

JUMO GmbH & Co. KG

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JUMO Instrument Co. Ltd.

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JUMO MIDAS C12 CA

OEM pressure transmitter – compressed air

Areas of application

- Air application

Special features

- Cost-optimized
- Long-term stability and resistant to overload
- Compactly constructed design
- Precisely fitting measuring ranges, process connections and electrical connections

Description

The device records the relative pressure of gaseous media in closed systems. The temperature-compensated process value is output to a higher-level system via the analog output.

The UL approval provides for the use of the transmitter basically only indoors.



Type 401014

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Approvals

	Designation	UL
	Test facility	Underwriter Laboratories
	Certificate no.	E201387
	Inspection basis	UL 61010-1 (3. Ed.), CAN/CSA-22.2 No. 61010-1 (3. Ed.)
	Valid for	JUMO MIDAS C12 CA (401014)
	Designation	UKCA
	Test facility	JUMO GmbH & Co. KG
	Certificate no.	UK 161
	Inspection basis	Electromagnetic Compatibility Regulations 2016
	Valid for	JUMO MIDAS C12 CA (401014)

Technical data

Electrical data

Voltage supply	DC 8 to 30 V, nominal voltage DC 24 V Residual ripple: The voltage peaks must not exceed or fall below the specified voltage supply values.
Current consumption	≤ 25 mA
Electrical circuit Requirement	SELV The device must be equipped with an electrical circuit that meets the requirements of EN 61010-1 with regard to "Limited-energy circuits".
Behavior after power on	The device is ready for use in < 100 ms after switch-on.
Behavior in the event of a measuring range overflow	The device delivers a linear signal up to 21.5 mA and is then limited to the value.
Behavior in the event of measuring range underflow	The device delivers a linear signal up to quiescent current consumption (approx. 2 mA).
Reverse voltage protection	Yes
Overvoltage resistance	> DC 30 V
Insulation resistance	> 100 MΩ at DC 500 V
Insulation voltage	AC 500 V

Inputs

Measuring range and accuracy

The reference conditions according to DIN 16086 and DIN EN 60770 apply. Observe the calibration position, see mechanical features.

Measuring range	Linearity ^a % MSP ^f	Accuracy at		Long-term stability ^b % MSP per year	Overload capability ^c bar	Burst pressure bar
		20 °C ^d % MSP	-20 to +85 °C ^e % MSP			
0 to 10 bar relative pressure	0.4	0.55	1.1	≤ 0.3	40	50
0 to 16 bar relative pressure		0.45	0.8			
-1 to +9 bar relative pressure		0.55	1.1			
-1 to +15 bar relative pressure		0.45	0.8			

^a Linearity according to limit point setting

^b Reference conditions EN 61298-1

^c All pressure transmitters are vacuum proof.

^d Includes: linearity, hysteresis, repeatability, deviation of measuring range start value and measuring range end value

^e Includes: linearity, hysteresis, repeatability, deviation of measuring range start value and measuring range end value, thermal effect on measuring range start and measuring span

^f MSP = measuring span

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Output

Analog output

Output	4 to 20 mA, 2-wire
Burden	$R_L \leq (U_B - 8 \text{ V}) \div 0.02 \text{ A} (\Omega)$
Burden influence	< 0.5 % max.
Step response t_{90}	< 3 ms, DIN 16068, Point 3.3.8

Environmental influences

Admissible temperatures	
Ambient temperature	-20 to +85 °C
Medium temperature	0 to 120 °C
Storage temperature	-30 to +100 °C
Admissible relative humidity	90 % relative humidity without condensation during operation or when in storage
Protection type	IP65 (with accessories line socket)
Admissible mechanical loads	
Vibration strength	10 to 2000 Hz, 20 g (m/s^2), DIN EN 60068-2-6
Shock resistance	50 m/s^2 , 11 ms, DIN EN 60068-2-27
Electromagnetic compatibility (EMC)	DIN EN 61326-2-3:2022
Interference emission	Class B ^a
Interference immunity	Industrial requirement

^a The product is suitable for industrial use as well as for households and small businesses.

Mechanical features

Materials of the parts that come into contact with the pressure medium	
Process connection	Aluminum AW-6026LF, optionally stainless steel 1.4305
Seals ^a	FKM (Viton)
Ceramic thick film sensor	96 % Al_2O_3
Material of the other parts	
Device connector	PBT GF30
Installation position	Any
Calibration position	Device upright, process connection at the bottom
Weight	28 g with process connection G 1/4"
Admissible load changes	> 10 million, 0 to 100 % measuring range

^a Note the medium durability of the selected seal material!

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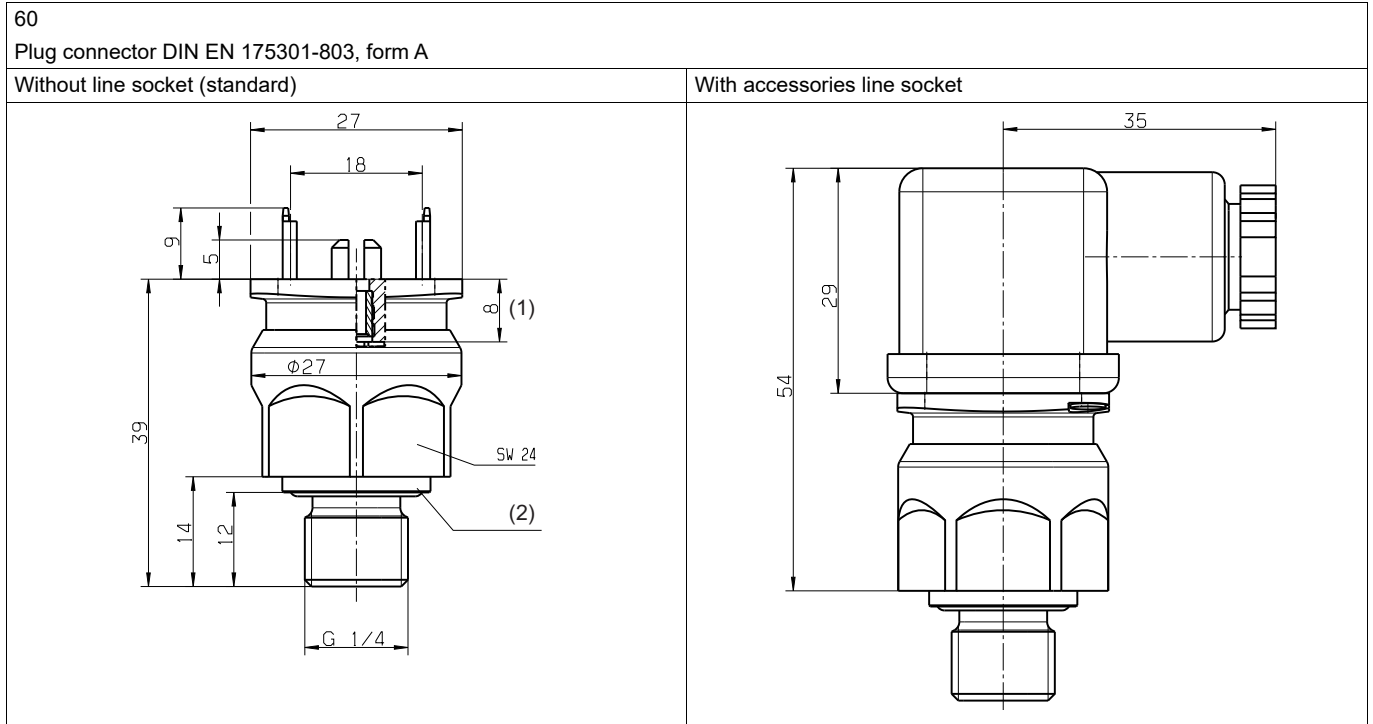
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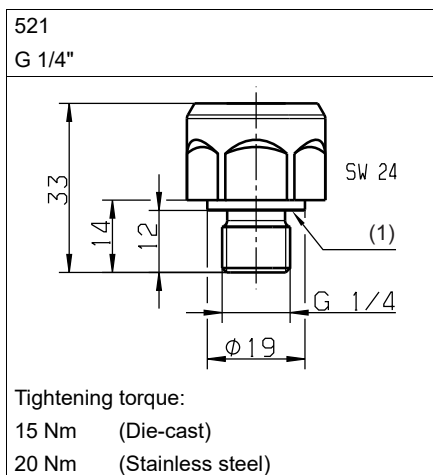
Dimensions

Electrical connection



- (1) Maximum screw-in depth
- (2) O-ring 13 × 2

Process connection



- (1) O-ring 13 × 2

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
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Connection diagram

The connection diagram in the data sheet provides information on product selection.

For the electrical connection, only use the installation instructions or the operating manual.

Connection		Terminal assignment (Figure: Connection to the pressure transmitter)	
		 <p data-bbox="703 719 730 741">60</p> <p data-bbox="703 748 1129 770">Plug connection DIN EN 175301-803, form A</p>	
4 to 20 mA, 2-wire Voltage supply DC 8 to 30 V	$U_B/S+$ $0 V/S-$	1 2	

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Order details

	(1) Basic type
401014	JUMO MIDAS C12 CA – OEM pressure transmitter – compressed air
	(2) Basic type extension
0	Standard
	(3) Input
459	0 to 10 bar relative pressure
460	0 to 16 bar relative pressure (standard)
483	-1 to +9 bar relative pressure
484	-1 to +15 bar relative pressure
	(4) Output
405	4 to 20 mA, 2-wire
	(5) Process connection
521	G 1/4" DIN 3852-11
	(6) Process connection material
44	Al (aluminum) (standard)
78	CrNi (stainless steel)
	(7) Seal material
601	FPM
	(8) Electrical connection
60	Plug connection DIN EN 175301-803, form A
	(9) Extra codes
000	None

Order code	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)								
Order example	401014	/	0	-	460	-	405	-	521	-	44	-	601	-	60	/	000

Stock versions

Order code	Part no.
401014/0-460-405-521-44-601-60/000	00772671

Minimum order quantities and multiples of the order quantity are specified for the device.

Accessories

Designation	Part no.
Line socket DIN EN 175301-803, form A	00342729

When using the transmitter in UL applications, the user must ensure that the accessories he uses are also approved for a UL application (e.g. cable socket DIN EN 175301-803, Form A with UL approval and connecting cables with UL approval AVL2/8 and/or CYJV/7 or CYJV/8 or PVVA/7 or PVVA2/8, each approved for ambient temperatures > 90 °C and designed for at least 30 V and 25 mA).