

Crank angle encoder set

Type 2614CK...

Precise angle signals from 0 ... 12 000 1/min

The Crank Angle Encoder Set, Type 2614CK..., provides the reference for all measurements related to the crank angle. It is typically used for combustion analysis applications on engines.

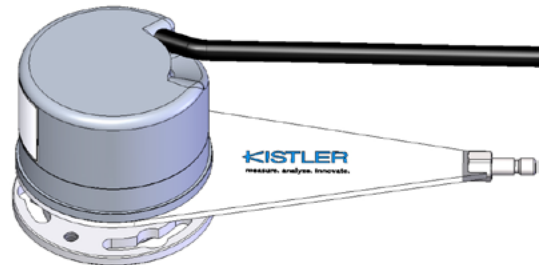
- Speed range 0 ... 12 000 1/min
- Auto adjustment of encoder and electronics
- Suitable for start measurements

Description Type 2614CK...

The Crank Angle Encoder Set consists of an angle encoder and a separate electronics module which can be used on a variety of engines in combination with all data acquisition systems with LVDS or TTL signal input. The fact that the encoder functions from standstill enables it to be used to conduct engine start measurements. Such applications include accurate measurements during the starting of test vehicles and in a low temperature test chamber. The optical sensor provides a resolution of 720x0,5°. The set Type 2614CK1, can be directly connected to the Kistler KiBox or other indicating systems using LVDS input. For indicating systems with TTL input we recommend Type 2614CK0. A matching connecting cable is available in our range of optional accessories. In contrast to other methods, optical crank angle encoders provide maximum accuracy over a wide speed range and the highest level of interference immunity.

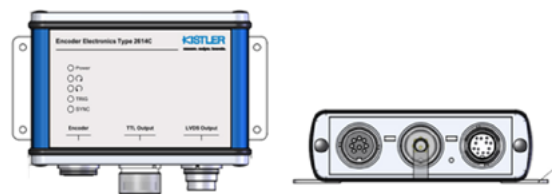
Applications

Combustion analysis data is generally represented on the basis of degrees [°] of crank angle. The crank angle encoder provides an angular and a TDC relationship, necessary for the calculation of any crank angle based result related to a combustion cycle (e.g. indicated mean effective pressures or maximum pressures). Its application is universal.



Technical data of crank angle encoder Type 2614C11

Crank angle signal	°	720x0,5
Speed range	1/min	0 ... 12 000
Temperature rang	° C	-40 ... 85
Mechanical Interface/Mounting diameter (mounting compatibility to Type 2614B1)	mm	60
Electrical connection		cable with plug l = 2 m
Weight	g	340



Technical data of encoder electronics Type 2614C21

Control and indication LED's	-	Power
	-	Rotation cw ¹ /ccw ²
	-	Trigger
	-	Synchronization
Output signal to indicating system	-	LVDS-Signal
	-	TTL-Signal
Power supply	VDC	5 ... 30
Temperature range	°C	-30 ... 70
Dimensions	mm	108x74x36
Weight	g	290

¹ clockwise

² counter clockwise

2614CK_003-049e-02_19



Angle Encoder set Type 2614CK...

This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

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Mounting/mechanical adaption of the encoder

The angle encoder must be mounted directly on the free end of the crankshaft, sufficiently rigidly to prevent slipping under torsion. This is achieved by providing the extension with a matching flange with three holes (Fig. 1). To avoid vibration

the encoder must also be centered very accurately. It can be mounted at any position. Its case must then be attached to a rigid part of the engine with an arm and a rod.

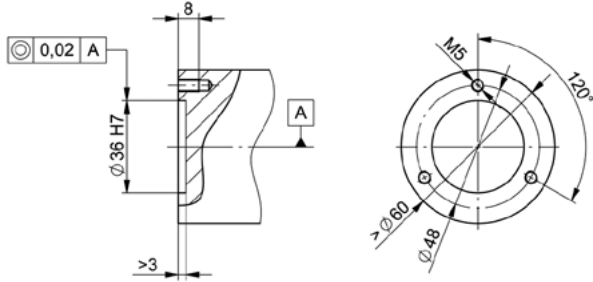


Fig. 1: Mounting flange for installing crank angle encoder Type 2614C11

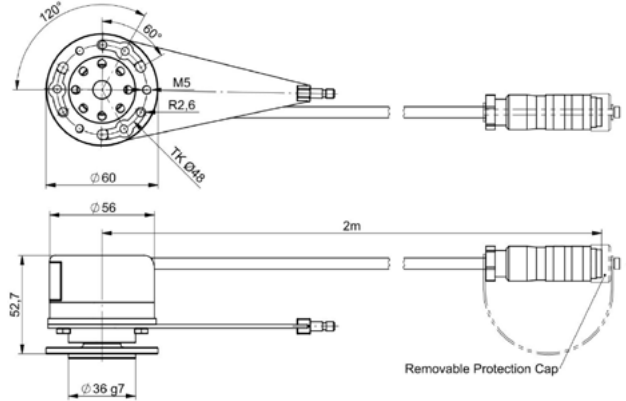


Fig. 2: Dimensions of crank angle encoder Type 2614C11

Installation of the crank angle encoder set 2614CK1

System setup with LVDS output

System setup with TTL output

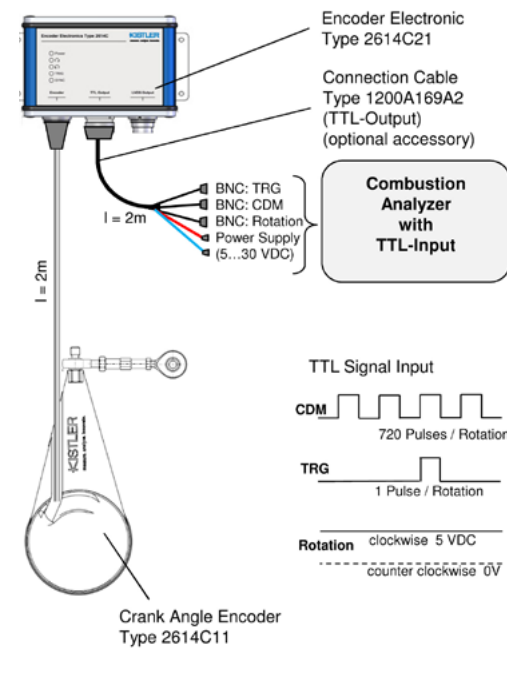
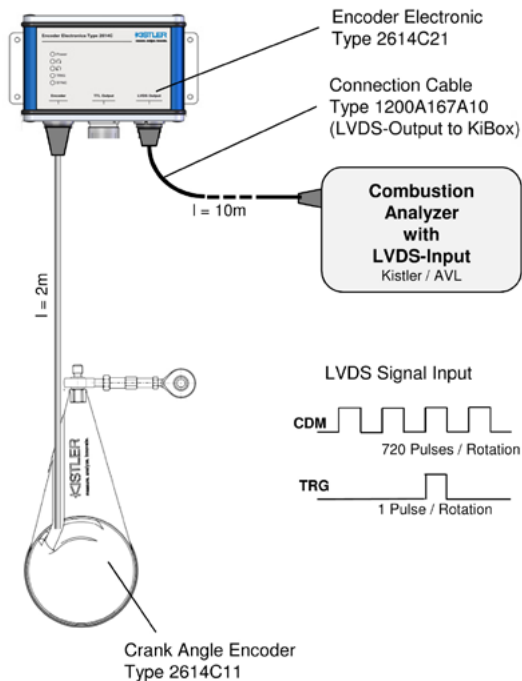


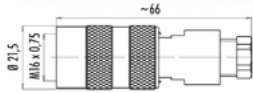
Fig. 3: Crank angle encoder set Type 2614CK1

Fig. 4: Crank angle encoder set Type 2614CK0 with TTL connecting cable Type 1200A169A2 (optional accessory)

2614CK_003-049e-02_19

Included accessories

- Crank Angle Encoder
- Encoder Electronic
- LVDS Connecting cable (L = 10 m), only for Type 2614CK1
- Cable connector for TTL-interface at 2614C21, only for Type 2614CK0



Type
2614C11
2614C21
1200A167A10
55138869

Ordering key

Crank angle encoder set

Excl. LVDS connecting cable Type 1200A167A10	0
Incl. cable connector for TTL-interface at 2614C21	
Incl. LVDS connecting cable Type 1200A167A10	1

Type 2614CK

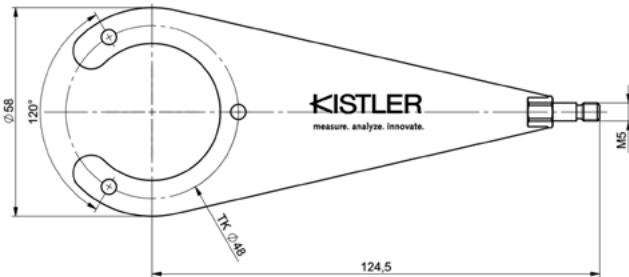
Optional accessories

- TTL connecting cable (l = 2 m)
incl. AC adapter 24 VDC for
power supply of 2614C21
- BNC extension cable (L = 5 m)
- BNC extension cable (L = 10 m)
- Adapter flange for Type 2613B
- Cable connector for TTL-interface
at 2614C21
- Torque arm replacement set
to crank angle encoder Type 2614C11

Type/Art. No.
1200A169A2

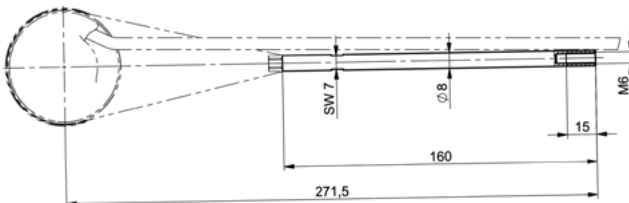
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1603B10
3.710.168
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2614CZ1



- Extension rod, retrofit set
to crank angle encoder Type 2614C11,
replacement compatible to AVL
crank angle encoder Type 365C

2614CZ2



2614CK_003-049e-02_19