Nautilus™ Electronic Pressure Sensors XMLE, XMLF, XMLG

Catalog 9014CT0201R8/07









Nautilus[™] electronic sensors for pressure control

Electronic pressure sensors for control circuits
Selection guide page 4
General overviewpage 8
 Nautilus type XMLG, without display
 □ Introduction, specificationspage 12 □ Pressure transmitters with analog output 4–20 mA or 0–10 Vpage 14 □ Pressure and vacuum switches with solid-state NPN or PNP outputpage 18 □ Accessories, dimensions, and wiringpage 22
 Nautilus type XMLE, without display
Introduction, specifications
■ Nautilus Universal, Osiconcept [™] , type XMLF, with digital display
Introduction, specifications

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Selection guide

Sensors for pressure control Nautilus™

Electronic pressure sensors

Applications	Type of installation	Control circuits				
	Fluids controlled	Air, water, hydraulic oils, corrosive fluids				
	Type of sensor and features	Units without display				
		Pressure transmitters Analog output 4–20 mA	Pressure and vacuum switches with solid- state output Regulation between 2 thresholds (adjustable differential)			
Fluid characteristics		Air, fresh water, sea water, hydraulic oils, corros -15 to +80 °C (5.0 to 176.0 °F)	sive fluids,			
Sizes		-1 to 600 bar (-14.5 to 8700 psi)				
Dimensions of case mm (in.)	Width x height x depth	sizes -1 to 25 bar: Ø 40 x 87 (Ø 1.57 x 3.43) sizes 60 to 600 bar: Ø 40 x 97 (Ø 1.57 x 3.82)				
Type of output		Analog, 4–20 mA	Solid-state, NPN or PNP, normally closed (NC) output			
Degree of protection		IP65				
Electrical connection		DIN 43650A or M12 connector				
Fluid connection		1/4" NPT male				
Catalog number		XMLE••••••23	XMLE0000033 XMLE0000043			
Pages		26 to 29	30 to 33			
Other versions		(1) For other connections (such as AMP connect (2) Phoenix Contact [®] QUICKON type integrated	or or cable), consult your local sales office. connection.			

(3) For other fluid connections (such as G 1/4 A BSP male or 1/4" NPTF female), refer to "Interpretation of the Catalog Number" on page 25, or consult your local sales office.

Control circuits

Air, water, hydraulic oils, corrosive fluids

Units without display

Pressure transmitters Analog output 4–20 mA or 0–10 V

Pressure and vacuum switches Factory set switching thresholds Solid-state NPN or PNP output



Air, fresh water, sea water, hydraulic oils 257.0 °F)	s, corrosive fluids, -15 to +125 °C (5.0 to	Air, fresh water, sea water, hydraulic oils, corrosive fluids, -15 to +125 °C (5.0 to 257.0 °F)		
-1 to 400 bar (-14.5 to 5800 psi)		-1 to 400 bar (-14.5 to 5800 psi)		
Ø 22.8 x 70.1 (Ø 0.90 x 2.76)	Ø 22.8 x 85 (Ø 0.90 x 3.35)	Ø 22.8 x 70.1 (Ø 0.90 x 2.76)	Ø 22.8 x 85 (Ø 0.90 x 3.35)	
Analog, 4–20 mA or 0–10 V		Solid-state, PNP or NPN normally closed (NC) output 150 mA, 12/24 V		
IP66, IP67 conforming to IEC/EN60529, NEMA4		IP66, IP67 conforming to IEC/EN60529, NEMA4		
M12 connector (1)	Integrated quick connection (2)	M12 connector (1)	Integrated quick connection (2)	
1/4" NPT male conforming to ISO7 (3)		1/4" NPT male conforming to ISO7 (3)		
XMLGeeeD23 XMLGeeeD23eeTQ (4)	XMLG●●●Q23●●TQ (4)	XMLGeeeD33eeTQ (4) XMLGeeeD43eeTQ (4)	XMLG•••Q33••TQ (4) XMLG•••Q43••TQ (4)	
14 to 17		18 and 19, 20 and 21		

For other connections (such as AMP connector or cable), consult your local sales office.
 Phoenix Contact® QUICKON type integrated connection.

(3) For other fluid connections (such as G 1/4 A BSP male or 1/4" NPTF female), refer to "Interpretation of the Catalog Number" on page 12, or consult your local (d) For other hard constantssales office.(4) Sold in lots of 25.

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Selection guide

Sensors for pressure control Nautilus™

Electronic pressure sensors

Applications	Type of installation	Control circuits		
	Fluids controlled	Air, water, hydraulic oils, corrosive fluids		
	Type of sensor and features	Configurable units with digital display Pressure transmitters Output current 4–20 mA	Configurable units with digital display Pressure transmitters Output voltage 0–10 V	
Fluid characteristics		Air, fresh water, sea water, hydraulic oils, corros	sive fluids, -15 to +80 °C (5.0 to 176.0 °F)	
Sizes		-1 to 600 bar (-14.5 to 8700 psi)		
Dimensions of case mm (in.)	Width x height x depth	46 x 113 x 58 (1.81 x 4.45 x 2.28)		
Type of output		Analog, 4–20 mA	Analog, 0–10 V	
Degree of protection		IP67		
Electrical connection		M12 connector, Snap-C [™] compatible		
Fluid connection		G 1/4 A (BSP) or 1/4" NPT or SAE 7/16-20 UNF	female	
Catalog number		XMLFeeeD201e	XMLFeeeD211e	
Pages		38 to 63		
Other versions		For pressure transmitters, electronic pressure sy tapped fluid entries, consult your local sales offi	witches, and vacuum switches with alternative ce.	

Control circuits

 Air, water, hydraulic oils, corrosive fluids

 Configurable units, corrosive fluids

 Configurable units with digital display Universal sensors Regulation between 2 thresholds (adjustable differential)
 Configurable units with digital display Universal sensors Regulation between 2 thresholds (adjustable differential)
 Configurable units with digital display Dual stage pressure and vacuum switches (solid-state outputs) Detection of 2 thresholds and adjustable differential for each threshold
 Configurable units with digital display Dual stage pressure and vacuum switches (solid-state outputs) Detection of 2 thresholds and adjustable differential for each threshold
 Configurable units with digital display Pressure and vacuum switches with 2.5 A relay outputs Regulation between 2 thresholds (adjustable differential)



Air, fresh water, sea water, hydraulic oils, corrosive fluids, -15 to +80 $^\circ C$ (5.0 to 176.0 $^\circ F)$

-1 to 600 bar (-14.5 to 8700 psi)

46 x 113 x 58 (1.81 x 4.45 x 2.28)		46 x 113 x 58 (1.81 x 4.45 x 2.28)	46 x 119 x 58 (1.81 x 4.69 x 2.28)
Solid-state, PNP or NPN, 200 mA, 24 V output Analog output 4–20 mA	Solid-state, PNP or NPN, 200 mA, 24 V output Analog output 0–10 V	2 solid-state, PNP or NPN, 200 mA, 24 V outputs	Relay output 2.5 A, 120 V \sim
IP67			
M12 connector, Snap-C [™] compatible		M12 connector, Snap-C [™] compatible	SAE 7/8-16UN connector
G 1/4 A (BSP) or 1/4 NPT or SAE 7/16-2	OUNF female		
XMLF•••D202•	XMLF•••D212•	XMLF•••D203•	XMLF●●●E204●
38 to 63			

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Electronic pressure sensors

Nautilus[™] pressure sensors For control circuits

Functions

Pressure transmitters

The function of pressure transmitters is the control and measurement of pressure or vacuum levels in hydraulic or pneumatic systems. They transform the pressure into an analog electrical signal which is proportional to the pressure measured. Their high precision makes them suitable for all industrial applications requiring pressure/vacuum display, control, or regulation.

Also very robust, they are equally suitable for applications involving high operating rates.

Pressure and vacuum switches

The function of electronic pressure and vacuum switches is the control or regulation of pressure or vacuum levels in hydraulic or pneumatic systems. They transform the pressure change into a digital output signal when the preset pressure or vacuum points are reached. The very wide adjustment range for the setpoints characterize these electronic switches.

Their robustness, along with their excellent adherence to the set values over time, make them ideal for applications involving high operating rates.

In addition, the high repeat accuracy and fast response time of these sensors make them equally suitable for applications requiring accurate pressure regulation and monitoring.

Universal sensors

Universal sensors are electronic pressure and vacuum switches with digital output, which also include an analog output identical to that of the pressure transmitters.

Operating principle

Pressure transmitters

The electrical signal from the pressure transmitter (signal proportional to the monitored pressure) is amplified, calibrated, and output as a standard 4–20 mA or 0-10 V analog signal (depending on the model).



Pressure and vacuum switches

Designed for regulation between 2 thresholds, these switches have both a high setpoint (PH) and a low setpoint (PB). Both of these points can be independently adjusted (adjustable differential).

The difference (differential) between the two setpoints can be small or large. Since the switches are electronic, they have no mechanical moving parts.

Operating principle with solid-state NC outputs



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General overview

(continued)

Electronic pressure sensors

Nautilus[™] pressure sensors For control circuits

Terminology

Measuring range

The measuring range (MR) of a pressure sensor corresponds to the difference between the upper and lower values measured by the load cell. It ranges between 0 and the pressure corresponding to the size of the sensor.

Operating range

The operating range of a pressure transmitter corresponds to its measuring range. Within this range, its analog output signal varies between 4 and 20 mA or 0 and 10 V, and is proportional to the measured pressure.

The operating range of a pressure or vacuum switch is the difference between the values of the minimum low setpoint (PB) and the maximum high setpoint (PH).

Precision

Signal

This includes linearity, hysteresis, repeat accuracy, and setting tolerances. It is expressed as a percentage of the measuring range of the load cell (%MR).



The linearity is the maximum deviation between the real transmitted curve and the ideal curve.

The hysteresis is the maximum deviation between the rising pressure curve and the falling pressure curve.

Signal

Signal

Signal

The repeat accuracy is the maximum drift encountered at varying pressures under given conditions.

The setting tolerances are the manufacturer's tolerances with regard to the zero point and sensitivity (gradient of output signal curve from pressure transmitter).

Temperature drift

Pressure

The precision of a pressure sensor is susceptible to variation due to the operating temperature.



Zero point drift, proportional to the temperature, is expressed as %MR/°C.

Sensitivity drift, proportional to the temperature, is expressed as %MR/°C.

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General overview

(continued)

Electronic pressure sensors

Nautilus[™] pressure sensors For control circuits

Terminology (continued)

Switching point on rising pressure (PH)

This is the upper pressure setting at which the output of the electronic pressure or vacuum switch changes state on rising pressure.

Switching point on falling pressure (PB)

This is the lower pressure setting at which the output of the electronic pressure or vacuum switch changes state on falling pressure.

Differential

This is the difference between the switching point on rising pressure (PH) and the switching point on falling pressure (PB). The low point can be set at the values indicated on the operating curves shown on the product pages.

Repeat accuracy

This is the variation of the operating point of the pressure or vacuum switch between several successive operations.

Size

Pressure transmitters and pressure switches

This is the maximum value of the operating range.

Vacuum transmitters and vacuum switches

This is the minimum value of the operating range.

Maximum permissible accidental pressure

This is the maximum pressure (excluding pressure surges) that the sensor can occasionally withstand without permanent damage.

Destructive pressure

This is the pressure value which, if exceeded, is likely to cause serious damage to the sensor, such as leaking, bursting, or component failure.

Load resistance of pressure transmitters

The supply voltage and load resistance of a pressure transmitter must be selected according to the formula:

R load = <u>U supply – U supply min.</u> (U supply min = 11 V for XMLE and 17 V for XMLF) 0.02 A General overview

(continued)

Electronic pressure sensors

Nautilus[™] pressure sensors For control circuits

Features of XMLF pressure sensors

XMLF pressure sensors (see page 36) feature numerous possibilities for configuring the display (response time, choice of bar or psi units), the analog output signal operation (maximum signal output adjustable between 75% and 125% of the unit size), the solid-state output operation (PNP or NPN, NO or NC, time delay on opening or on closing, response time), and the status signaling (see below). A diagnostic function enables verification at any time of the sensor's correct operation (see below), and also provides information regarding pressure peak values.

Self-test function (calibration shunt)

XMLF pressure sensors incorporate a diagnostic function that can be used at any time to check the correct operation of the unit. An internal system enables automatic monitoring of the sensor circuits, including the ceramic pressure measuring load cell.

For all models, this function is manually activated and the result of the test is indicated on the display (DONE or ERR).

For pressure transmitters, this function can also be remotely activated via a digital input connected to a PLC, which enables automatic verification without operator intervention. In this case, the self-test also generates an analog output signal equivalent to 50% of the sensor's size (12 mA or 5 V), which in turn can be verified by the PLC.

The unit can be considered defective if the difference between the signal transmitted and the standard theoretical value is too great.

Operational status signaling

XMLF pressure and vacuum switches feature status LED indicators for the digital outputs. Indication can be configured for two modes:

- Hysteresis mode: the indicator illuminates when the output is activated (output off for NC configuration or output on for NO configuration).

- Window mode: the indicator illuminates when the measured pressure is between the high and low setpoint values.

Selection of switch size

Size is selected according to the maximum pressure of the system to be controlled.

Adherence to pressure

Select a size where the nominal pressure is higher than the maximum pressure of the controlled system.

Precision, repeat accuracy

The precision and repeat accuracy are expressed as a percentage of the measuring range. Better detection is achieved when the sensor size is close to that of the maximum pressure of the controlled system. As general rule, avoid working toward the bottom limit of the measuring range.

Minimum differential of a pressure or vacuum switch

The minimum differential for each switch size is a percentage of its operating range: 2% for XMLE, and 3% for XMLF.

Selection example for a pressure switch

Maximum pressure of the system = 11 bar PH = 7 bar PB = 6 bar 2 alternatives: XMLe010eeeee (10 bar) or XMLe025eeeee (25 bar) Advantages: XMLe010eeee: maximum repeat accuracy and precision XMLe025eeeee: withstand of overpressure.

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Introduction

Electronic pressure sensors Nautilus[™] type XMLG

For control circuits



Introduction

XMLG pressure transmitters and pressure switches are characterized by their ceramic pressure measuring cell. The deformation caused by the pressure is transmitted to the resistors of a Wheatstone bridge silk-screened on the ceramic. The change in resistance is then processed by the integrated electronics for providing either a digital or analog output signal.

- Electrical connection, for example: M12 1
- 2 Electronics with EMC protection
- 3 Ceramic measuring cell
- 4 Seals
- 5 Leakage protection
- 6 Threaded connection

Functions

Pressure transmitters have an analog 4–20 mA or 0–10 V output that is proportional to the measuring range.

Pressure and vacuum switches have a solid-state NPN or PNP normally closed (NC) output.

An anti-leakage system integrated in products for pressures ≥ 40 bar prevents fluid leakage in the event of the measuring cell destructive pressure being exceeded.

These compact products that offer excellent EMC characteristics are particularly suited to difficult industrial environments.

Important ordering requirement

XMLG pressure and vacuum switches are factory set; the upper and lower switching thresholds must be specified when ordering.

Bulk packs are mainly intended for machine manufacturers.

interpretation of the	e Catal	og Number					
XMLG	100			D	2	1	TQ
Units without display,	Rated p	oressure		Electrical	Output	Eluid connection	Bulk peek
22.8 mm diameter	Code	psi	bar	connection	Output	Fiuld connection	Buik pack
	M01 001 010 025 100 250	-14.5 to 0 0 to 14.5 0 to 145 0 to 362.5 0 to 1450 0 to 3625	-1 to 0 0 to 1 0 to 10 0 to 25 0 to 100 0 to 250	D: M12 Q: Integrated quick connect	2: Analog, 4–20 mA 3: Solid state, NPN 4: Solid state, PNP 7: Analog, 0–10 V (bulk packs only)	1: G 1/4 A (BSP male) 3: 1/4" NPT male 6: 1/4" NPTF female 7: 7/16-20 UNF male	

NOTE: Use this table only to interpret the catalog number. Some combinations are not available.

Specifications

Electronic pressure sensors Nautilus[™] type XMLG For control circuits

Environmental spec	ifications	
Conformity to standards		CE IEC/EN 60947-1, IEC/EN 60947-5-1 EN 50081-1, EN 50082-2, EN 61000-6-2
Product certifications		UL, CSA
Rated supply voltage	Transmitters 4–20 mA	12/24 \/
nated supply voltage	Pressure/vacuum switches	
	Transmitters 0–10 V	24 V
Voltage limits	Transmitters 4–20 mA	8-33 V
	Pressure/vacuum switches	
	Transmitters 0–10 V	11.4–33 V
Current consumption	Pressure/vacuum switches	< 4 mA
	Transmitters	< 20 mA
Protective treatment		Standard version "TC"
Ambient air temperature	For operation	-15 to +85 °C (5 to 185 °F)
	For storage	-40 to +85 °C (-40 to 185 °F)
Fluids or products controlled		Hydraulic oils, air, fresh water, sea water, corrosive fluids from -15 to +125 °C (5 to 257 °F)
Component materials in contact with fluid		Ceramic Al_2O_3 , stainless steel type AISI 303, Viton [®] FPM, PPS (Leakage protection for P > 40 bar)
Operating position		All positions
Vibration resistance		20 gn (9–2000 Hz) conforming to IEC 60068-2-6
Shock resistance		25 gn (half sine wave 11 ms) conforming to IEC 60068-2-27
Resistance to	Electrostatic discharges	Standard EN 61000-4-2, 15 kV in air, 8 kV on contact
electromagnetic	Radiated electromagnetic fields	Standard EN 61000-4-3, 200 V/m, 80–1000 MHz
Interference	Fast transients	Standard EN 61000-4-4, 4 kV
	Surges	Standard EN 61000-4-5, 500 V 12 Ω, 1 kV 42 Ω
	Conducted disturbances, induced by radio frequency fields	Standard EN 61000-4-6, 30 V 0.15–80 MHz
	Magnetic fields	Standard EN 61000-4-8, 30 A/m, 50 Hz
Electrical protection		Protected against reverse polarity and load short-circuit
Rated impulse withstand volta	age	0.5 kV
Degree of protection		IP66, IP67 conforming to IEC/EN 60529, NEMA 4
Output response time		< 2 ms
Repeat accuracy		$\pm 0.1\%$ of the measuring range
Precision	Transmitters	Combined sum of linearity, hysteresis, and repeat accuracy ± < 0.3% of the measuring range
		Setting tolerance of zero point and measuring range limit \pm < 0.3% of the measuring range
	Pressure/vacuum switches	Setting accuracy ± < 1% of the measuring range
Drift	Zero point	± < 0.015% of the measuring range/°C
	Sensitivity	± < 0.015% of the measuring range/°C
Service life	In millions of operating cycles	> 10
Fluid connection		1/4" NPT male conforming to ISO 7
Electrical connection		M12 connector or Phoenix Contact® QUICKON type integrated connection.

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Electronic pressure sensors Nautilus[™] Pressure transmitters type XMLG With analog output 4–20 mA Sizes -1 to 1 bar (-14.5 to 14.5 psi)

Units with analog outp	out						
Pressure range (1)		–1 to 0 bar (-14.5 to 0	0 psi)	0 to 1 bar (0 to 14.5 p	osi)		
Type of electrical connection (2)		M12	Integrated quick connection	M12	Integrated quick connection		
Catalog numbers							
Sold in packs of:	1	XMLGM01D23	—	XMLG001D23	—		
	bulk <i>(3)</i>	XMLGM01D23TQ	XMLGM01Q23TQ	XMLG001D23TQ	XMLG001Q23TQ		
Fluid connection (4)		1/4" NPT male					
Weight, g (oz)		95 (3.35)	95 (3.35)	95 (3.35)	95 (3.35)		
Additional specifi	cations not shown under genera	al specifications (page 13))				
Rated supply voltage		12/24 V					
Voltage limits		8–33 V 	8–33 V				
Analog output (5)		4–20 mA, 2-wire	4–20 mA, 2-wire				
Current consumption		< 20 mA	< 20 mA				
Maximum permissible acc	idental pressure	2.7 bar (39.1 psi)	2.7 bar (39.1 psi)		2.7 bar (39.1 psi)		
Destructive pressure		3 bar (43.5 psi)	3 bar (43.5 psi) 3 bar (43.5 psi)				
Electrical connection	By connector	XMLGeeeD23: M12, 3-pin male. For suitable female connectors, including see pages 22 and 23		ding pre-wired versions,			
	Integrated	XMLGeeeQ23: integ	rated connection, Phoen	ix Contact® QUICKON ty	rpe		
		 (1) For other pressure (2) For other connection (3) Sold in lots of 25. (4) For other fluid control 	 For other pressure ranges, consult your local sales office. For other connections (such as AMP connector or cable), consult your local sales office. Sold in lots of 25. (4) For other fluid connections (such as G 1/4 A BSP male or 1/4" NPTF female), refer to 				

(1) So some more commensions (source as to 1/4 A BSP male or 1/4" NPTF temale), refer to "Interpretation of the Catalog Number" on page 12, or consult your local sales office.
 (5) To order a pressure transmitter with a 0–10 V analog output, replace 23 in the catalog number with 73 (bulk packs only). Example: XMLGM01D23TQ becomes XMLGM01D73TQ with a 0–10 V analog output.

Output curves





Accessories:	Dimensions:	Wiring:	
page 22	page 23	page 23	
14		Telemecanique	

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Electronic pressure sensors Nautilus[™] Pressure transmitters type XMLG With analog output 4–20 mA Sizes 10 to 25 bar (145 to 362.5 psi)

Units with analog output						
Pressure range (1)		0–10 bar (0–145 psi)		0–25 bar (0–362.5 psi)	
Type of electrical connection	(2)	M12	Integrated quick connection	M12	Integrated quick connection	
Catalog numbers						
Sold in packs of:	1	XMLG010D23	—	XMLG025D23	—	
	bulk <i>(3)</i>	XMLG010D23TQ	XMLG010Q23TQ	XMLG025D23TQ	XMLG025Q23TQ	
Fluid connection (4)		1/4" NPT male				
Weight, g (oz)		95 (3.35)	95 (3.35)	95 (3.35)	95 (3.35)	
Additional specifica	tions not shown under general s	specifications (page 13)				
Rated supply voltage		12/24 V				
Voltage limits		8–33 V				
Analog output (5)		4–20 mA, 2-wire				
Current consumption		< 20 mA				
Maximum permissible accide	ental pressure	22 bar (319 psi) 5		56 bar (812 psi)		
Destructive pressure		25 bar (362.5 psi)		62.5 bar (906.2 psi)		
Electrical connection	By connector	XMLGeeD23 : M12, 3 see pages 22 and 23	B-pin male. For suitable for	emale connectors, includ	ding pre-wired versions,	
	Integrated	XMLGeeeQ23: integrated connection, Phoenix Contact® QUICKON type				
		 For other pressure ranges, consult your local sales office. For other connections (such as AMP connector or cable), consult your local sales office. Sold in lots of 25. For other fluid connections (such as G 1/4 A BSP male or 1/4" NPTF female), refer to "Interpretation of the Catalog Number" on page 12, or consult your local sales office. Component materials of units in contact with the fluid: see page 13. To order a pressure transmitter with a 0–10 V analog output, replace 23 in the catalog number with 73 (bulk packs only). Example: XML G010D73TO becomes XML G010D73TO 				

with a 0-10 V analog output.

Output curves





Accessories: page 22	Dimensions: page 23	Wiring: page 23	
		Telemecanique	15

Electronic pressure sensors Nautilus[™] Pressure transmitters type XMLG With analog output 4–20 mA Sizes 100 to 250 bar (1450 to 3625 psi)

Units with analog outpu	t					
Pressure range (1)		0–100 bar (0–1450 psi)		0–250 bar (0–3625 psi)		
Type of electrical connection (2)		M12	Integrated quick connection	M12	Integrated quick connection	
Catalog numbers						
Sold in packs of:	1	XMLG100D23	—	XMLG250D23	-	
	bulk (3)	XMLG100D23TQ	XMLG100Q23TQ	XMLG250D23TQ	XMLG250Q23TQ	
Fluid connection (4)		1/4" NPT male	1/4" NPT male			
Weight, g (oz)		95 (3.35)	95 (3.35)	95 (3.35)	95 (3.35)	
Additional specific	ations not shown under general s	specifications (page 13)				
Rated supply voltage		12/24 V				
Voltage limits		8-33 V				
Analog output (5)		4–20 mA, 2-wire				
Current consumption		< 20 mA				
Maximum permissible accid	ental pressure	225 bar (3262.5 psi) 560 bar (8120 psi)				
Destructive pressure		250 bar (3625 psi) 625 bar (9062.5 psi)				
Electrical connection	By connector	XMLGeeD23 : M12, 3 see pages 22 and 23	-pin male. For suitable fe	emale connectors, includ	ding pre-wired versions,	
	Integrated	XMLGeeeQ23: integra	ated connection, Phoenix	Contact [®] QUICKON typ	pe	
		 (1) For other pressure ranges, consult your local sales office. (2) For other connections (such as AMP connector or cable), consult your local sales office. (3) Sold in lots of 25. (4) For other fluid connections (such as G 1/4 A BSP male or 1/4" NPTF female), refer to 				

(4) For other null connections (such as G 1/4 A BSP male or 1/4" NPTF female), refer to "Interpretation of the Catalog Number" on page 12, or consult your local sales office.
(5) To order a pressure transmitter with a 0–10 V analog output, replace 23 in the catalog number with 73 (bulk packs only). Example: XMLG100D23TQ becomes XMLG100D73TQ with a 0– 10 V analog output.

250 P (bar)

Output curves



Dimensions: Wiring: page 23 Accessories: page 22 page 23 🗊 Telemecanique 16

Electronic pressure sensors Nautilus[™] Pressure transmitters type XMLG With analog output 4–20 mA Size: 400 bar (5800 psi)

Units with analog output	ut			
Pressure range (1)		0–400 bar (0–5800 psi)		
Type of electrical connection (2)		M12	Integrated quick connection	
Catalog numbers				
Sold in packs of:	1	XMLG400D23	_	
	bulk <i>(3)</i>	XMLG400D23TQ	XMLG400Q23TQ	
Fluid connection (4)		1/4" NPT male	1	
Weight, g (oz)		95 (3.35)	95 (3.35)	
Additional specific	ations not shown under general	specifications (page 13)		
Rated supply voltage		12/24 V		
Voltage limits		8–33 V		
Analog output (5)		4–20 mA, 2-wire		
Current consumption		< 20 mA		
Maximum permissible acci	dental pressure	800 bar (11,600 psi)		
Destructive pressure		900 bar (13,050 psi)		
Electrical connection	By connector	XMLGeeeD23: M12, 3-pin male. For suitable female connectors, including pre-wired ve see pages 22 and 23		
	Integrated	XMLG ••• Q23: integrated connection, Phoeni	x Contact [®] QUICKON type	
		 (1) For other pressure ranges, consult your loca (2) For other connections (such as AMP connec (3) Sold in lots of 25. (4) For other fluid connections (such as G 1/4 A 	al sales office. stor or cable), consult your local sales office. BSP male or 1/4" NPTF female), refer to	

"Interpretation of the Catalog Number" on page 12, or consult your local sales office.
 (5) To order a pressure transmitter with a 0–10 V analog output, replace 23 in the catalog number with 73 (bulk packs only). Example: XMLG400D23TQ becomes XMLG400D73TQ with a 0–10 V analog output.

Output curves



Accessories: page 22	Dimensions: page 23	Wiring: page 23		
Telemecanique				17

Electronic pressure sensors Nautilus[™] Type XMLG pressure and vacuum switches Sizes -1 to 1 bar (-14.5 to 14.5 psi)

Units with solid-state out	put (1)					
onits with solid-state out	μαι (<i>1)</i>					
Adjustable range of switching Rising pressure (2) (7)	j point (PH)	-0.08 to -1 bar (-1.16 t	o -14.5 psi)	0.08–1 bar (1.16–14.	ō psi)	
Type of electrical connection	(3)	M12	Integrated quick connection	M12	Integrated quick connection	
Catalog numbers						
Only sold in bulk packs (4)						
	NPN output (N.C.)	XMLGM01D33TQ	XMLGM01Q33TQ	XMLG001D33TQ	XMLG001Q33TQ	
	PNP output (N.C.)	XMLGM01D43TQ	XMLGM01Q43TQ	XMLG001D43TQ	XMLG001Q43TQ	
Fluid connection (5)		1/4" NPT male				
Weight, g (oz)		95 (3.35)	95 (3.35)	95 (3.35)	95 (3.35)	
Additional specifica	tions not shown under general s	specifications (page 13)				
Switching thresholds (6)		Factory set				
Possible differential	Min. at low setting	0.03 bar (0.44 psi)		0.03 bar (0.44 psi)		
	Min. at high setting	0.03 bar (0.44 psi)		0.03 bar (0.44 psi)		
Maximum parmissible asside	Max. at high setting	0.95 bar (15.77 psi)		2.7 bor (20.1 poi)		
Destructive pressure		3 har (43 5 nsi)		3 har (43 5 nsi)		
Rated supply voltage		12/24 V				
Voltage limits		8–33 V				
Output		Solid-state, NPN or PNP, NC				
Switching capacity		150 mA				
Current consumption		< 4 mA				
Electrical connection	By connector	XMLGeeeDee: M12, 3 see pages 22 and 23	B-pin male. For suitable f	emale connectors, inclue	ding pre-wired versions,	
	Integrated	 XML GeeeQee: integrated connection, Phoenix Contact® QUICKON type (1) For other types of output (such as normally open PNP or NPN), consult your local sales off (2) For other pressure ranges, consult your local sales office. (3) For other connections (such as cable and AMP connector), consult your local sales office. (4) Sold in lots of 25. (5) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +125 °C (5 to 257 °F). For other fluid connections (such as G 1/4 A BSP male or 1/4" NPTF female), refer to "Interpretation of the Catalog Number" on page 12, or consult your local sales office. (6) State the switching threshold settings when ordering. (7) For vacuum switches (size -1 bar): adjustable range of switching point (PB) on falling pressure. 			ult your local sales office. our local sales office. fluids, female), refer to cal sales office. nt (PB) on falling	
Operating curves						
		XMLGM01●●1		XMLG001●●1		
Appendigation	1 Maximum differential 2 Minimum differential	Rising pressure bar -0,97 -0,5	-0,05 0 -0,08 -0,08 -0,5 -0,5 -0,5 -0,5 -0,08 -0,5 -0,08	bar 0,5 0,08 0,05 0,05 0,05 0,05 0	2 2 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
page 22	page 23	page 23				
18) Telemecanique				

Electronic pressure sensors Nautilus[™] Type XMLG pressure switches Sizes 10 to 25 bar (11.6 to 362.5 psi)

Units with solid-state out	put (1)					
Adjustable range of switching Rising pressure (2)	g point (PH)	0.8–10 bar (11.6–145	osi)	2–25 bar (29–362.5 ps	ii)	
Type of electrical connection	(3)	M12	Integrated quick connection	M12	Integrated quick connection	
Catalog numbers						
Only sold in bulk packs (4)	NPN output (N.C.)	XMLG010D33TQ	XMLG010Q33TQ	XMLG025D33TQ	XMLG025Q33TQ	
	PNP output (N.C.)	XMLG010D43TQ	XMLG010Q43TQ	XMLG025D43TQ	XMLG025Q43TQ	
Fluid connection (5)		1/4" NPT male				
Weight, g (oz)		95 (3.35)	95 (3.35)	95 (3.35)	95 (3.35)	
Additional specifica	tions not shown under general s	specifications (page 13)				
Switching thresholds (6)		Factory set				
Possible differential	Min. at low setting	0.3 bar (4.4 psi)		0.75 bar (10.9 psi)		
	Min. at high setting	0.3 bar (4.4 psi)	0.3 bar (4.4 psi)			
	Max. at high setting	9.5 bar (137.75 psi)		23.8 bar (345.1 psi)		
Maximum permissible accide	ntal pressure	22 bar (319 psi)		56 bar (812 psi)		
Destructive pressure		25 bar (362.5 psi)		62.5 bar (906.2 psi)		
Rated supply voltage		12/24 V				
Voltage limits		8–33 V				
Output		Solid-state, NPN or PNP, NC				
Switching capacity		150 mA				
Current consumption		< 4 mA				
Electrical connection	By connector	XMLGeeeDee: M12, 3 see pages 22 and 23	-pin male. For suitable f	emale connectors, includ	ling pre-wired versions,	
	Integrated	XML-GeeeQee: integr	ated connection, Phoen	ix Contact® QUICKON ty	ре	
		 For other types of output (such as normally open PNP or NPN), consult your local sales office. For other pressure ranges, consult your local sales office. For other connections (such as AMP connector or cable), consult your local sales office. Sold in lots of 25. Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +125 °C (5 to 257 °F). For other fluid connections (such as G 1/4 A BSP male or 1/4" NPTF female), refer to "Interpretation of the Catalog Number" on page 12, or consult your local sales office. State the switching threshold settings when ordering. 				



Electronic pressure sensors Nautilus[™] Type XMLG pressure switches Sizes 100 to 250 bar (1450 to 3625 psi)

Units with solid-state out	put (1)					
Adjustable range of switching Rising pressure (2)	g point (PH)	8–100 bar (11.6–1450	psi)	20–250 bar (29–3625	psi)	
Type of electrical connection	(3)	M12	Integrated quick	M12	Integrated quick	
Catalog numbers			Connocation	1	Connocaon	
Only sold in bulk packs (4)						
	NPN output (N.C.)	XMLG100D33TQ	XMLG100Q33TQ	XMLG250D33TQ	XMLG250Q33TQ	
	PNP output (N.C.)	XMLG100D43TQ	XMLG100Q43TQ	XMLG250D43TQ	XMLG250Q43TQ	
Fluid connection (5)	,	1/4" NPT male				
Weight, g (oz)		95 (3.35)	95 (3.35)	95 (3.35)	95 (3.35)	
Additional specifica	tions not shown under general s	pecifications (page 13)				
Switching thresholds (6)	5	Factory set				
Possible differential	Min. at low setting	3 bar (43.5 psi) 7.5 bar (108.8 psi)				
	Min. at high setting	3 bar (43.5 psi)		7.5 bar (108.8 psi)		
	Max. at high setting	95 bar (1377.5 psi)		237.5 bar (3443.7 psi)		
Maximum permissible accide	ntal pressure	225 bar (3262.5 psi)		560 bar (8120 psi)		
Destructive pressure	· · · ·	250 bar (3625 psi)		625 bar (9062.5 psi)		
Rated supply voltage		12/24 V				
Voltage limits		8–33 V				
Output		Solid-state, NPN or PNP, NC				
Switching capacity		150 mA				
Current consumption		< 4 mA				
Electrical connection	By connector	XMLGeeeDee: M12, 3 see pages 22 and 23	-pin male. For suitable f	emale connectors, inclue	ding pre-wired versions,	
	Integrated	XMLGeeeQee: integra	ated connection, Phoenia	K Contact [®] QUICKON type	pe	
		 For other types of output (such as normally open PNP or NPN), consult your local sales office. For other pressure ranges, consult your local sales office. For other connections (such as AMP connector or cable), consult your local sales office. For other connections (such as AMP connector or cable), consult your local sales office. Sold in lots of 25. Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +125 °C (5 to 257 °F). For other fluid connections (such as G 1/4 A BSP male or 1/4" NPTF female), refer to "Interpretation of the Catalog Number" on page 12, or consult your local sales office. State the switching threshold settings when ordering. 				

Operating curves

20



Electronic pressure sensors Nautilus[™] Type XMLG pressure switches Size: 400 bar (5800 psi)

Unite with called states	140114 (1)						
Units with solid-state of	itput (1)						
Adjustable range of switchin Rising pressure (2)	ng point (PH)	32–400 bar (464–5800 psi)					
Type of electrical connection	n (3)	M12	Integrated quick connection				
Catalog numbers							
Only sold in bulk packs (4)							
,	NPN output (N.C.)	XMLG400D33TQ	XMLG400Q33TQ				
	PNP output (N.C.)	XMLG400D43TQ	XMLG400Q43TQ				
Fluid connection (5)	,	1/4" NPT male					
Weight, g (oz)		95 (3.35)	95 (3.35)				
Additional specific	ations not shown under de	neral specifications (page 13)					
Switching thresholds (6)	alle net she with and of go	Eactory set					
Bessible differential	Min at low cotting	12 hor (174 poi)	bar (174 psi)				
Possible differential	Min. at high setting	12 bar (174 psi)					
	Max at high setting	220 bor (5510 poi)					
Maximum parmissible agaid		800 bar (11 600 psi)					
Destructive proceure		000 bar (12,050 psi)	900 bar (13,050 psi)				
Bated supply voltage		12/24 V					
		12/24 V					
		0-33 V					
Switching consoity							
Switching capacity		150 MA					
Electrical connection	Ru connector	< 4 IIIA	r quitable female connectors, including are wired versions.				
Electrical connection		see pages 22 and 23	r suitable remain connectors, including pre-wired versions,				
	Integrated	XMLGeeeQee: integrated connection	on, Phoenix Contact® QUICKON type				
		 (1) For other pressure ranges, consult your local sales office. (2) For other pressure ranges, consult your local sales office. (3) For other connections (such as AMP connector or cable), consult your local sales office. (4) Sold in lots of 25. (5) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +125 °C (5 to 257 °F). For other fluid connections (such as G 1/4 A BSP male or 1/4" NPTF female), refer to "Interpretation of the Catalog Number" on page 12, or consult your local sales office. (6) State the switching threshold settings when ordering. 					
Operating curve							
		XMLG400●●1TQ					



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21

Catalog numbers

Electronic pressure sensors Nautilus[™] accessories and replacement parts for

Type XMLG sensors



	U			
Description	Length of cable	Catalog number	Weight	
		m (ft)		g (oz)
M12 Snap-C [™] , straight, female connector (1)		—	XZCC12FDM40V	15 (0.53)
M12 female connector, metal clamping ring	Straight	_	XZCC12FDM40B	20 (0.71)
Connector with screw terminal connections	90°	—	XZCC12FCM40B	20 (0.71)
Pre-wired M12 female connectors	Straight (Black	2 (6.6)	XZCP1141L2	90 (3.17)
	PVR)	5 (16.4)	XZCP1141L5	190 (6.70)
		10 (32.8)	XZCP1141L10	370 (13.05)
	Straight (Yellow PVC)	2 (6.6)	XSZCD101Y	90 (3.17)
		5 (16.4)	XSZCD102Y	190 (6.70)
		10 (32.8)	XSZCD103Y	370 (13.05)
	90°	2 (6.6)	XZCP1241L2	90 (3.17)
		5 (16.4)	XZCP1241L5	0.190 (6.70)
		10 (32.8)	XZCP1241L10	370 (13.05)
Replacement part				
Description		Sold in lots of	Unit catalog number	Weight g (oz)
Quick connection Phoenix Contact® QUICKON type		10	XMLGZ001	25 (0.88)

(1) Connector incorporating IDCs (insulation displacement connectors) for quick, direct, in-line connection to cable without a screwdriver or soldering iron.

XMLGZ001

Dimensions, wiring

Electronic pressure sensors

Nautilus™ Type XMLG transmitters and pressure switches For control circuits

Dimensions, mm (in.)

XMLGeeeDee, M12 x 1 connection



XMLGeeeQee, integrated quick connection















Telemecaníque

Introduction

Electronic pressure sensors Nautilus[™] type XMLE



Introduction

XMLE pressure switches and pressure transmitters are characterized by their ceramic pressure measuring cell.

- 1 Threaded fluid entry.
- 2 Sealing gaskets.
- 3 Measuring load cell (ceramic technology).
- 4 Electronic card.
- 5 Electrical connector.
- 6 Adjustment potentiometer for switching point PH (rising pressure). Only applicable to pressure switches.
- Adjustment potentiometer for switching point PB (falling pressure). 7 Only applicable to pressure switches.



Operating principle

Pressure switches XMLE incorporate a solid-state NPN or PNP NC output. Two potentiometers enable the setting of the PH (rising pressure) and PB (falling pressure) switching points.

Pressure transmitters XMLE provide a 4-20 mA analog output which is proportional to the measuring range.

A digital display unit can be plugged in directly between the male and female DIN 43650A connectors.

Simple, unrestricted positioning of the display unit + sensor + connector is possible (can be rotated through 360°).

The display can be adjusted to enable reading from any direction (360° orientation both vertically and horizontally).

Specifications

Electronic pressure sensors Nautilus[™] type XMLE

Specifications	
Conformity to standards	C€, EN 50081, EN 50082
Product certifications	UL, CSA
Protective treatment	Standard version "TC"
Ambient air temperature	For operation: -15 to +80 °C (5 to 176 °F)
Fluids or products controlled	Hydraulic oils, air, fresh water, sea water, corrosive fluids from -15 to +80 °C (5 to 176 °F)
Component materials in contact with fluid	Stainless steel fluid entry type AISI 303, Viton [®] gasket Ceramic pressure measuring cell
Operating position	All positions
Vibration resistance	5 gn (25–200 Hz) and 35 gn (60–2000 Hz)
Shock resistance	50 gn
Electrical protection	Protected against reverse polarity, short-circuit, and overload
Degree of protection	IP65 conforming to IEC/EN 60529
Operating rate	50 Hz
Response time	< 5 ms
Service life	> 10 million operating cycles
Drift	Zero point: < ± 0.03% of the measuring range/°C Sensitivity: < ± 15% of the measuring range/°C
Precision	< ± 0.3% of the measuring range
Fluid connection	1/4" NPT (male) conforming to NF E 03-004, ISO 7
Electrical connection	DIN 43650A or M12 connector

Interpretation	of the C	Catalog	Number-	-XMLE

XMLE	100			U1	D	2	1
Units without	Rated pressure		Solid state,	Electrical	Output	Eluid connection	
display, 40 mm dia.	Code	psi	bar	without scale	connection	Culpul	Fiuld connection
	M01	-14.5 to 0	-1 to 0		C: DIN 43650A	2: Analog	1: G 1/4 A (BSP male)
	001	0 to 14.5	0 to 1		D: M12	3: Solid state, NPN	3: 1/4" NPT male
	010	0 to 145	0 to 10		Q: Integrated	4: Solid state, PNP	6: 1/4" NPTF female
	025	0 to 362.5	0 to 25		quick connect		7: 7/16-20 UNF male
	060	0 to 870	0 to 60				
	100	0 to 1450	0 to 100				
	250	0 to 3625	0 to 250				
	600	0 to 8700	0 to 600				

NOTE: Use this table only to interpret the catalog number. Some combinations are not available.

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Туре

Electronic pressure sensors Nautilus[™] type XMLE

Nautilus[™] type XMLE Transmitters without display (1) Sizes -1 to 25 bar (-14.5 to 362.5 psi)

With analog output, fluid connection 1/4" NPT male





Pressure range		0 to -1 bar (0 to -14.5 psi)		0 to 1 bar (0 to 14.5 psi)		
Electrical connector type		DIN 43650A	M12	DIN 43650A	M12	
Catalog numbers	S					
Fluids controlled (2)	Hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F)	XMLEM01U1C23	XMLEM01U1D23	XMLE001U1C23	XMLE001U1D23	
Weight, g (oz)		250 (8.82)	300 (10.58)	250 (8.82)	300 (10.58)	
Additional speci	fications not shown under gener	al specifications (pag	je 25)	1	1	
Maximum permissible accidental pressure		1 bar (14.5 psi)		2 bar (29 psi)		
Destructive pressure		2 bar (29 psi)		3 bar (43.5 psi)		
Rated supply voltage		24 V 				
Voltage limits		11–33 V 				
Output		Analog, 4–20 mA, 2-wire				
Current consumption		< 20 mA				
Electrical connection		XMLEeeeU1C23: DIN 43650A, 4-pin male connector. For suitable female connector, see page 34. XMLEeeeU1D23: M12, 5-pin male connector. For suitable female pre-wired connector, see page 34.				
		(1) Optional digital displ	lay for sensor, see page	34.		

(2) Component materials of units in contact with the fluid: see page 25.

Output curves





Other versions

For other fluid connections (such as G 1/4 A BSP male or 1/4" NPTF female), refer to "Interpretation of the Catalog Number" on page 25, or consult your local sales office.

Accesso	pries: Dimensions:	Wiring:	
page 34	page 35	page 35	
26		Telemecanique	

With analog output, fluid connection 1/4" NPT male









0–10 bar (0–145 psi)		0–25 bar (0–362.5 psi)		
DIN 43650A	M12	DIN 43650A	M12	
Catalog numbers				
XMLE010U1C23	XMLE0101U1D23	XMLE025U1C23	XMLE025U1D23	
250 (8.82)	300 (10.58)	250 (8.82)	300 (10.58)	
Additional specificat	i ons not shown under gener	al specifications (page 25)		
20 bar (290 psi)		50 bar (725 psi)		
30 bar (435 psi)		75 bar (1087.5 psi)		
24 V				
11–33 V				
Analog, 4–20 mA, 2-wire				
< 20 mA				
XMLEeeeU1C23: DIN 43650A, 4-pin male connector. For suitable female connector, see page 34. XMLEeeeU1D23: M12, 5-pin male connector. For suitable female pre-wired connector, see page 34.				

Output curves





Accessories: page 34	Dimensions: page 35	Wiring: page 35		
Telemecanique				27

Туре

Electronic pressure sensors Nautilus[™] type XMLE

Nautilus[™] type XMLE Transmitters without display (1) Sizes 60 to 600 bar (870 to 8700 psi)

With analog output, fluid connection 1/4" NPT male

Pressure range		0–60 bar (0–870 psi)		0–100 bar (0–1450 p	0–100 bar (0–1450 psi)	
Electrical connector typ	Electrical connector type		M12	DIN 43650A	M12	
Catalog numbers						
Fluids controlled (2)	Hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F)	XMLE060U1C23	XMLE060U1D23	XMLE100U1C23	XMLE100U1D23	
Weight, g (oz)		270 (9.52)	320 (11.29)	270 (9.52)	320 (11.29)	
Additional speci	ifications not shown under gener	al specifications (pag	ge 25)			
Maximum permissible accidental pressure		120 bar (1740 psi)		200 bar (2900 psi)		
Destructive pressure		180 bar (2610 psi)		300 bar (4350 psi)		
Rated supply voltage		24 V 				
Voltage limits		11–33 V 				
Output		Analog, 4–20 mA, 2-wire				
Current consumption		< 20 mA				
Electrical connection		XMLEeeeU1C23: DIN 43650A, 4-pin male connector. For suitable female connector, see page 34. XMLEeeeU1D23: M12, 5-pin male connector. For suitable female pre-wired connector, see page 34.				
		(1) Optional digital display for sensor, see page 34.				

(2) Component materials of units in contact with the fluid: see page 25.

Output curves





Other versions

For other fluid connections (such as G 1/4 A BSP male or 1/4" NPTF female), refer to "Interpretation of the Catalog Number" on page 25, or consult your local sales office.

Accesso page 34	pries: Dimensions: page 35	Wiring: page 35	
28		Elemecanique	

With analog output, fluid connection 1/4" NPT male









0–250 bar (0–3625 psi)		0–600 bar (0–8700 psi)		
DIN 43650A	M12	DIN 43650A	M12	
Catalog numbers				
XMLE250U1C23	XMLE250U1D23	XMLE600U1C23	XMLE600U1D23	
270 (9.52)	320 (11.29)	270 (9.52)	320 (11.29)	
Additional specificat	ions not shown under gener	al specifications (page 25)		
500 bar (7250 psi)		1200 bar (17 400 psi)		
750 bar (10 875 psi)		1800 bar (26 100 psi)		
24 V				
11–33 V				
Analog, 4–20 mA, 2-wire				
< 20 mA				
XMLEeeeU1C23: DIN 43650A, 4-pin male connector. For suitable female connector, see page 34. XMLEeeeU1D23: M12, 5-pin male connector. For suitable female pre-wired connector, see page 34.				

Output curves





Accessories: page 34	Dimensions: page 35	Wiring: page 35		
Telemecanique				

Electronic pressure sensors Nautilus[™] type XMLE

Vacuum and pressure switches without display (1), for regulation between 2 thresholds Sizes -1 to 25 bar (-14.5 to 362.5 psi)

Туре

With solid-state output, fluid connection 1/4" NPT male







Adjustable range of switching point (PH) (Rising pressure) (2)		–0.07 to –1 bar (-1.015 to –14.5 psi)		0.07 to 1 bar (1.015 to 14.5 psi)			
Electrical connector type		DIN 43650A	M12	DIN 43650A	M12		
Catalog numbers							
Fluids controlled (3)		Type of output					
Hydraulic oils, fresh water, sea w corrosive fluids, from -15 to +80	vater, air, °C (5 to 176 °F)	NPN	XMLEM01U1C33	XMLEM01U1D33	XMLE001U1C33	XMLE001U1D33	
		PNP	XMLEM01U1C43	XMLEM01U1D43	XMLE001U1C43	XMLE001U1D43	
Weight, g (oz)			250 (8.82)	300 (10.58)	250 (8.82)	300 (10.58)	
Additional specificat	t ions not show	n under gene	ral specifications (pag	ge 25)		1	
Possible differential	Min. at low se	etting	0.02 bar (0.29 psi)		0.02 bar (0.29 psi)		
	Min. at high s	setting	0.02 bar (0.29 psi)		0.02 bar (0.29 psi)		
	Max. at high	setting	0.95 bar (13.77 psi) (max. differential at low setting)		0.95 bar (13.77 psi)		
Maximum permissible accider	ntal pressure		1 bar (14.5 psi)		2 bar (29 psi)		
Destructive pressure			2 bar (29 psi)		3 bar (43.5 psi)		
Rated supply voltage			24 V				
Voltage limits			11–33 V				
Output			Solid-state, NPN or PNP, NC				
Switching capacity			100 mA				
Current consumption			< 15 mA				
Electrical connection		XMLEeeeU1Ce1: DIN 43650A, 4-pin male connector. For suitable female connector, see page 34. XMLEeeeU1De1: M12, 4-pin male connector. For suitable female pre-wired connector, see page 34.					
			 (1) Optional digital disp (2) For vacuum switcher pressure. (3) Component materia 	lay for pressure switch, es (size -1 bar): adjustab Is of units in contact witt	see page 34. le range of switching poir h the fluid: see page 25.	nt (PB) on falling	

Operating curves

page 34

30



With solid-state output, fluid connection 1/4" NPT male









31

0.7–10 bar (10.15–145 psi)		1.75–25 bar (25.38–362.5 psi)			
DIN 43650A	M12	DIN 43650A M12			
Catalog numbers					
XMLE010U1C33	XMLE010U1D33	XMLE025U1C33	XMLE025U1D33		
XMLE010U1C43	XMLE010U1D43	XMLE025U1C43	XMLE025U1D43		
250 (8.82)	300 (10.58)	250 (8.82)	300 (10.58)		
Additional specificat	ions not shown under gene	ral specifications (page 25)			
0.2 bar (2.9 psi)		0.2 bar (2.9 psi)			
0.2 bar (2.9 psi)		0.2 bar (2.9 psi)			
9.5 bar (137.7 psi)		23.75 bar (344.37 psi)			
20 bar (290 psi)		50 bar (725 psi)			
30 bar (435 psi)		75 bar (1087.5 psi)			
24 V					
11–33 V					
Solid-state, NPN or PNP, NC					
100 mA	100 mA				
< 15 mA					
XMLEeeeU1Ce1: DIN 43650A, 4-pin male connector. For suitable female connector, see page 34. XMLEeeeU1De1: M12, 5-pin male connector. For suitable female pre-wired connector, see page 34.					

Operating curves



Туре

Electronic pressure sensors Nautilus[™] type XMLE

Pressure switches without display (1), for regulation between 2 thresholds. Sizes 60 to 600 bar (870 to 8700 psi)

With solid-state output, fluid connection 1/4" NPT male

Adjustable range of switching point (PH) (Rising pressure)			4.2–60 bar (60.9–870 psi)		7–100 bar (101.5–1450 psi)		
Electrical connector type			DIN 43650A	M12	DIN 43650A	M12	
Catalog numbers			1	1			
Fluids controlled (2)		Type of output					
Hydraulic oils, fresh water, se corrosive fluids, from -15 to +	a water, air, 80 °C (5 to 176 °F)	NPN	XMLE060U1C33	XMLE060U1D33	XMLE100U1C33	XMLE100U1D33	
		PNP	XMLE060U1C43	XMLE060U1D43	XMLE100U1C43	XMLE100U1D43	
Weight, g (oz)			270 (9.52)	320 (11.29)	270 (9.52)	320 (11.29)	
Additional specific	ations not show	/n under genei	ral specifications (pag	je 25)			
Possible differential	Min. at low se	etting	1.2 bar (17.4 psi)		2 bar (29 psi)	2 bar (29 psi)	
	Min. at high s	setting	1.2 bar (17.4 psi)		2 bar (29 psi)	2 bar (29 psi)	
	Max. at high	setting	57 bar (826.5 psi)		95 bar (1377.5 psi)		
Maximum permissible accid	lental pressure		120 bar (1740 psi)		200 bar (2900 psi)		
Destructive pressure			180 bar (2610 psi)		300 bar (4350 psi)		
Rated supply voltage			24 V				
Voltage limits			11–33 V				
Output			Solid-state, NPN or PNP, NC				
Switching capacity			100 mA				
Current consumption		< 15 mA					
Electrical connection		XMLEeeeU1Ce1: DIN page 34. XMLEeeeU1De1: M12 page 34.	43650A, 4-pin male co 2, 5-pin male connector	nnector. For suitable fem	ale connector, see wired connector, see		
			(1) Ontional digital disn	lay for pressure switch	see nage 34		

(2) Component materials of units in contact with the fluid: see page 25.

Operating curves



With solid-state output, fluid connection 1/4" NPT male









17.5–250 bar (253.7–3625 psi)		42–600 bar (609–8700 psi)			
DIN 43650A	M12	DIN 43650A	M12		
Catalog numbers					
XMLE250U1C33	XMLE250U1D33	XMLE600U1C33	XMLE600U1D33		
XMLE250U1C43	XMLE250U1D43	XMLE600U1C43	XMLE600U1D43		
270 (9.52)	320 (11.29)	270 (9.52)	320 (11.29)		
Additional specificat	ions not shown under gener	al specifications (page 25)			
5 bar (72.5 psi)		12 bar (174 psi)			
5 bar (72.5 psi)		12 bar (174 psi)			
237.5 bar (3443.7 psi)		570 bar (8265 psi)			
500 bar (7250 psi)		1200 bar (17 400 psi)			
750 bar (10 875 psi)		1800 bar (26 100 psi)			
24 V					
11–33 V	11–33 V				
Solid-state, NPN or PNP, NC					

< 15 mA XMLEeeeU1Ce1: DIN 43650A, 4-pin male connector. For suitable female connector, see page 34. XMLEeeeU1De1: M12, 5-pin male connector. For suitable female pre-wired connector, see page 34.

Operating curves

100 mA



Electronic pressure sensors Nautilus[™] type XMLE Accessories

	Accessories			
	Description	Sensor size	Catalog number	Weight
		bar		q (oz)
098	Digital displays for analog pressure sensors	-1 to 0	XMLEZM01	100 (3.53)
		0 to 1	XMLEZ001	100 (3.53)
		0 to 10	XMLEZ010	100 (3.53)
VMI EZanna		0 to 25	XMLEZ025	100 (3.53)
		0 to 60	XMLEZ060	100 (3.53)
		0 to 100	XMLEZ100	100 (3.53)
		0 to 250	XMLEZ250	100 (3.53)
		0 to 600	XMLEZ600	100 (3.53)
	Connection accessories			
XZCC43FCP40B	Description	Length of cable	Catalog number	Weight
		m (ft)		g (oz)
	Female DIN 43650 A connector	_	XZCC43FCP40B	35 (1.23)
	DIN 43650 A, straight M12 male jumper cables for splitter boxes	1 (3.3)	XZCR1523062K1	80 (2.82)
		2 (6.6)	XZCR1523062K2	110 (3.88)
	Pre-wired M12, straight, female connectors (Black PVR)	2 (6.6)	XZCP1164L2	115 (4.06)
		5 (16.4)	XZCP1164L5	270 (9.52)
		10 (32.8)	XZCP1164L10	520 (18.34)
XZCP1164Le	Pre-wired M12, straight, female connectors (Yellow PVC)	2 (6.6)	XSZCD1501Y	115 (4.06)
	(1)	5 (16.4)	XSZCD1502Y	270 (9.52)
		10 (32.8)	XSZCD1503Y	520 (18.34)
	Pre-wired M12, 90°, female connectors	2 (6.6)	XZCP1264L2	115 (4.06)
芀		5 (16.4)	XZCP1264L5	270 (9.52)
XZCP1264L•		10 (32.8)	XZCP1264L10	520 (18.34)

Dimensions, wiring

Electronic pressure sensors Nautilus[™] type XMLE



Electronic pressure sensors

Nautilus[™] Universal, **Osi**concept[™] For control circuits, type XMLF

Introduction

XMLF electronic pressure sensors are used for pressure control of hydraulic oils, fresh water, sea water, air, and corrosive fluids, between -1 and 600 bar (-14.5 and 8700 psi).

■ Osiconcept[™] technology: simplifying setup

XMLF electronic pressure sensors are characterized by their ceramic pressure measuring cell.

- Large 4-digit display indicating the programming codes, parameter values, or measured pressure.
- 2 LED indicating the selected unit of measurement (bar or psi).
- 3 LED indicating the status of the pressure switch output(s).
- Ergonomic keys for configuring the product via the pull-down menu.
- 5 Excellent resistance to overpressure.
- 6 Memorization and ability to display the pressure peaks within the installation.
- □ Three menus enable the user to do the following:
 - configure (PROG menu) the various functions of the unit (access to all the parameters of the product)
 - perform (USER menu) diagnostic operations and, for pressure switches, to set the switching point pressure values
 - read (READ menu) all the configuration details, together with the values set in the PROG and USER menus

Functions

■ Pressure transmitters XMLF●●●D2●1● have a 4–20 mA or 0–10 V analog output. In addition to having a manual diagnostic function (see below), they also incorporate a remote diagnostic function: a digital input connected to a PLC, for example, enables remote activation of the sensor's test function. When the sensor is operating correctly, the analog output must, when testing, be close to 50% of the sensor size (12 mA or 5 V).

■ Universal sensors XMLF●●●D2●2● are pressure switches with an adjustable differential, for regulation between 2 thresholds, featuring a solid-state output (configurable for NPN or PNP, and for NO or NC), and a 4–20 mA or 0–10 V analog output. They incorporate the manual diagnostic function (see below).

■ Pressure switches XMLF●●●D2●3● are dual stage switches, with adjustable differential for each threshold, featuring 2 solid-state outputs (configurable for NPN or PNP, and for NO or NC). They incorporate the manual diagnostic function (see below).

■ Pressure switches XMLF●●●E2●4● for AC control are switches with adjustable differential, for regulation between 2 thresholds, featuring a 2.5 A, AC relay output (configurable for NO or NC). They incorporate the manual diagnostic function (see below).

XMLF sensors feature:

- Various configurable functions
- □ For the display:
 - pressure unit of measurement (bar or psi),
 - response time (slow: display refreshes in increments of 1% of the unit size; normal: display refreshes in increments of 0.5% of the unit size; or fast: display refreshes every 10 ms).
- □ For the analog output:
 - response time (adjustable from 5 to 500 ms, in increments of 1 ms),
- maximum pressure of the output curve (adjustable from 75 to 125% of the unit size).
- □ For each solid-state output:
 - PNP or NPN logic,
 - NO or NC output,
 - time delay on trip and on reset (adjustable from 0 to 50 s, in increments of 1 s),
 - response time (adjustable from 5 to 500 ms, in increments of 1 ms).
- □ For the AC relay output models:
 - NO or NC contact,
- time delay on trip and on reset (adjustable from 0 to 50 s, in increments of 1 s),
- response time (adjustable from 5 to 500 ms, in increments of 1 ms).
- Manual diagnostic function enabling:
- checking the correct operation of sensor
- reading the value of the maximum pressure peak that has occurred since the last reset to zero, as well as deleting this value for a fresh reset.



Specifications

Electronic pressure sensors Nautilus[™] Universal, Osiconcept[™]

For control circuits, type XMLF

Environmental specifi	cations			
Conformity to standards		C€ , IEC/EN 60947-1, IEC/EN 60947-5-1, IEC/EN 60947-5-1, EN 50081, EN 50082, EN 61000-6-2, EN 61000-4-2/3/4/5/6/8/11		
Product certifications		UL, CSA		
Protective treatment		Standard version "TC"		
Ambient air temperature For operation		DC models: -25 to +80 °C (-13 to 176 °F)		
		AC models: -25 to +75 °C (-13 to 167 °F)		
Fluids or products controlled		Hydraulic oils, air, fresh water, sea water, corrosive fluids from -15 to +80 °C (5 to 176 °F)		
Component materials in contact	with fluid	Stainless steel fluid entry type AISI 303, Viton® gasket Ceramic pressure measuring cell		
Operating position		All positions		
Vibration resistance		5 gn (25–200 Hz) and 35 gn (60–2000 Hz), conforming to IEC 68-2-6		
Shock resistance		50 gn, conforming to IEC 68-2-27		
Electrical protection		Protected against reverse polarity, short-circuit, overload, and connection faults		
Resistance to electromagnetic	Electrostatic discharges	Standard EN 61000-4-2 contact 4kV, air 8 kV		
interference	Radiated electromagnetic fields	Standard EN 61000-4-3 10 V/m		
	Fast transients	Standard EN 61000-4-4 2 kV		
	Surges	Standard EN 61000-4-5 (AC) 1 kV, (DC) 0.5 kV		
	Conducted disturbances, induced by radio frequency fields	Standard EN 61000-4-6 10 V		
Degree of protection		IP67 conforming to IEC/EN 60529, NEMA 4/6/12/13		
Operating rate		< 50 Hz		
Output response time		Adjustable from 5 to 500 ms, in increments of 1 ms		
Service life	In millions of operating cycles	>10		
Drift	Of the zero point	< ± 0.1% of the measuring range/°C		
	Of the sensitivity	< ± 0.03% of the measuring range/°C		
Precision	Analog output	≤ 0.6% of the measuring range, output offset < 200 mV		
	Digital output	≤ 0.6% of the measuring range		
Repeat accuracy		≤ 0.5% of the measuring range		
Display response time		Adjustable; 3 options: - slow (1% of the unit size), - normal (0.5% of the unit size), or - fast (refreshed every 10 ms)		
Fluid connection		G 1/4A (BSP female) conforming to NF E 03-004 and ISO 7, 1/4" NPT, or SAE 7/16-20UNF female, depending on the model		
Electrical connection		M12 Snap-C™ compatible connector or SAE 7/8-16UN connector, depending on the model		

Interpretation of the Catalog Number—XMLF

XMLF	100			D	2	01	5
Configurable	Rated Code	pressure psi	bar	Electrical Connection	N/A	Output	Fluid Connection
	M01 002 010 016 025 040 070 100 160 250 400 600	-14.5 to 0 0 to 36.25 0 to 145 0 to 232 0 to 362.5 0 to 580 0 to 1015 0 to 1450 0 to 1450 0 to 2320 0 to 3625 0 to 5800 0 to 8700	-1 to 0 0 to 2.5 0 to 10 0 to 16 0 to 25 0 to 40 0 to 70 0 to 100 0 to 160 0 to 250 0 to 400 0 to 600	D: M12 DC only E: 7/8-16 UN2A AC only		 01: DC Analog 4–20 mA, shunt calibration 02: DC Analog 4–20 mA, digital single stage 11: DC Analog 0–10 V, shunt calibration 12: DC Analog 0–10 V, digital single stage 03: DC digital dual stage 04: AC Relay 120 V 	5: 1/4" BSP female 6: 1/4" NPTF female 9: SAE 7/16-20 UNF female

NOTE: Use this table only to interpret the catalog number. Some combinations are not available.

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Electronic pressure sensors Nautilus[™] type XMLF Size: -1 bar (-14.5 psi)

Туре		Pressure transmitters		Universal sensors with adjustable differential. Solid-state and analog outputs		
Adjustable range of switching (Falling pressure)	g point (PB)	—		-0.08 to -1 bar (-1.16 to	o -14.5 psi)	
Analog output		4–20 mA	0–10 V	4–20 mA	0–10 V	
Catalog numbers						
Fluid connection	1/4" BSP female	XMLFM01D2015	XMLFM01D2115	XMLFM01D2025	XMLFM01D2125	
(1)	1/4" NPT female	XMLFM01D2016	XMLFM01D2116	XMLFM01D2026	XMLFM01D2126	
	SAE 7/16-20UNF female	XMLFM01D2019	XMLFM01D2119	XMLFM01D2029	XMLFM01D2129	
Weight, g (oz)		480 (16.93)				
Additional specifica	tions not shown under gener	al specifications (pag	e 37)			
Possible differential	Min. at low and high setting	—		0.03 bar (0.44 psi)		
(add to PB to give PH)	Max. at low setting	—		0.95 bar (13.77 psi)		
Maximum permissible accide	ental pressure	3 bar (43.5 psi)				
Destructive pressure		5 bar (72.5 psi)				
Rated supply voltage		24 V				
Voltage limits		17–33 V				
Current consumption		80 mA				
Output		_		Programmable, NPN or PNP, and NO or NC		
Time delay		_		Adjustable time delay on trip and on reset from 0 to 50 s, in increments of 1 s		
Switching capacity		200 mA				
Analog output		4–20 mA or 0–10 V, depending on the model. Maximum signal level adjustable between -0.25 and 0.25 bar (-3.62 and 3.62 psi)				
Electrical connection		M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64				
		(1) Fluids controlled: hy +80 °C (5 to 176 °F).	draulic oils, fresh water,	sea water, air, corrosive	fluids, from -15 to	

Curves

Analog output curve

20 mA - 10 V 12 mA - 5 V į. 4 mA - 0 V - 0,50 - 0,25 Ó 0,25 bar

Vacuum sensor operating curves



Maximum differential 1 2 Minimum differential



-Adjustable value

Accesso	ries: Dimensions:	Wiring:	
page 64	page 65	page 65	
38		Telemecaníque	

Туре

Electronic pressure sensors Nautilus[™] type XMLF

Size: -1 bar (-14.5 psi)

Vacuum switches with adjustable differential and relay output



39





Adjustable range of switching poi (Falling pressure)	int(s) (PB or PB1 and PB2)	-0.08 to -1 bar (-1.16 to -14.5 psi)			
Catalog numbers					
Fluid connection	1/4" BSP female	XMLFM01E2045	XMLFM01D2035		
(1)	1/4" NPT female	XMLFM01E2046	XMLFM01D2036		
	SAE 7/16-20UNF female	XMLFM01E2049	XMLFM01D2039		
Weight, g (oz)		590 (20.81)	480 (16.93)		
Additional specification	ns not shown under gener	al specifications (page 37)			
Possible differential (add to:	Min. at low and high setting	0.03 bar (0.44 psi)	For each stage:		
 PB to get PH PB1 & PB2 to get PH1 & PH2) 	Max. at low setting	0.95 bar (13.77 psi)	min. at low and high setting: 0.03 bar (0.44 psi) max. at low setting: 0.95 bar (13.77 psi)		
Maximum permissible accidental	pressure	3 bar (43.5 psi)			
Destructive pressure		5 bar (72.5 psi)			
Rated supply voltage		120 V \sim	24 V 		
Voltage limits		102–132 V∕	17–33 V		
Current consumption		32 mA	80 mA		
Output		Relay	Programmable, NPN or PNP, and NO or NC		
Time delay		Adjustable time delay on trip and on reset from () to 50 s, in increments of 1 s		
Switching capacity		2.5 A, AC-15, C300 (120 V / 1.5 A)	200 mA		
Electrical connection		SAE 7/8-16UN, 5-pin male connector. For suitable female pre-wired connectors, see page 64. M12, 4-pin male connector. For suitable f connectors, including pre-wired versions page 64			

(1) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F).



Electronic pressure sensors Nautilus[™] type XMLF Size: 1 bar (14.5 psi)

Туре		Pressure transmitters		Universal sensors with adjustable differential. Solid-state and analog outputs (1)		
Adjustable range of switching point (PH) (Rising pressure)		—		0.08–1 bar (1.16–14.5 psi)		
Analog output		4–20 mA	0–10 V	4–20 mA	0–10 V	
Catalog numbers						
Fluid connection	1/4" BSP female	XMLF001D2015	XMLF001D2115	XMLF001D2025	XMLF001D2125	
(2)	1/4" NPT female	XMLF001D2016	XMLF001D2116	XMLF001D2026	XMLF001D2126	
	SAE 7/16-20UNF female	XMLF001D2019	XMLF001D2119	XMLF001D2029	XMLF001D2129	
Weight, g (oz)		480 (16.93)				
Additional specific	ations not shown under gener	ral specifications (pag	je 37)			
Possible differential	Min. at low and high setting			0.03 bar (0.44 psi)		
(subtract from PH to get PB)	Max. at high setting	-		0.95 bar (13.77 psi)		
Maximum permissible accid	lental pressure	4 bar (58 psi)				
Destructive pressure	-	6 bar (87 psi)				
Rated supply voltage		24 V				
Voltage limits		17–33 V 				
Current consumption		80 mA				
Output		—		Programmable, NPN or PNP, and NO or NC		
Time delay		-		Adjustable time delay on trip and on reset from 0 to 50 s, in increments of 1 s		
Switching capacity		—		200 mA		
Analog output		4-20 mA or 0-10 V, depending on the model. Maximum signal level adjustable between 0.75 and 1.25 bar (10.88 and 18.12 psi)				
Electrical connection		M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64				
		(1) Pressure sensors wa and analog outputs.	ith adjustable differentia	l for regulation between 2	2 thresholds. Solid-state	

(2) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.

Curves

Analog output curve



Pressure sensor operating curves





-Adjustable value

Accesso	ries: Dimensions:	Wiring:
page 64	page 65	page 65
40		(iii) Telemecanique

Туре

Electronic pressure sensors Nautilus[™] type XMLF

Size: 1 bar (14.5 psi)

Pressure switches with adjustable differential and relay output (1)

Dual stage adjustable pressure switches with solid-state outputs (2)





Adjustable range of switching point(s) (PH or PH1 and PH2) (Rising pressure)		0.08–1 bar (1.16–14.5 psi)			
Catalog numbers					
Fluid connection	1/4" BSP female	XMLF001E2045	XMLF001D2035		
(3)	1/4" NPT female	XMLF001E2046	XMLF001D2036		
	SAE 7/16-20UNF female	XMLF001E2049	XMLF001D2039		
Weight, g (oz)		590 (20.81)	480 (16.93)		
Additional specificat	tions not shown under gener	al specifications (page 37)			
Possible differential	Min. at low and high setting	0.03 bar (0.44 psi)	For each stage:		
(subtract from: - PH to give PB	Max. at high setting	0.95 bar (13.77 psi)	min. at low and high setting: 0.03 bar (0.44 psi) max. at high setting: 0.95 bar (13.77 psi)		
- PH1 & PH2 to get PB1 & PB2)	1				
Maximum permissible accider	ntal pressure	4 bar (58 psi)			
Destructive pressure		6 bar (87 psi)			
Rated supply voltage		120 V \sim	24 V		
Voltage limits		102–132 V∼	17–33 V		
Current consumption		32 mA	80 mA		
Output		Relay	Programmable, NPN or PNP, and NO or NC		
Time delay		Adjustable time delay on trip and on reset from 0 to 50 s, in increments of 1 s			
Switching capacity		2.5 A, AC-15, C300 (120 V / 1.5 A)	200 mA		
Electrical connection		XE 7/8-16UN, 5-pin male connector. For itable female pre-wired connectors, see ige 64. M12, 4-pin male connector. For suitable connectors, including pre-wired versions page 64			

(1) Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output.

(2) Pressure switches with 2 adjustable stages and adjustable differential for each threshold. (2) Pressure swinches wind a dijustable stages and adjustable unreferitian for each unrefine Solid-state outputs.
 (3) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to

+80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.

Pressure switch operating curves (Curve for each stage for dual stage pressure switches) Pressure switches with relay output Dual stage pressure switches Rising pressure Pre Pressure PH2 PH PB2 0.5 PH1 PB1 PB 0,08 Time Time 0 0,05 0,5 0,97ba Falling pressure 1 Maximum differential - Adjustable value -Adjustable value 2 Minimum differential Dimensions: Wiring: page 65 Accessories: page 64 page 65

Telemecaníque

41

Electronic pressure sensors Nautilus[™] type XMLF Size: 2.5 bar (36.25 psi)

Туре		Pressure transmitters		Universal sensors with adjustable differential. Solid-state and analog outputs (1)		
Adjustable range of switching point (PH) (Rising pressure)		-		0.20–2.5 bar (2.9–36.25 psi)		
Analog output		4–20 mA	0–10 V	4–20 mA	0–10 V	
Catalog numbers						
Fluid connection	1/4" BSP female	XMLF002D2015	XMLF002D2115	XMLF002D2025	XMLF002D2125	
(2)	1/4" NPT female	XMLF002D2016	XMLF002D2116	XMLF002D2026	XMLF002D2126	
	SAE 7/16-20UNF female	XMLF002D2019	XMLF002D2119	XMLF002D2029	XMLF002D2129	
Weight, g (oz)		480 (16.93)				
Additional specific	ations not shown under gener	al specifications (pag	je 37)			
Possible differential	Min. at low and high setting	—		0.08 bar (1.09 psi)		
(subtract from PH to give PB)	Max. at high setting	—		2.38 bar (34.51 psi)		
Maximum permissible accid	lental pressure	10 bar (145 psi)				
Destructive pressure		15 bar (217.5 psi)				
Rated supply voltage		24 V				
Voltage limits		17–33 V				
Current consumption		80 mA				
Output				Programmable, NPN or PNP, and NO or NC		
Time delay		-		Adjustable time delay on trip and on reset from 0 to 50 s in increments of 1 s		
Switching capacity		— 200 mA				
Analog output		4–20 mA or 0–10 V, depending on the model. Maximum signal level adjustable between 1.9 and 3.1 bar (27.5 and 44.9 psi)				
Electrical connection		M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64				
		(1) Pressure sensors wi	ith adjustable differential	for regulation between 2	2 thresholds. Solid-state	

(2) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.

Curves

Analog output curve



Pressure sensor operating curves





-Adjustable value

Accesso	pries: Dimensions:	Wiring:
page 64	page 65	page 65
42		Telemecanique

Туре

Electronic pressure sensors Nautilus[™] type XMLF

Size: 2.5 bar (36.25 psi)

Pressure switches with adjustable Dual stage adjustable pressure switches with solid-state outputs (2) differential and relay output (1)





Adjustable range of switching point(s) (PH or PH1 and PH2) (Rising pressure)		0.20–2.5 bar (2.9–36.25 psi)				
Catalog numbers						
Fluid connection	1/4" BSP female	XMLF002E2045	XMLF002D2035			
(3)	1/4" NPT female	XMLF002E2046	XMLF002D2036			
	SAE 7/16-20UNF female	XMLF002E2049	XMLF002D2039			
Weight, g (oz)		590 (20.81)	480 (16.93)			
Additional specific	cations not shown under gene	ral specifications (page 37)				
Possible differential	Min. at low and high setting	0.08 bar (1.09 psi)	For each stage:			
(subtract from: Max. at high setting - PH to get PB - PH 18, PH2 to get PR1 & PR2)		2.38 bar (34.51 psi)	min. at low and high setting: 0.08 bar (1.09 psi) max. at high setting: 2.38 bar (34.51 psi)			
Maximum permissible acc	idental pressure	10 bar (145 psi)				
Destructive pressure		15 bar (217.5 psi)				
Rated supply voltage		120 V \sim	24 V			
Voltage limits		102–132 V∿	17–33 V			
Current consumption		32 mA	80 mA			
Output		Relay	Programmable, NPN or PNP, and NO or NC			
Time delay		Adjustable time delay on trip and on reset from	0 to 50 s, in increments of 1 s			
Switching capacity		2.5 A, AC-15, C300 (120 V / 1.5 A)	200 mA			
Electrical connection		SAE 7/8-16UN, 5-pin male connector. For suitable female pre-wired connectors, see page 64. M12, 4-pin male connector. For suitab connectors, including pre-wired version page 64				
		(1) Pressure switches with adjustable differentiation output.	al for regulation between 2 thresholds. Relay			

(2) Pressure switches with 2 adjustable stages and adjustable differential for each threshold.

Solid-state outputs. (3) Fluids controlled: hvdraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to

43

+80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.



Electronic pressure sensors Nautilus[™] type XMLF Size: 10 bar (145 psi)

Туре		Pressure transmitters		Universal sensors with adjustable differential. Solid-state and analog outputs (1)		
Adjustable range of switchin (Rising pressure)	g point (PH)	-		0.8–10 bar (11.6–145	osi)	
Analog output		4–20 mA	0–10 V	4–20 mA	0–10 V	
Catalog numbers						
Fluid connection	1/4" BSP female	XMLF010D2015	XMLF010D2115	XMLF010D2025	XMLF010D2125	
(2)	1/4" NPT female	XMLF010D2016	XMLF010D2116	XMLF010D2026	XMLF010D2126	
	SAE 7/16-20UNF female	XMLF010D2019	XMLF010D2119	XMLF010D2029	XMLF010D2129	
Weight, g (oz)		480 (16.93)				
Additional specifica	ations not shown under gener	al specifications (pag	e 37)			
Possible differential	Min. at low and high setting	—		0.3 bar (4.4 psi)		
(subtract from PH to give PB)	Max. at high setting	-		9.5 bar (137.75 psi)		
Maximum permissible accide	ental pressure	40 bar (580 psi)				
Destructive pressure		60 bar (870 psi)				
Rated supply voltage		24 V				
Voltage limits		17–33 V				
Current consumption		80 mA				
Output		—		Programmable, NPN or PNP, and NO or NC		
Time delay		-		Adjustable time delay on trip and on reset from 0 to 50 s, in increments of 1 s		
Switching capacity		—		200 mA		
Analog output		4–20 mA or 0–10 V, depending on the model. Maximum signal level adjustable between 7.5 and 12.5 bar (108.75 and 181.25 psi)				
Electrical connection		M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64				
		(1) Pressure sensors wi and analog outputs.	th adjustable differential	for regulation between 2	thresholds. Solid-state	

(2) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.

Curves

Analog output curve



Pressure sensor operating curves





-Adjustable value

Accessories:	Dimensions:	Wiring:	
page 64	page 65	page 65	
44		Telemecanique	

Electronic pressure sensors Nautilus[™] type XMLF

Size: 10 bar (145 psi)

Туре		Pressure switches with adjustable differential and relay output (1)	Dual stage adjustable pressure switches with solid-state outputs (2)
Adjustable range of switchin (Rising pressure)	ng point(s) (PH or PH1 and PH2)	0.8–10 bar (11.6–145 psi)	
Catalog numbers			
Fluid connection	1/4" BSP female	XMLF010E2045	XMLF010D2035
(3)	1/4" NPT female	XMLF010E2046	XMLF010D2036
	SAE 7/16-20UNF female	XMLF010E2049	XMLF010D2039
Weight, g (oz)		590 (20.81)	480 (16.93)
Additional specific	ations not shown under gene	ral specifications (page 37)	
Possible differential	Min. at low and high setting	0.3 bar (4.4 psi)	For each stage:
(subtract from: – PH to get PB – PH1 & PH2 to get PB1 & PE	Max. at high setting	9.5 bar (137.75 psi)	min. at low and high setting: 0.3 bar (4.4 psi) max. at high setting: 9.5 bar (137.75 psi)
Maximum permissible accid	lental pressure	40 bar (580 psi)	
Destructive pressure	·	60 bar (870 psi)	
Rated supply voltage		120 V~	24 V
Voltage limits		102–132 V∿	17–33 V
Current consumption		32 mA	80 mA
Output		Relay	Programmable, NPN or PNP, and NO or NC
Time delay		Adjustable time delay on trip and on reset from	0 to 50 s, in increments of 1 s
Switching capacity		2.5 A, AC-15, C300 (120 V / 1.5 A)	200 mA
Electrical connection		SAE 7/8-16UN, 5-pin male connector. For suitable female pre-wired connectors, see page 64.	M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64
		 Pressure switches with adjustable differenti output. Pressure switches with 2 adjustable stages Solid-state outputs. Fluids controlled: hydraulic oils, fresh water +80 °C (5 to 176 °F). Component materials 	al for regulation between 2 thresholds. Relay and adjustable differential for each threshold. sea water, air, corrosive fluids, from -15 to of units in contact with the fluid: see page 37.

(Curve for each stage for dual stage pressure switches) **Pressure switches with relay output Dual stage pressure switches** Rising pressure 10 Pressure Pressure PH PH2 PB2 PH1 PB1 PB 0,8 Time Time 0 0,5 9,7 bar Falling pressure 5 Maximum differential -Adjustable value -Adjustable value 1 2 Minimum differential

Accessories: Dimensions: Wiring: page 64 page 65 page 65 Elemecanique 45

Electronic pressure sensors Nautilus[™] type XMLF Size: 16 bar (232 psi)

Туре		Pressure transmitt	ers	Universal sensors differential. Solid-s outputs (1)	with adjustable state and analog
Adjustable range of switchin (Rising pressure)	g point (PH)	—		1.28–16 bar (18.56–23	2 psi)
Analog output		4–20 mA	0–10 V	4–20 mA	0–10 V
Catalog numbers					
Fluid connection	1/4" BSP female	XMLF016D2015	XMLF016D2115	XMLF016D2025	XMLF016D2125
(2)	1/4" NPT female	XMLF016D2016	XMLF016D2116	XMLF016D2026	XMLF016D2126
	SAE 7/16-20UNF female	XMLF016D2019	XMLF016D2119	XMLF016D2029	XMLF016D2129
Weight, g (oz)		480 (16.93)			
Additional specifica	ations not shown under gener	al specifications (pag	e 37)		
Possible differential	Min. at low and high setting	-		0.48 bar (6.96 psi)	
(subtract from PH to give PB)	Max. at high setting	—		15.2 bar (220.4 psi)	
Maximum permissible accide	ental pressure	64 bar (928 psi)			
Destructive pressure		96 bar (1392 psi)			
Rated supply voltage		24 V			
Voltage limits		17–33 V			
Current consumption		80 mA			
Output		—		Programmable, NPN or PNP, and NO or NC	
Time delay		—		Adjustable time delay on trip and on reset from 0 to 50 s. in increments of 1 s	
Switching capacity		—		200 mA	
Analog output		4–20 mA or 0–10 V, depending on the model. Maximum signal level adjustable between 12 and 20 bar (174 and 290 psi)			
Electrical connection		M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64			
		(1) Pressure sensors wi and analog outputs.	th adjustable differential	for regulation between 2	thresholds. Solid-state

(2) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.

Curves

Analog output curve



Pressure sensor operating curves





-Adjustable value

Accessories:	Dimensions:	Wiring:	
page 64	page 65	page 65	
46		Telemecanique	

Туре

Electronic pressure sensors Nautilus[™] type XMLF

Size: 16 bar (232 psi)

Pressure switches with adjustable Dual stage adjustable pressure switches with solid-state outputs (2) differential and relay output (1)

Adjustable range of switching point(s) (PH or PH1 and PH2) (Rising pressure)		1.28–16 bar (18.56–232 psi)		
Catalog numbers				
Fluid connection	1/4" BSP female	XMLF016E2045	XMLF016D2035	
(3)	1/4" NPT female	XMLF016E2046	XMLF016D2036	
	SAE 7/16-20UNF female	XMLF016E2049	XMLF016D2039	
Weight, g (oz)		590 (20.81)	480 (16.93)	
Additional specific	cations not shown under gener	al specifications (page 37)		
Possible differential	Min. at low and high setting	0.48 bar (6.96 psi)	For each stage:	
(subtract from: – PH to get PB – PH1 & PH2 to get PB1 & PI	Max. at high setting B2)	15.2 bar (220.4 psi)	min. at low and high setting: 0.48 bar (6.96 psi) max. at high setting: 15.2 bar (220.4 psi)	
Maximum permissible acci	dental pressure	64 bar (928 psi)		
Destructive pressure		96 bar (1392 psi)		
Rated supply voltage		120 V∼	24 V	
Voltage limits		102–132 V∼	17–33 V	
Current consumption		32 mA	80 mA	
Output		Relay	Programmable, NPN or PNP, and NO or NC	
Time delay		Adjustable time delay on trip and on reset from	0 to 50 s, in increments of 1 s	
Switching capacity		2.5 A, AC-15, C300 (120 V / 1.5 A)	200 mA	
Electrical connection		SAE 7/8-16UN, 5-pin male connector. For suitable female pre-wired connectors, see page 64.	M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64	
		(1) Pressure switches with adjustable differentia	I for regulation between 2 thresholds. Relay	

output. (2) Pressure switches with 2 adjustable stages and adjustable differential for each threshold.

Solid-state outputs. (3) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to

+80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.

Pressure switch operating curves

Pressure switches with relay output Dual stage pressure switches (Curve for each stage for dual stage pressure switches)



2 Minimum differential



-Adjustable value



-Adjustable value

47

Accessories:	Dimensions:	Wiring:	
page 64	page 65	page 65	
		Telemecanique	47

Electronic pressure sensors Nautilus[™] type XMLF Size: 25 bar (362.5 psi)

Туре		Pressure transmit	ers	Universal sensors differential. Solid-s outputs (1)	with adjustable state and analog
Adjustable range of switchin (Rising pressure)	g point (PH)	-		2–25 bar (29–362.5 ps	ii)
Analog output		4–20 mA	0–10 V	4–20 mA	0–10 V
Catalog numbers					
Fluid connection	1/4" BSP female	XMLF025D2015	XMLF025D2115	XMLF025D2025	XMLF025D2125
(2)	1/4" NPT female	XMLF025D2016	XMLF025D2116	XMLF025D2026	XMLF025D2126
	SAE 7/16-20UNF female	XMLF025D2019	XMLF025D2119	XMLF025D2029	XMLF025D2129
Weight, g (oz)		480 (16.93)		<u>,</u>	
Additional specifica	ations not shown under gener	ral specifications (pag	e 37)		
Possible differential	Min. at low and high setting	—		0.75 bar (10.9 psi)	
(subtract from PH to give PB)	Max. at high setting	—		23.8 bar (345.1 psi)	
Maximum permissible accide	ental pressure	100 bar (1450 psi)			
Destructive pressure		150 bar (2175 psi)			
Rated supply voltage		24 V			
Voltage limits		17–33 V			
Current consumption		80 mA			
Output		—		Programmable, NPN or PNP, and NO or NC	
Time delay		-		Adjustable time delay on trip and on reset from 0 to 50 s, in increments of 1 s	
Switching capacity		—		200 mA	
Analog output		4–20 mA or 0–10 V, depending on the model. Maximum signal level adjustable between 18.8 and 31.2 bar (272.6 and 452.4 psi)			
Electrical connection		M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64			
		(1) Pressure sensors wi and analog outputs.	th adjustable differentia	I for regulation between 2	thresholds. Solid-state

(2) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.

Curves

Analog output curve



Pressure sensor operating curves bar 25





-Adjustable value

Accessories:	Dimensions:	Wiring:	
page 64	page 65	page 65	
48		Telemecanique	

2 Minimum differential

Туре

Electronic pressure sensors Nautilus[™] type XMLF

Size: 25 bar (362.5 psi)

Pressure switches with adjustable differential and relay output (1)



Dual stage adjustable pressure switches with solid-state outputs (2)

Adjustable range of switching point(s) (PH or PH1 and PH2) (Rising pressure)		2–25 bar (29–362.5 psi)		
Catalog numbers				
Fluid connection	1/4" BSP female	XMLF025E2045	XMLF025D2035	
(3)	1/4" NPT female	XMLF025E2046	XMLF025D2036	
	SAE 7/16-20UNF female	XMLF025E2049	XMLF025D2039	
Weight, g (oz)		590 (20.81)	480 (16.93)	
Additional specific	cations not shown under gene	ral specifications (page 37)		
Possible differential	Min. at low and high setting	0.75 bar (10.9 psi)	For each stage:	
(subtract from:	Max. at high setting	23.8 bar (345.1 psi)	min. at low and high setting: 0.75 bar (10.9 psi)	
- PH to get PB - PH1 & PH2 to get PB1 & PE	22)		max. at high setting: 23.8 bar (345.1 psi)	
Maximum permissible acci	dental pressure	100 bar (1450 psi)		
Destructive pressure	• • • •	150 bar (2175 psi)		
Rated supply voltage		120 V~	24 V	
Voltage limits		102–132 V∿	17–33 V	
Current consumption		32 mA	80 mA	
Output		Relay	Programmable, NPN or PNP, and NO or NC	
Time delay		Adjustable time delay on trip and on reset from 0 to 50 s, in increments of 1 s		
Switching capacity		2.5 A, AC-15, C300 (120 V / 1.5 A)	200 mA	
Electrical connection		SAE 7/8-16UN, 5-pin male connector. For suitable female pre-wired connectors, see	M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see	
		page 64.	page 64	

(2) Pressure switches with 2 adjustable stages and adjustable differential for each threshold. Solid-state outputs.

(3) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.

Pressure

Pressure switch operating curves

Pressure switches with relay output Dual stage pressure switches (Curve for each stage for dual stage pressure switches)



2 Minimum differential



-Adjustable value



-Adjustable value

Accessories: page 64	Dimensions: page 65	Wiring: page 65		
		Telemecanique	· · · · · · · · · · · · · · · · · · ·	49

Electronic pressure sensors Nautilus[™] type XMLF Size: 40 bar (580 psi)

Туре		Pressure transmi	tters	Universal sensors differential. Solid outputs (1)	s with adjustable -state and analog
Adjustable range of switchin (Rising pressure)	ng point (PH)	-		3.2–40 bar (46.4–580) psi)
Analog output		4–20 mA	0–10 V	4–20 mA	0–10 V
Catalog numbers					
Fluid connection	1/4" BSP female	XMLF040D2015	XMLF040D2115	XMLF040D2025	XMLF040D2125
(2)	1/4" NPT female	XMLF040D2016	XMLF040D2116	XMLF040D2026	XMLF040D2126
	SAE 7/16-20UNF female	XMLF040D2019	XMLF040D2119	XMLF040D2029	XMLF040D2129
Weight, g (oz)		500 (17.64)			
Additional specific	ations not shown under gen	eral specifications (pa	ge 37)		
Possible differential	Min. at low and high setting	_		1.2 bar (17.4 psi)	
(subtract from PH to give PB)	Max. at high setting	-		38 bar (551 psi)	
Maximum permissible accid	lental pressure	160 bar (2320 psi)			
Destructive pressure		240 bar (3480 psi)			
Rated supply voltage		24 V			
Voltage limits		17–33 V			
Current consumption		80 mA			
Output		—		Programmable, NPN	or PNP, and NO or NC
Time delay		— A		Adjustable time delay on trip and on reset from 0 to 50 s, in increments of 1 s	
Switching capacity		-		200 mA	
Analog output		4-20 mA or 0-10 V, depending on the model. Maximum signal level adjustable between 30 and 50 bar (435 and 725 psi)		ljustable between 30 and	
Electrical connection		M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64			
		(1) Pressure sensors with adjustable differential for regulation between 2 thresholds. Solid-statiand analog outputs. (2) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to		2 thresholds. Solid-state	

+80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.

Curves

Analog output curve



Rising pressure 40 30 0 30 38,8 bar Falling pressure 10 20 Maximum differential 1 2 Minimum differential

Pressure sensor operating curves



Accessories:	Dimensions:	Wiring:	
page 64	page 65	page 65	
50		Telemecanique	

Electronic pressure sensors Nautilus[™] type XMLF Size: 40 bar (580 psi)

Туре		Pressure switches with adjustable differential and relay output (1)	Dual stage adjustable pressure switches with solid-state outputs (2)
Adjustable range of switching (Rising pressure)	point(s) (PH or PH1 and PH2)	3.2–40 bar (46.4–580 psi)	
Catalog numbers			
Fluid connection	1/4" BSP female	XMLF040E2045	XMLF040D2035
(3)	1/4" NPT female	XMLF040E2046	XMLF040D2036
	SAE 7/16-20UNF female	XMLF040E2049	XMLF040D2039
Weight, g (oz)		610 (21.52)	500 (17.64)
Additional specificat	t ions not shown under gener	al specifications (page 37)	
Possible differential	Min. at low and high setting	1.2 bar (17.4 psi)	For each stage:
(subtract from: – PH to get PB – PH1 & PH2 to get PB1 & PB2)	Max. at high setting	38 bar (551 psi)	min. at low and high setting: 1.2 bar (17.4 psi) max. at high setting: 38 bar (551 psi)
Maximum permissible accider	ntal pressure	160 bar (2320 psi)	
Destructive pressure	•	240 bar (3480 psi)	
Rated supply voltage		120 V~	24 V
Voltage limits		102–132 V∼	17–33 V
Current consumption		32 mA	80 mA
Output		Relay	Programmable, NPN or PNP, and NO or NC
Time delay		Adjustable time delay on trip and on reset from	0 to 50 s, in increments of 1 s
Switching capacity		2.5 A. AC-15, C300 (120 V / 1.5 A) 200 mA	
Electrical connection		SAE 7/8-16UN, 5-pin male connector. For suitable female pre-wired connectors, see page 64.	M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64
		 (1) Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output. (2) Pressure switches with 2 adjustable stages and adjustable differential for each threshold Solid-state outputs. (3) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37 	
Pressure switch ope	rating curves		
(Curve for each stage for du	al stage pressure switches)	Pressure switches with relay output	Dual stage pressure switches

Rising pressure 40 Pressure Pressure 30 PH2 PH PB2 20 PH1 PB PB1 10 3,3 Time Time 38,8 bar 0 10 20 30 2 Falling pressure 1 Maximum differential -Adjustable value -Adjustable value 2 Minimum differential

Accessories: page 64 Dimensions: page 65 Wiring: page 65 🕀 Telemecanique 51

Electronic pressure sensors Nautilus[™] type XMLF Size: 70 bar (1015 psi)

Туре		Pressure transmitters		Universal sensors with adjustable differential. Solid-state and analog outputs (1)	
Adjustable range of switching point (PH)		-		5.6–70 bar (81.2–101	5 psi)
Analog output		4–20 mA	0–10 V	4–20 mA	0–10 V
Catalog numbers					
Fluid connection	1/4" BSP female	XMLF070D2015	XMLF070D2115	XMLF070D2025	XMLF070D2125
(2)	1/4" NPT female	XMLF070D2016	XMLF070D2116	XMLF070D2026	XMLF070D2126
	SAE 7/16-20UNF female	XMLF070D2019	XMLF070D2119	XMLF070D2029	XMLF070D2129
Weight, g (oz)		500 (17.64)			
Additional specific	ations not shown under gene	ral specifications (pag	ge 37)		
Possible differential	Min. at low and high setting	—		2.1 bar (30.5 psi)	
(subtract from PH to give PB)	Max. at high setting	—		66.5 bar (964.2 psi)	
Maximum permissible accid	ental pressure	280 bar (4060 psi)			
Destructive pressure		420 bar (6090 psi)			
Rated supply voltage		24 V			
Voltage limits		17–33 V 			
Current consumption		80 mA			
Output				Programmable, NPN or PNP, and NO or NC	
Time delay		-		Adjustable time delay on trip and on reset from 0 to 50 s, in increments of 1 s	
Switching capacity		—		200 mA	
Analog output		4-20 mA or 0-10 V, depending on the model. Maximum signal level adjustable between 52.5 and 87 5 har (761 3 and 1268 7 nsi)			
Electrical connection		M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64			
(1) Pressure sensors with adjustable differential for regulation between 2 thresholds. Solid-su and analog outputs.				2 thresholds. Solid-state	

2) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.

Curves











Accesso page 64	pries:	Dimensions: page 65	Wiring: page 65	
52			Telemecanique	

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Electronic pressure sensors Nautilus[™] type XMLF Size: 70 bar (1015 psi)

Туре		Pressure switches with adjustable differential and relay output (1)	Dual stage adjustable pressure switches with solid-state outputs (2)
Adjustable range of switching (Rising pressure)	g point(s) (PH or PH1 and PH2)	5.6–70 bar (81.2–1015 psi)	
Catalog numbers		·	
Fluid connection	1/4" BSP female	XMLF070E2045	XMLF070D2035
(3)	1/4" NPT female	XMLF070E2046	XMLF070D2036
	SAE 7/16-20UNF female	XMLF070E2049	XMLF070D2039
Weight, g (oz)		610 (21.52)	500 (17.64)
Additional specifica	tions not shown under gene	ral specifications (page 37)	
Possible differential	Min. at low and high setting	2.1 bar (30.5 psi)	For each stage:
(subtract from: – PH to get PB – PH1 & PH2 to get PB1 & PB2	Max. at high setting	66.5 bar (964.2 psi)	min. at low and high setting: 2.1 bar (30.5 psi) max. at high setting: 66.5 bar (964.2 psi)
Maximum permissible accide	ental pressure	280 bar (4060 psi)	
Destructive pressure	•	420 bar (6090 psi)	
Rated supply voltage		120 V~	24 V
Voltage limits		102-132 V∿	17–33 V
Current consumption		32 mA	80 mA
Output		Relay	Programmable, NPN or PNP, and NO or NC
Time delay		Adjustable time delay on trip and on reset from	0 to 50 s, in increments of 1 s
Switching capacity		2.5 A, AC-15, C300 (120 V / 1.5 A)	200 mA
Electrical connection		SAE 7/8-16UN, 5-pin male connector. For suitable female pre-wired connectors, see page 64.	M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64
		 Pressure switches with adjustable differentia output. Pressure switches with 2 adjustable stages a Solid-state outputs. Fluids controlled: hydraulic oils, fresh water, +80 °C (5 to 176 °F). Component materials o 	I for regulation between 2 thresholds. Relay and adjustable differential for each threshold. sea water, air, corrosive fluids, from -15 to f units in contact with the fluid: see page 37.

Pressure switch operating cur

(Curve for each stage for dual stage pressure switches) Pressure switches with relay output Dual stage pressure switches











Accessories:	Dimensions:	Wiring:	
page 64	page 65	page 65	
		Telemecaníque	53

Electronic pressure sensors Nautilus[™] type XMLF Size: 100 bar (1450 psi)

Туре		Pressure transmitters		Universal sensors with adjustable differential. Solid-state and analog outputs (1)		
Adjustable range of switching point (PH) (Rising pressure)		-		8–100 bar (116–1450	psi)	
Analog output		4–20 mA	0–10 V	4–20 mA	0–10 V	
Catalog numbers						
Fluid connection	1/4" BSP female	XMLF100D2015	XMLF100D2115	XMLF100D2025	XMLF100D2125	
(2)	1/4" NPT female	XMLF100D2016	XMLF100D2116	XMLF100D2026	XMLF100D2126	
	SAE 7/16-20UNF female	XMLF100D2019	XMLF100D2119	XMLF100D2029	XMLF100D2129	
Weight, g (oz)		500 (17.64)				
Additional specifica	ations not shown under gener	al specifications (pag	e 37)			
Possible differential	Min. at low and high setting	—		3 bar (43.5 psi)		
(subtract from PH to give PB)	Max. at high setting	—		95 bar (1377.5 psi)		
Maximum permissible accide	ental pressure	400 bar (5800 psi)				
Destructive pressure	•	600 bar (8700 psi)				
Rated supply voltage		24 V				
Voltage limits		17–33 V				
Current consumption		80 mA				
Output		_		Programmable, NPN o	r PNP, and NO or NC	
Time delay		-		Adjustable time delay on trip and on reset from		
Switching capacity						
Analog output		4–20 mA or 0–10 V, depending on the model. Maximum signal level adjustable between 75 and 125 bar (1087.5 and 1812.5 osi)				
Electrical connection		M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64				
(1) Pressure sensors with adjustable differential for re and analog outputs. (2) Etuids controlled: hydraulic cits, fresh water, see w		l for regulation between 2	? thresholds. Solid-state			

om -15 +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.

Curves

Analog output curve

Pressure sensor operating curves



Electronic pressure sensors Nautilus[™] type XMLF Size: 100 bar (1450 psi)

Туре		Pressure switches with adjustable differential and relay output (1)	Dual stage adjustable pressure switches with solid-state outputs (2)
Adjustable range of switching (Rising pressure)	point(s) (PH or PH1 and PH2)	8–100 bar (116–1450 psi)	
Catalog numbers		·	
Fluid connection	1/4" BSP female	XMLF100E2045	XMLF100D2035
(3)	1/4" NPT female	XMLF100E2046	XMLF100D2036
	SAE 7/16-20UNF female	XMLF100E2049	XMLF100D2039
Weight, g (oz)		610 (21.52)	500 (17.64)
Additional specificat	tions not shown under gene	ral specifications (page 37)	
Possible differential	Min. at low and high setting	3 bar (43.5 psi)	For each stage:
(subtract from: – PH to get PB – PH1 & PH2 to get PB1 & PB2)	Max. at high setting	95 bar (1377.5 psi)	min. at low and high setting: 3 bar (43.5 psi) max. at high setting: 95 bar (1377.5 psi)
Maximum permissible accider	ntal pressure	400 bar (5800 psi)	
Destructive pressure		600 bar (8700 psi)	
Rated supply voltage		120 V~	24 V
Voltage limits		102–132 V∼	17–33 V
Current consumption		32 mA	80 mA
Output		Relay	Programmable, NPN or PNP, and NO or NC
Time delay		Adjustable time delay on trip and on reset from	0 to 50 s, in increments of 1 s
Switching capacity Electrical connection		2.5 A, AC-15, C300 (120 V / 1.5 A) SAE 7/8-16UN, 5-pin male connector. For suitable female pre-wired connectors, see page 64.	200 mA M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64
		 Pressure switches with adjustable differentia output. Pressure switches with 2 adjustable stages a Solid-state outputs. Fluids controlled: hydraulic oils, fresh water, +80 °C (5 to 176 °F). Component materials of 	al for regulation between 2 thresholds. Relay and adjustable differential for each threshold. sea water, air, corrosive fluids, from -15 to of units in contact with the fluid: see page 37.
Pressure switch ope	erating curves		
(Curve for each stage for du	ual stage pressure switches)	Pressure switches with relay output	Dual stage pressure switches
p bar 50 50 50 50 Fallin	97 bar g pressure	Pressure PH PB Time	Pressure PH2 PB2 PH1 PB1 Time
1 Maximum differential		— Adjustable value	— Adjustable value
Z Minimum differential Accessories:	Dimensions:	Wiring:	
page 64	page 65	page 65	

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55

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Electronic pressure sensors Nautilus[™] type XMLF Size: 160 bar (2320 psi)

Туре		Pressure transm	Pressure transmitters		s with adjustable state and analog
Adjustable range of switchin (Rising pressure)	ng point (PH)	-		12.8–160 bar (185.6–	2320 psi)
Analog output		4–20 mA 0–10 V		4–20 mA	0–10 V
Catalog numbers					
Fluid connection	1/4" BSP female	XMLF160D2015	XMLF160D2115	XMLF160D2025	XMLF160D2125
(2)	1/4" NPT female	XMLF160D2016	XMLF160D2116	XMLF160D2026	XMLF160D2126
	SAE 7/16-20UNF female	XMLF160D2019	XMLF160D2119	XMLF160D2029	XMLF160D2129
Weight, g (oz)		590 (20.81)			
Additional specific	ations not shown under gen	eral specifications (pa	age 37)		
Possible differential	Min. at low and high setting	_		4.8 bar (69.6 psi)	
(subtract from PH to give PB)	Max. at high setting	—		152 bar (2204 psi)	
Maximum permissible occa	sional surge pressure	640 bar (9280 psi)			
Destructive pressure		960 bar (13,920 psi)			
Rated supply voltage		24 V			
Voltage limits		17–33 V==			
Current consumption		80 mA			
Output		—		Programmable, NPN or PNP, and NO or NC	
Time delay		-		Adjustable time delay on trip and on reset from 0 to 50 s, in increments of 1 s	
Switching capacity		— 200 mA			
Analog output	g output 4–20 mA or 0–10 V, depending on the model and 200 bar (1740 and 2900 bsi)		Maximum signal level ad	justable between 120	
Electrical connection		M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64			
		(1) Pressure sensors with adjustable differential for regulation between 2 thresholds. Solid-state and analog outputs.			
		(2) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to			

+80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37.

Curves

Analog output curve



Pressure sensor operating curves





-Adjustable value

Accesso	ries: Dimensions:	Wiring:	
page 64	page 65	page 65	
56		Telemecanique	

Maximum differential

Minimum differential

1 2

Electronic pressure sensors Nautilus[™] type XMLF Size: 160 bar (2320 psi)

Туре		Pressure switches with adjustable differential and relay output (1)	Dual stage adjustable pressure switches with solid-state outputs (2)
Adjustable range of switching (Rising pressure)	g point(s) (PH or PH1 and PH2)	12.8–160 bar (185.6–2320 psi)	
Catalog numbers			
Fluid connection	1/4" BSP female	XMLF160E2045	XMLF160D2035
(3)	1/4" NPT female	XMLF160E2046	XMLF160D2036
	SAE 7/16-20UNF female	XMLF160E2049	XMLF160D2039
Weight, g (oz)		700 (24.69)	590 (20.81)
Additional specifica	tions not shown under gene	ral specifications (page 37)	· · · · · · · · · · · · · · · · · · ·
Possible differential	Min. at low and high setting	4.8 bar (69.6 psi)	For each stage:
(subtract from: – PH to get PB – PH1 & PH2 to get PB1 & PB2	Max. at high setting	152 bar (2204 psi)	min. at low and high setting: 4.8 bar (69.6 psi) max. at high setting: 152 bar (2204 psi)
Maximum permissible accide	ntal pressure	640 bar (9280 psi)	,
Destructive pressure	·	960 bar (13,920 psi)	
Rated supply voltage		120 V \sim	24 V
Voltage limits		102–132 V∼	17–33 V
Current consumption		32 mA	80 mA
Output		Relay	Programmable, NPN or PNP, and NO or NC
Time delay		Adjustable time delay on trip and on reset from	0 to 50 s, in increments of 1 s
Switching capacity		2.5 A, AC-15, C300 (120 V / 1.5 A)	200 mA
Electrical connection		SAE 7/8-16UN, 5-pin male connector. For suitable female pre-wired connectors, see page 64.	M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64
		 Pressure switches with adjustable differential output. Pressure switches with 2 adjustable stages a Solid-state outputs. Fluids controlled: hydraulic oils, fresh water, +80 °C (5 to 176 °F). Component materials o 	I for regulation between 2 thresholds. Relay and adjustable differential for each threshold. sea water, air, corrosive fluids, from - 15 to f units in contact with the fluid: see page 37.
Pressure switch ope	erating curves		
(Curve for each stage for d	ual stage pressure switches)	Pressure switches with relay output	Dual stage pressure switches
(our verior cach stage for a		Tressure sinches intriting output	Puul stage pressure switches
bar 100 12.8 0 8 100 12.8 0 100 12.8 100 100 100 Fa	155,2 bar Illing pressure	Pressure PH PB Time Time	Pressure PH2 PH2 PH1 PB1 Time
Accessories: page 64	Dimensions: page 65	Wiring: page 65	

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57

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58

Electronic pressure sensors Nautilus[™] type XMLF Size: 250 bar (3625 psi)

Туре		Pressure transmitters		Universal sensors with adjustable differential. Solid-state and analog outputs (1)	
Adjustable range of switching	point (PH)	-		20–250 bar (290–3625	psi)
(Rising pressure) Analog output		4–20 mA	0–10 V	4–20 mA	0–10 V
Catalog numbers				1	
Fluid connection	1/4" BSP female	XMLF250D2015	XMLF250D2115	XMLF250D2025	XMLF250D2125
(2)	1/4" NPT female	XMLF250D2016	XMLF250D2116	XMLF250D2026	XMLF250D2126
	SAE 7/16-20UNF female	XMLF250D2019	XMLF250D2119	XMLF250D2029	XMLF250D2129
Weight, g (oz)		590 (20.81)			
Additional specificat	tions not shown under gener	al specifications (pag	e 37)		
Possible differential	Min. at low and high setting	—		7.5 bar (108.8 psi)	
(subtract from PH	Max. at high setting	—		237.5 bar (3443.7 psi)	
Maximum permissible accider	ntal pressure	1000 bar (14 500 psi)			
Destructive pressure		1500 bar (21 750 psi)			
Rated supply voltage		24 V			
Voltage limits		17–33 V			
Current consumption		80 mA			
Output		—		Programmable, NPN o	r PNP, and NO or NC
Time delay		—		Adjustable time delay of	on trip and on reset from
Switching consoity		200 mA			of 1 s
		— 4–20 mA or 0–10 V der	pending on the model	aximum signal level adiu	istable between 187
Analog output		and 312 bar (2711 and	4524 psi)		
Electrical connection		M12, 4-pin male conne	ctor. For suitable female	e connectors, including pr	e-wired versions, see
		page 64	th adjustable differentia	I for regulation between ?	thresholds Solid-state
		 (1) Flockard controlled with and analog outputs. (2) Fluids controlled: hydrogen (2000) (draulic oils, fresh water, Component materials c	sea water, air, corrosive i of units in contact with the	fluids, from -15 to fluid: see page 37.
Curves					
Analog output curve		Pressure sensor of	perating curves		
, malog output our to			soluting our roo		
20 mA - 10 V 12 mA - 5 V 4 mA - 0 V 0 100	187 250 312 bar	bar 250 200 1 1 1 0 200 0 12,5 100	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Pressure PH PB	Time
		 Maximum differen Minimum different 	tial ial	— Adjustable value	
Accessories: page 64	Dimensions: page 65	Wiring: page 65			

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Electronic pressure sensors Nautilus[™] type XMLF Size: 250 bar (3625 psi)

Type Pressure evitches with adjustable differential and relay output (?) Dual stage adjustable pressure witches with solid-state outputs (?) Adjustable range of switching point(s) (PI or PH1 and PH2) (?) 29-250 bar (290-3625 psi) Image: Comparison of the Co				
<image/> Adjustable range of switching point(s) (Pt or PH1 and Pt2): 2-250 bar (350-355 cs) Adjustable range of switching point(s) (Pt or PH1 and Pt2): 2-250 bar (350-355 cs) Children of switching point(s) (Pt or PH1 and Pt2): 2-250 bar (350-355 cs) Children of switching point(s) (Pt or PH1 and Pt2): 2-250 bar (350-355 cs) Children of switching point(s) (Pt or PH1 and Pt2): 2-250 bar (350-355 cs) Children of switching point(s) (Pt or PH1 and Pt2): 2-250 bar (340-750 cs) Maint Switching point(s) (Pt or PH1 and Pt2): 2-250 bar (340-750 cs) Maint Switching point(s) (Pt or PH1 and Pt2): 2-250 bar (340-750 cs) Maint Switching point(s) (Pt or PH1 and Pt2): 2-250 bar (340-750 cs) Maint Switching point(s) (Pt or PH1 and Pt2): 2-250 bar (340-750 cs) Maint Switching point(s) (Pt or PH1 and Pt2): 2-250 bar (340-750 ps) Maint Switching point(s) (Pt or PH1 and Pt2): 2-250 bar (340-750 ps) Maint Switching point(s) (Pt or PH1 and Pt2): 2-250 bar (340-750 ps) Maint Switching point(s) (Pt or PH1 and Pt2): 2-250 bar (340-750 ps) Maint Switching point(s) (Pt or PH1 and Pt2): 2-260 bar (2-170 ps) Maint Switching point(s) (Pt or PH1 and Pt2): 2-260 bar (2-170 ps) Maint Switching point(s) (Pt or PH1 and Pt2): 240 bar (2-10 bar	Туре		Pressure switches with adjustable differential and relay output (1)	Dual stage adjustable pressure switches with solid-state outputs (2)
Adjustable range of switching point(s) (PH or PH1 and PH2) (Range pressure) 22-250 bar (290-3625 psi) Catalog numbers Fuid connection (a) 14" BSP female TGP Female Additional specifications in the pressure Additional specifications in the pressure (a) XML F250E2046 XML F250E2035 (XML F250E2035 (XML F250E2035) Velaght, g (oz) Min. at low and high setting 7.5 bar (108.8 psi) Max. at high setting 7.5 bar (100.5 psi) 7.5 bar (100.7 bi) 7.5 bar (100.7 bi				
Catalog numbers Fluid connection 1/4" BSP female XML F250E2046 XML F250E2036 Saf 7/16 20UNF female XML F250E2046 XML F250E2036 Weight, g(o2) XML F250E2046 XML F250E2036 Additional specifications not shown under general specifications (page 37) Poresubte differential Mai. at logs setting Possible differential Mai. at logs setting 7.5 bar (108.8 ps) Mai. at logs setting 7.5 bar (108.8 ps) Maximum permissible accidental pressure 1500 bar (14.500 ps) Extended to the setting 7.5 bar (104.83.7 ps) Maximum permissible accidental pressure 1500 bar (14.500 ps) Extended to the setting 7.5 bar (104.83.7 ps) Maximum permissible accidental pressure 1500 bar (14.500 ps) Extended to the setting 7.5 bar (104.83.7 ps) Maximum permissible accidental pressure 1500 bar (14.500 ps) Extended to the setting 7.5 bar (104.83.7 ps) Maximum permissible accidental pressure 1500 bar (24.700 ps) Extended to the setting 7.5 bar (34.93.7 ps) Maximum permissible accidental pressure 1000 bar (14.500 ps) Extended to the setting 7.5 bar (34.93.7 ps) Destructive pressure 1500 bar (24.700 ps) Extended to the setting 7.5 bar (34.93.7 ps) Maximum permissible accidental pressure 1000 bar (14.500 ps) Extended to the setting 7.5 bar (34.93.7 ps) Differential Noressure se	Adjustable range of switching (Rising pressure)	point(s) (PH or PH1 and PH2)	20–250 bar (290–3625 psi)	
Full connection 1/f BSP female XMLF250E2045 XMLF2502035 (3) IVE IPT female XMLF250E2046 XMLF2502035 Weight, g (az) SAE 7/16-20UNF female XMLF250E2049 XMLF2502035 Additional specifications not shown under general specifications (page 37) For each stage: Min. at low and high setting 7.5 bar (10.8 pa) Max. at low and high setting 27.5 bar (10.8 pa) Min. at low and high setting: 7.5 bar (10.8 pa) Min. at low and high setting: 7.5 bar (10.8 pa) Maximum permissible accidental pressure 1500 bar (14.500 pa) 28.5 bar (34.37 pa) Min. at low and high setting: 7.5 bar (10.8 pa) Maximum permissible accidental pressure 1500 bar (14.500 pa) 28.5 bar (34.37 pa) Min. at low and high setting: 7.5 bar (10.8 pa) Maximum permissible accidental pressure 1500 bar (14.500 pa) 28.5 bar (34.37 pa) Min. at low and high setting: 7.5 bar (34.37 pa) Maximum permissible accidental pressure 1500 bar (14.500 pa) 28.5 bar (34.37 pa) Min. at low and high setting: 7.5 bar (34.37 pa) Maximum permissible accidental pressure 1500 bar (14.500 pa) 28.5 bar (34.37 pa) Min. at low and high setting: 7.5 bar (34.37 pa) Maximum permissible accidental pressure 10.2 bar (34.5 con tolor) 12.0 con tolor (35.0 con tolor)	Catalog numbers			
(1) 14 ⁴ NPT female SAE 7/16-20UNF female XMLF250E2046 XMLF250D2036 Weight, g (oz) XMLF250E2049 XMLF250D2039 Additional specifications not shown under general specifications (page 37) For each stage: Min. at low and high setting 237.5 bar (3483.7 ps) For each stage: Min. at low and high setting: 7.5 bar (108.8 ps) Additional specifications (page 37) For each stage: Min. at low and high setting: 7.5 bar (108.8 ps) Min. at low and high setting: 7.5 bar (108.8 ps) Additional specifications (page 37) For each stage: Min. at low and high setting: 7.5 bar (108.8 ps) Min. at low and high setting: 7.5 bar (108.8 ps) Astimum permissible accidental pressure 1000 bar (14.500 ps) Eater supply voltage 24 V ⁻ Destructive pressure 1000 bar (14.500 ps) Eater supply voltage 24 V ⁻ Current consumption 32 mA 80 mA 80 mA Output Relay Programmable, NPN or PNP, and NO or NC Switching capacity 2.5 A, AC-15, C300 (120 V/1.5 A) 200 mA Electrical connection SAL 7.78 + 101N, S- ph male connector, For suitable female connectors, including pre-wired versions, see page 64. 200 mA Vibus controllect hydraulic bill, free with adjustable differential for regulations between 2 thresholds. Relay (1) Pressure switches with adjustable differential for user the should. 20 Pressure adjustable differential for user the should: see page 37. Pressure	Fluid connection	1/4" BSP female	XMLF250E2045	XMLF250D2035
SAE 7/16-20UNF female XMLF250E2049 XMLF250D2039 Velights (cond) 500 (24.69) 500 (20.81) Additional specifications not shown under general specifications (page 37) For each stage: Possible differential Min. at twin and high setting 7.5 bar (108.8 pa) Image: Additional Specifications (page 37) For each stage: PH to pit 2 og the B1 & PB2. 237.5 bar (34.37 pa) Image: Additional Specifications (page 37) For each stage: Destructive pressure 1500 bar (14.500 ps) Rated supply voltage 120 V~ Voltage limits 1000 bar (14.500 ps) Output Reley Programmele, NPN or PNP, and NO or NC Time delay Adjustable time delay on trip and on reset from 0 to 50 s, in increments of 1 s Switching capacity 2.56 Ac-156. C300 (12 V / 1.5.A) Electrical connection SPA 728-161.M. Spin male connector, For suitable female pre-wired connectors, see page 64 01/10 Pressure switches with 2 adjustable time relay output 2.00 cas 0.1 s 02/10 do 12 - 50 to 76 79 / D. Component materials of units in contact with the fluid, see page 37. Pressure switche operating curves Pressure switches with relay output	(3)	1/4" NPT female	XMLF250E2046	XMLF250D2036
Weight, g (oz) 700 (24.69) 590 (20.81) Additional specifications not show under general specifications (page 37) Possible differential (Min. at low and high setting 2.7.5 bar (108.8 ps)) Min. at low and high setting 2.7.5 bar (108.8 ps)) PH to get PB 18 PB2) Max. at high setting 2.37.5 bar (3443.7 ps)) Min. at low and high setting 2.37.5 bar (3443.7 ps)) Maximum permissible accidental pressure 1000 bar (14.500 ps)) Tor each stage: Maximum permissible accidental pressure 1000 bar (14.500 ps)) Retad supply voltage Output 102-132 V· 17-33 V::: 247.500 ps) Current consumption 32 mA 90 mA 90 mA Output Retay Programmable, NPN or PNP, and NO or NC 102-132 V· 17-33 V::: Current consumption 32 mA 90 mA 90 mA 90 mA Switching capacity 2.5A, AC-15, C300 (120 V 1.5A) 200 mA 15 Switching capacity 2.5A, AC-15, C300 (120 V 1.5A) 200 mA 16 Set (10 consection SAE (78-16UN, 5-pin male connector. For suitable differential for each threshold. Sole-140 (100 registration see page 54. 10) Fressure switches with 2 adjustable stages and adjustable differential for each threshold. Sole-140 (100 registration see page 37. Pressure switche		SAE 7/16-20UNF female	XMLF250E2049	XMLF250D2039
Additional specifications (page 37) Pressue differential (subtract from: (subtract fr	Weight, g (oz)		700 (24.69)	590 (20.81)
Obside differential (softmat from: (softmat from: (s	Additional specificat	t ions not shown under gene	ral specifications (page 37)	
Starting 237.5 bar (344.37 ps) Min. at two and high setting: 7.5 bar (344.37 ps) Maximum permissible accidental pressure 1000 bar (14.500 ps) Pert log [PS] 1000 bar (14.500 ps) Rated supply voltage 120 Vn Voltage limits 102-132 Vn Current consumption 32 mA Balay Programmable, NPN or PNP, and NO or NO Switching capacity 2.5 A.4C-15, Casing Electrical connection Starting 2.57, bar (344.37 ps) Wax at high setting: 2.57, bar (344.37 ps) Min. at two and high setting: 2.57, bar (344.37, ps) Maximum permissible accidental pressure 1000 bar (14.500 ps) Rated supply voltage 12 Vic. Current consumption 32 mA Balay Programmable, NPN or PNP, and NO or NO Time delay Adjustable time delay on tip and on reset from 105 0s, in increments of 1 s Switching capacity 2.5 A.4C-15, Casing (120.V11.5A) 200 mA Electrical connection Start State outputs. 12.4 ppin male connector. For suitable formal pre-wired variance, see page 64 (1) Pressure switches with adjustable differential for each threshold. Solid-state outputs. 31.4 apin male connector. Encl state outputs. (2) Urve for each	Possible differential	Min at low and high setting	7 5 bar (108 8 psi)	For each stage:
 -PH to get PB accidental pressure -PH to get PE1 a SPL2 to get PE1 a SPL2 Maximum permissible accidental pressure 1000 bar (14:500 ps) Destructive pressure 120 V- 121 20 0 m A 22 5 A AC-15 C300 (120 V1 1.5 A) 20 m A 25 A AC-15 C300 (120 V1 1.5 A) 20 m A 25 A AC-15 C300 (120 V1 1.5 A) 20 m A 20 m A 21 2 A A A P B A 22 5 A AC-15 C300 (120 V1 1.5 A) 20 m A 21 2 A A P B A 22 5 A AC-15 C300 (120 V1 1.5 A) 22 5 A AC-15 C300 (120 V1 1.5 A) 20 m A 21 2 2 A A A P B A 21 2 2 A A A P B A 22 5 A AC-15 C300 (120 V1 1.5 A) 22 5 A AC-15 C300 (120 V1 1.5 A) 23 2 2 0 m A 24 2 5 A A A P B A 23 2 0 m A A P B A 24 2 2 0 m A A P B A 24 2 2 0 m A A P B A<td>(subtract from:</td><td>Max at high setting</td><td>237 5 bar (3443 7 psi)</td><td>Min_at low and high setting: 7.5 bar (108.8 psi)</td>	(subtract from:	Max at high setting	237 5 bar (3443 7 psi)	Min_at low and high setting: 7.5 bar (108.8 psi)
 HH2 to get P31 × P420 Maximum permissible accidental pressure 1000 bar (14.500 ps) Destructive pressure 1000 bar (21.750 ps) Reted supply voltage 102 V-x 17-33 V::: Current consumption 32 mA 80 mA 80 mA Output Relay Programmable, NPN or PNP, and NO or NC Time delay on trip and on rest from 00 50 s, in increments of 1 s Switching capacity E3.5A AC-16.5C 300 (120 V1.15A) Z00 mA Electrical connection SAE 7/8-16UN, 5-pin male connectors, see page 64. (1) Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output. (2) Pressure switches with 2 adjustable stages and adjustable differential for each threshold. Solid-state outputs. (2) Pressure switches with 2 adjustable stages and adjustable differential for each threshold. Solid-state outputs. (2) Pressure switches with relay output Dual stage pressure switches Pressure switches with relay output Dual stage pressure switches Pressure switches with relay output Dual stage pressure switches Pressure switches with relay output Dual stage pressure switches 	- PH to get PB	indu de ingri obtaing		Max. at high setting: 237.5 bar (3443.7 psi)
Maximum permissible accidental pressure 1000 bar (14:00 ps) Perssure Rated supply voltage 120 V~ 17-33 V:: Current consumption 32 mA 80 mA Programmable, NPN or PNP, and NO or NC Time delay Switching capacity Electrical connection SAE 7/8-16UN, Spin male connector. For suitable female pre-wired connectors, see page 64. (1) Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output. (2) Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output. (2) Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output. (2) Pressure switches with adjustable differential for each threshold. Solid state outputs. (3) Fluids controlled: hydraulic oils, fresh water, sae water, air, corosine fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37. Pressure switch operating curves (Curve for each stage for dual stage pressure switches) Pressure switches with relay output Dual stage pressure switches 1 Maximum differential 2 Minimum differential Maximum differential 2 Minimum differential	– PH1 & PH2 to get PB1 & PB2)			
Destructive pressure 1 300 Var. (21, Kp ps)) Rated supply voltage 120 V- Voltage limits 102-132 V- Current consumption 32 mA Output Relay Programmable, NPN or PNP, and NO or NC Switching capacity 2.5 A. Ac-15, C. 300 (120 V 1.5 A) Electrical connection SAE 7/8-16UN, 5-pin male connectors, including pre-wired versions, see page 64 (1) Pressure switches with adjustable future formulation tervere of connectors, including pre-wired versions, see page 64 (1) Pressure switches with adjustable future formulation tervere of threshold. Sold-state outputs. (2) Pressure switches with adjustable future formulation tervere adjustable future formulation tervere of the shold. Sold-state outputs. (3) Fluids controlled: hydraulic oils, fresh water, see water, air. corrosine fluids, from -ts to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37. Pressure switche operating curves (Curve for each stage for dual stage pressure switches) Pressure switches with relay output Dual stage pressure switches I Maximum differential -Adjustable value -Adjustable value 1 Maximum differential -Adjustable value -Adjustable value	Maximum permissible accider	ntal pressure	1000 bar (14,500 psi)	
Rates supply Voitage 120 V- 124 V-:: Voitage limits 102-132 V 17-33 V::: Current consumption 32 mA 80 mA Output Relay Programmable, NPN or PNP, and NO or NC Time delay Adjustable time delay on trip and on reset from 0 to 50 s, in increments of 1 s Switching capacity 2.5 A, AC-15, C300 (120 V/1.5 A) 200 mA Electrical connection SAF 7/8-1610. S-pin male connector. For suitable temals pre-wired connectors, neukding pre-wired versions, see page 64 (1) Pressure switches with 2 adjustable differential for regulation between 2 thresholds. Relay output. (2) Pressure switche operating curves (3) Fuids controlled: hydraulic oils, fresh water, see water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37. Pressure switche operating curves (Curve for each stage for dual stage pressure switches) Pressure switches with relay output Dual stage pressure switches 9000000000000000000000000000000000000	Destructive pressure		1500 bar (21,750 psi)	04.1/
Voitage imms 112-32 V- 117-33 V-:: Current consumption 32 mA 80 mA Output Relay Programmable, NPN or PNP, and NO or NC Time delay Adjustable time delay on trip and on reset from to to 50 s, in increments of 1 s Switching capacity 2.5 A, AC-15, C300 (120 V / 1.5 A) 200 mA Electrical connection SAE 7/8-16UN, 5-pin male connector, see page 64 M12, 4-pin male connector, for suitable femalia pre-wired connectors, see page 64 (1) Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output. (2) Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output. (2) Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output. (3) Fluids conclude: hydraulic oils, fresh water, see water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37. Pressure switch operating curves (Curve for each stage for dual stage pressure switches) Pressure switches with relay output Dual stage pressure switches update Pressure Pressure Pressure PH2 PH2 PH2 update Pressure Pressure PH2 PH2 PH2 PH2 PH2 update Pressure <t< td=""><td>Rated supply voltage</td><td></td><td>120 V~</td><td>24 V</td></t<>	Rated supply voltage		120 V~	24 V
Current consumption 2d RNA gd RNA <td< td=""><td></td><td></td><td>102-132 V</td><td>17-33 V</td></td<>			102-132 V	17-33 V
Output Presave Product Number of Nu	Current consumption		32 MA	
Time delay Adjustable time delay of https into the set inform to soly, in increments of 1 is Switching capacity 2.5.6, Ac-15, C300 (120 V/1.5.A) 200 mA Electrical connection SAE 7/8-16UN, 5-pin male connectors, see page 64 200 mA (1) Pressure switches with adjustable differential or regulation between 2 thresholds. Relay output. (2) Pressure switches with adjustable differential for each threshold. Solid state outputs. (2) Pressure switch operating curves (2) Pressure switches with relay output (2) In adjustable differential for each threshold. Solid state outputs. (2) Pressure switch operating curves (2) Component materials of units in contact with the fluid: see page 37. Pressure switch operating curves (2) Component materials of units in contact with the fluid: see page 37. (2) Or a contact of the fluid stage pressure switches (3) Fried versions: with relay output Dual stage pressure switches (2) Or a contact of the fluid stage pressure Pressure Pressure Pressure (2) Or a contact of the fluid stage pressure Pressure Pressure Pressure (2) Or a contact of the fluid stage pressure Pressure Pressure Pressure (2) Or a contact of the fluid stage pressure Pressure Pressure Pressure (2) Or a contact of the fluid stage pressure	Time delet		Relay	Programmable, NPN or PNP, and NO or NC
Switching capacity 2.5 A, AC-15, C300 (120 V1.13A) 200 RA Electrical connection SAE 77, 610UX, 5-pin male connector, see page 64. M12, 4-pin male connector, including pre-wired versions, see page 64. (1) Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output. (2) Pressure switches with 2 adjustable stages and adjustable differential for each threshold. Solid state outputs. (3) Fillids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37. Pressure switch operating curves (Curve for each stage for dual stage pressure switches) Pressure switches with relay output Dual stage pressure switches Pressure full of the fluid state outputs. Pressure for the fluid state outputs. (Curve for each stage for dual stage pressure switches) Pressure for the fluid state outputs. Pressure for the flu	Time delay		Adjustable time delay on trip and on reset from	U to 50 s, in increments of 1 s
 Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output. Pressure switches with 2 adjustable stages and adjustable differential for regulation between 2 thresholds. Relay output. Pressure switches with 2 adjustable stages and adjustable differential for each threshold. Solid-state outputs. Fressure switch operating curves (Curve for each stage for dual stage pressure switches) Pressure switches with relay output Dual stage pressure switches Pressure switches with relay output Dual stage pressure switches Pressure for dual stage pressure switches Pressure switches with relay output Dual stage pressure switches Pressure for dual stage pressure switches Pressure switches with relay output Dual stage pressure switches Pressure for dual stage pres	Electrical connection		SAE 7/8-16UN, 5-pin male connector. For suitable female pre-wired connectors, see	M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64
Pressure switch operating curves (Curve for each stage for dual stage pressure switches) Pressure switches with relay output Dual stage pressure switches Darge of the stage for dual stage pressure switches) Pressure switches with relay output Dual stage pressure switches Darge of the stage for dual stage pressure switches) Pressure switches with relay output Dual stage pressure switches Darge of the stage for dual stage pressure switches) Pressure switches with relay output Dual stage pressure switches Darge of the stage of			 Pressure switches with adjustable differentia output. Pressure switches with 2 adjustable stages a Solid-state outputs. Fluids controlled: hydraulic oils, fresh water, +80 °C (5 to 176 °F). Component materials of 	If or regulation between 2 thresholds. Relay and adjustable differential for each threshold. sea water, air, corrosive fluids, from -15 to f units in contact with the fluid: see page 37.
Curve for each stage for dual stage pressure switches)Pressure switches with relay outputDual stage pressure switches $u^{portioned}$ <t< td=""><td>Pressure switch ope</td><td>rating curves</td><td></td><td></td></t<>	Pressure switch ope	rating curves		
$\frac{1}{2}$	(Curve for each stage for du	ial stage pressure switches)	Pressure switches with relay output	Dual stage pressure switches
Accessories: Dimensions: Dimensions: Wring:	2 bar			Dual stage pressure suitones
1 Maximum differential — Adjustable value — Adjustable value 2 Minimum differential — Adjustable value — Adjustable value	ng 250 200 10 200 10 200 10 200 10 200 10 200 10 200 10 200 10 200 10 200 10 200 10 200 10 200 10 200 10 200 10 10 10 10 10 10 10 10 10 10 10 10 1	0 242,5 bar ing pressure	Pressure PH PB Time	Pressure PB2 PH1 PB1 Time
Accessories: Dimensions: Wiring:	1 Maximum differential 2 Minimum differential		— Adjustable value	— Adjustable value
	Accessories:	Dimensions:	Wiring: page 65	

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59

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4 mA - 0 V

400

300

500 bar

100 200

0

Electronic pressure sensors Nautilus[™] type XMLF Size: 400 bar (5800 psi)

Туре		Pressure transmitters		Universal sensors differential. Solid-s outputs (1)	Universal sensors with adjustable differential. Solid-state and analog outputs (1)	
Adjustable range of switchin (Rising pressure)	g point (PH)	-		32–400 bar (464–5800	0 psi)	
Analog output		4–20 mA	0–10 V	4–20 mA	0–10 V	
Catalog numbers				- I		
Fluid connection (2)	1/4" BSP female 1/4" NPT female SAE 7/16-20UNF female	XMLF400D2015 XMLF400D2016 XMLF400D2019	XMLF400D2115 XMLF400D2116 XMLF400D2119	XMLF400D2025 XMLF400D2026 XMLF400D2029	XMLF400D2125 XMLF400D2126 XMLF400D2129	
Weight, g (oz)		590 (20.81)	741121 10022110	741121 10022020		
Additional specifications not shown under general specifications (page 37)						
Possible differential (subtract from PH to give PB)	Min. at low and high setting Max. at high setting	- -		12 bar (174 psi) 380 bar (5510 psi)		
Maximum permissible accide	ental pressure	1200 bar (17,400 psi)				
Destructive pressure		1800 bar (26,100 psi)				
Rated supply voltage		24 V				
Voltage limits		17–33 V				
Current consumption		80 mA				
Output Time delay		Programmable, NP Adjustable time del 0 to 50 s, in increme		Adjustable time delay of 0 to 50 s, in increments	or PNP, and NO or NC on trip and on reset from s of 1 s	
Switching capacity		— 200 mA				
Analog output		4-20 mA or 0–10 V, depending on the model. Maximum signal level adjustable between 300 and 500 bar (4350 and 7250 psi)				
Electrical connection		M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64				
		 (1) Pressure sensors with adjustable differential for regulation between 2 thresholds. Solid-state and analog outputs. (2) Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37. 				
Curves						
Analog output curve		Pressure sensor operating curves				
20 mA - 10 V		bar 400 50 300 200		Pressure PH		





-Adjustable value

2 Minimum differential

Accesso	ries: Dimensions:	Wiring:	
page 64	page 65	page 65	
60		Telemecanique	2

Maximum differential

1

Electronic pressure sensors Nautilus[™] type XMLF Size: 400 bar (5800 psi)

Туре		Pressure switches with adjustable differential and relay output (1)	Dual stage adjustable pressure switches with solid-state outputs (2)		
Adjustable range of switching point(s) (PH or PH1 and PH2) (Rising pressure)		32–400 bar (464–5800 psi)			
Catalog numbers					
Fluid connection	1/4" BSP female	XMI F400F2045	XML E400D2035		
(3)	1/4" NPT female	XML F400E2046	XML F400D2036		
	SAE 7/16-20UNE female	XML F400E2049	XML F400D2039		
Weight, g (oz)		700 (24.69)	590 (20.81)		
Additional specifica	tions not shown under gone	rel encoificatione (page 27)	000 (20.01)		
Additional specifica	tions not shown under gene				
- PH to get PB - PH1 & PH2 to get PB1 & PB2	Max. at high setting	380 bar (5510 psi)	min. at low and high setting: 12 bar (174 psi) max. at high setting: 380 bar (5510 psi)		
Maximum permissible accide	ental pressure	1200 bar (17.400 psi)			
Destructive pressure	•	1800 bar (26,100 psi)			
Rated supply voltage		120 V∼	24 V		
Voltage limits		102–132 V∼	17–33 V		
Current consumption		32 mA	80 mA		
Output		Relay	Programmable, NPN or PNP, and NO or NC		
Time delay		Adjustable time delay on trip and on reset from	0 to 50 s, in increments of 1 s		
Switching capacity		2.5 A, AC-15, C300 (120 V / 1.5 A)	200 mA		
Electrical connection		SAE 7/8-16UN, 5-pin male connector. For suitable female pre-wired connectors, see page 64.	M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64		
		 Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output. Pressure switches with 2 adjustable stages and adjustable differential for each threshold. Solid-state outputs. Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37. 			
Pressure switch op	erating curves				
(Curve for each store for d		Processing switches with relay output	Dual stage pressure switches		
(Curve for each stage for d	iual stage pressure switches)	Pressure switches with relay output	Dual stage pressure switches		
<pre>bar 400 300 200 200 100 200 300 Fall 1 Maximum differential</pre>	0 388 bar ing pressure	Pressure PH PB Time Time	Pressure PH2 PH2 PH1 PB1 Time Time		
2 Minimum differential	Discovision	Molec	,		
Accessories: page 64	umensions: page 65	vviring: page 65			

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61

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Electronic pressure sensors Nautilus[™] type XMLF Size: 600 bar (8700 psi)

Туре		Pressure transmit	ers	Universal sensors with adjustable differential. Solid-state and analog outputs (1)		
Adjustable range of switching point (PH) (Rising pressure)		-		48–600 bar (696–8700 psi)		
Analog output		4–20 mA	0–10 V	4–20 mA	0–10 V	
Catalog numbers						
Fluid connection	1/4" BSP female	XMLF600D2015	XMLF600D2115	XMLF600D2025	XMLF600D2125	
(2)	1/4" NPT female	XMLF600D2016	XMLF600D2116	XMLF600D2026	XMLF600D2126	
	SAE 7/16-20UNF female	XMLF600D2019	XMLF600D2119	XMLF600D2029	XMLF600D2129	
Weight, g (oz)		590 (20.81)				
Additional specifications not shown under general specifications (page 37)						
Possible differential	ible differential Min. at low and high setting		—		18 bar (261 psi)	
(subtract from PH to give PB)	Max. at high setting	— 570 bar (8265 psi)				
Maximum permissible accide	issible accidental pressure 1200 bar (17,400 psi)					
Destructive pressure		1800 bar (26,100 psi)				
Rated supply voltage		24 V				
Voltage limits		17–33 V				
Current consumption		80 mA				
Output		—		Programmable, NPN or PNP, and NO or NC		
Time delay		-		Adjustable time delay on trip and on reset from 0 to 50 s, in increments of 1 s		
Switching capacity		— 200 mA				
Analog output		4–20 mA or 0–10 V, depending on the model. Maximum signal level adjustable between 450 and 750 bar (6525 and 10 875 psi)				
Electrical connection		M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64				
		 Pressure sensors with adjustable differential for regulation between 2 thresholds. Solid-state and analog outputs. Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37. 				

Curves

Analog output curve



Pressure sensor operating curves





-Adjustable value

Accesso	ries: Dimensions:	Wiring:
page 64	page 65	page 65
62		(F) Telemecanique

Minimum differential

1 2

Electronic pressure sensors Nautilus[™] type XMLF Size: 600 bar (8700 psi)

Tupo		Prossure switches with adjustable	Dual stago adjustable prossure		
туре		differential and relay output (1)	switches with solid-state outputs (2)		
Adjustable range of switching (Rising pressure)	g point(s) (PH or PH1 and PH2)	48–600 bar (696–8700 psi)			
Catalog numbers					
Fluid connection	1/4" BSP female	XMLF600E2045	XMLF600D2035		
(3)	1/4" NPT female	XMLF600E2046	XMLF600D2036		
	SAE 7/16-20UNF female	XMLF600E2049	XMLF600D2039		
Weight, g (oz)		700 (24.69)	590 (20.81)		
Additional specifica	tions not shown under gene	ral specifications (page 37)			
Possible differential	Min at low and high setting	18 bar (261 psi)	For each stage:		
(subtract from:	Max at high setting	570 bar (8265 psi)	min at low and high setting: 18 bar (261 psi)		
- PH to get PB			max. at high setting: 570 bar (8265 psi)		
- PH1 & PH2 to get PB1 & PB2	:) 	4000 h = (47, 400 = -3)			
Maximum permissible accide	entai pressure	1200 bar (17,400 psi)			
Pated supply voltage		120 Vo.	24.1/		
Voltage limits		102-132 \/\.	17_33V—		
Current consumption		32 mA	80 mA		
Output		Relav	Programmable, NPN or PNP, and NO or NC		
Time delay		Adjustable time delay on trip and on reset from	0 to 50 s. in increments of 1 s		
Switching capacity		2.5 A. AC-15. C300 (120 V / 1.5 A)	200 mA		
Electrical connection		SAE 7/8-16UN, 5-pin male connector. For suitable female pre-wired connectors, see page 64.	M12, 4-pin male connector. For suitable female connectors, including pre-wired versions, see page 64		
		 Pressure switches with adjustable differential for regulation between 2 thresholds. Relay output. Pressure switches with 2 adjustable stages and adjustable differential for each threshold. Solid-state outputs. Fluids controlled: hydraulic oils, fresh water, sea water, air, corrosive fluids, from -15 to +80 °C (5 to 176 °F). Component materials of units in contact with the fluid: see page 37. 			
Pressure switch ope	erating curves				
(Curve for each stage for d	lual stage pressure switches)	Pressure switches with relay output	Dual stage pressure switches		
(Ourverior each stage for a	idal stage pressure switches)	Tressure switches with relay output	Dual stage pressure switches		
⁹ ⁶⁰⁰ ⁴⁰ ⁴⁰ ⁴⁰ ⁴⁰ ⁴⁰ ⁴⁰ ⁴⁰ 	582 bar	Pressure PH PB Time	Pressure PH2 PH2 PH1 PB1 Time		
Accessories:	Dimensions:	- Adjustable value	— Adjustable Value		
page 64	page 65	page 65			

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63

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Electronic pressure sensors Nautilus[™] Universal, Osiconcept[™], type XMLF Accessories and replacement parts

	-	Catalog numb	ore			
		Benjacement part	615			
		Description	3		Catalog number	Weight g (oz)
		Transparent cover wit	h legends		XMLZL007	20 (0.71)
1 SPI		Sealing gasket	All sizes (XMLF)		XMLZL010	15 (0.53)
(1 (P1 SP1		Accessories				
ID IP2		Description			Catalog number	Weight g (oz)
rP1		Fixing bracket			XMLZL008	37 (1.31)
Î	XMLZL009	Cooler for versions w Usage temperature: 150 °C (302 °F) max. fo 50 °C (122 °F) for the a	ith 1/4" BSP fluid connection fronthe fluid, mbient air	on (2)	XMLZL009	370 (13.05)
		Connectors				
		Description		Length of cable m (ft)	Catalog number	Weight g (oz)
) XMLZL008		Pre-wired M12, straight, female connectors		2 (6.6)	XZCP1141L2	115 (4.06)
	g	(Black PVR)		5 (16.4)	XZCP1141L5	270 (9.52)
\gg				10 (32.8)	XZCP1141L10	520 (18.34)
	\sum	Pre-wired M12, straight female connectors	ht,	2 (6.6)	XSZCD101Y	90 (3.17)
	✓ XZCP1241L●	(Yellow PVC)		5 (16.4)	XSZCD102Y	190 (6.70)
				10 (32.8)	XSZCD103Y	370 (13.05)
		Pre-wired M12, 90°, female connectors		2 (6.6)	XZCP1241L2	115 (4.06)
				5 (16.4)	XZCP1241L5	270 (9.52)
V Ces	C			10 (32.8)	XZCP1241L10	520 (18.34)
	XZCC12FDM40V	Pre-wired 7/8" 16UN, straight, female connectors		2 (6.6)	XZCP1764L2	185 (6.53)
				5 (16.4)	XZCP1764L5	460 (16.23)
\sim				10 (32.8)	XZCP1764L10	900 (31.75)
	L C	M12 Snap-C [™] , straig female connector (1)	ht,	_	XZCC12FDM40V	520 (18.34)
		M12–M12 jumper cables	Straight female connector	1 (3.3)	XZCR1511041C1	(2.29)
	\sim	with straight male connector, for splitter box	00% female comparison	2 (0.6)	XZCR1511041C2	(3.35)
~			90° remaie connector	2 (6 6)	XZCR1512041C1	(2.29) 05
V-00		(1) Connector incornorating IDCs /insulation di			octore) for quick direct	(3.35)
XZCR15	12041C e	connection to cable (2) Available with other	without a screwdriver or sold fluid connections (1/4" NPT	lering iron. and SAE 7/1	6-20 UNF).	, ,,,-,,,,,e
onnections (pressure sensor c	onnector pin viev	N)				
u						



64

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Dimensions, wiring

Electronic pressure sensors Nautilus[™] Universal, Osiconcept[™], type XMLF Accessories and replacement parts



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