

QUADRO-G[®]

Measurement of vibration, acceleration and inclination



The Quadro-G is a capacitor based sensor for measurement of vibration, acceleration or inclination. It has a round sensing head and is mounted in a compact square polycarbonate housing with a well secured cable or connector.

Thanks to its right-angled sides, it has a very high rigidity. The vulnerable electronics is mounted in a flexible filling compound. As a result, the sensor is highly resilient to shock and vibration.

The Quadro-G sensor can be customized to your specific requirements. Options are:

- Acceleration from 0...0,5G to 0...12G
- Inclination single or dual axis, $\pm 10^\circ$, 30° and 90°
- Specific output configuration (analog, voltage/ current, digital)
- Specific cable or connector
- Self-test function
- Adjustable switch levels

APPLICATIONS

- Acceleration measurement
- Inclination measurement
- Motion measurement
- Vibration measurement
- Condition monitoring
- Position control

FEATURES

- Broad range of application areas
- Simply adjustable to your needs
- Very compact, simple mounting
- Self test function
- Reverse polarity protection
- Resilient to shock and vibration
- Direct connection to PLC's
- Secure cable entry
- IP68

Technical data

Functional

Measuring ranges	
Acceleration	$\pm 1,5G$ to $\pm 12G$ FSD
Inclination	Single or dual axis $\pm 10^\circ$, 30° and 90°
Measuring plane	Horizontal (X & Y) and Vertical (Z axis)
Sensitivity error	High Accuracy model $\pm 0,5\%$ FS Standard model $\pm 2,5\%$ FS
Frequency response	Digital 11 bits
	Range 0..0,5G 18 ± 8 Hz (inclinometer)
	Range 0..1,0G 18 ± 8 Hz
	Range 0..1,0G 400 ± 150 Hz (accelerometer)
	Range 0..2,7G 400 ± 150 Hz
	Range 0..12 G 400 ± 150 Hz



Electrical

Power supply		10 - 30	Vdc (5 Vdc as option)
Current consumption		Typical	5 mA (excl.LED)
		Max.	7 mA (excl.LED)
Output	single axis	0,5 – 4,5 V	
		1 – 9 V	
	dual axis	4 – 20 mA	
		2 x 0,5 – 4,5 V	
		2 x 4 – 20mA	
		2 x SPI (serial interface)	

Environmental conditions

Temperature range	-25 to 85 °Celsius
Protection	IP68

Mechanical

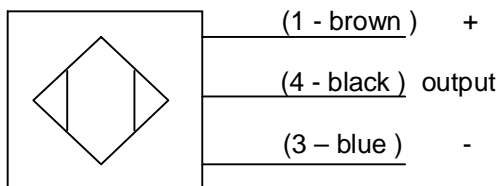
Material housing	polycarbonate black
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Connection

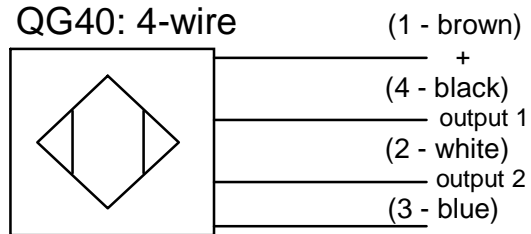
Cable	PVC 3*0,34 mm ² (3-wire)
	PVC 4*0,34 mm ² (4-wire)
	Standard length: 2 m
Connector	M8 or M12

Connection diagrams

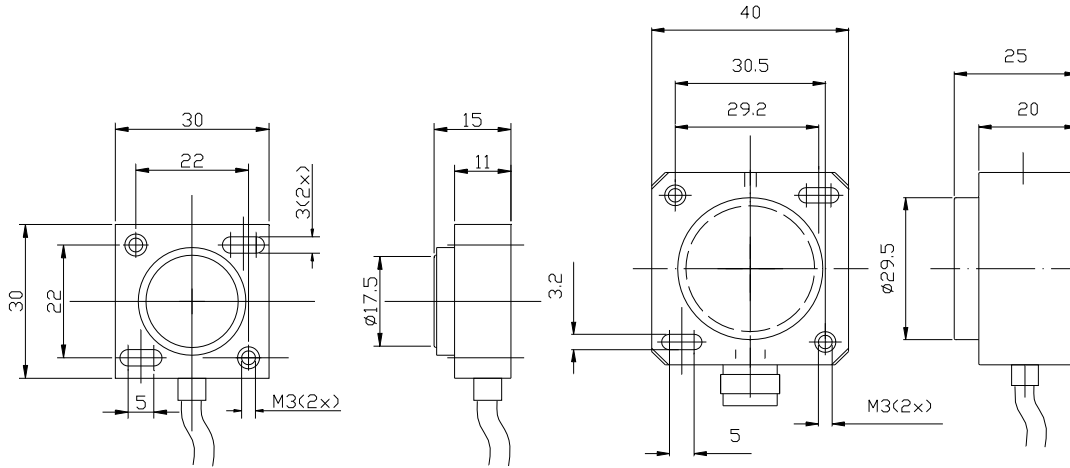
QG30: 3-wire



QG40: 4-wire



Dimensions



Ordering info

Quadro-G identification code

I = Single axis inclination
D = Dual axis inclination
A = Acceleration

flange size

G-sensor

QG 30

Material housing:

K=Polycarbonate
M=Metal (AL...
S=Stainless Steel

Sensitive direction

Measuring range:

010 = +/- 10 degrees
030 = +/- 30 degrees
090 = +/- 90 degrees
360 = full rotation
...G = Max acceleration

H = High accuracy

Cable length in m if not standard 2m

Connection:

K = 2m PVC cable
P = 2m PUR cable
C = M12 connector

Output configuration:

AV = Analog Voltage 0,5 - 4,5 V
AV2= Analog Voltage 1 - 9 V
AI = Analog 4 - 20 mA
AS = Switching 2 x NPN 50 mA
SPI = Serial perifial interface
I2C = Bus interface
CAN = CANopen interface

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