

# 0110/0112/0114/0116/0118/0122

## Diaphragm pressure switches with integrated connector

- Setting ranges to up to 725 psi (50 bar) (higher settings refer to page 26)
- NC or NO, maximum voltage 42 V
- Zinc-plated steel (Cr VI-free)
- Overpressure safety up to 4,350 psi (300 bar)<sup>1)</sup>

### Plug-in types for diaphragm pressure switches

Deutsch DT04-2P	0110 - XXX XX - X - XXX	0110 - XXX XX - X - XXX
AMP Superseal 1.5°	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
M12x1 DIN EN 61076-2-101-A	0122 - XXX XX - X - XXX	0122 - XXX XX - X - XXX

Adjustment range tolerance at room temperature	Male thread	Order number NO → :	Order number NC → :
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### Diaphragm pressure switches with integrated connector

1.45 - 14.5 ± 2.90 psi (0.1 - 1 ± 0.2 bar)	M 10x1 taper	XXXX - 403 01 - X - 009	XXXX - 404 01 - X - 013
	1/4" BSPP	XXXX - 403 03 - X - 011	XXXX - 404 03 - X - 015
	1/8" NPT	XXXX - 403 04 - X - 012	XXXX - 404 04 - X - 016
	1/4" NPT	XXXX - 403 09 - X - 345	XXXX - 404 09 - X - 346
	7/16 - 20 UNF	XXXX - 403 20 - X - 305	XXXX - 404 20 - X - 307
	9/16 - 18 UNF	XXXX - 403 21 - X - 306	XXXX - 404 21 - X - 308
7.25 - 43.5 ± 4.35 psi (0.5 - 3 ± 0.3 bar)	M 10x1 taper	XXXX - 423 01 - X - 070	XXXX - 424 01 - X - 070
	1/4" BSPP	XXXX - 423 03 - X - 070	XXXX - 424 03 - X - 070
	1/8" NPT	XXXX - 423 04 - X - 070	XXXX - 424 04 - X - 070
	1/4" NPT	XXXX - 423 09 - X - 070	XXXX - 424 09 - X - 070
	7/16 - 20 UNF	XXXX - 423 20 - X - 070	XXXX - 424 20 - X - 070
	9/16 - 18 UNF	XXXX - 423 21 - X - 070	XXXX - 424 21 - X - 070
14.5 - 145 ± 7.25 psi (1 - 10 ± 0.5 bar)	M 10x1 taper	XXXX - 407 01 - X - 025	XXXX - 408 01 - X - 029
	1/4" BSPP	XXXX - 407 03 - X - 027	XXXX - 408 03 - X - 031
	1/8" NPT	XXXX - 407 04 - X - 028	XXXX - 408 04 - X - 032
	1/4" NPT	XXXX - 407 09 - X - 349	XXXX - 408 09 - X - 350
	7/16 - 20 UNF	XXXX - 407 20 - X - 313	XXXX - 408 20 - X - 315
	9/16 - 18 UNF	XXXX - 407 21 - X - 314	XXXX - 408 21 - X - 316

### Seal material – Application areas

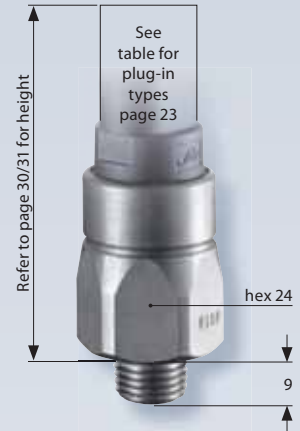
NBR (BunaN)	Hydraulic/machine oil, heating oil, air, nitrogen, etc.	1
EPDM	Brake fluid, hydrogen, oxygen, acetylene, etc.	2
FKM (Viton®)	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	3
HNBR	Hydraulic/machine oil, ester-based bio-oils	9

Refer to page 24 for the temperature range and application thresholds of sealing materials.

**Your order number:** 01XX - XXX XX - X - XXX

# M.1

hex 24 integrated



M

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

### Diaphragm pressure switches with integrated connector

- Setting ranges up to 725 psi (50 bar) (lower settings refer to page 25)
- NC or NO, maximum operating voltage up to 42 V
- Zinc-plated steel (Cr VI-free)
- Overpressure safety up to 4,350 psi (300 bar)<sup>1)</sup>



#### Plug-in types for diaphragm pressure switches

Deutsch DT04-2P	0110 - XXX XX - X - XXX	0110 - XXX XX - X - XXX
AMP Superseal 1.5°	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
M12x1 DIN EN 61076-2-101-A	0122 - XXX XX - X - XXX	0122 - XXX XX - X - XXX

Adjustment range tolerance at room temperature	Male thread	Order number NO → :	Order number NC → :
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#### Diaphragm pressure switches with integrated connector

145 - 290 ± 14.50 psi (10 - 20 ± 1.0 bar)	M 10x1 taper	XXXX - 411 01 - X - 041	XXXX - 412 01 - X - 045
	1/4" BSPP	XXXX - 411 03 - X - 043	XXXX - 412 03 - X - 047
	1/8" NPT	XXXX - 411 04 - X - 044	XXXX - 412 04 - X - 048
	1/4" NPT	XXXX - 411 09 - X - 353	XXXX - 412 09 - X - 354
	7/16-20 UNF	XXXX - 411 20 - X - 321	XXXX - 412 20 - X - 323
	9/16-18 UNF	XXXX - 411 21 - X - 322	XXXX - 412 21 - X - 324
290 - 725 ± 29.00 psi (20 - 50 ± 2.0 bar)	M 10x1 taper	XXXX - 415 01 - X - 057	XXXX - 416 01 - X - 061
	1/4" BSPP	XXXX - 415 03 - X - 059	XXXX - 416 03 - X - 063
	1/8" NPT	XXXX - 415 04 - X - 060	XXXX - 416 04 - X - 064
	1/4" NPT	XXXX - 415 09 - X - 357	XXXX - 416 09 - X - 358
	7/16-20 UNF	XXXX - 415 20 - X - 329	XXXX - 416 20 - X - 331
	9/16-18 UNF	XXXX - 415 21 - X - 330	XXXX - 416 21 - X - 332

#### Seal material – Application areas

NBR (BunaN)	Hydraulic/machine oil, heating oil, air, nitrogen, etc.	1
EPDM	Brake fluid, hydrogen, oxygen, acetylene, etc.	2
FKM (Viton®)	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	3
HNBR	Hydraulic/machine oil, ester-based bio-oils	9

Refer to page 24 for the temperature range and application thresholds of sealing materials.

Your order number: **01XX - XXX XX - X - XXX**

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

# 0111 / 0113 / 0115 / 0117 / 0119 / 0123

## Piston pressure switches with integrated connector

- Setting range up to 2,175 psi (150 bar)
- NC or NO, maximum operating voltage up to 42 V
- Zinc-plated steel (Cr VI-free)
- Overpressure safety up to 8,700 psi (600 bar)<sup>1)</sup>

### Plug-in types for piston pressure switches

Deutsch DT04-2P	0111 - XXX XX - X - XXX	0111 - XXX XX - X - XXX
AMP Superseal 1.5°	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
M12x1 DIN EN 61076-2-101-A	0123 - XXX XX - X - XXX	0123 - XXX XX - X - XXX

Adjustment range tolerance at room temperature	Male thread	Order number NO →  :	Order number NC → :
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### Piston pressure switches with integrated connector

725 - 2,175 ± 72.5 psi (50 - 150 ± 5 bar)	M 10x1 taper	XXXX - 419 01 - X - 009	XXXX - 420 01 - X - 013
	1/4" BSPP	XXXX - 419 03 - X - 011	XXXX - 420 03 - X - 015
	1/8" NPT	XXXX - 419 04 - X - 012	XXXX - 420 04 - X - 016
	1/4" NPT	XXXX - 419 09 - X - 311	XXXX - 420 09 - X - 312
	7/16-20 UNF	XXXX - 419 20 - X - 305	XXXX - 420 20 - X - 307
	9/16-18 UNF	XXXX - 419 21 - X - 306	XXXX - 420 21 - X - 308

### Seal material – Application areas

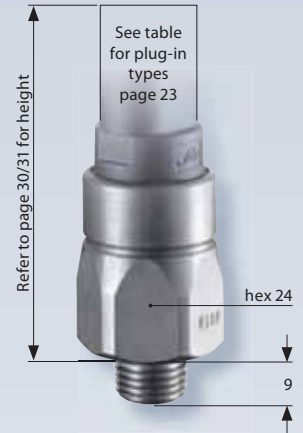
<b>NBR (BunaN)</b>	Hydraulic/machine oil, heating oil, air, nitrogen, etc.	<b>1</b>
<b>EPDM</b>	Brake fluid, hydrogen, oxygen, acetylene, etc.	<b>2</b>
<b>FKM (Viton®)</b>	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	<b>3</b>
<b>HNBR</b>	Hydraulic/machine oil, ester-based bio-oils	<b>9</b>

Refer to page 24 for the temperature range and application thresholds of sealing materials.

**Your order number:** 01XX - XXX XX - X - XXX

# M.1

hex 24 integrated



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

## Pressure switches hex 24 with integrated connector

### Technical data



**0110/0111**  
**Deutsch DT04-2P**  
IP67, IP6K9K



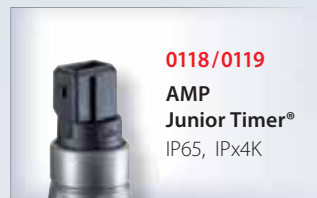
**0112/0113**  
**AMP Superseal 1.5°**  
IP67



**0114/0115**  
**Packard MetriPack 280°**  
IP67



**0116/0117**  
**Deutsch DT04-3P**  
IP67, IP6K9K



**0118/0119**  
**AMP Junior Timer®**  
IP65, IPx4K



**0120/0121**  
**Bayonet DIN 72585**  
IP67, IP6K9K



**0122/0123**  
**M12x1 DIN EN 61076-2-101-A**  
IP67

Rated working voltage:	10 ... 42 VAC/DC	
Rated current range (resistive load, DC12 and AC12):	10 mA ... 4 A	
Switching power DC12 / AC12:	100 W / 100 VA	
Temperature resistance of sealing materials:	NBR (BunaN)	-40 °F ... +212 °F (-40 °C ... +100 °C)
	EPDM	-22 °F ... +248 °F (-30 °C ... +120 °C)
	FKM (Viton®) (in diaphragm pressure switch)	+23 °F ... +248 °F (-5 °C ... +120 °C)
	FKM (Viton®) (in piston pressure switch)	+5 °F ... +248 °F (-15 °C ... +120 °C)
	Silicone	-40 °F ... +248 °F (-40 °C ... +120 °C)
HNBR	-22 °F ... +248 °F (-30 °C ... +120 °C)	
Switching frequency:	200 / min.	
Mechanical life expectancy:	1,000,000 cycles (for diaphragm pressure switches, life expectancy value only applies for switching pressures to max. 725 psi / 50 bar)	
Pressure rise rate:	≤ 14.5 psi/ms (1 bar/ms)	
Differential:	Average value 5...30 % depending on type, not adjustable	
Vibration resistance:	10 g; 5...200 Hz sine wave, DIN EN 60068-2-6	
Shock resistance:	294 m/s <sup>2</sup> ; 14 ms half sine wave; DIN EN 60068-2-27	
Protection class:	Up to IP67 / IP6K9K according to the manufacturer's specifications for the respective plug-in system only when plugged in, otherwise IP00	
Weight:	approx. 3.17 oz / 90 g	

### Contact assignment for bayonet connectors



Coding A1-2.1	Coding A2-2.1	Coding A3-2.1	Coding A4-2.1

## Technical details, contact assignment and accessories



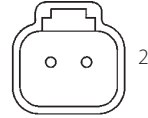

for hex 24 pressure switches with integrated connector

**Please note:**  
Mating plugs are not included in the delivery and can be ordered separately.

### Mating plug accessories

	Deutsch DT06-2S (für DT04-2P)	AMP- Superseal 1.5®
<b>Mating plug type</b> ▶		
<b>Including 2 m cable</b> ▶		
<b>Cable cross-section</b> ▶	2 x 0.5 mm <sup>2</sup> Radox cables	2 x 0.5 mm <sup>2</sup> Radox cables
<b>Protection class</b> ▶	IP65	IP65
<b>Order number</b> ▶	1-1-10-653-118	1-1-12-653-113

### Plug-in types for hex 24 diaphragm and piston pressure switches

	0110 / 0111	0112 / 0113
<b>Model / type</b> ▶		
		
<b>Connector</b> ▶	Deutsch DT04-2P	AMP Superseal 1.5®
<b>Protection class</b> ▶	IP67, IP6K9K	IP67
<b>Overall height</b> ▶	H ≈ 61 mm	H ≈ 61 mm
<b>Contact assignment</b> ▶		

Packard MetriPack 280®	Deutsch DT06-3S (für DT04-3P)	AMP Junior Timer®	Bayonet DIN 72585 / ISO 15170 A1-2.1	M12x1 DIN EN 61076-2-101-LF
2 x 0.5 mm <sup>2</sup> Radox cables	2 x 0.5 mm <sup>2</sup> PUR-cables	2 x 0.5 mm <sup>2</sup> Radox cables	2 x 0.5 mm <sup>2</sup> Radox cables	4 x 0.34 mm <sup>2</sup> PUR-cables
IP65	IP67	IP65	IP65	IP67
1-1-14-653-114	1-1-36-653-160	1-1-18-653-116	1-1-20-653-112	1-1-00-653-162

0114 / 0115	0116 / 0117	0118 / 0117	0120 / 0121	0122 / 0123
Packard MetriPack 280®	Deutsch DT04-3P	AMP Junior Timer®	Bayonet DIN 72585/ISO 15170	M12x1 DIN EN 61076-2-101-A
IP67	IP67, IP6K9K	IP65, IPx4K	IP67, IP6K9K	IP67
H ≈ 62 mm	H ≈ 63 mm	H ≈ 54 mm	H ≈ 49 mm	H ≈ 51 mm
			 Coding: A1-2.1	

## Pressure switches hex 24 with integrated connector

NC or NO, maximum operating voltage up to 42 V



- Large selection of electrical plug-in types for quick attachment and reliable connection
- High protection class (to IP67 or IP6K9K)
- Compact and rugged design in industrial environments like construction and agricultural machinery or commercial vehicles
- Switching point can be set on site with adjusting screw in the connector<sup>1)</sup>
- High overpressure resistance, compact, small switches, available as normally open or normally closed

<sup>1)</sup> Pressure switches can also be supplied preset at factory.  
The switching point is embossed onto pressure switches preset at factory.

# The all-rounder with the broad selection of options

NC or NO, maximum operating voltage up to 42 V

**with 10 plug-in types**

**Deutsch DT04-2P**

**AMP Superseal 1.5°**

**Packard MetriPack 280°**

**Deutsch DT04-3P**

**AMP Junior Timer®**

**M12x1 DIN EN 61076-2-101-A**

**Bayonet with 4 codings**

Coding A1-2.1

Coding A2-2.1

Coding A3-2.1

Coding A4-2.1

**for 6 setting ranges**

- 1.45 - 14.5 psi (0.1 - 1 bar)
- 7.25 - 43.5 psi (0.5 - 3 bar)
- 14.5 - 145 psi (1 - 10 bar)
- 145 - 290 psi (10 - 20 bar)
- 290 - 725 psi (20 - 50 bar)
- 725 - 2,175 psi (50 - 150 bar)

**with many thread types**

- 1/4 BSPP
- 1/8 BSPP
- M 10x1 cyl.
- M 10x1 con.
- M 12x1.5 cyl.
- NPT 1/8
- NPT 1/4
- 9/16-18 UNF
- 7/16-20 UNF

**for a broad diversity of applications**

- NBR (BunaN): Hydraulic/machine oil, heating oil, air, nitrogen, etc.
- EPDM: Brake fluid, hydrogen, oxygen, acetylene, etc.
- FKM (Viton®): Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.
- HNBR: Hydraulic/machine oil, esterbased bio-oils
- Silicone: Water, food products (FDA approval)

