

# Pressure switch hex 24 with integrated plug

Normally open or normally closed, maximum voltage 42 V



■ **Stable switching point even after high load and long use.**

■ **Switching point easily adjustable<sup>1)</sup> – also during operation.**

■ **High overpressure safety, small compact switches, available as no or nc.**








- High degree of protection: IP67, IP6K9K (except for AMP Junior Timer)
- Reduced assembly time: simple, quick attachment by rotation or plug connection
- Innovative solution based on long-term proven technology
- Fast mounting with socket wrench (nut) possible (except for 0114 / 0115 and 0116 / 0117)

## Technical data

Voltage:	max. 42 V		
Current rating (resistive):	max. 4 Ampere		
Contact capacity:	100 VA		
Temperature stability for diaphragm/ seal materials:	NBR	-40 °C – +100 °C	
	EPDM	-30 °C – +120 °C	
	FKM	-5 °C – +120 °C	
	Silicone	-40 °C – +120 °C	
	HNBR	-30 °C – +120 °C	
Switching frequency:	min: 200 / min.		
Mechanical life expectancy:	10 <sup>6</sup> switching cycles (for diaphragm pressure switches the switching life applies to pressure up to a max. of 50 bar)		
Pressure rise rate:	≤ 1 bar / ms		
Hysteresis:	average value 5 – 30% depending on type, not adjustable		
Vibration resistance:	10 g / 5 – 200 Hz sine wave		
Shock resistance:	294 m/s <sup>2</sup> ; 14 ms half sine wave		
Degree of protection:	up to IP67 / IP6K9K according to the manufacturer's specifications for the respective plug-in system only when plugged in, otherwise IP00		
Weight in grams:	approx. 90 g		

<sup>1)</sup> The pressure switches can also be supplied as preset by the factory. Our preset switches are sealed with lacquer paint and have the set pressure value embossed on their body








**Accessories: Female plugs with 2 m cable, 2 x 0,5 mm<sup>2</sup> except 1-1-22-653-117: 3 x 0,34 mm<sup>2</sup>**

Deutsch DT06-2S (for DT04-2P)	AMP-Superseal	Packard MetriPack 280	Deutsch DT06-3S (for DT04-3P)	AMP Junior Timer	Bayonet DIN 72585 A1-2.1	M12x1 DIN EN 61076-2-LF
						

Order number for female plugs:

1-1-10-653-118	1-1-12-653-113	1-1-14-653-114	1-1-16-653-115	1-1-18-653-116	1-1-20-653-112	1-1-22-653-117
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**Plug types**

						
Deutsch DT04-2P	AMP Superseal	Packard MetriPack 280	Deutsch DT04-3P (A+B)	AMP Junior Timer	Bayonet DIN 72585 A1-2.1	M12x1 DIN EN 61076-2-D (1+3)
IP67, IP6K9K	IP67	IP67	IP67, IP6K9K	IP65, IPx4K	IP67, IP6K9K	IP67
x ≈ 61 mm	x ≈ 61 mm	x ≈ 62 mm	x ≈ 63 mm	x ≈ 54 mm	x ≈ 49 mm	x ≈ 51 mm

Please insert the respective type designation into your order number:

Order numbers of diaphragm pressure switches see page 14

0110 ...	0112 ...	0114 ...	0116 ...	0118 ...	0120 ...	0122 ...
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Order numbers of piston pressure switches see page 15

0111 ...	0113 ...	0115 ...	0117 ...	0119 ...	0121 ...	0123 ...
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# Pressure switch hex 24 with integrated plug

## Diaphragm pressure switches



- No or nc, max. voltage 42 V (according to the standard hex 24)
- Made of zinc-plated steel (Cr VI-free)
- Overpressure safe up to 300 bar <sup>1)</sup>

### Degree of protection IPXX

The type approval does not apply without restriction to all environmental conditions. It is the responsibility of the user to check whether the electrical connection complies with regulations other than those stated and whether it can be used for special applications which could not be foreseen by us.

### Oxygen warning!

When using oxygen, the relevant safety regulations have to be observed. In addition, we recommend that a maximum operating pressure of 10 bar will not be exceeded.

■ Our pressure switches are also available with factory preset switching points.

■ We offer other body materials and connecting threads upon request.

■ Other diaphragm materials are available on request, e.g. HNBR or silicone for diaphragm pressure switches.

Adjustment range in bar (tolerance in bar at room temperature)	Thread	Normally open (no) →  :	Normally closed (nc) →  :
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### Diaphragm pressure switches with integrated plug

0.1 – 1 (± 0.2)	M 10x1 con.	XXXX	403 01	X	009	XXXX	404 01	X	013
	M 12x1.5	XXXX	403 02	X	010	XXXX	404 02	X	014
	G 1/4	XXXX	403 03	X	011	XXXX	404 03	X	015
	NPT 1/8	XXXX	403 04	X	012	XXXX	404 04	X	016
	G 1/8	XXXX	403 28	X	603	XXXX	404 28	X	604
	M 10x1 cyl.	XXXX	403 13	X	003	XXXX	404 13	X	004

1 – 10 (± 0.5)	M 10x1 con.	XXXX	407 01	X	025	XXXX	408 01	X	029
	M 12x1.5	XXXX	407 02	X	026	XXXX	408 02	X	030
	G 1/4	XXXX	407 03	X	027	XXXX	408 03	X	031
	NPT 1/8	XXXX	407 04	X	028	XXXX	408 04	X	032
	G 1/8	XXXX	407 28	X	607	XXXX	408 28	X	608
	M 10x1 cyl.	XXXX	407 13	X	007	XXXX	408 13	X	008

10 – 20 (± 1.0)	M 10x1 con.	XXXX	411 01	X	041	XXXX	412 01	X	045
	M 12x1.5	XXXX	411 02	X	042	XXXX	412 02	X	046
	G 1/4	XXXX	411 03	X	043	XXXX	412 03	X	047
	NPT 1/8	XXXX	411 04	X	044	XXXX	412 04	X	048
	G 1/8	XXXX	411 28	X	611	XXXX	412 28	X	612
	M 10x1 cyl.	XXXX	411 13	X	011	XXXX	412 13	X	012

20 – 50 (± 2.0)	M 10x1 con.	XXXX	415 01	X	057	XXXX	416 01	X	061
	M 12x1.5	XXXX	415 02	X	058	XXXX	416 02	X	062
	G 1/4	XXXX	415 03	X	059	XXXX	416 03	X	063
	NPT 1/8	XXXX	415 04	X	060	XXXX	416 04	X	064
	G 1/8	XXXX	415 28	X	615	XXXX	416 28	X	616
	M 10x1 cyl.	XXXX	415 13	X	015	XXXX	416 13	X	016

### Plug types (photo see page 13)

Deutsch DT04-2P	0110	XXX XX	X	XXX	0110	XXX XX	X	XXX
AMP Superseal	0112	XXX XX	X	XXX	0112	XXX XX	X	XXX
Packard MetriPack 280	0114	XXX XX	X	XXX	0114	XXX XX	X	XXX
Deutsch DT04-3P (A+B)	0116	XXX XX	X	XXX	0116	XXX XX	X	XXX
AMP Junior Timer	0118	XXX XX	X	XXX	0118	XXX XX	X	XXX
Bayonet DIN 72585 A1-2.1	0120	XXX XX	X	XXX	0120	XXX XX	X	XXX
M12x1 DIN EN 61076-2-D (1 + 3)	0122	XXX XX	X	XXX	0122	XXX XX	X	XXX

### Diaphragm material<sup>2)</sup> - application

<b>NBR</b>	Hydraulic / machine oil, heating oil, air, nitrogen, etc.	<b>1</b>
<b>EPDM</b>	Brake fluid, ozone, acetylene, hydrogen, etc.	<b>2</b>
<b>FKM</b>	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	<b>3</b>

<b>Order number:</b>	01XX - XXX XX - X - XXX	01XX - XXX XX - X - XXX
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<sup>1)</sup> Static value. Dynamic value is 30-50% lower. The values refer to the hydraulic or pneumatic part of the pressure switch.

<sup>2)</sup> Temperature range of the seal materials, see page 12.

# Pressure switch hex 24 with integrated plug

## Piston pressure switches

- No or nc, max. voltage 42 V (according to the standard hex 24)
- Made of zinc-plated steel (Cr VI-free)
- Overpressure safe up to 600 bar <sup>1)</sup>



Adjustment range in bar (tolerance in bar at room temperature)	Thread	Normally open (no) →  :	Normally closed (nc) →  :
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### Piston pressure switches with integrated plug

50 – 150 (± 5)	M 10x1 con.	XXXX	419 01	X	009	XXXX	420 01	X	013
	M 12x1.5	XXXX	419 02	X	010	XXXX	420 02	X	014
	G 1/4	XXXX	419 03	X	011	XXXX	420 03	X	015
	NPT 1/8	XXXX	419 04	X	012	XXXX	420 04	X	016
	G 1/8	XXXX	419 28	X	603	XXXX	420 28	X	604
	M 10x1 cyl.	XXXX	419 13	X	003	XXXX	420 13	X	004

### Plug versions (photo see page 13)

Deutsch DT04-2P	0111	XXX XX	X	XXX	0111	XXX XX	X	XXX
AMP Superseal	0113	XXX XX	X	XXX	0113	XXX XX	X	XXX
Packard MetriPack 280	0115	XXX XX	X	XXX	0115	XXX XX	X	XXX
Deutsch DT04-3P (A+B)	0117	XXX XX	X	XXX	0117	XXX XX	X	XXX
AMP Junior Timer	0119	XXX XX	X	XXX	0119	XXX XX	X	XXX
Bayonet DIN 72585 A1-2.1	0121	XXX XX	X	XXX	0121	XXX XX	X	XXX
M12x1 DIN EN 61076-2-LF (1 + 3)	0123	XXX XX	X	XXX	0123	XXX XX	X	XXX

### Seal material <sup>2)</sup> - application

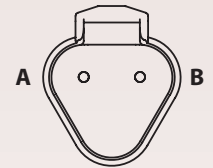
<b>NBR (Buna-N)</b>	Hydraulic / machine oil, heating oil, air, nitrogen, etc.	<b>1</b>
<b>EPDM</b>	Brake fluid, ozone, acetylene, hydrogen, etc.	<b>2</b>
<b>FKM</b>	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	<b>3</b>

<b>Order number:</b>	01XX -XXX XX -X-XXX	01XX -XXX XX -X-XXX
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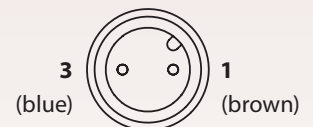
Piston pressure switches are only to a limited extent suitable for use with gases. See explanation on page 9.



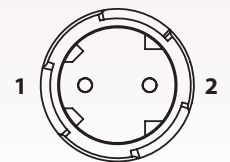
Plug pin assignments (male)



DT04-3P



M 12x1



Bayonet

<sup>1)</sup> Static value. Dynamic value is 30-50% lower. The values refer to the hydraulic or pneumatic part of the pressure switch.

<sup>2)</sup> Temperature range of the seal materials, see page 12.