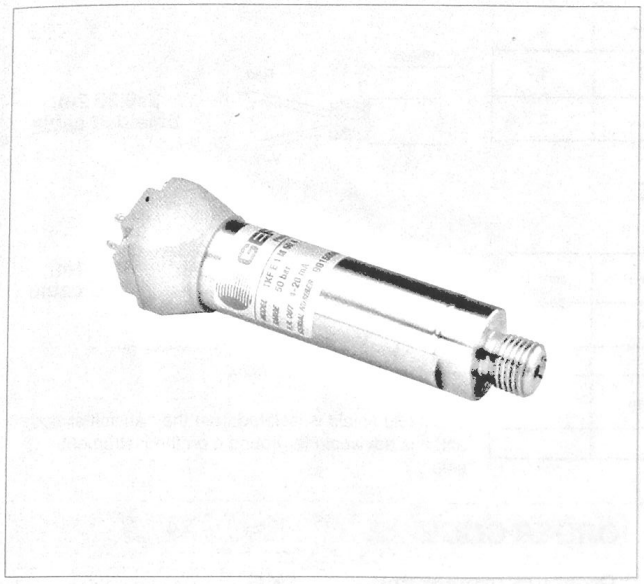
GEFRAN

TKF

THICK FILM ON STEEL PRESSURE TRANSMITTER



Main features

- *Pressure ranges from 0-7 to 0-500 bar*
- *Thick film on steel strain gauge sensor*
- *Output signal 4...20mA (2-wires) / 0,1...5,1Vdc / 0,1...10,1Vdc / 0...5Vdc / 0...10Vdc / 1...5Vdc / 1...10Vdc*
- *Protection degree: IP60 for connector output, IP65 for cable output.*

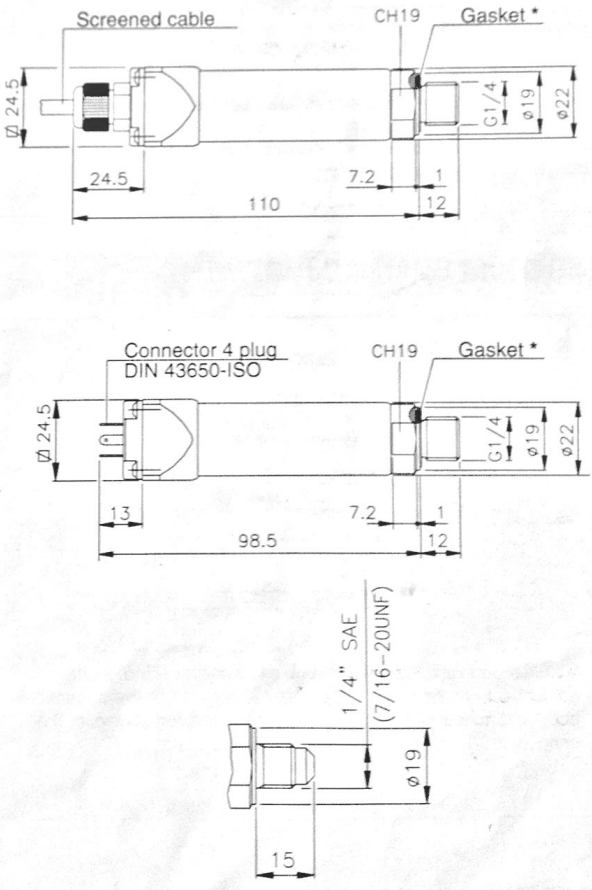
The TKF transmitters are based on the measurement principle of the strain gauge in which the primary measuring elements are not glued but deposited directly on the reaction diaphragm using a thick film serigraphic process.
The high stability electronic components enable the transmitters to be used in applications that require transmission of the output signal over long distances or for intelligent control systems.
The TKF pressure transmitters have been designed for pressure measurement in the field of industrial refrigeration and HVC.
They are also used for monitoring and control in a wide range of mechanical installations.

TECHNICAL DATA

Output signal		VOLTAGE	CURRENT
Class of sensor		H = 0,5%	M = 1%
Resolution		Infinite	
Range of measurement		from 0-7 to 0-500bar	
Max. applicable pressure (20sec without degradation of the specific.)		2 times rated Full Scale	
Rupture pressure		3 times rated FSO (max.1000bar)	
Supply voltage		15...30Vdc	10...30Vdc
Maximum current drain		12mA	32mA
Isolation resistance at 50Vdc		>1000MΩ	
Output at nominal pressure **H** = ± 0,5% FSO **M** = ± 1% FSO		B 5,1Vdc C 10,1Vdc M/P 5Vdc N/Q 10Vdc	E 20mA
Output at ambient pressure **H** = ± 0,5% FSO **M** = ± 1% FSO		B/C 0,1Vdc M/N 0 Vdc P/Q 1Vdc	E 4mA
Max. admissible load		1mA	see diagr.
Max. response time (10...90%FSO)		4 msec.	8 msec.
Output noise (RMS 10-400Hz)		<0,05% FSO	
Output short circuit and supply polarity inversion protection		YES	
Prot. against output voltage spikes		YES	NO
Compensated temperature range		-10...+70°C	
Max temperature range		-20...+80°C	
Storage temperature range		-30...+85°C	
Thermal drift in compensated range	Zero / Sensitivity	<0,02	%FSO / °C
Wetted material		1.4540/1.4016 stainless steel	
Case material		AISI 304 Stainless steel Nylon 66GF35VO	
Protection degree		IP60 connector / IP65 cable	
Electrical connections	mod. F	Shielded cable	
	mod. M	DIN43650-ISO4400 4p conn.	

FSO = Full Scale Output (output signal at nominal pressure)

MECHANICAL DIMENSIONS

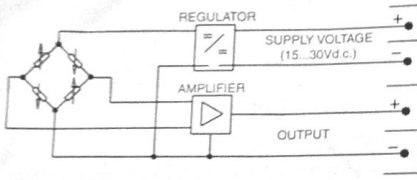


* Only for range of measurement: 7, 10, 30 BAR

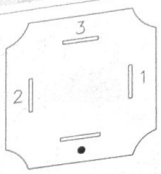
WARNING: for installation apply a maximum tightening torque of 20Nm.

ELECTRICAL CONNECTIONS

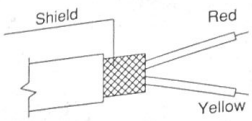
VOLTAGE AMPLIFIED OUTPUT - mod. B/C/M/N



	code V	code P	code F	code M
+	C	1	White	3
−	D	2	Green	•
+	A	3	Red	1
−	B	4	Yellow	2

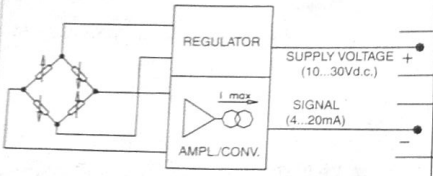


DIN43650 - ISO4400
4-pole connector

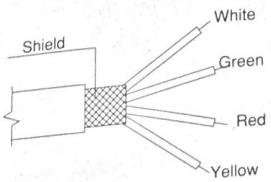


2x0,25 2m.
Shielded cable

CURRENT AMPLIFIED OUTPUT (4...20mA 2wires) - mod. E



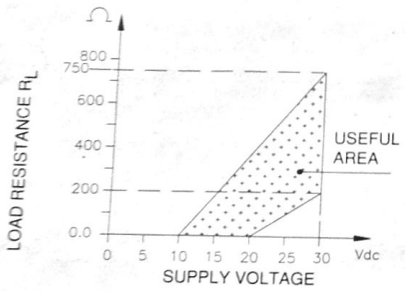
	code V	code P	code F	code M
+	A	3	Red	1
−	B	4	Yellow	2



4x0,25 1m.
Shielded cable

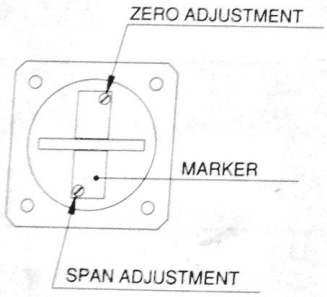
The cable shield is isolated from the transmitter body and it is advisable to ground it on the instrument side.

LOAD DIAGRAM



The diagram shows the optimum ratio between the load and supply voltage of the 4-20mA transmitter.
For a correct use, choose any combination of load resistance and supply voltage, in the shaded area.

ZERO and SPAN ADJUSTMENT



Nominal pressure (Span) and ambient pressure (Zero) signal adjustment can be made by relative trimpots inside the transmitter body and accessible after removing the four fixing screws of the connector.

ORDER CODE

Pressure transmitter **TKF** □ □ □ □ □

OUTPUT SIGNAL	
0,1...5,1Vdc	B
0,1...10,1Vdc	C
4...20mA (2-wires)	E
0...5Vdc	M
0...10Vdc	N
1...5Vdc	P
1...10Vdc	Q

PRESSURE FITTING	
THREAD	
G 1/4 male	1
1/4" SAE (7/16-20UNF)	2

ELECTRICAL CONNECTIONS	
Shielded cable	F
4 pole connector DIN43650 - ISO4400	M

MEASUREMENT RANGE bar	
0 - 7	7U
0 - 10	1D
0 - 30	3D
0 - 50	5D
0 - 100	1C
0 - 200	2C
0 - 350	3,5C
0 - 500	5C

ACCURACY CLASS	
0,5%	H
1%	M

Ex.: **TKF - E - 1 - F - 1D - M**
Pressure transmitter TKF, pressure fitting G1/4 male, 4x0,25 1m. shielded cable output, range 0...10bar; accuracy class 1%.