

# Compression force transducer

## Miniature design to 5 kN

### Model F1818

WIKA data sheet FO 51.58

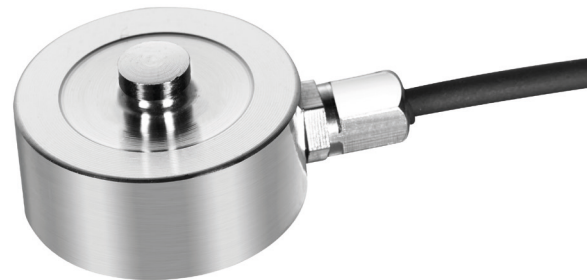
# EAC

## Applications

- Equipment manufacturing, production lines
- Measuring and control systems
- Automation industry
- Materials testing machinery
- Tooling manufacture

## Special features

- Measuring ranges 0 ... 50 N to 0 ... 5 kN
- Relative linearity error 0.5 %  $F_{nom}$
- Stainless steel version
- Low installation height, easy to install
- Ingress protection IP65



Miniature compression force transducer, model F1818

## Description

The miniature model F1818 compression force transducer is suitable for measuring static and dynamic compression forces to 5 kN.



The low overall height and small external diameter enable simple installation in machinery or test instruments and they can therefore be used in the widest variety of industrial areas. With this, it is also ideally suited for the measurement of compression forces in areas where installation space is critical.

Fields of application include test rigs for a variety of purposes, monitoring and control of manufacturing processes, in test facilities and laboratories.

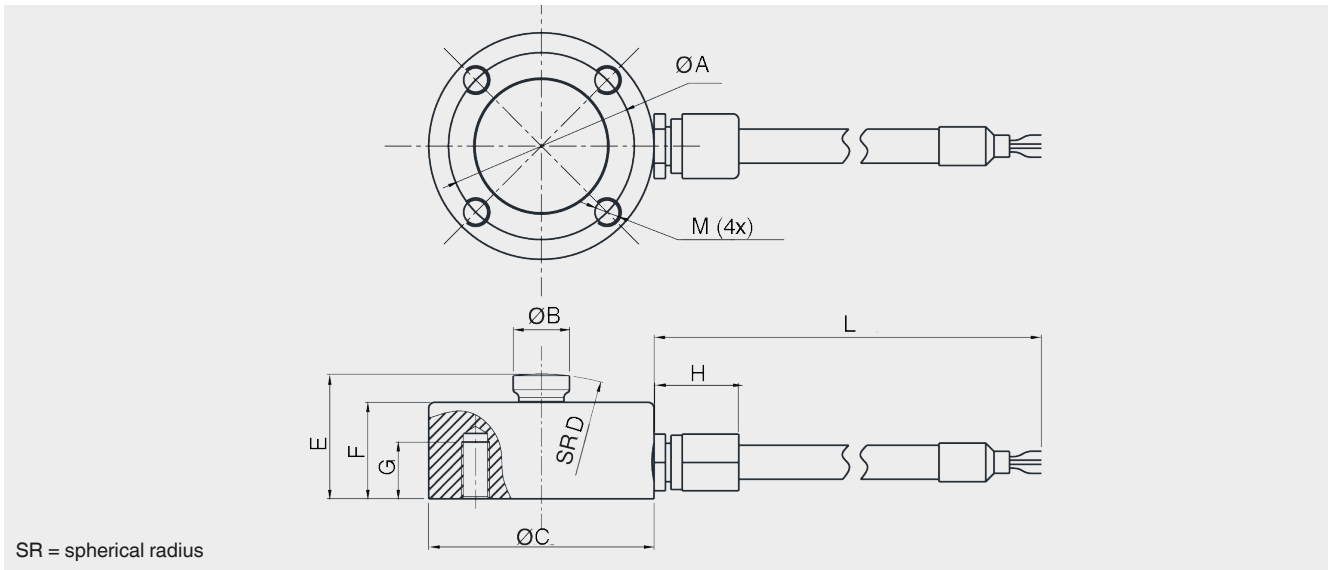
## Specifications per VDI/VDE/DKD 2638

Model F1818							
Rated force $F_{nom}$ kN	0.05	0.1	0.2	0.5	1	2	5
Rated force $F_{nom}$ lbf	11.24	22.5	45	112	225	450	1,124
Relative linearity error $d_{lin}$	0.5 % $F_{nom}$						
Relative reversibility error $v$	0.5 % $F_{nom}$						
Relative span in unchanged mounting situation $b_{rg}$	0.1 % $F_{nom}$						
Relative deviation of zero signal $d_{S,0}$	$\pm 2$ % $F_{nom}$						
Limit force $F_L$	150 % $F_{nom}$						
Breaking force $F_B$	200 % $F_{nom}$						
Material of the measuring body	Stainless steel						
Service temperature range $B_{T,G}$	-20 ... +80 °C [-68 ... +176 °F]						
Input resistance $R_e$	350 $\pm$ 10 $\Omega$						
Output resistance $R_a$	350 $\pm$ 5 $\Omega$						
Insulation resistance $R_{is}$	$\geq$ 5,000 M $\Omega$ /DC 100 V						
Output signal (rated characteristic value) $C_{nom}$	1.5 $\pm$ 0.15 mV/V						
Electrical connection	Cable $\varnothing$ 2 x 3,000 mm [ $\varnothing$ 0.1 in x 118 in]						
Voltage supply	DC 5 V (max. 10 V)						
Ingress protection (per IEC/EN 60529)	IP65						
Weight	0.1 kg [0.22 lbs]						

## Approvals

Logo	Description	Country
	EU Declaration of Conformity	European Union
	EMC Directive	
	RoHS Directive	
	EAC (Option)	Eurasian Economic Community
	EMV-Directive	

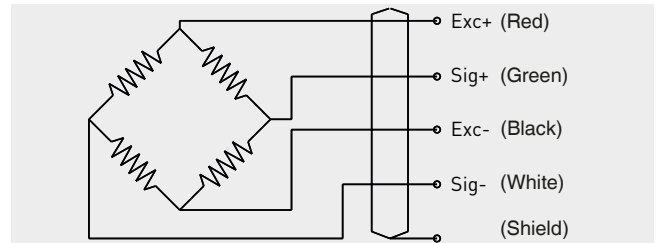
## Dimensions in mm [in]



Rated force in kN [lbf]	Dimensions in mm [in]									
	ØA	ØB	ØC	SR D	E	F	G	H	L	M
0.05 [11.24] / 0.1 [22.5] / 0.2 [45] / 0.5 [112] / 1 [225] / 2 [450] / 5 [1,124]	16.5 [0.65]	5 [0.19]	20 [0.79]	20 [0.79]	11 [0.43]	8.5 [0.33]	5 [0.19]	7.5 [0.26]	3.000 [118]	M2.5

## Pin assignment

Electrical connection	
Excitation voltage (+)	Red
Excitation voltage (-)	Black
Signal (+)	Green
Signal (-)	White
Shield ⊕	Shield



© 08/2019 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.  
The specifications given in this document represent the state of engineering at the time of publishing.  
We reserve the right to make modifications to the specifications and materials.

