

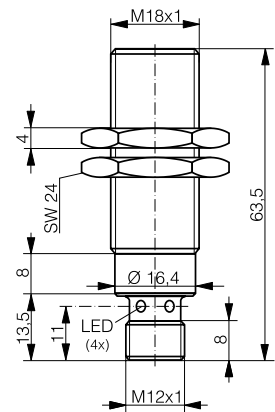
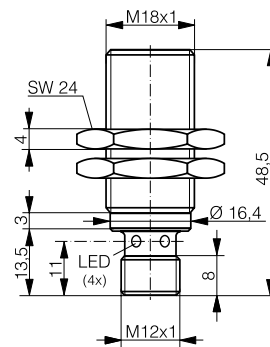
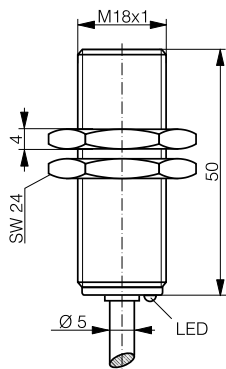
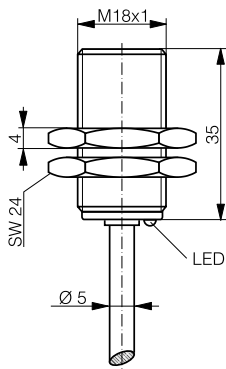
# M18

5

5

5

5



Chrome-plated brass	Chrome-plated brass	Chrome-plated brass	Chrome-plated brass
PVC cable type 8	PVC cable type 8	Connector S12	Connector S12
IP 67	IP 67	IP 67	IP 67
Embeddable	Embeddable	Embeddable	Embeddable
2,000 Hz	2,000 Hz	2,000 Hz	2,000 Hz
Table 1	Table 1	Table 1	Table 1
Diagram 1	Diagram 1	Diagram 2	Diagram 2
Built-in	Built-in	Built-in	Built-in
10 ... 30 VDC	10 ... 30 VDC	10 ... 30 VDC	10 ... 30 VDC
-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C
≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA
CE, CCC, UL, RoHS	CE, CCC, UL, RoHS	CE, CCC, UL, RoHS	CE, CCC, UL, RoHS

<b>DW-AD-601-M18-120</b>	<b>DW-AD-601-M18</b>	<b>DW-AS-601-M18-120</b>	<b>DW-AS-601-M18-002</b>
DW-AD-602-M18-120	DW-AD-602-M18	DW-AS-602-M18-120	DW-AS-602-M18-002
<b>DW-AD-603-M18-120</b>	<b>DW-AD-603-M18</b>	<b>DW-AS-603-M18-120</b>	<b>DW-AS-603-M18-002</b>
DW-AD-604-M18-120	DW-AD-604-M18	DW-AS-604-M18-120	DW-AS-604-M18-002
		G, H, M, N (N.O.); M, N (N.C.)	G, H, M, N (N.O.); M, N (N.C.)

Inductive

Photoelectric

Optical fibers

Ultrasonic

Capacitive

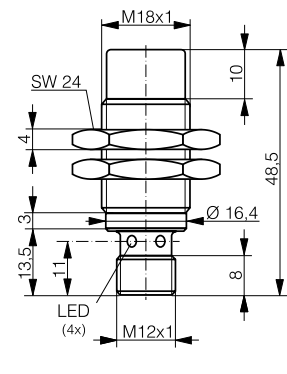
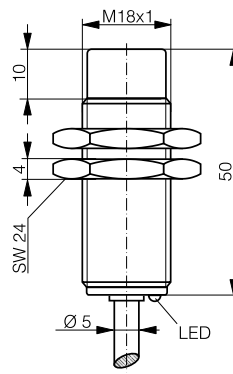
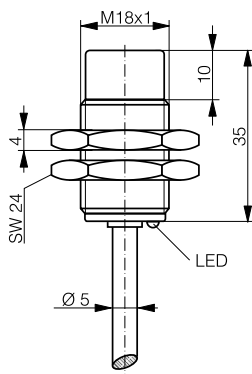
Cables & connectors

Accessories

Glossary

Index

HOUSING SIZE	M18		
OPERATING DISTANCE MM	8	8	8



- 1) Standard cable length 2 m. Non-standard cable lengths and types on request. Cable type see page 271.
- 2) see page 132
- 3) see page 133
- 4) see page 268

### TECHNICAL DATA

Housing material	Chrome-plated brass	Chrome-plated brass	Chrome-plated brass
Connection <sup>1)</sup>	PVC cable type 8	PVC cable type 8	Connector S12
Degree of protection	IP 67	IP 67	IP 67
Mounting	Non-embeddable	Non-embeddable	Non-embeddable
Max. switching frequency	2,000 Hz	2,000 Hz	2,000 Hz
Additional technical data <sup>2)</sup>	Table 1	Table 1	Table 1
Wiring <sup>3)</sup>	Diagram 1	Diagram 1	Diagram 2
LED	Built-in	Built-in	Built-in
Supply voltage range	10 ... 30 VDC	10 ... 30 VDC	10 ... 30 VDC
Ambient temperature range	-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C
Output current	≤ 200 mA	≤ 200 mA	≤ 200 mA
Approvals	CE, CCC, UL, RoHS	CE, CCC, UL, RoHS	CE, CCC, UL, RoHS

### PART REFERENCES: (BOLD: PREFERRED TYPES)

NPN N.O.	<b>DW-AD-611-M18-120</b>	<b>DW-AD-611-M18</b>	<b>DW-AS-611-M18-120</b>
NPN N.C.	DW-AD-612-M18-120	DW-AD-612-M18	DW-AS-612-M18-120
PNP N.O.	<b>DW-AD-613-M18-120</b>	<b>DW-AD-613-M18</b>	<b>DW-AS-613-M18-120</b>
PNP N.C.	DW-AD-614-M18-120	DW-AD-614-M18	DW-AS-614-M18-120
Compatible connectors <sup>4)</sup>			G, H, M, N (N.O.); M, N (N.C.)

# M18

8

8

8

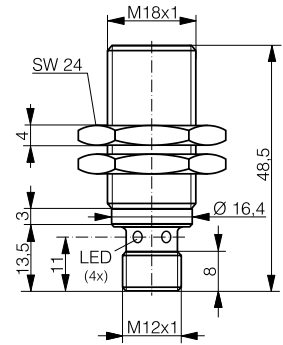
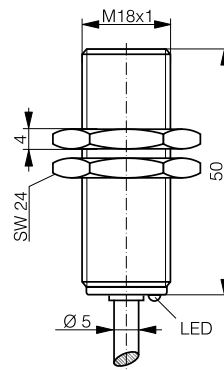
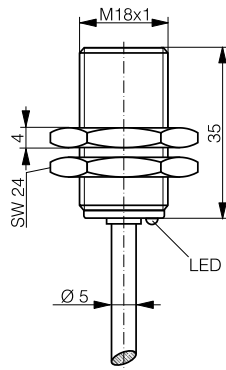
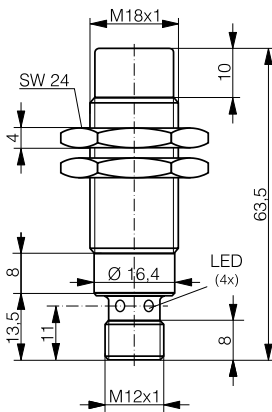
8



INCREASED DISTANCE

INCREASED DISTANCE

INCREASED DISTANCE



Chrome-plated brass	Chrome-plated brass	Chrome-plated brass	Chrome-plated brass
Connector S12	PVC cable type 8	PVC cable type 8	Connector S12
IP 67	IP 67	IP 67	IP 67
Non-embeddable	Quasi-embeddable	Quasi-embeddable	Quasi-embeddable
2,000 Hz	1,500 Hz	1,500 Hz	1,500 Hz
Table 1	Table 1	Table 1	Table 1
Diagram 2	Diagram 1	Diagram 1	Diagram 2
Built-in	Built-in	Built-in	Built-in
10 ... 30 VDC	10 ... 30 VDC	10 ... 30 VDC	10 ... 30 VDC
-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C
≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA
CE, CCC, UL, RoHS	CE, CCC, UL, RoHS	CE, CCC, UL, RoHS	CE, CCC, UL, RoHS

<b>DW-AS-611-M18-002</b>	<b>DW-AD-621-M18-120</b>	<b>DW-AD-621-M18</b>	<b>DW-AS-621-M18-120</b>
DW-AS-612-M18-002	DW-AD-622-M18-120	DW-AD-622-M18	DW-AS-622-M18-120
<b>DW-AS-613-M18-002</b>	<b>DW-AD-623-M18-120</b>	<b>DW-AD-623-M18</b>	<b>DW-AS-623-M18-120</b>
DW-AS-614-M18-002	DW-AD-624-M18-120	DW-AD-624-M18	DW-AS-624-M18-120
G, H, M, N (N.O.); M, N (N.C.)			G, H, M, N (N.O.); M, N (N.C.)

Inductive

Photoelectric

Optical fibers

Ultrasonic

Capacitive

Cables & connectors

Accessories

Glossary

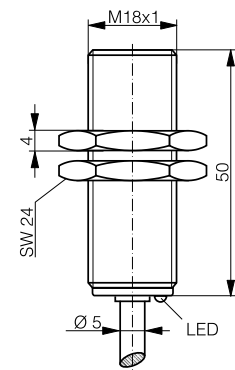
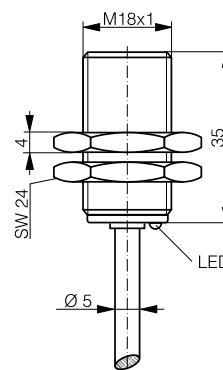
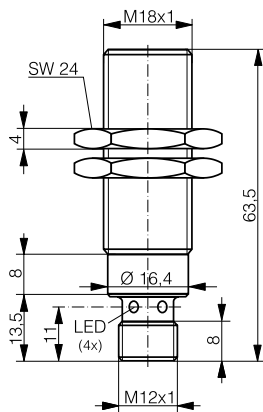
Index

HOUSING SIZE	M18		
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OPERATING DISTANCE MM	8	10	10*
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INCREASED DISTANCE	ALL-METAL / 60 BAR	ALL-METAL / 60 BAR
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- 1) Standard cable length 2 m. Non-standard cable lengths and types on request. Cable type see page 271.
- 2) see page 132
- 3) see page 133
- 4) see page 268

### TECHNICAL DATA

Housing material	Chrome-plated brass	Stainless steel V2A	Stainless steel V2A
Connection <sup>1)</sup>	Connector S12	PUR cable type 11	PUR cable type 11
Degree of protection	IP 67	IP 68 & IP 69K	IP 68 & IP 69K
Mounting	Quasi-embeddable	Embeddable	Embeddable
Max. switching frequency	1,500 Hz	200 Hz	200 Hz
Additional technical data <sup>2)</sup>	Table 1	Table 1	Table 1
Wiring <sup>3)</sup>	Diagram 2	Diagram 1	Diagram 1
LED	Built-in	Built-in	Built-in
Supply voltage range	10 ... 30 VDC	10 ... 30 VDC	10 ... 30 VDC
Ambient temperature range	-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C
Output current	≤ 200 mA	≤ 200 mA	≤ 200 mA
Approvals	CE, CCC, UL, RoHS	CE, UL, RoHS	CE, UL, RoHS

### PART REFERENCES: (BOLD: PREFERRED TYPES)

NPN N.O.	<b>DW-AS-621-M18-002</b>	<b>DW-AD-701-M18-120</b>	<b>DW-AD-701-M18</b>
NPN N.C.	DW-AS-622-M18-002	DW-AD-702-M18-120	DW-AD-702-M18
PNP N.O.	<b>DW-AS-623-M18-002</b>	<b>DW-AD-703-M18-120</b>	<b>DW-AD-703-M18</b>
PNP N.C.	DW-AS-624-M18-002	DW-AD-704-M18-120	DW-AD-704-M18
Compatible connectors <sup>4)</sup>	G, H, M, N (N.O.); M, N (N.C.)		

\* versions with 5 mm operating distance on request

# M18

10

10\*

12

12

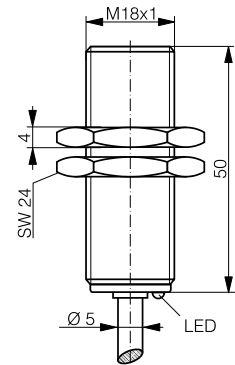
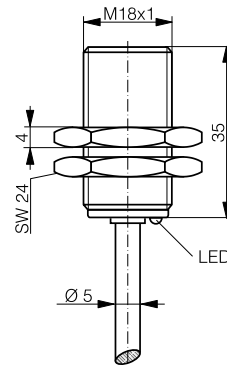
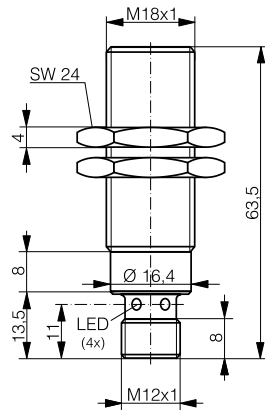
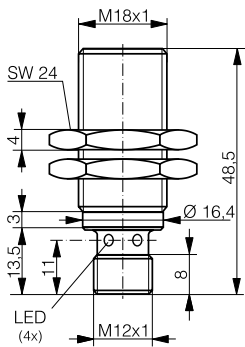


ALL-METAL / 60 BAR

ALL-METAL / 60 BAR

LONG DISTANCE

LONG DISTANCE



Stainless steel V2A	Stainless steel V2A	Chrome-plated brass	Chrome-plated brass
Connector S12	Connector S12	PVC cable type 8	PVC cable type 8
IP 68 & IP 69K	IP 68 & IP 69K	IP 67	IP 67
Embeddable	Embeddable	Quasi-embeddable	Quasi-embeddable
200 Hz	200 Hz	500 Hz	500 Hz
Table 1	Table 1	Table 1	Table 1
Diagram 2	Diagram 2	Diagram 1	Diagram 1
Built-in	Built-in	Built-in	Built-in
10 ... 30 VDC	10 ... 30 VDC	10 ... 30 VDC	10 ... 30 VDC
-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C
≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA
CE, UL, RoHS	CE, UL, RoHS	CE, UL, RoHS	CE, UL, RoHS

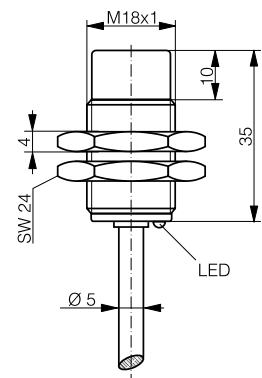
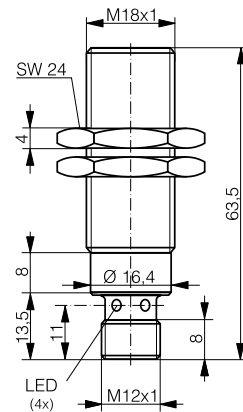
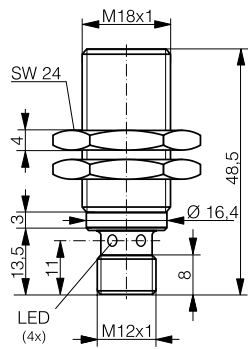
<b>DW-AS-701-M18-120</b>	<b>DW-AS-701-M18-002</b>	<b>DW-AD-501-M18-120</b>	<b>DW-AD-501-M18</b>
DW-AS-702-M18-120	DW-AS-702-M18-002	DW-AD-502-M18-120	DW-AD-502-M18
<b>DW-AS-703-M18-120</b>	<b>DW-AS-703-M18-002</b>	<b>DW-AD-503-M18-120</b>	<b>DW-AD-503-M18</b>
DW-AS-704-M18-120	DW-AS-704-M18-002	DW-AD-504-M18-120	DW-AD-504-M18
G, H, M, N (N.O.); M, N (N.C.)	G, H, M, N (N.O.); M, N (N.C.)		

\* versions with 5 mm operating distance on request

HOUSING SIZE	M18		
OPERATING DISTANCE MM	12	12	20



LONG DISTANCE      LONG DISTANCE      LONG DISTANCE



- 1) Standard cable length 2 m. Non-standard cable lengths and types on request. Cable type see page 271.
- 2) see page 132
- 3) see page 133
- 4) see page 268

### TECHNICAL DATA

Housing material	Chrome-plated brass	Chrome-plated brass	Chrome-plated brass
Connection <sup>1)</sup>	Connector S12	Connector S12	PVC cable type 8
Degree of protection	IP 67	IP 67	IP 67
Mounting	Quasi-embeddable	Quasi-embeddable	Non-embeddable
Max. switching frequency	500 Hz	500 Hz	200 Hz
Additional technical data <sup>2)</sup>	Table 1	Table 1	Table 1
Wiring <sup>3)</sup>	Diagram 2	Diagram 2	Diagram 1
LED	Built-in	Built-in	Built-in
Supply voltage range	10 ... 30 VDC	10 ... 30 VDC	10 ... 30 VDC
Ambient temperature range	-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C
Output current	≤ 200 mA	≤ 200 mA	≤ 200 mA
Approvals	CE, UL, RoHS	CE, UL, RoHS	CE, UL, RoHS

### PART REFERENCES: (BOLD: PREFERRED TYPES)

NPN N.O.	<b>DW-AS-501-M18-120</b>	<b>DW-AS-501-M18-002</b>	<b>DW-AD-511-M18-120</b>
NPN N.C.	DW-AS-502-M18-120	DW-AS-502-M18-002	DW-AD-512-M18-120
PNP N.O.	<b>DW-AS-503-M18-120</b>	<b>DW-AS-503-M18-002</b>	<b>DW-AD-513-M18-120</b>
PNP N.C.	DW-AS-504-M18-120	DW-AS-504-M18-002	DW-AD-514-M18-120
Compatible connectors <sup>4)</sup>	G, H, M, N (N.O.); M, N (N.C.)	G, H, M, N (N.O.); M, N (N.C.)	

# M18

20

20

20

20\*

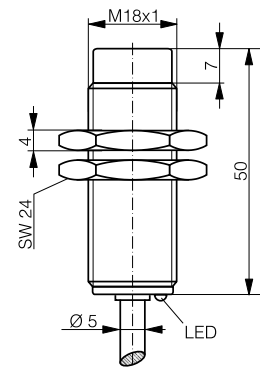
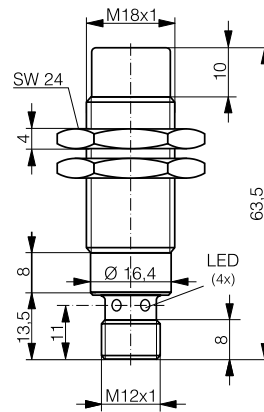
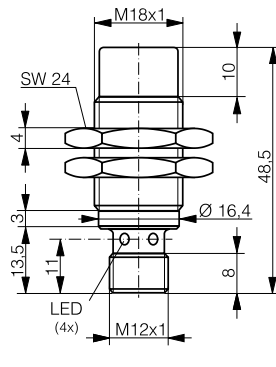
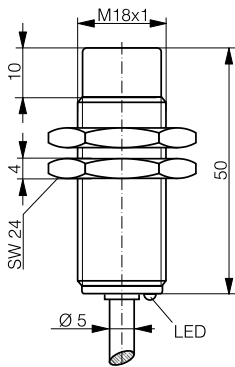


LONG DISTANCE

LONG DISTANCE

LONG DISTANCE

ALL-METAL / 60 BAR



Chrome-plated brass  
PVC cable type 8  
IP 67  
Non-embeddable  
200 Hz  
Table 1  
Diagram 1  
Built-in  
10 ... 30 VDC  
-25 ... +70 °C  
≤ 200 mA  
CE, UL, RoHS

Chrome-plated brass  
Connector S12  
IP 67  
Non-embeddable  
200 Hz  
Table 1  
Diagram 2  
Built-in  
10 ... 30 VDC  
-25 ... +70 °C  
≤ 200 mA  
CE, UL, RoHS

Chrome-plated brass  
Connector S12  
IP 67  
Non-embeddable  
200 Hz  
Table 1  
Diagram 2  
Built-in  
10 ... 30 VDC  
-25 ... +70 °C  
≤ 200 mA  
CE, UL, RoHS

Stainless steel V2A  
PUR cable type 11  
IP 68 & IP 69K  
Non-embeddable  
200 Hz  
Table 1  
Diagram 1  
Built-in  
10 ... 30 VDC  
-25 ... +70 °C  
≤ 200 mA  
CE, UL, RoHS

**DW-AD-511-M18**

DW-AD-512-M18

**DW-AD-513-M18**

DW-AD-514-M18

**DW-AS-511-M18-120**

DW-AS-512-M18-120

**DW-AS-513-M18-120**

DW-AS-514-M18-120

G, H, M, N (N.O.); M, N (N.C.)

**DW-AS-511-M18-002**

DW-AS-512-M18-002

**DW-AS-513-M18-002**

DW-AS-514-M18-002

G, H, M, N (N.O.); M, N (N.C.)

**DW-AD-711-M18**

DW-AD-712-M18

**DW-AD-713-M18**

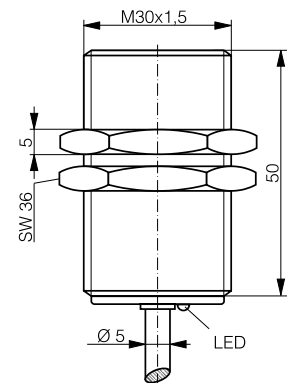
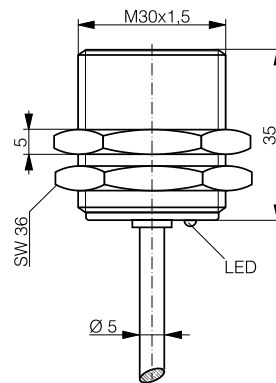
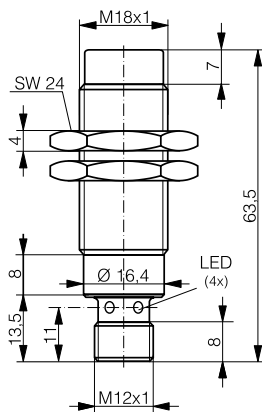
DW-AD-714-M18

\* versions with 8 mm operating distance on request

HOUSING SIZE	M18	M30	
OPERATING DISTANCE MM	20*	10	10



**ALL-METAL / 60 BAR**



- 1) Standard cable length 2 m. Non-standard cable lengths and types on request. Cable type see page 271.
- 2) see page 132
- 3) see page 133
- 4) see page 268

TECHNICAL DATA			
Housing material	Stainless steel V2A	Chrome-plated brass	Chrome-plated brass
Connection <sup>1)</sup>	Connector S12	PVC cable type 8	PVC cable type 8
Degree of protection	IP 68 & IP 69K	IP 67	IP 67
Mounting	Non-embeddable	Embeddable	Embeddable
Max. switching frequency	200 Hz	1,200 Hz	1,200 Hz
Additional technical data <sup>2)</sup>	Table 1	Table 1	Table 1
Wiring <sup>3)</sup>	Diagram 2	Diagram 1	Diagram 1
LED	Built-in	Built-in	Built-in
Supply voltage range	10 ... 30 VDC	10 ... 30 VDC	10 ... 30 VDC
Ambient temperature range	-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C
Output current	≤ 200 mA	≤ 200 mA	≤ 200 mA
Approvals	CE, UL, RoHS	CE, CCC, UL, RoHS	CE, CCC, UL, RoHS

PART REFERENCES: (BOLD: PREFERRED TYPES)			
NPN N.O.	<b>DW-AS-711-M18-002</b>	<b>DW-AD-601-M30-120</b>	<b>DW-AD-601-M30</b>
NPN N.C.	DW-AS-712-M18-002	DW-AD-602-M30-120	DW-AD-602-M30
PNP N.O.	<b>DW-AS-713-M18-002</b>	<b>DW-AD-603-M30-120</b>	<b>DW-AD-603-M30</b>
PNP N.C.	DW-AS-714-M18-002	DW-AD-604-M30-120	DW-AD-604-M30
Compatible connectors <sup>4)</sup>	G, H, M, N (N.O.); M, N (N.C.)		

\* versions with 8 mm operating distance on request