Compact I/O modules IP67

Bus module MVK and MBV
The robust units with IP67 protection are specially suited for harsh environments. No additional cabinets.

Mounting
The units can be directly mounted on flat surface of machines next to sensors and actuators.

Plug-in connection technology
The use of M12 round plug connectors in the I/O connection area offers a quick and failure free installation.
Additional plug-in connections make it easy to change modules without completely new wiring.

Diagnostics
The extensive use of LEDs on the module and over the field bus to the master facilitates commissioning of the system and fault location.

Overload protection
All outputs and sensor supplies are short circuit and overload protected.

Galvanic separation
All inputs and outputs are electrically isolated from the field bus. The separate voltage connection from the bus interface and the I/O sector, enables an alarm output to be available.

Labelling
The large exchangeable label strip for the signals and the module can be labelled manually, or with a printer or plotter.

MVK

MVK-I
DI8 + 8 x diagnostics/DI
DI4 DO4 + 8 x diagnostics/DI
DO8 + 8 x diagnostics/DI

Page 2.4.5

MVK-P
DI8 + 8 x diagnostics/DI
DI4 DO4 + 8 x diagnostics/DI
DO8 + 8 x diagnostics/DI

Page 2.4.6

MVK-DN and MVK-C
DI8 + 8 x diagnostics/DI
DI4 DO4 + 8 x diagnostics/DI
DO8 + 8 x diagnostics/DI

Page 2.4.7 and 2.4.8

MBV

MBV-P
DI8
DI16
DO8/2 A
DI8 DO4/2 A
DO16/0,5 A

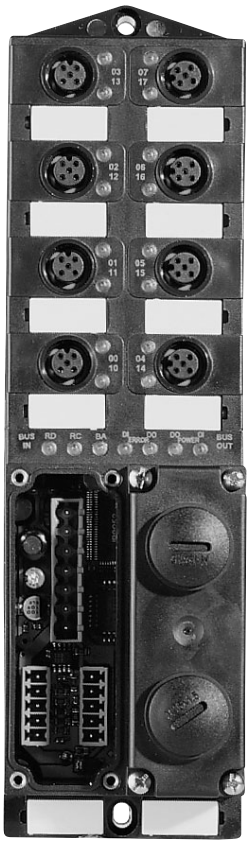
From page 2.4.14

MBV-I
DI8
DI16
DO8/2 A
DI8 DO4/2 A

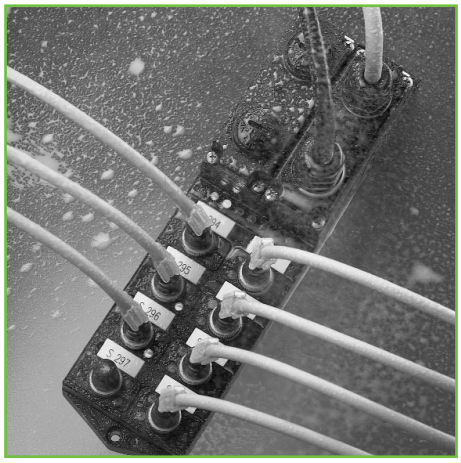
Page 2.4.16

MVK – for all bus systems

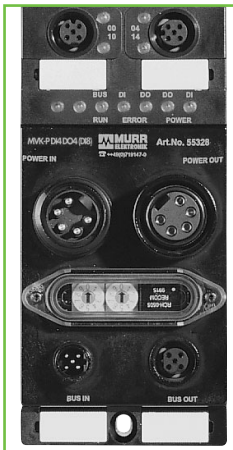
Diagnostics made easy – as easy as you'll get!
With the motto of "Diagnostics made easy – as easy as you'll get!" the MVK family sets a new standard in simple configuration, installation, start-up, user friendliness and short diagnostics times in machines and systems. Diagnostics and the associated down-times can be reduced by as much as 87,5 %.

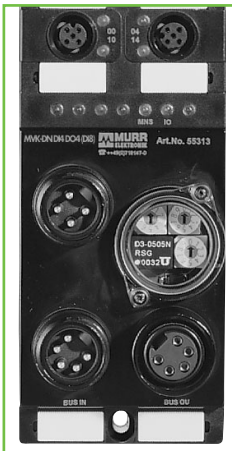


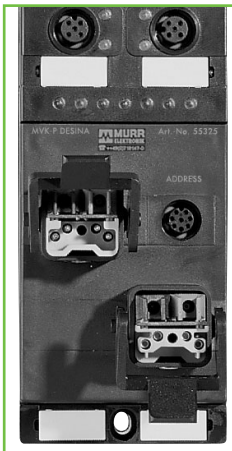
Flexibility for bus systems
The MVK family is available for all kinds of bus systems. Any address or ID settings that may be necessary are easy to make, and can even be checked from outside through an inspection window.



For heavy duty in a mechanical environment
The MVK family with IP67 protection was conceived specifically for heavy duty applications in a mechanical environment. The modules can be installed close to the sensors and actuators. This keeps the cable connections short.







see page 2.11.5

MVK – Reduction of down times

The highest costs in connection with system outages are often caused by the long search for the error, and the long down-times this involves.

In this context, field bus systems and their diagnostic capabilities are ideal tools for diagnostic support. In principle, we must distinguish between 4 different kinds of diagnostics:

Basic diagnostics
(Master/slave diagnostic) recognizing whether there are slaves present, and whether the system is running.

Module diagnostics
Errors are indicated by an LED on the module.

Enhanced module diagnostics
Recognition of actuator and sensor short circuits, undervoltage in actuators and sensors. The reports are transmitted to the master via bus, and an LED indicator is set on the module.

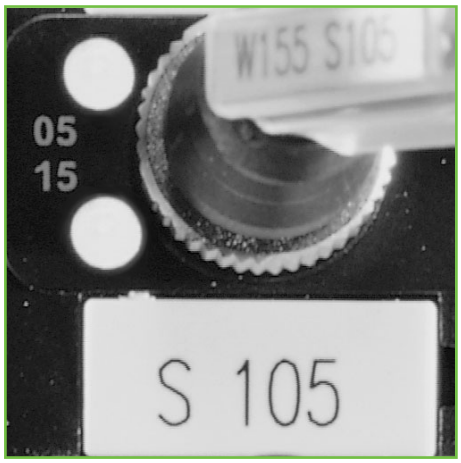
Component diagnostics
Short circuit reports from the sensor-actuator system are broken down to the individual port. Diagnostic functionality (according to DESINA®) for evaluating defective sensors and actuators or wire breaks is available on Pin 2. Messages, with reference to the port, are transmitted one by one to the master, and indicated by an LED directly at the port.

The transmission of the diagnostic data to the master makes it easy for the operator to recognize where the error is located, and to correct it directly. Down times can thus be reduced by up to 87,5 %.

Remote maintenance capability
The transmission of diagnostic data via bus from the module to the master makes all diagnostic information available to you at the control system. This offers ideal opportunities for remote maintenance. You can inspect a sensor or actuator directly from anywhere.

Diagnostic function
The M12 ports are equipped with diagnostic functionality (according to DESINA®) on Pin 2 for interpretation of wire breaks and defective sensors or actuators. Any error that occur is transmitted by bus to the master, and indicated by a red LED directly at the port.

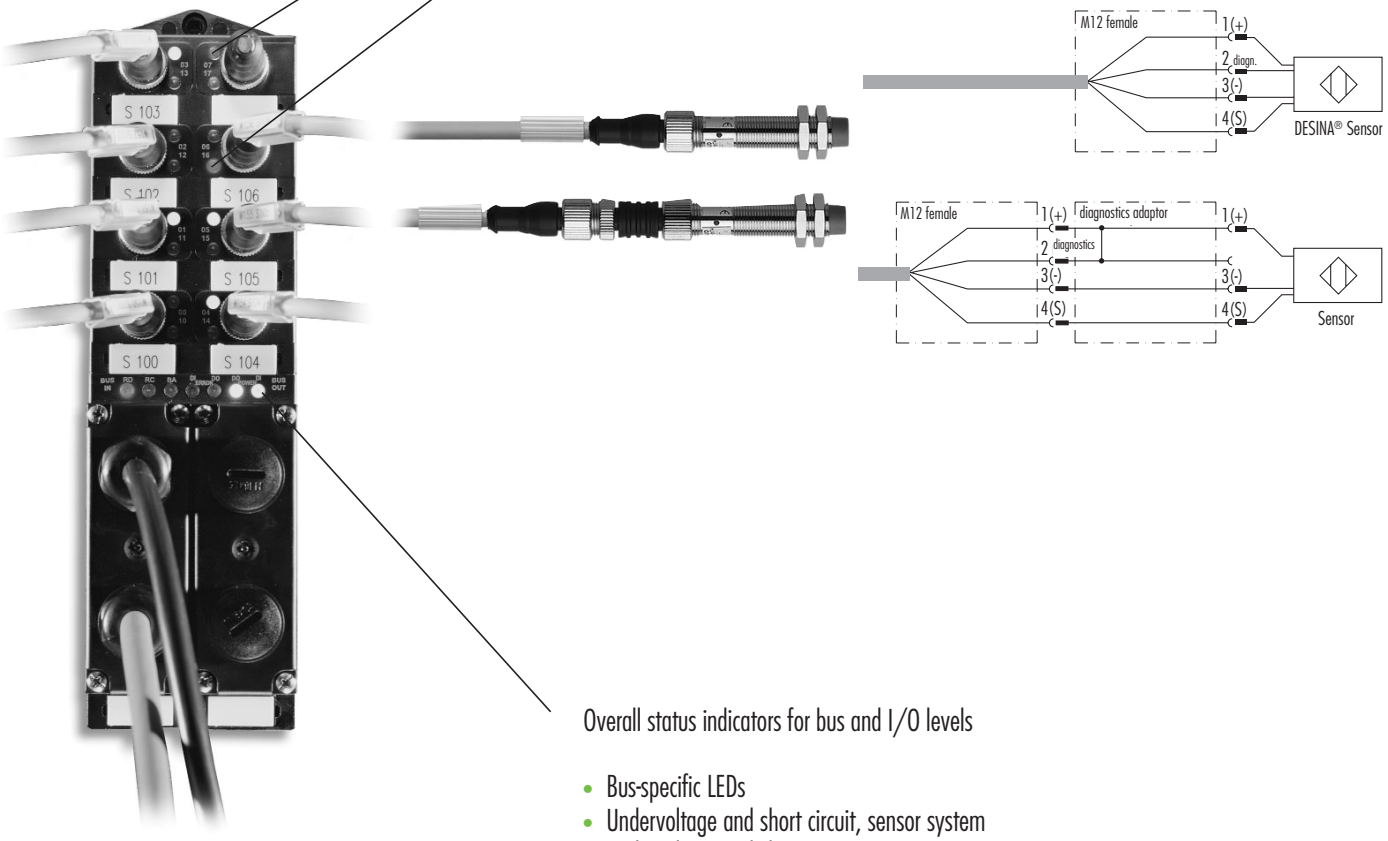
Configuration
To allow the attachment of antivalent sensors, a second sensor, or pressure switches, the diagnostic functionality of Pin 2 of each port can be individually to additional to a digital input. This parameterization can be carried out via Profibus, using the GSD file, for example. Short circuits are, of course, still recognized and reported.



MVK – Diagnostics made easy

Status indicator, input or output

Single channel diagnostic indicator for short circuit, wire break and defective sensor/actuator



Overall status indicators for bus and I/O levels

- Bus-specific LEDs
- Undervoltage and short circuit, sensor system
- Undervoltage and short circuit, actuator system

Diagnostic data transmission via bus to the master

- Single channel messages
- Multiple-channel messages
- Pin 2 diagnostic (wire break, defective sensor/ actuator)

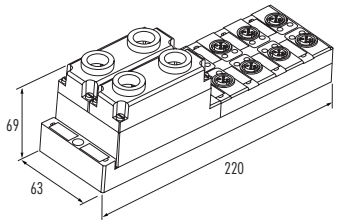
Bus modules MVK Interbus

Input/output modules

IP67 Protection

MVK-I

Ordering data			Art.-No.
8 DI	+ 8 x diagnostics/DI	housing blue/black	**55330**
8 DI	+ 8 x diagnostics/DI	housing black	**55333**
4 DI 4 DO	+ 8 x diagnostics/DI	housing black	**55331**
8 DO	+ 8 x diagnostics/DI	housing grey/black	**55332**
8 DO	+ 8 x diagnostics/DI	housing black	**55334**
8 DI/DO	+ 8 x diagnostics/DI/DO	housing black	**55335**
Technical data	**Field bus**		
Supply		24 V DC (18…30,2 V), to EN61131-2	
Type		remote bus/installations remote bus participants (slave)	
Transfer protocol		Interbus DIN EN 50254	
Operating modes		–	
Transfer rate		500 kBit/s	
Technical data	**Inputs**		
Type		for 3-wire sensors or mechanical switches, p-switching, IEC-1131-2 Typ 2 compatible	
Supply		24 V DC (18…30,2 V), to EN61131-2, ≤ 200 mA per M12 port	
Status indicator		LED yellow per input	
Technical data	**Outputs**		
Supply		24 V DC (18…30,2 V), to EN61131-2, I ∑ ≤ 12,8 A	
Switching current per output		1,6 A, short circuit protection and overload	
Filament lamp load		10 W	
Max. switching frequency		resistive load: 20 Hz; inductive load: 20 Hz	
Status indicator		LED yellow per output	
Diagnostics			
Field bus		BA-, RD-, RC-LEDs	
Under voltage		group LED and alarm to the master	
Short circuit sensor/actuator		LED per M12 port and alarm to the master	
Diagnostics to DESINA® (PIN 2)		PIN 2 diagnostic with red LED per M12 port and signal to master; individually parameterized as digital input;	
		see inputs of electronic data	
General data			
Temperature range		0…+55 °C (storage temperature -20…+70 °C)	
Mounting method		2-hole screw mounting	
Dimensions	H x D x W	220 x 63 x 69 mm (drill plan 208,5 ± 0,5 mm)	
Dimension drawing			

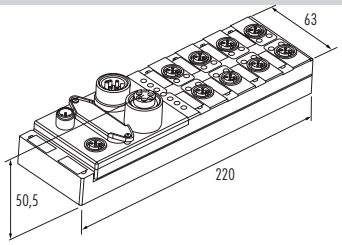
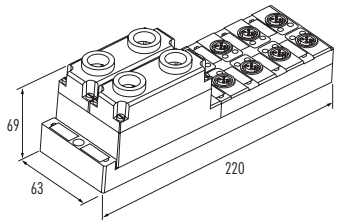


Accessories		Art.-No.
Handbook German/English/French	media for technical data	**55396**
Cable compression gland	M16 x 1,5 (Set: 2 pieces) for cable diameter 5…10 mm	**55357**
Remote bus cable	per meter	**55771**
Installation remote bus cable	per meter	**55772**
Notes		
	3 separate voltages for sensor, actuator on left side and actuator on right side. Configuration see 2.4.17 Cable compression glands are not part of the delivery content. Accessories see 2.4.10	

Bus modules MVK Profibus-DP

Input/output modules

IP67 Protection

	MVK-P	MVK-P
		
Ordering data	**Art.-No.**	**Art.-No.**
8 DI + 8 x diagnostics/DI	**55326**	[1] **55380**
4 DI 4 DO + 8 x diagnostics/DI	**55328**	
8 DO + 8 x diagnostics/DI	**55327**	
8 DI/DO + 8 x diagnostics/DI	**55389**	[1] **55381**
8 DI/DO + 8 x diagnostics/DI/DO	**55329**	[1] **55383**
Technical data Field bus		
Supply	24 V DC (18…30,2 V), to EN61131-2	
Type	Profibus-DP slave	
Transfer protocol	Profibus-DP to EN50170	
Operating modes	Sync- and freeze-mode are supported	
Transfer rate	up to 12 MBit/s	
Technical data Inputs		
Type	for 3-wire sensors or mechanical switches, p-switching, IEC-1131-2 type 2 compatible	
Supply	24 V DC (18…30,2 V), to EN61131-2, ≤ 200 mA per M12 port	
Status indicator	LED yellow per input	
Technical data Outputs		
Supply	24 V DC (18…30,2 V), to EN61131-2, I ∑ ≤ 9 A	24 V DC (18…30,2 V), to EN61131-2, I ∑ ≤ 12,8 A
Switching current per output	1,6 A, short circuit protection and overload	
Filament lamp load	10 W	
Max. switching frequency	resistive load: 20 Hz; inductive load: 20 Hz	
Status indicator	LED yellow per output	
Diagnostics		
Field bus	RUN-LED	
Under voltage	group LED and alarm to the master	
Short circuit sensor/actuator	LED per M12 port and alarm to the master	
Diagnostics to DESINA® (PIN 2)	PIN 2 diagnostic with red LED per M12 port and signal to master; individually parameterized as digital input; see inputs of electronic data	
General data		
Temperature range	0…+55 °C (storage temperature -20…+70 °C)	
Mounting method	2-hole screw mounting	
Dimensions H x D x W	220 x 63 x 50,5 mm (drill plan 208,5 ± 0,5 mm)	220 x 63 x 69 mm (drill plan 208,5 ± 0,5 mm)
Dimension drawing		
		
Accessories	**Art.-No.**	**Art.-No.**
Handbook German/English/French	media for technical data **55395**	media for technical data **55395**
GSD/type data	disk 3,5" **55246**	disk 3,5" **55246**
Profibus cable	per meter **55770**	per meter **55770**
Terminating resistor connector	M12, B-coded **55356**	Set **55359**
Notes		
	Configuration see 2.4.17 [1] 2 shielded compression glands are part of the delivery content. Accessories see 2.4.9	

Bus modules MVK DeviceNet Mini

Input/output modules

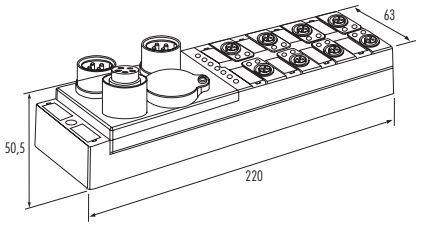
IP67 Protection

MVK-DN

Ordering data		Art.-No.
8 DI	+ 8 x diagnostics/DI	**55311**
4 DI 4 DO	+ 8 x diagnostics/DI	**55313**
8 DO	+ 8 x diagnostics/DI	**55314**

Technical data	Field bus	
Supply		24 V DC (18…30,2 V), to EN61131-2
Type		prod. type 7; generic I/O module
Transfer protocol		CANopen; layer 7 DeviceNet (ODVA conformance tested)
Operating modes		polling; change of state; cyclic
Transfer rate		100…500 kBit/s
Technical data	**Inputs**	
Type		for 3-wire sensors or mechanical switches, p-switching, IEC-1131-2 type 2 compatible
Supply		24 V DC (18…30,2 V), to EN61131-2, ≤ 200 mA per M12 port
Status indicator		LED yellow per input
Technical data	**Outputs**	
Supply		24 V DC (18…30,2 V), to EN61131-2, I ∑ ≤ 9 A
Switching current per output		1,6 A, short circuit protection and overload
Filament lamp load		10 W
Max. switching frequency		resistive load: 20 Hz; inductive load: 20 Hz
Status indicator		LED yellow per output
Diagnostics		
Field bus		MS-LED, NS-LED
Under voltage		group LED and alarm to the scanner
Short circuit sensor/actuator		LED per M12 port and alarm to the scanner
Diagnostics to DESINA® (PIN 2)		PIN 2 diagnostic with red LED per M12 port and signal to scanner; individually parameterized as digital input; see inputs of electronic data
General data		
Temperature range		0…+55 °C (storage temperature -20…+70 °C)
Mounting method		2-hole screw mounting
Dimensions	H x D x W	220 x 63 x 50,5 mm (drill plan 208,5 ± 0,5 mm)

Dimension drawing



Accessories		Art.-No.
Handbook German/English/French	media for technical data	**55398**
EDS data	disk 3,5"	**55246**

Notes

Configuration see 2.4.17
Accessories see 2.4.11

Bus modules MVK CANopen

Input/output modules

IP67 Protection

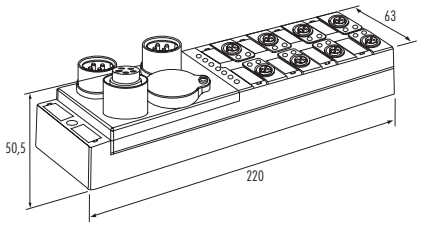
MVK-C

CANopen

Ordering data		Art.-No.
8 DI	+ 8 x diagnostics/DI	**55340**
4 DI 4 DO	+ 8 x diagnostics/DI	**55342**
8 DO	+ 8 x diagnostics/DI	**55341**

Technical data	Field bus	
Supply		24 V DC (18…30,2 V), to EN61131-2
Type		generic I/O module, DeviceNet profile DS 401 V 2.0
Transfer protocol		CANopen, DS 301 V 4.01
Operating modes		asynchronous; synchronous cyclic; synchronous acyclic
Transfer rate		up to 1 MBit/s
Technical data	**Inputs**	
Type		for 3-wire sensors or mechanical switches, p-switching, IEC-1131-2 type 2 compatible
Supply		24 V DC (18…30,2 V), to EN61131-2, ≤ 200 mA per M12 port
Status indicator		LED yellow per input
Technical data	**Outputs**	
Supply		24 V DC (18…30,2 V), to EN61131-2, $I \sum \leq 9$ A
Switching current per output		1,6 A, short circuit protection and overload
Filament lamp load		10 W
Max. switching frequency		resistive load: 20 Hz; inductive load: 20 Hz
Status indicator		LED yellow per output
Diagnostics		
Field bus		MS-LED, NS-LED
Under voltage		group LED and alarm to the master
Short circuit sensor/actuator		LED per M12 port and alarm to the master
Diagnostics to DESINA® (PIN 2)		PIN 2 diagnostic with red LED per M12 port and signal to master; individually parameterized as digital input; see inputs of electronic data
General data		
Temperature range		0…+55 °C (storage temperature -20…+70 °C)
Mounting method		2-hole screw mounting
Dimensions	H x D x W	220 x 63 x 50,5 mm (drill plan 208,5 ± 0,5 mm)

Dimension drawing



Accessories		Art.-No.
Handbook German/English/French	media for technical data	**55397**
EDS data	disk 3,5"	**55246**
CANopen data cable	per meter	**55774**

Notes

Configuration see 2.4.17
Accessories see 2.4.11

Round plug connector

for field bus and power cables

Male M12 straight
shielded, B-coded

Female M12 straight
shielded, B-coded

Male 7/8" straight
for field wiring

Female 7/8" straight
for field wiring

PIN assignment

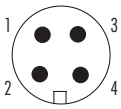
General:

PIN 1:	NC
PIN 2:	A wire
PIN 3:	NC
PIN 4:	B wire
PIN 5:	shield
housing:	shield

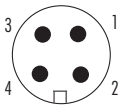
5-pole Male

5-pole Female

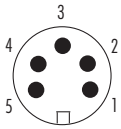
4-pole Male



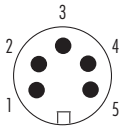
4-pole Female



5-pole Male



5-pole Female



Ordering data	**Field bus connector**	**Art.-No.**	**Art.-No.**	**Art.-No.**	**Art.-No.**
Version	Clamping range				
Straight	6 … 8 mm	**5027606**	**5027601**		
	10 … 12 mm			5-pole **27665**	5-pole **27664**
Ordering data	**Power connector**	**Art.-No.**	**Art.-No.**	**Art.-No.**	**Art.-No.**
Version	Clamping range				
Straight	6 … 9,5 mm			4-pole **27662**	4-pole **27660**
	6 … 9,5 mm			5-pole **27663**	5-pole **27661**

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

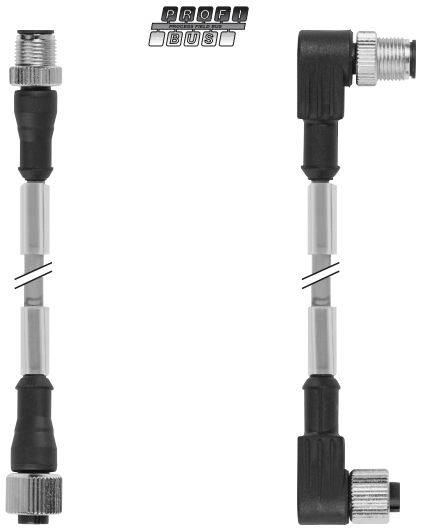
Notes

Other version on request

Bus and power supply cable

Pre-wired

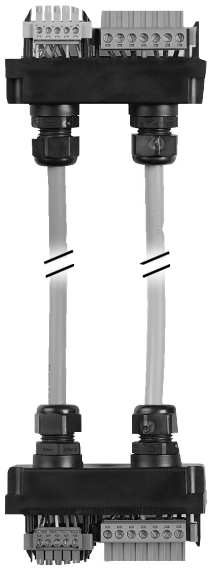
Male straight **Male 90°**



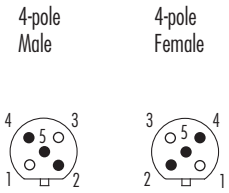
Female straight **Female 90°**

Module connection

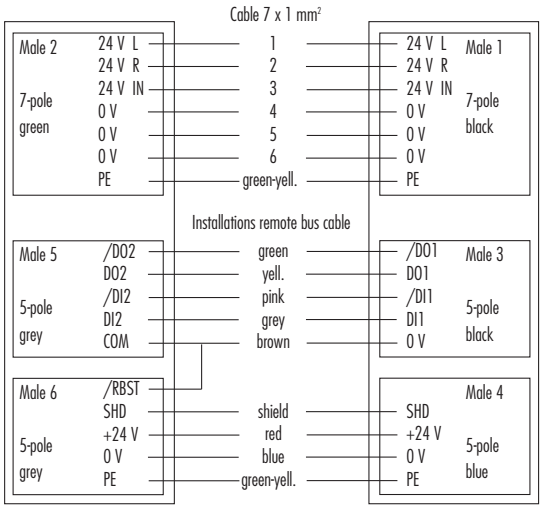
bus and power supply



PIN assignment



Connection diagram installations remote bus



Ordering data		Art.-No.	Art.-No.	Art.-No.
Connection cable	cable length			
PUR	0,3 m	**4234500**	**4234650**	**826892**
	0,6 m	**4234501**	**4234651**	**826893**
	1,0 m	**4234502**	**4234652**	**826894**
	2,0 m	**4234503**	**4234653**	**826895**
	3,0 m	**4234504**	**4234654**	**826896**
	5,0 m	**4234505**	**4234655**	**826897**

Technical data		
Cable	halogen free, suitable for drag chains	suitable for drag chains
Power cable	–	7 x 1 mm²
Segment length	to Profibus guideline	installations remote bus cable
	at transmission rate ≤ 187,5 kBit/s max. 700 m/segment	max. 50 m

Accessories	Art.-No.	Art.-No.
Profibus cable	**55777**	
Interbus remote bus cable		**55771**
Interbus installations remote bus cable		**55772**

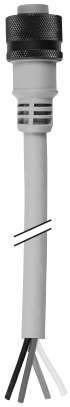
Notes

Other version on request

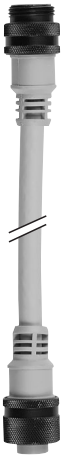
7/8" Cables

Power cable

Female straight



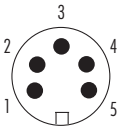
Male straight



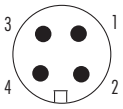
Female straight

PIN assignment

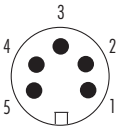
5-pole Female



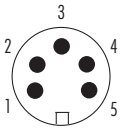
4-pole Female



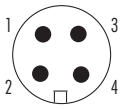
5-pole Male



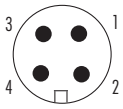
5-pole Female



4-pole Male



4-pole Female



Ordering data	5-pole	Art.-No.	Art.-No.
Connection cable	cable length		
PUR	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**	
Ordering data	**4-pole**	**Art.-No.**	**Art.-No.**
Pre-wired cable	cable length		
PUR	0,3 m		**14618**
	0,6 m		**14619**
	1,0 m		**14620**
	1,5 m	**14548**	
	2,0 m		**14623**
	3,0 m	**14551**	
	5,0 m	**14552**	
	10,0 m	**14553**	

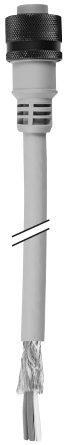
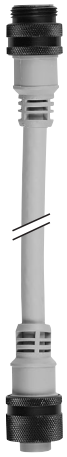
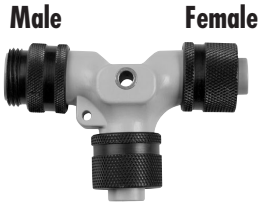
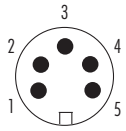
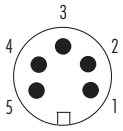
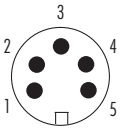
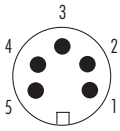
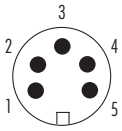
Technical data	
Supply voltage	600 V AC/DC
Nominal current	8 A
Cable cross section	1,5 mm²
Protection	IP67
Temperature range	-20…+80 °C
Outer jacket/color	PUR/grey
Notes	
	Other version on request

7/8" cable for bus

Trunk-Thick cable

T coupler
Terminator

DeviceNet CONFORMANCE TESTED

	Female straight shielded cable	**Male straight** shielded cable	**T coupler/Terminator** shielded
			 
PIN assignment			
	5-pole Female 	**Female straight** 5-pole Male  5-pole Female 	5-pole Male  5-pole Female 

Ordering data	**5-pole**	**Art.-No.**	**Art.-No.**	**Art.-No.**
Connection cable	cable length			
PVC	0,3 m		**4214676**	
	0,6 m		**4214677**	
	1,0 m		**4214678**	
	1,5 m	**4214554**		
	2,0 m		**4214680**	
	3,0 m	**4214555**		
	5,0 m	**4214556**		
	10,0 m	**4214557**		
T coupler 5-pole				**14881**
Terminating resistor connector DeviceNet				**14995**

Technical data			
Supply voltage	300 V AC/DC		–
Nominal current	8 A		8 A
Cable cross section	data AWG 18/power AWG 15		–
Protection	IP67		IP67
Temperature range	-20…+80 °C		-40…+90 °C
Outer jacket/color	PVC/grey		grey

Notes

Other version on request

Accessories	DESINA® Installation technology	Art.-No.
	**Sensor M12 x 1** – Nom. switching distance: 2 mm flush (secured 0…1,6 mm) – Supply voltage: 10…30 V DC – Load current max.: 200 mA – Polarity safe, short circuit protected – Switching frequency: 800 Hz Other system accessories on request 2.11.14	**17259**
	**Valve connector form A** for valves with wire-break diagnostics or pressure switches, with integrated gasket, labelplate and screw (cannot be lost) – Contact form 18 mm – M12 connector top entry – Supply voltage 24 V AC/DC, pressure switch 24 V DC – Supply current max. 4 A LED yellow, suppression for valves LED yellow/green for pressure switches	**3513850** **3513858**
	**Valve connector form A** for valves with wire-break diagnostics or pressure switches, with integrated gasket, labelplate and screw (cannot be lost) – Contact form 18 mm – M12 connector at the rear – Supply voltage 24 V AC/DC, pressure switch 24 V DC – Supply current max. 4 A LED yellow, suppression for valves LED yellow/green for pressure switches	**3513855** **3513859**
	**M12 diagnostic adapter** for sensors with wire-break diagnostic	**338008**
Blind plugs		**Art.-No.**
	**Blind plug M12 x 1** Set (4 pieces)	**55468**
	**Diagnostic blind plug M12 x 1** Set (1 piece)	**338155**
	**7/8"- blind plug with outer thread** Set (1 piece)	**55390**
Others		**Art.-No.**
	**Label plate** Set (10 piece)	**90900**
Notes		
	Detailed information on request.	

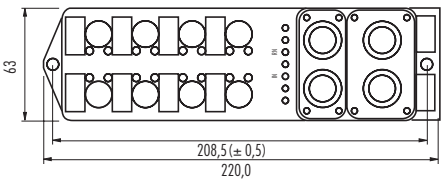
Bus modules MBV Profibus-DP

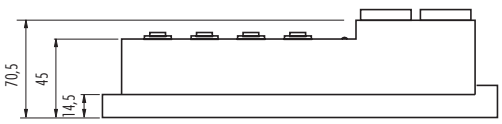
Input/output modules

IP67 Protection

MBV-P

Ordering data		Art.-No.	Art.-No.	Art.-No.
8 digital inputs		**55450**	[1] **55480**	
16 digital inputs		**55453**	[1] **55483**	**55454**
8 digital inputs, 4 digital 2 A outputs		**55452**	[1] **55482**	
8 digital 1,6 A outputs		**55484**		
8 digital 2 A outputs		**55451**	[1] **55481**	
Technical data	**Field bus**			
Supply		24 V DC (18…30,2 V), to EN 61131-2, < 100 mA		
Type		Profibus-DP slave		
Transfer protocol		Profibus-DP DIN EN 50170		
Operating modes		Sync- freeze-mode are supported		
Transfer rate		up to 12 MBit/s	up to 6 MBit/s	
Addressing		BCD rotary switch, 1…99		
Technical data	**Inputs**			
Type		for 3-wire sensors or mechanical switches, p-switching, IEC 1131-2 compatible		
Supply		24 V DC (18…30,2 V), to EN 61131-2, < 1,6 A, overload protected		
Status indicator		one LED per input		
Technical data	**Outputs**			
Supply		24 V DC (18…30,2 V), to EN 61131-2, $I\sum \leq 8$ resp. 12,8 resp. 16 A		
Switching current per output		1,6 resp. 2 A, short circuit protection and overload		
Filament lamp load		10 W		
Max. switching frequency		resistive load: 100 Hz; inductive load: 1…4 Hz (dependent on current load per output)		
Status indicator		one LED per output		
Diagnostics				
Field bus		RUN-LED		
Under voltage		LED and alarm to the master		
Short circuit output		LED and alarm to the master, every channel individual		
General data				
Temperature range		0…+55 °C	-20…+55 °C	
Mounting method		2-hole screw mounting		
Dimensions	H x D x W	220 x 63 x 70,5 mm (drill plan 208,5 ± 0,5 mm)		
Dimension drawing				





Accessories			Art.-No.
PG 9 Cable compression gland	Set: 2 pieces	polyamide black	**55469**
PG 9 Cable compression gland	Set: 2 pieces	nickel plated brass	**55459**
PG 9 Cap	Set: 2 pieces	polyamide black	**55458**
M12 Blind plug	Set: 4 pieces		**55468**
Handbook German		disk 3,5"	**55498**
GSD/type data		disk 3,5"	**55246**
Profibus cable		per meter	**55770**

Notes

PG glands are not supplied. Configuration see page 2.4.18

[1] Different schematic for "VW"

Bus modules MBV Profibus-DP

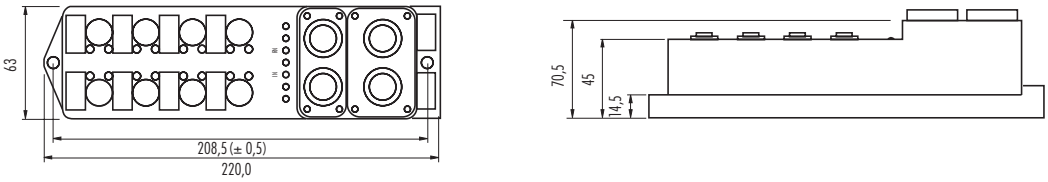
Output modules

IP67 Protection

MBV-P

Ordering data			**Art.-No.**
16 digital 0,5 A outputs			**55489**

Technical data	**Field bus**	
Supply		24 V DC (18…30,2 V), to EN 61131-2, < 100 mA
Type		Profibus-DP slave
Transfer protocol		Profibus-DP DIN EN 50170
Operating modes		Sync-mode are supported
Transfer rate		up to 12 MBit/s
Addressing		BCD rotary switch, 1…99
Technical data	**Outputs**	
Supply		24 V DC (18…30,2 V), to EN 61131-2, I ∑ ≤ 8 A
Switching current per output		0,5 A, short circuit protection and overload
Filament lamp load		2 W
Max. switching frequency		resistive load: 100 Hz; inductive load: 1…4 Hz (dependent on current load per output)
Status indicator		one LED per output
Diagnostics		
Field bus		RUN-LED
Under voltage		LED and alarm to the master
Short circuit output		LED and alarm to the master, every channel individual
General data		
Temperature range		0…+55 °C
Mounting method		2-hole screw mounting
Dimensions	H x D x W	220 x 63 x 70,5 mm (drill plan 208,5 ± 0,5 mm)
Dimension drawing		



Accessories			**Art.-No.**
PG 9 Cable compression gland	Set: 2 pieces	polyamide black	**55469**
PG 9 Cable compression gland	Set: 2 pieces	nickel plated brass	**55459**
PG 9 Cap	Set: 2 pieces	polyamide black	**55458**
M12 Blind plug	Set: 4 pieces		**55468**
Handbook German		disk 3,5"	**55498**
GSD/type data		disk 3,5"	**55246**
Profibus cable		per meter	**55770**

Notes

PG glands are not supplied. Configuration see page 2.4.18

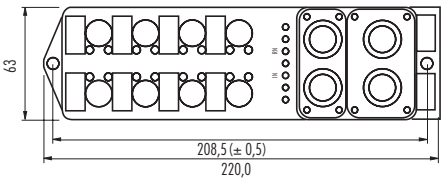
Bus modules MBV
Interbus

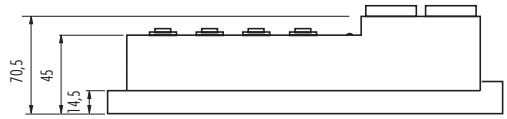
Input/output modules

IP67 Protection

MBV-I

Ordering data		Art.-No.
8 digital inputs		**55460**
16 digital inputs		**55463**
8 digital inputs, 4 digital 2 A outputs		**55462**
8 digital 2 A outputs		**55461**
Technical data	**Field bus**	
Supply	24 V DC (18…30,2 V), to EN 61131-2, < 100 mA	
Type	remote bus / installation remote bus participants (slave)	
Transfer protocol	Interbus DIN EN 50254	
Operating modes	–	
Transfer rate	500 kBit/s	
Technical data	**Inputs**	
Type	for 3-wire sensors or mechanical switches, p-switching, IEC 1131-2 compatible	
Supply	24 V DC (18…30,2 V), to EN 61131-2, < 1,6 A overload protected	
Status indicator	one LED per input	
Technical data	**Outputs**	
Supply	24 V DC (18…30,2 V), to EN 61131-2, $I\sum \leq 8$ A resp. 16 A	
Switching current per output	2 A, short circuit protection and overload	
Filament lamp load	10 W	
Max. switching frequency	resistive load: 100 Hz; inductive load: 1…4 Hz (dependent on current load per output)	
Status indicator	one LED per output	
Diagnostics		
Field bus	BA-, RD-, RC-LEDs	
Under voltage	LED and alarm to the master	
Short circuit sensor	LED and alarm to the master	
Short circuit output	LED and alarm to the master, every channel individual	
General data		
Temperature range	0…+55 °C (-20…+55 °C on request)	
Mounting method	2-hole screw mounting	
Dimensions H x D x W	220 x 63 x 70,5 mm (drill plan 208,5 ± 0,5 mm)	
Dimension drawing		

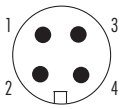




Accessories			Art.-No.
PG 9 Cable compression gland	Set: 2 pieces	polyamide black	**55469**
PG 9 Cap	Set: 2 pieces	polyamide black	**55458**
M12 Blind plug	Set: 4 pieces		**55468**
Handbook German			**55497**
INTERBUS remote bus cable		per meter	**55771**
INTERBUS installation remote bus cable		per meter	**55772**
Notes			
		PG glands are not supplied, configuration see page 2.4.18	

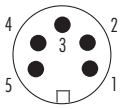
PIN assignment for MVK-DN

POWER
Male



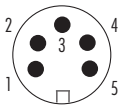
PIN 1: 24 V Actuator 00…03
+ Sensor supply
PIN 2: PE
PIN 3: 24 V Actuator 04…07
PIN 4: GND

BUS IN
Male



PIN 1: shield
PIN 2: V+
PIN 3: V–
PIN 4: CAN_H
PIN 5: CAN_L

BUS OUT
Female

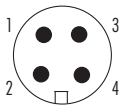


Top view of module

DeviceNet CONFORMANCE TESTED

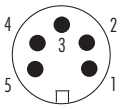
PIN assignment for MVK-C

POWER
Male



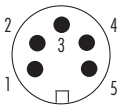
PIN 1: 24 V Actuator 00…03
+ Sensor supply
PIN 2: PE
PIN 3: 24 V Actuator 04…07
PIN 4: GND

BUS IN
Male



PIN 1: shield
PIN 2: NC (Jumper from BUS IN to BUS OUT)
PIN 3: NC (Jumper from BUS IN to BUS OUT)
PIN 4: CAN_H
PIN 5: CAN_L

BUS OUT
Female

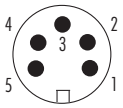


Top view of module

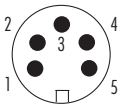
CANopen

PIN assignment for MVK-P

POWER IN
Male



POWER OUT
Female



PIN 1: GND
PIN 2: GND
PIN 3: PE
PIN 4: 24 V supply voltage und Sensor supply
PIN 5: Actuator supply

Top view of module

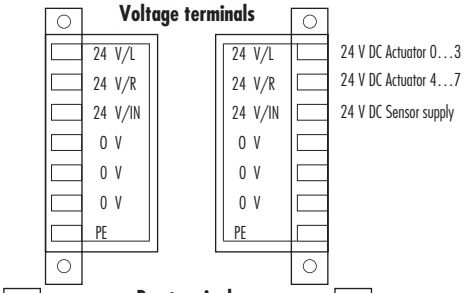
BUS IN
Male

BUS OUT
Female

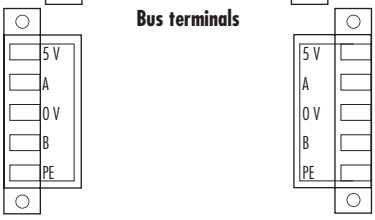
PIN 1: 5 V
PIN 2: A wire (green)
PIN 3: 0 V
PIN 4: B wire (red)
PIN 5: shield

Connection : shield

Voltage terminals



Bus terminals

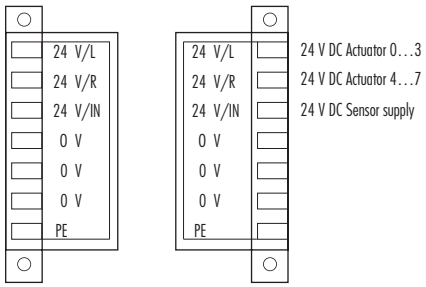


BUS IN **BUS OUT**

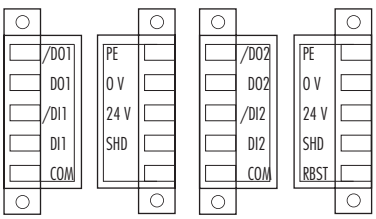
PROFI PROCESS FIELD BUS

MVK-I as installation remote bus user or remote bus user

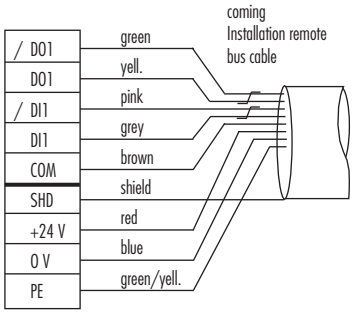
Voltage terminals

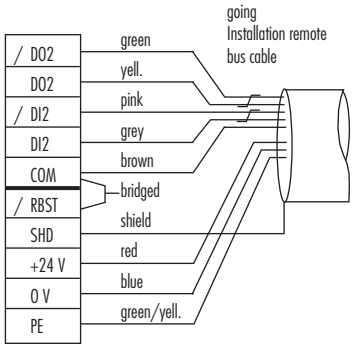


Bus terminals

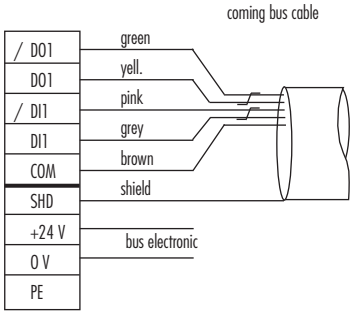


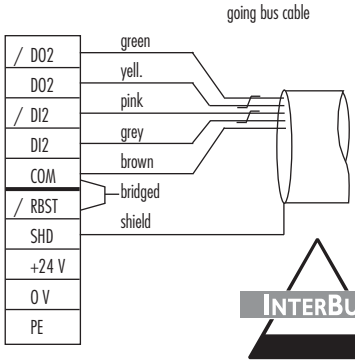
Connections as installation remote bus user





Connection as remote bus user

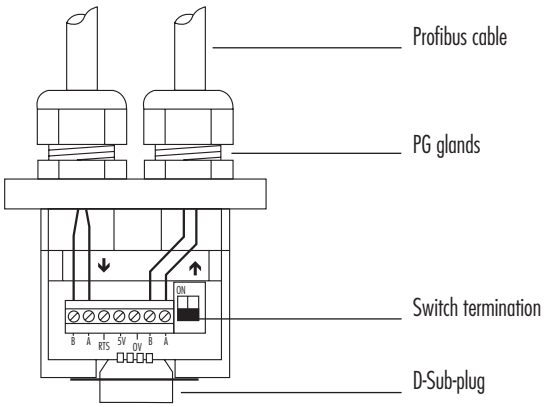




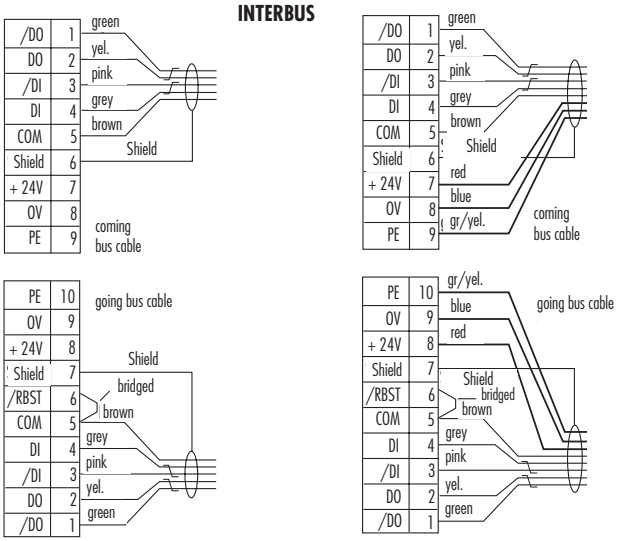
INTERBUS

PIN assignment for MBV

PROFIBUS-DP



INTERBUS

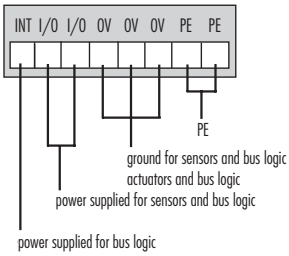


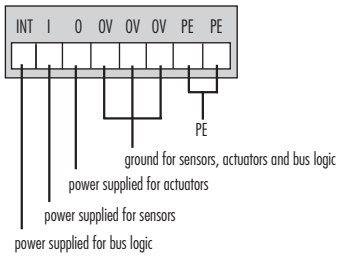
Standard configuration

PROFIBUS-DP	MBV-P DI8	(Art.-No. 55450)
	MBV-P DO8/2 A	(Art.-No. 55451)
	MBV-P DI16	(Art.-No. 55453, 55454)
	MBV-P DO8/1,6 A	(Art.-No. 55484)
	MBV-P DO16/0,5 A	(Art.-No. 55489)
INTERBUS	MBV-I DI8	(Art.-No. 55460)
	MBV-I DO8/2 A	(Art.-No. 55461)
	MBV-I DI16	(Art.-No. 55463)

PROFIBUS-DP MBV-P DI8 DO4/2 A (Art.-No. 55452)

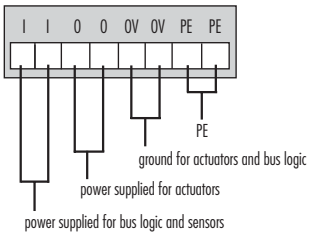
INTERBUS MBV-I DI8 DO4/2 A (Art.-No. 55462)



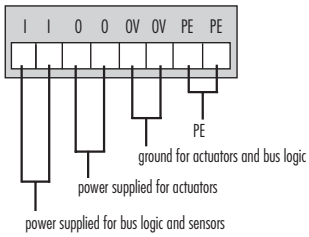


Configuration for "VW"

PROFIBUS-DP MBV2-P DO8/2 A (Art.-No. 55481)



PROFIBUS-DP MBV2-P DI8 DO4/2 A (Art.-No. 55482)



PROFIBUS-DP MBV2-P DI8 (Art.-No. 55480)
MBV2-P DI16 (Art.-No. 55483)