The Temperature-sensitive one T S 1

Temperature transmitter for industrial application

Main features

- Temperature ranges -70°C to 150°C
- PT100 and PT1000 and for all standard signals for industry
- Pressure-resistant design to 300 bar
- Protection class IP67 (special version up to IP69K)
- Compact and rugged model in stainless steel
- High flexibility for options thanks to modular design
- Highly reliable
- CE declaration

Applications

- Industrial applications
- Hydraulics / Pneumatics
- Marine application
- Railway application
- Air-conditioning and refrigeration technology (heating systems)
- Industrial Equipment and Automation technology

Description

The temperature sensor TS1 is the "temperature-sensitive one" in the ADZ range of products and suited for the most diverse applications. With its distinctly wide measuring range (-70 to 150°C) it is extremely resilient. Thanks to a modular system, a wide variety of plug and thread configurations are possible – depending on customer requirements – all of which can be delivered within a short time. Its robust design ensures maximum reliability even in very rugged environments.

ADZ NAGANO Sensortechnik

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Specifications

ELECTRICAL PARAMETER					
		2-wire	PT100/PT1000	3-wire	3-wire
Output signal*		4...20 mA	PT100/PT1000	0...10 V	0,25...4,75 V ratiometric
Supply voltage	U_S [V_{DC}]	10...32**		12...32	5 ± 10 %
Load resistor	R_A in Ohm	R_A=(Us-10V)/0,02A		≥4.7kΩ**	≥4.7kΩ
Response time	t [s]	≤ 10	≤ 10	≤ 10	≤ 10
Maximum supply current	I [mA]	23	40	10	7,5
Standard measuring ranges*	T [°C]	0...100	0...100	0...100	-50...150 pre-set
		-40...85	-40...85	-40...85	
		-20...100	-20...100	-20...100	
		-40...125	-40...125	-40...125	
		-70...150		-70...150	
Isolation voltage*	U [V_{DC}]	50			

** > AppNote (see www.adz.de)

ACCURACY		
Accuracy @ RT	% of the range	2 K
Stability/year	% of the range	≤ 0,15

ACCEPTABLE TEMPERATURE RANGES			
Operating temperature	T [°C]	-50...150	
Total error	% of the range	-40°C 5 K	
	% of the range	105°C 5 K	
Proof pressure	p [bar]	up to 300	

MECHANICAL PARAMETER			
Wetted components		stainless steel	
Housing		stainless steel	
Weight	m [g]	80-120	depending on design
Shock resistance/drop	g	1000	acc. to DIN EN 60068-2-32 – free fall
Vibration resistance	g	20	acc. to DIN EN 60068-2-6 – vibration sinusoidal
Shock resistance/constant	g	50	acc. to DIN EN 60068-2-27 – shock
Approvals	CE Declarations of conformity 2014/30/EU		
	Note: Not every specification listed here applies to all configurations, thus affecting the appropriate approval.		

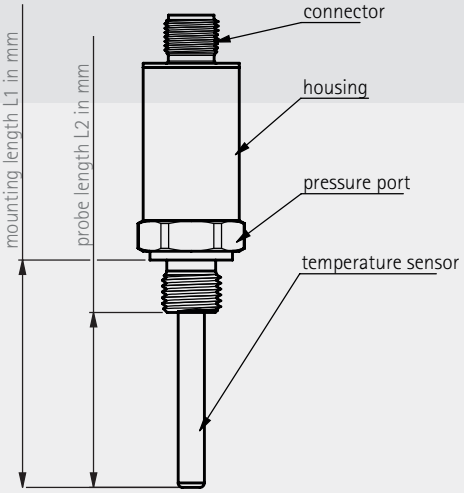
IP system of protection (IEC 605029) up to IP69K	The IP system of protection as specified in the data sheets generally applies, with appropriate mating plug connected.

Configurations -examples-

DIN 72585 Bayonett
G1/4 Form A plus tip

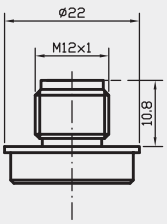
DEUTSCH DT04 3PIN
G1/4

TS1 with Plug M12x1

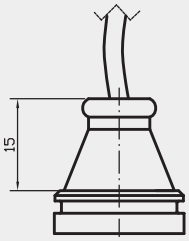


Electrical connections* -examples-

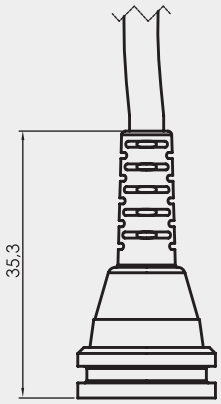
male socket
M12x1 (S763)
(IP67)



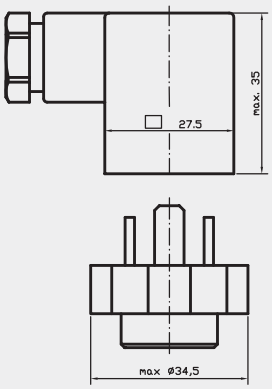
cable output
(IP67/IP69K)



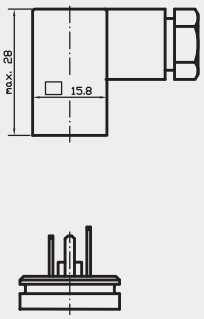
cable output
(IP67) with
bend protection



MVS/A
DIN EN 175301-803
(IP65)

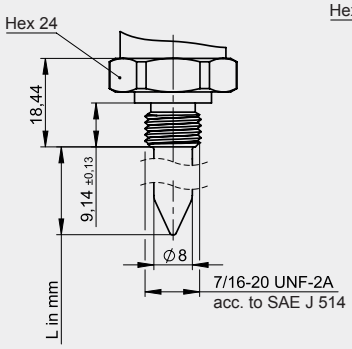


MVS/C
DIN EN 175301-803
(IP65)

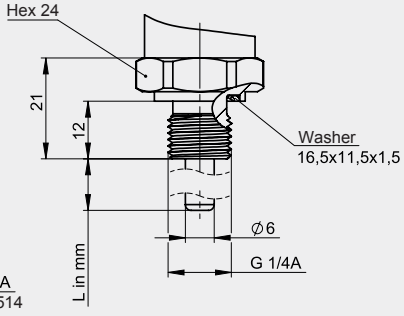


Pressure Connections* -examples-

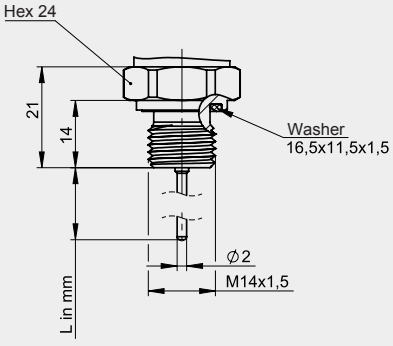
7/16-20 UNF-2A
acc. to SAE J 514



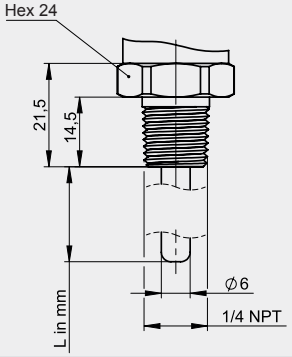
G 1/4 A Form E



M14x1,5 Form E



1/4 NPT



* customer specific configurations available

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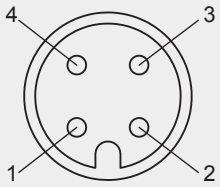
Electrical Configuration*

Plug M12x1	Cable
	
2-wire 1: UB+ 2: nc 3: out 4: nc	2-wire red: UB+ black: out white: nc
3-wire 1: UB+ 2: nc 3: UB- 4: out	3-wire red: UB+ black: UB- white: out

The electrical connection must be made in accordance with the respective connection diagram unless otherwise agreed upon.

*** custom-made adjustments are possible**

Product line

DS5	Electronic Pressure Switch	SMC	Pressure Transmitter with CANopen Interface and J1939
DPSX9I	Intrinsically Safe Electronic Pressure Switch for Current	SME	Pressure Transmitter in Miniature Design
DPSX9U	Intrinsically Safe Electronic Pressure Switch for Voltage	SMF	Pressure Transmitter with Flush Diaphragm
PS1/17	Level Sensor	SMH	High Pressure Transmitter
PSX2	Intrinsically Safe Level Sensor	SML	Pressure Transmitter for Industrial Application
SH2	Pressure transmitter for hydrogen applications	SMO	Pressure Transmitter in Mobile Hydraulics
SHP	High Precision Pressure Transmitter	SMX2	Intrinsically Safe Pressure Transmitter for Industrial Application
SIS	Low Pressure Transmitter in Short and Compact Design	TPSE	Multi-Function Transmitter for Pressure and Temperature – external sensor
SIL	Low Pressure Transmitter for Industrial Application	TPSI	Multi-Function Transmitter for Pressure and Temperature – internal sensor
SKE	High Temperature Pressure Transmitter with Detached Electronics	TS1	Temperature transmitter for industrial application
SKL	High Temperature Pressure Transmitter with Cooling Fins		

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Subject to change
due to technical progress.
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