

Limit switch attachments



# Limit switch attachments DAPZ

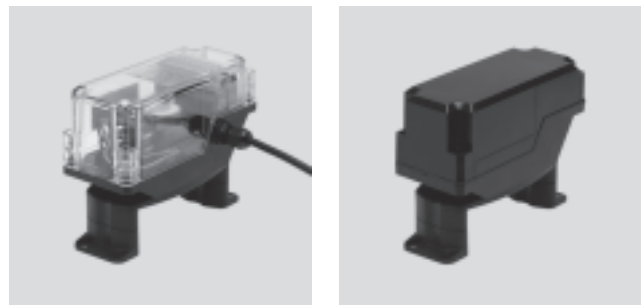
Type codes

		DAPZ	–	SB	–	M	–	250AC	–	EXS	–	RO
<b>Type</b>												
DAPZ	Limit switch attachment											
<b>Specification</b>												
SB	Sensor box											
<b>Measuring principle</b>												
I	Inductive											
M	Electrical, micro switch											
<b>Operating voltage</b>												
25DC	8 V DC											
30DC	30 V DC											
250AC	250 V AC/DC											
<b>Version</b>												
EX	Explosion-proof											
D	Display											
S	Square design											
R	Round design											
A	AS-interface connection											
M	Solenoid plug											
<b>Variant</b>												
RO	Foot height fixed											
AR	Foot height adjustable											

# Limit switch attachments DAPZ, square design

Technical data

- Drive interface to Namur VDI/VDE 3845
- Quick and easy assembly and connection
- Integrated solenoid valve actuation
- DAPZ-SB-I-... with AS-interface



General technical data		DAPZ-SB-M-250AC-DSM-RO	DAPZ-SB-M-250AC-EXS-RO	DAPZ-SB-I-30DC-DSAM-RO
Measuring principle		Mechanical, electrical	Mechanical, electrical	Inductive
Based on standard		EN 60947-5-1	EN 60947-5-1	EN 60947-5-6
		VDI/VDE 3845 (NAMUR)		
Design		Square		
Mounting position		Any		
Protection against short circuit		No	No	Yes
Switching element function		Changeover switch	Changeover switch	Normally closed contact
Protection against reverse polarity		No	No	For all electrical connections
Switching position display		No	No	No
Operating voltage range	Direct current DC [V]	0 ... 250	0 ... 250	–
	Alternating current AC [V]	0 ... 250	0 ... 250	–
Nominal operating voltage DC [V]		–	–	30
Insulation voltage [V]		250	250	50
Surge capacity [kV]		4	4	0.8
Max. output current [mA]		16,000	4,000	–
Electrical connection		Screw terminal	Screw terminal	–
Fieldbus interface		–	–	AS-interface: flat cable plug
Permissible cable diameter [mm]		8 ... 13	8 ... 13	–
Cable connector		M20x1.5	M20x1.5	–

Operating and environmental conditions		DAPZ-SB-M-250AC-DSM-RO	DAPZ-SB-M-250AC-EXS-RO	DAPZ-SB-I-30DC-DSAM-RO
Ambient temperature [°C]		–20 ... +85 °C	–20 ... +60 °C	–20 ... +85 °C
Protection class		IP65		
CE marking (see declaration of conformity)		To EU Low Voltage Directive	To EU Explosion Protection Directive (ATEX)	–
ATEX category for gas		–	II 2G	–
Explosion ignition protection type for gas		–	Ex d e IIC T6 Gb	–
Explosion-proof temperature rating		–	–20 °C ≤ Ta ≤ +60 °C	–
Certificate issuing authority		–	PTB 05 ATEX 1087	–
Explosion protection certification outside the EU		–	EPL Gb (RU)	–
		–	EPL Gc (RU)	–
Degree of contamination		3		
Corrosion resistance class CRC <sup>1)</sup>		2		

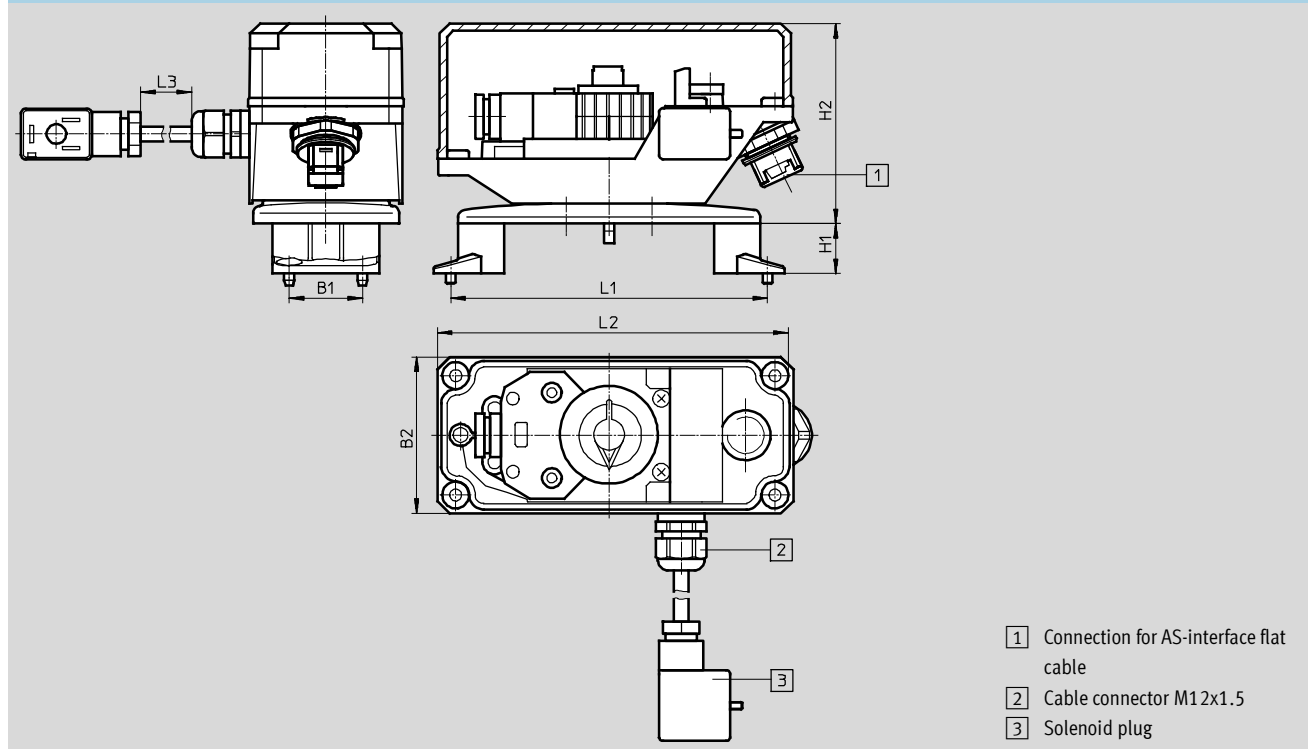
1) Corrosion resistance class 2 according to Festo standard 940 070  
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

# Limit switch attachments DAPZ, square design

Technical data

Materials	DAPZ-SB-M-250AC-DSM-RO	DAPZ-SB-M-250AC-EXS-RO	DAPZ-SB-I-30DC-DSAM-RO
1 Housing cover	PC	PA	PC
2 Housing socket, bracket	PA	PA	PA
3 Seals	EPDM		
- Note on materials	RoHS-compliant		

Dimensions – DAPZ-SB-I-30 V/DC-... Download CAD data → [www.festo.com](http://www.festo.com)



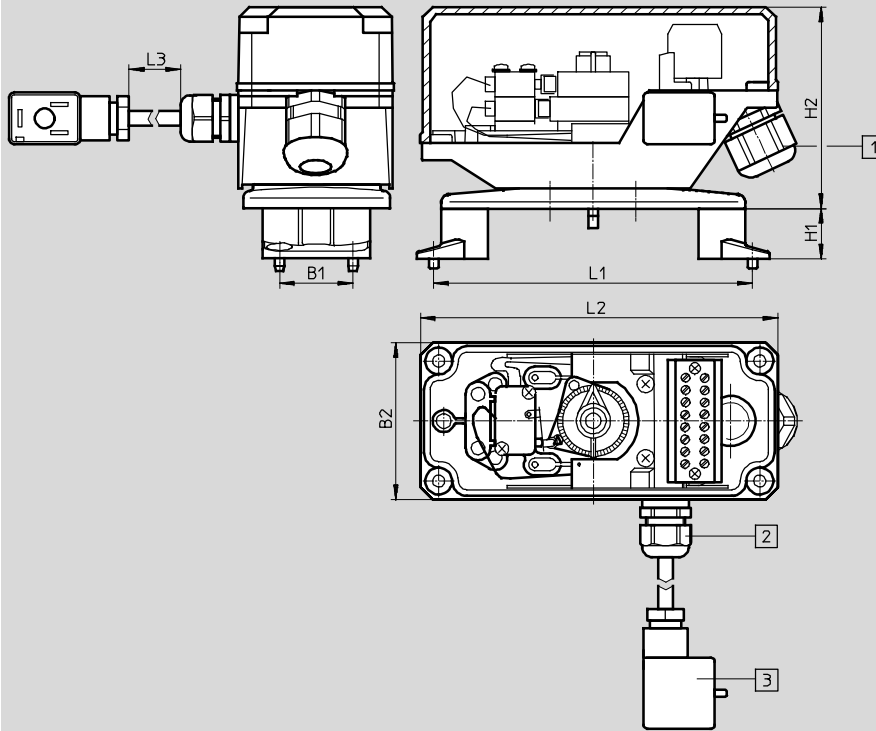
	B1	B2±2	H1	H2±3	L1	L2±2	L3±10
<b>Feet mounted inwards</b>							
Foot 20	30	63	20.5	80	80	145	300
Foot 30	30	63	30.5	80	80	145	300
Foot 50 (order accessories separately)	30	63	50.5	80	80	145	300
<b>Feet mounted outwards</b>							
Foot 20	30	63	20.5	80	130	145	300
Foot 30	30	63	30.5	80	130	145	300
Foot 50 (order accessories separately)	30	63	50.5	80	130	145	300
<b>Mounting via adapter (order accessories separately)</b> → 11							
DAPZ-SBZ-K0-RO	25±0.3	63	20.5	80	50±0.3	145	300
DAPZ-SBZ-K3-RO	30±0.3	63	30.5	80	150±0.3	145	300

# Limit switch attachments DAPZ, square design

Technical data

Dimensions – DAPZ-SB-M-250 V/AC...

Download CAD data → [www.festo.com](http://www.festo.com)



- 1 Cable connector M20x1.5
- 2 Cable connector M12x1.5
- 3 Solenoid plug

	B1	B2± <sub>2</sub>	H1	H2± <sub>3</sub>	L1	L2± <sub>2</sub>	L3± <sub>10</sub>
<b>Feet mounted inwards</b>							
Foot 20	30	63	20.5	80	80	145	300
Foot 30	30	63	30.5	80	80	145	300
Foot 50 (order accessories separately)	30	63	50.5	80	80	145	300
<b>Feet mounted outwards</b>							
Foot 20	30	63	20.5	80	130	145	300
Foot 30	30	63	30.5	80	130	145	300
Foot 50 (order accessories separately)	30	63	50.5	80	130	145	300
<b>Mounting via adapter (order accessories separately) → 11</b>							
DAPZ-SBZ-K0-RO	25± <sub>0.3</sub>	63	20.5	80	50± <sub>0.3</sub>	145	300
DAPZ-SBZ-K3-RO	30± <sub>0.3</sub>	63	30.5	80	150± <sub>0.3</sub>	145	300

<b>Ordering data</b>				
Sensing type	Variant	Measuring principle	Part No.	Type
Mechanical	Basic version	Mechanical, electrical	534 468	DAPZ-SB-M-250AC-DSM-RO
Mechanical	Explosion-proof	Mechanical, electrical	534 470	DAPZ-SB-M-250AC-EXS-RO
Contactless	Basic version	Inductive	534 473	DAPZ-SB-I-30DC-DSAM-RO

# Limit switch attachments DAPZ, round design, variant RO

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Technical data

- Drive interface to Namur VDI/VDE 3845
- Quick and easy assembly and connection
- Integrated solenoid valve actuation



General technical data	DAPZ-SB-M-250AC-DR-RO	DAPZ-SB-I-30DC-DR-RO	DAPZ-SB-I-25DC-R-RO
Measuring principle	Mechanical, electrical	Inductive	Inductive
Based on standard	EN 60947-5-1	EN 60947-5-2	EN 60947-5-6
	VDI/VDE 3845 (NAMUR)		
Design	Round		
Mounting position	Any		
Protection against short circuit	No	Pulsed	Yes
Switching element function	Changeover switch	Normally open contact	Normally closed contact
Protection against reverse polarity	No	For all electrical connections	For all electrical connections
Switching position display	Yes	Yes	No
Switching output	–	PNP	Namur
Operating voltage range	Direct current DC [V]	0 ... 250	10 ... 30
	Alternating current AC [V]	0 ... 250	–
Nominal operating voltage DC [V]	–	–	8
Insulation voltage [V]	250	50	25
Surge capacity [kV]	4	0.8	0.5
Max. output current [mA]	9,000	200	–
Switching current [mA]	Attenuated	–	≤1
	Non-attenuated	–	≥3
Electrical connection	Screw terminal	Screw terminal, plug-in	Screw terminal, plug-in
Permissible cable diameter [mm]	8 ... 13		
Cable connector	M20x1.5		

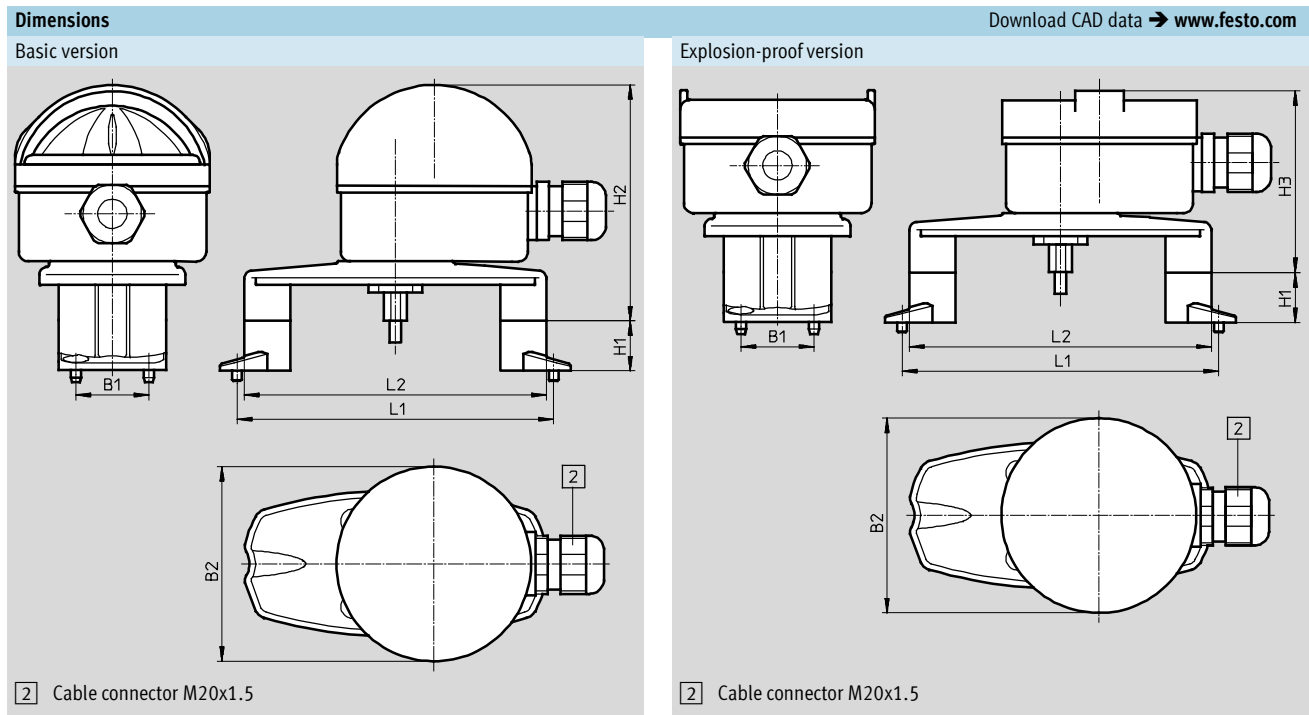
Operating and environmental conditions	DAPZ-SB-M-250AC-DR-RO	DAPZ-SB-I-30DC-DR-RO	DAPZ-SB-I-25DC-R-RO
Ambient temperature [°C]	–20 ... +85 °C	–25 ... +70 °C	–25 ... +70 °C
Protection class	IP65		
CE marking (see declaration of conformity)	To EU Low Voltage Directive	–	To EU Explosion Protection Directive (ATEX)
ATEX category for gas	–	–	II 2G
Explosion ignition protection type for gas	–	–	EEx ia IIC T6
Explosion-proof temperature rating	–	–	–25 °C ≤ Ta ≤ +70 °C
Certificate issuing authority	–	–	TÜV 99 ATEX 1479 X
Degree of contamination	3		
Corrosion resistance class CRC <sup>1)</sup>	2		

1) Corrosion resistance class 2 according to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Materials	DAPZ-SB-M-250AC-DR-RO	DAPZ-SB-I-30DC-DR-RO	DAPZ-SB-I-25DC-R-RO
1 Housing cover	PC	PC	PA
2 Housing socket, bracket	PA	PA	PA
3 Seals	EPDM		
– Note on materials	RoHS-compliant		

# Limit switch attachments DAPZ, round design, variant RO

Technical data



	B1	B2± <sub>1</sub>	H1	H2± <sub>2</sub>	H3± <sub>2</sub>	L1	L2± <sub>2</sub>
<b>Feet mounted inwards</b>							
Foot 20	30	80	20.5	97	75	80	122
Foot 30	30	80	30.5	97	75	80	122
Foot 50 (order accessories separately)	30	80	50.5	97	75	80	122
<b>Feet mounted outwards</b>							
Foot 20	30	80	20.5	97	75	130	122
Foot 30	30	80	30.5	97	75	130	122
Foot 50 (order accessories separately)	30	80	50.5	97	75	130	122
<b>Mounting via adapter (order accessories separately)</b> → 11							
DAPZ-SBZ-K0-RO	25± <sub>0.3</sub>	80	20.5	97	75	50± <sub>0.3</sub>	122
DAPZ-SBZ-K3-RO	30± <sub>0.3</sub>	80	30.5	97	75	150± <sub>0.3</sub>	122

<b>Ordering data</b>				
Sensing type	Variant	Measuring principle	Part No.	Type
Mechanical	Basic version	Mechanical, electrical	534 469	DAPZ-SB-M-250AC-DR-RO
Contactless	Basic version	Inductive	534 471	DAPZ-SB-I-30DC-DR-RO
Contactless	Explosion-proof	Inductive	534 472	DAPZ-SB-I-25DC-R-RO

# Limit switch attachments DAPZ, round design, variant AR

Technical data

- Drive interface to Namur VDI/VDE 3845
- Quick and easy assembly and connection
- Integrated solenoid valve actuation



General technical data		DAPZ-SB-M-250AC-DR-AR	DAPZ-SB-I-30DC-DR-AR	DAPZ-SB-I-25DC-EXDR-AR
Measuring principle		Mechanical, electrical	Inductive	Inductive
Based on standard		EN 60947-5-1	EN 60947-5-2	EN 60947-5-6
		VDI/VDE 3845 (NAMUR)		
Design		Round		
Mounting position		Any		
Protection against short circuit		No	Pulsed	No
Switching element function		Changeover switch	Normally open contact	Normally closed contact
Protection against reverse polarity		No	For all electrical connections	No
Switching position display		Yes		
Switching output		–	PNP	Namur
Operating voltage range	Direct current DC [V]	4 ... 250	10 ... 30	–
	Alternating current AC [V]	4 ... 250	–	–
Intrinsic current consumption at operating voltage [mA]		1 ... 5	0 ... 100	–
Nominal operating voltage DC [V]		–	–	8
Max. input power Pi [mW]		–	–	34
Max. input voltage Ui Direct current DC [V]		–	–	16
Max. input current Ii [mA]		–	–	25
Insulation voltage [V]		250	50	25
Surge capacity [kV]		2.5	0.5	0.5
Max. output current [mA]		5,000	100	–
Switching current	Attenuated [mA]	–	–	0 ... 1
	Non-attenuated [mA]	–	–	3
Minimum load current		1 mA at 4 V/DC		
Electrical connection		Screw terminal		
Permissible cable diameter [mm]		7 ... 13		
Cable connector		M20x1.5		



# Limit switch attachments DAPZ, round design, variant AR

Technical data

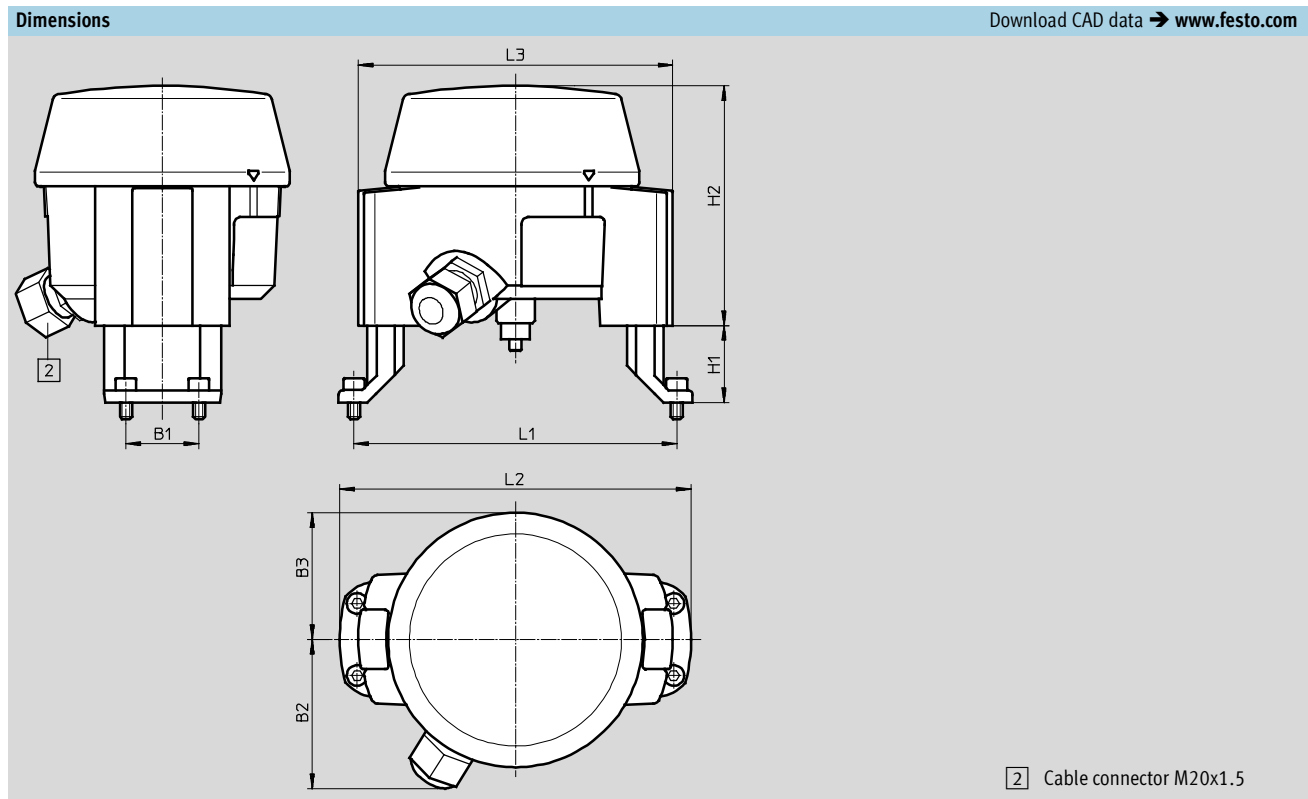
Operating and environmental conditions	DAPZ-SB-M-250AC-DR-AR	DAPZ-SB-I-30DC-DR-AR	DAPZ-SB-I-25DC-EXDR-AR
Ambient temperature [°C]	-20 ... +70 °C		
Protection class	IP67		
CE marking (see declaration of conformity)	To EU Low Voltage Directive	-	To EU Explosion Protection Directive (ATEX)
ATEX category for gas	-	-	II 2GX
Explosion ignition protection type for gas	-	-	EEx ia IIB T6
Explosion-proof temperature rating	-	-	-20 °C ≤ Ta ≤ +70 °C
Certificate issuing authority	-	-	PTB 00 ATEX 2032 X
Explosion protection certification outside the EU	-	-	EPL Gb (RU)
	-	-	EPL Gc (RU)
PFD	-	-	4,69E-04
PFH	-	-	1,07E-07
Degree of contamination	3		
Corrosion resistance class CRC <sup>1)</sup>	2		

1) Corrosion resistance class 2 according to Festo standard 940 070  
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Materials	
1 Housing cover	PC
2 Housing socket, bracket	ABS, PC
3 Seals	NBR
- Note on materials	RoHS-compliant

# Limit switch attachments DAPZ, round design, variant AR

Technical data









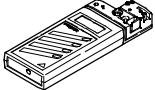
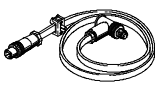


	B1	B2	B3	H1	H2	L1	L2	L3
<b>Feet mounted inwards</b>								
Foot height adjustable	30	62	52.5	20, 30, 50	100	80	144	130
<b>Feet mounted outwards</b>								
Foot height adjustable	30	62	52.5	20, 30, 50	100	130	144	130

Ordering data				
Sensing type	Variant	Measuring principle	Part No.	Type
Mechanical	Basic version	Mechanical, electrical	534 474	DAPZ-SB-M-250AC-DR-AR
Contactless	Basic version	Inductive	534 475	DAPZ-SB-I-30DC-DR-AR
Contactless	Explosion-proof	Inductive	534 476	DAPZ-SB-I-25DC-EXDR-AR

# Limit switch attachments DAPZ

Accessories

Ordering data			
	Brief description	Part No.	Type
<b>Foot</b>			
	Kit for limit switch attachment DAPZ-...-RO Shaft height 50 mm, port pattern 130 x 30 mm	534 477	DAPZ-SBZ-F50-RO
<b>Adapter for foot mounting</b>			
	Kit for limit switch attachment DAPZ-...-RO on the quarter turn actuator DRD/DRE sizes 1 and 2 Foot connection L50 x W25 x H20 mm	534 478	DAPZ-SBZ-K0-RO
	Kit for limit switch attachment DAPZ-...-RO on the quarter turn actuator DRD/DRE sizes 375 ... 880 Foot connection L150 x W30 x H30 mm	534 479	DAPZ-SBZ-K3-RO
<b>Fieldbus connection</b>			
	Flat cable for AS-interface components, yellow, 100 m	18 940	KASI-1,5-Y-100
	Cable distributor for flat cable, cable rotatable	18 786	ASI-KVT-FK
	Cable distributor for flat cable, cable symmetrical	18 797	ASI-KVT-FK-S
	Cable cap for flat cable (50 included in the scope of delivery)	18 787	ASI-KK-FK
	Cable sleeve (20 included in the scope of delivery)	165 593	ASI-KT-FK
<b>Miscellaneous</b>			
	Addressing device for AS-interface stations	18 959	ASI-PRG-ADR
	Addressing cable for addressing device	18 960	KASI-ADR

# Limit switch attachments QH-DR-E

## Technical data

Limit switch attachment  
with 3 measuring principles:

- Pneumatic
- Mechanical, electrical
- Inductive



General technical data		QH-DR-E-S3-PK-3-B-B	QH-DR-E-S3-E-SW-B	QH-DR-E-SIEN-M12-NB-B
Measuring principle		Pneumatic <sup>1)</sup>	Mechanical, electrical <sup>2)</sup>	Inductive <sup>3)</sup>
Pneumatic connection		G $\frac{1}{8}$	–	–
Based on standard		VDI/VDE 3845 (NAMUR)		
		–	EN 60947-5-1	EN 60947-5-2
Design		Square		
Mounting position		Any		
Protection against short circuit		–	No	Pulsed
Switching element function		–	Changeover switch	Normally open contact
Protection against reverse polarity		–	No	For all electrical connections
Switching position display		No	No	No
Switching output		–	–	PNP
Operating voltage range	Direct current DC [V]	–	0 ... 250	10 ... 30
	Alternating current AC [V]	–	0 ... 250	–
Insulation voltage [V]		–	250	50
Surge capacity [kV]		–	2.5	0.5
Max. output current [mA]		–	16,000	200
Electrical connection		–	Screw terminal	Screw terminal
Cable diameter [mm]		–	8 ... 13	8 ... 13
Cable connector		–	M20	M20

1) With stem actuated micro valve S-3-PK-3-B

2) With micro switch with roller lever (splash-proof) S-3-E-SW-B

3) With proximity sensor SIEN-M12-NB-B

Operating and environmental conditions		QH-DR-E-S3-PK-3-B-B	QH-DR-E-S3-E-SW-B	QH-DR-E-SIEN-M12-NB-B
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:--:--]	–	
Note on operating/pilot medium		Operation with lubricated medium possible (in which case lubricated operation will always be required)		
Operating pressure [bar]		–0.95 ... +8	–	
Ambient temperature [°C]		–10 ... +60 °C	–20 ... +85 °C	–25 ... +70 °C
Protection class		IP65		
CE marking (see declaration of conformity)		–	To EU Low Voltage Directive	To EU EMC Directive
Degree of contamination		–	3	
Corrosion resistance class CRC <sup>1)</sup>		2		

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

# Limit switch attachments QH-DR-E

Technical data

Materials		
1	Bracket	High-alloy stainless steel
2	Housing cover	PC
3	Housing socket	PA
4	Seals	EPDM
-	Note on materials	RoHS-compliant

Dimensions Download CAD data → [www.festo.com](http://www.festo.com)

1 Pg13.5

	B1	B2	D1 Ø	H1	H2	L1	L2
QH-DR-E- ...	64	30	5.5	102	28.5	146	80

Ordering data		
Measuring principle	Part No.	Type
Pneumatic with S3-PK-3-B	164 855	QH-DR-E-S3-PK-3-B-B
Electrical with S3-E-SW-B	164 854	QH-DR-E-S3-E-SW-B
Inductive with SIE-M12-NB-B	164 853	QH-DR-E-SIEN-M12-NB-B