight
A-coded

Male 7/8" straight
for field wiring

Female 7/8" straight
for field wiring

Female M12 straight
shielded, B-coded

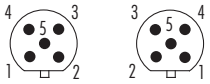
PROFIBUS

Female M12 straight
A-coded

DeviceNet

Contact layout

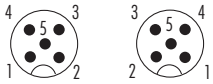
5-pole male / 5-pole female



PIN 1: NC
PIN 2: A-cable
PIN 3: NC
PIN 4: B-cable
PIN 5: shield

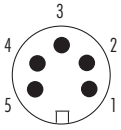
housing: shield

5-pole male / 5-pole female



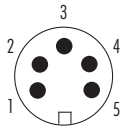
PIN 1: shield
PIN 2: V+
PIN 3: V–
PIN 4: CAN-H
PIN 5: CAN-L

5-pole male



PIN 1: GND
PIN 2: GND
PIN 3: PE
PIN 4: sensor supply
PIN 5: actuator supply

5-pole female



PIN 1: GND
PIN 2: GND
PIN 3: PE
PIN 4: sensor supply
PIN 5: actuator supply

Ordering data	**field bus conn.**	**Art.-No.**	**Art.-No.**
Version			
straight	male	**5027606**	**27626**
	female	**5027601**	**27621**

Ordering data	**power conn.**	**Art.-No.**	**Art.-No.**
Version	clamping range		
straight	6 … 9,5 mm	5-pole **27663**	5-pole **27661**
90°			

Technical data		
Mounting method	screw terminals	screw terminals
Connection diameter	max. 0,75 mm²	max. 1,5 mm²
Protection	IP67 when plugged and screwed down DIN VDE 0470	IP67
Temperature range	-40…+85 °C	-40…+90 °C
Supply voltage	30 V AC/36 V DC	250 V AC
Current per contact	4 A	9 A

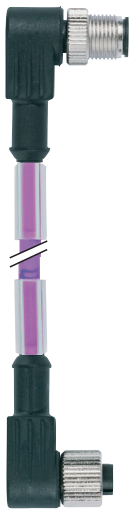
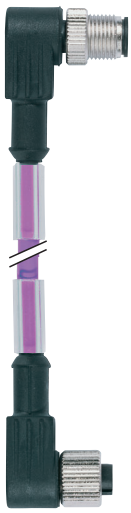
Notes

Other versions on request.

Round plug connector M12

With pre-wired cable

Field bus cable

	Male straight B-coded	**Male 90°** B-coded	**Male straight** A-coded	**Male 90°** A-coded
				
	Female straight B-coded	**Female 90°** B-coded	**Female straight** A-coded	**Female 90°** A-coded

Contact layout

	5-pole male	5-pole female	5-pole male	5-pole female
				
PIN 2:	A-cable (green)		PIN 1:	shield
PIN 4:	B-cable (red)		PIN 2:	V+
PIN 5:	shield		PIN 3:	V–
Compression gland:	shield		PIN 4:	CAN_H
			PIN 5:	CAN_L

Ordering data		**Art.-No.**	**Art.-No.**	**Art.-No.**	**Art.-No.**
Connection cable	cable length				
PUR	0,3 m	**4234500**	**4234650**	**4234520**	**4234670**
	0,6 m	**4234501**	**4234651**	**4234521**	**4234671**
	1,0 m	**4234502**	**4234652**	**4234522**	**4234672**
	2,0 m	**4234503**	**4234653**	**4234523**	**4234673**
	3,0 m	**4234504**	**4234654**	**4234524**	**4234674**
	5,0 m	**4234505**	**4234655**	**4234525**	**4234675**

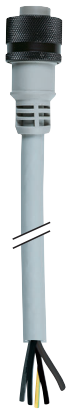
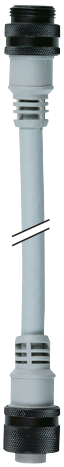
Technical data		
Cable	suitable for drag chains	
Bend radius for flexible use	min. 10 x cable diameter	
Movement speed	max. 4 m/s	max. 2 m/s
Radius	5,5 m	
Number of bend cycle	min. 5 Mio.	

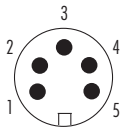
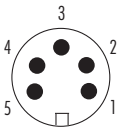
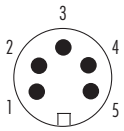
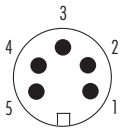
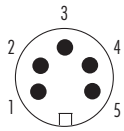
Accessories	**Art.-No.**
Profibus cable	**55777**

Notes

Other versions on request.

Cube67 - Accessories

Power cable 7/8"	Female straight	Male straight	T-Stück
			Male Female  Female
		Female straight	

Contact layout			
PIN 1: GND PIN 2: GND PIN 3: PE PIN 4: sensor supply PIN 5: actuator supply	5-pole female 	5-pole male  5-pole female 	5-pole male  5-pole female 

Ordering data		Art.-No.	Art.-No.	Art.-No.
PUR-Connection cable	cable length			
	0,3 m		**14624**	
	0,6 m		**14625**	
	1,0 m		**14626**	
	1,5 m	**14558**		
	2,0 m		**14628**	
	3,0 m	**14559**		
	5,0 m	**14562**		
	10,0 m	**14563**		
T coupler 5-pole				**14881**

Technical data			
Supply voltage	U_o/U: 300/500 V		–
Nominal current	8 A		8 A
Wire diameter	1,5 mm²		–
Protection	IP67		IP67
Temperature range	-20…+80 °C		-20…+80 °C
Outer jacket/color	PUR/grey		grey

Notes	
	Other versions on request.

Installation technology			Art.-No.
	**DESINA®-Sensor M12 x 1** - Nom. switching distance: 2 mm flush (secured 0…1,6 mm) - Supply voltage: 10…30 V DC - Load current: 200 mA - Polarity safe, short circuit protected - Switching frequency: 800 Hz		**17259**
	**Valve connector form A** for valves with wire-break diagnostics or pressure switches - Contact form 18 mm - Supply voltage 24 V AC/DC, pressure switch 24 V DC - Supply current max. 4 A - M12 connector top entry - M12 connector at the rear	 LED yellow, suppression for valves LED yellow/green for pressure switch LED yellow, suppression for valves LED yellow/green for pressure switch	 **3513850** **3513858** **3513855** **3513859**
	**Valve connector form A** for valves with wire-break diagnostics - Contact form 18 mm - Supply voltage 24 V AC/DC - Supply current max. 4 A - M12 connector top entry - M12 connector at the rear	 cable length 100 mm cable length 150 mm cable length 200 mm cable length 100 mm cable length 150 mm cable length 200 mm	 **3611130** **3611150** **3611170** **3613130** **3613150** **3613170**
	**M12 diagnostic adapter**	for sensors with wire-break diagnostic	**338008**
	**Termination resistor M12** Cube67 BT PROFIBUS-DP DeviceNet	 for sensors with wire-break diagnostic 	 **56950** **55356** **55319**
	**MSDD front panel interface** MSDD profi	 7/8" and B-coded	 **67254**
Blind plugs			**Art.-No.**
	**Blind plug M12 x 1 Cube67 BP** **Blind plug M8 x 1**	Set 4 piece Set 4 piece	**56952** **3858627**
	**Diagnostic blind plug M12 x 1**	Set 1 piece	**338155**
	Blind cap M12 Cube67 BP for internal system connection	 Set 4 piece	 **56951**
Others			**Art.-No.**
	**Label plate**	Set 20 piece	**55318**
	Handbook **Handbook**	PROFIBUS DeviceNet	**56980** **56981**
Notes			
	Other system accessories upon request. Up-to-date files and handbooks can be downloaded under www.murrelektronik.com		