



**Main Features**

- Pressure ranges: from 0...2 to 0...500 bar (0...30 to 0...7500psi) and pressure ranges from -1...+1 to -1...+10 bar
- Output signal 4...20mA 2-wires / 0,1...5,1Vdc / 0,1...10,1Vdc / 0...5Vdc / 0...10Vdc / 1...5Vdc / 1...10Vdc
- Protection level: IP65
- Material in contact: AISI 430 and 17-4PH

TKG transmitters are based on the thick film extensimetric (over 30 bar) and piezoresistive (up to 30 bar) measurement principle.

Thanks to highly stable electronic components, these transmitters can be used in applications requiring long-distance signal transmission or in smart control systems. TKG pressure transmitters were developed mainly for measuring pressures in the industrial refrigeration and air conditioning fields.

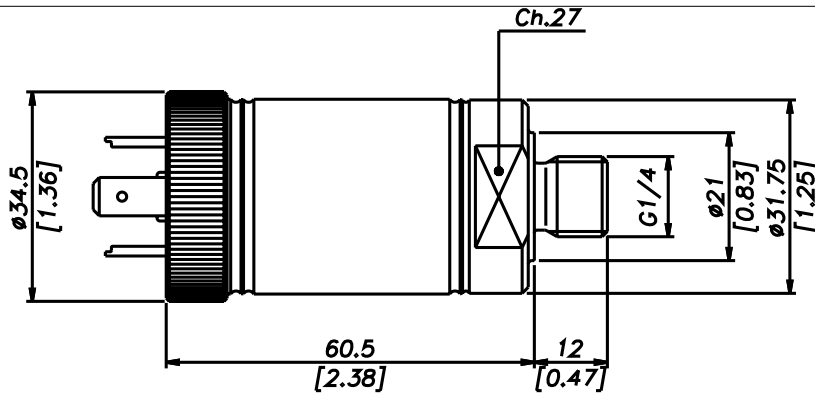
They are also used to monitor and control other mechanical installations.

**TECHNICAL DATA**

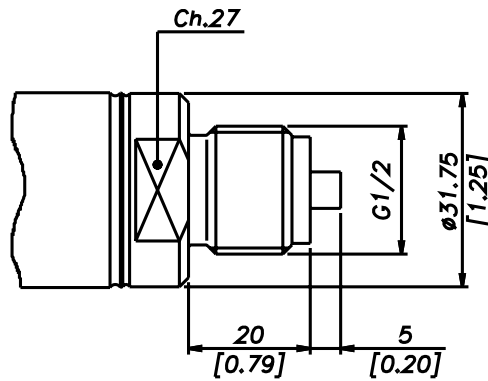
	VOLTAGE	CURRENT
Output signal		
Sensor class	<b>H</b> 0,3% FSO (1) <b>M</b> 0,6% FSO (1)	
Resolution	Infinite	
Measurement range	-1...+1 to -1...+10bar and 0...2 to 0...500bar (0...30 to 0...7500psi)	
Max. applicable pressure (without decay) (2)	2 times Full Scale	
Resistance to bursting	3 times Full Scale (max.1000bar / 14500psi)	
Power supply ± 5%	15 to 30Vdc	10 to 30Vdc
Max. input on power supply (3)	13mA	32mA
Isolation resistance at 50Vdc	>1000MΩ	
Rated pressure signal: FS <b>H</b> = ± 0,5% <b>M</b> = ± 1%	B 5,1 Vdc C 10,1 Vdc M/P 5 Vdc N/Q 10 Vdc	E 20mA
Ambient pressure signal: FS <b>H</b> = ± 0,5% <b>M</b> = ± 1%	B/C 0,1 Vdc M/N 0 Vdc P/Q 1 Vdc	E 4mA
Max. allowed load	1mA	see diagram
Max. response time (10...90% FSO)	Range ≤ 30bar 1 msec. Range > 30bar 4 msec	Range ≤ 30bar 1 msec Range > 30bar 8 msec
Output noise (RMS 10-400 Hz)	< 0,05% FS	
Output short circuit protection and reverse power polarity	YES	
Output pulse overvoltage protection	YES	NO
Compensated temperature range	-10 to +70°C (+14 to 158°F)	
Permitted temperature range	-20°C to +80°C (-4 to 176°F)	
Storage temperature range	-30°C to +85°C (-22 to 185°F)	
Thermal drift in compensated range (zero - sens.)	<0,02% FSO/°C (<0,01% FSO/°F)	
Materials in contact with measurement fluid	> 30bar AISI430 and 17- 4 PH ≤ 30bar AISI304 and AISI316	
Outer case materials	AISI 304 stainless steel Nylon 66GF35VO	
Protection level	IP65	
Process connections	G 1/4" male, G 1/2" male, G 1/4" female	
Electrical connections	mod. F 2-4 pole shielded cable mod. M 4-pole connector DIN43650A-ISO4400 mod. V 6-pole connector VPT02A-10-6PT2	

**FSO** = Full scale output (output signal at rated pressure)  
**1** BFSL (Best Fit Straight Line) method  
**2** tested for more than 1000 strokes with single duration < 2msec.  
**3** with 30V power supply, max. load calibration signal on.

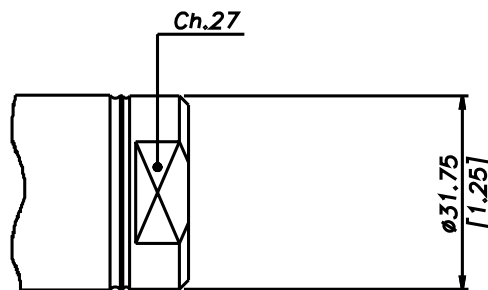
## MECHANICAL DIMENSIONS



1/4" G male  
connection  
(code 1)



1/2" G male  
connection  
(code 3)



1/4" G female  
connector  
(code 4)

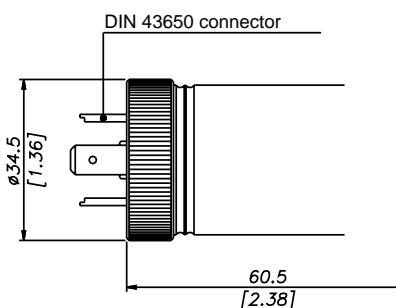
**ATTENTION:** For installation, use a maximum locking torque of 20Nm.

## ADAPTERS AVAILABLE ON REQUEST

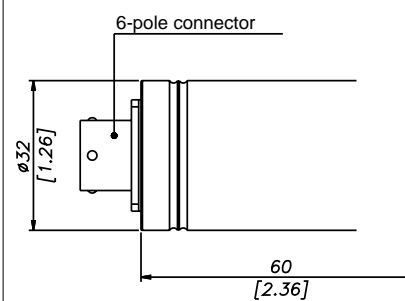
From 1/4G female to 1/4G male	<b>PKIT101</b>	From 1/4G female to M12x1,5 male	<b>PKIT106</b>
From 1/4G female to 1/8-27 NPT male	<b>PKIT102</b>	From 1/4G female to 7/16-20 UNF male	<b>PKIT107</b>
From 1/4G female to 1/8-27 NPT female	<b>PKIT103</b>	From 1/4G female to 1/2G male	<b>PKIT108</b>
From 1/4G female to M14x1,5 male	<b>PKIT104</b>	From 1/4G female to 1/4-18 NPT female	<b>PKIT109</b>
From 1/4G female to 1/4-18 NPT male	<b>PKIT105</b>	From 1/4G female to 7/16-20 UNF female	<b>PKIT111</b>

## MECHANICAL DIMENSIONS - Connectors

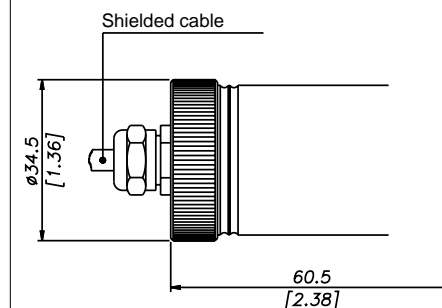
**M** - 4-pole connector solenoid



**V** - 6-pole connector

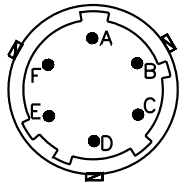


**F** - 2-4 pole cable



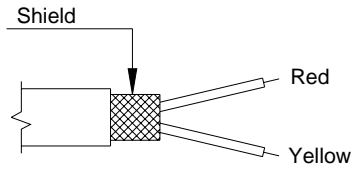
# ELECTRICAL CONNECTIONS - Connectors

V - 6-pole connector

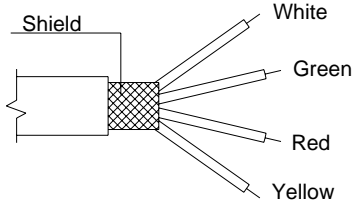


Male connector  
VPT02A10-6PT2

F - 2-4 pole cable

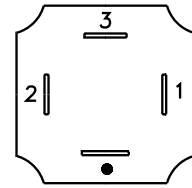


Shielded cable 2 x 0,25 - 2m (output E)



Shielded cable 4 x 0,25 - 1m.

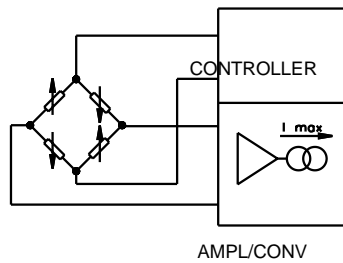
M - 4-pole connector solenoid



M Solenoid 400DIN  
46350A-ISO 4400

# ELECTRICAL CONNECTIONS - connection diagrams

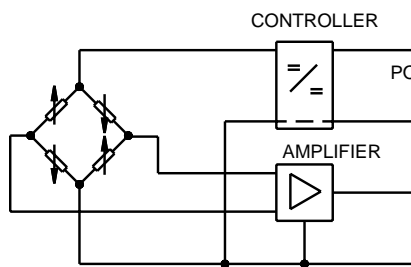
OUTPUT AMPLIFIED IN CURRENT  
mod. E



	Code V	Code F	Code M
POWER SUPPLY (10...30Vdc) +	A	Red	1
NOT CONNECTED	C	-	-
SIGNAL (4...20mA) -	B	Yellow	2
NOT CONNECTED	D	-	-
NOT CONNECTED	E-F		

The cable sheathing is connected to the transducer body

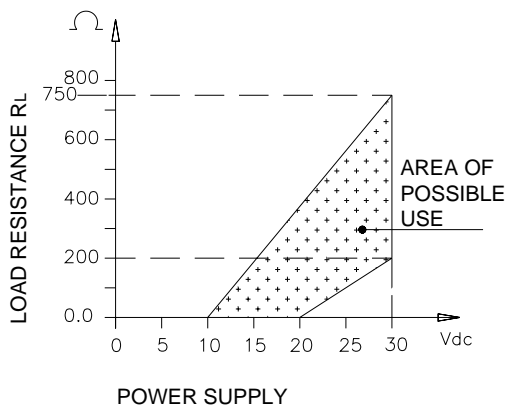
OUTPUT AMPLIFIED IN VOLTAGE  
mod. B/C/M/N/P/Q/R



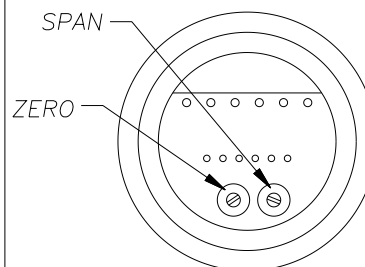
	Code V	Code F	Code E
POWER SUPPLY (15...30Vdc) +	C	White	3
-	D	Green	2
AMPLIFIER +	A	Red	1
SIGNAL (Vdc) -	B	Yellow	2
NOT CONNECTED	E-F		

The cable sheathing is connected to the transducer body

# LOAD DIAGRAM (current output)



# SETTINGS



The signal can be set to room pressure (ZERO) and to rated pressure (SPAN) by means of their trimmers, accessed inside the transmitter after removal of the two fixing screws.

**SPAN is set during production and must not be changed.**

## ACCESSORIES ON REQUEST

### Connectors

#### Connection M

3-pole connector + ground  
DIN43650A ISO4400  
Prot. IP65

**CON 006**

#### Connection V

Female cable connector Prot. IP66

**CON 300**

## ORDER CODE

Pressure Transmitter **TKG**

OUTPUT SIGNAL	
<b>Standard</b>	
4 .. 20 mA	<b>E</b>
0 .. 10 Vdc	<b>N</b>
<b>On request</b>	
0.1 .. 10.1 Vdc	<b>C</b>
0.1 .. 5.1 Vdc	<b>B</b>
0 .. 5 Vdc	<b>M</b>
1 .. 5 Vdc	<b>P</b>
1 .. 10 Vdc	<b>Q</b>
1 .. 6 Vdc	<b>R</b>

CONNESSIONI AL PROCESSO	
<b>Standard</b>	
G1/4 male	<b>1</b>
G 1/2 A (DIN 16288)	<b>3</b>
G 1/4 female	<b>4</b>
<b>On request</b>	
1/4" SAE (7/16-20UNF)	<b>2</b>
1/8-27 NPT female (hex 1"1/8)	<b>5</b>
1/4-18 NPT female (hex 1"1/8)	<b>6</b>
1/4-18 NPT male (hex 1"1/8)	<b>7</b>
1/8-27 NPT male (hex 1"1/8)	<b>9</b>
7/16-20UNF female (hex 1"1/8)	<b>F</b>

CELECTRICAL CONNECTIONS	
<b>Standard</b>	
4-pole connector solenoid	<b>M</b>
<b>On request</b>	
6-pole connector	<b>V</b>
2/4-pole shielded cable	<b>F</b>

Mechanical and/or electrical characteristics differing from standard may be arranged on request

PRECISION CLASS	
<b>H</b>	0.3% FSO
<b>M</b>	0.6% FSO

PRESSURE RANGE		
	bar	psi
<b>N01U</b>	-1..+1	<b>P03D</b> 0..30
<b>N02U</b>	-1..+2	<b>P05D</b> 0..50
<b>N03U</b>	-1..+3	<b>P75U</b> 0..75
<b>N05U</b>	-1..+5	<b>P01C</b> 0..100
<b>N01D</b>	-1..+10	<b>P15D</b> 0..150
<b>B02U</b>	0..2	<b>P25D</b> 0..250
<b>B2V5</b>	0..2.5	<b>P03C</b> 0..300
<b>B04U</b>	0..4	<b>P05C</b> 0..500
<b>B05U</b>	0..5	<b>P75D</b> 0..750
<b>B06U</b>	0..6	<b>P01M</b> 0..1000
<b>B07U</b>	0..7	<b>P15C</b> 0..1500
<b>B01D</b>	0..10	<b>P25C</b> 0..2500
<b>B16U</b>	0..16	<b>P03M</b> 0..3000
<b>B02D</b>	0..20	<b>P05M</b> 0..5000
<b>B25U</b>	0..25	<b>P75C</b> 0..7500
<b>B03D</b>	0..30	
<b>B04D</b>	0..40	
<b>B05D</b>	0..50	
<b>B06D</b>	0..60	
<b>B01C</b>	0..100	
<b>B16D</b>	0..160	
<b>B02C</b>	0..200	
<b>B25D</b>	0..250	
<b>B35D</b>	0..350	
<b>B04C</b>	0..400	
<b>B05C</b>	0..500	

Ex.: **TKG - E - 1 - M - B01D - M**  
Transmitter: output signal 4-20mA two wires, pressure fitting G1/4" male, 10 bar, 4-pole connector solenoid, precision class 0.6 %FSO

GEFRAN spa reserves the right to make any kind of design or functional modification at any moment without prior notice



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