

Type 01-09

- Optical Shaft Encoder
- ATEX / IECEx / UKCA
- Resolution 1 to 400
- 1 to 3 output channels



The incremental shaft encoder 01-09 series has been designed for heavy-duty applications, especially for use in environments where potentially explosive atmospheres can be expected. This makes the 01-09 especially suitable for use in petrol, LPG and diesel dispensing systems.

The rugged and compact construction is also an advantage in other applications such as machine control and monitoring.

Electrical Specification (generic)	
Type	Incremental
Resolution	1 to 400 pulses/rev.
Supply Voltage VCC	Fixed: 5/12/24V _{DC} Variable: min. 4.5V _{DC} to max. 25V _{DC}
Current consumption	1ch. typ. 15mA 2ch. typ. 25mA 3ch. typ. 35mA
Output Voltage V_o	Low: V _{OL} < 0.8V _{DC} High: V _{OH} > 0.9*VCC
Output current I_o	I _o max. 30mA load per channel
Output formats dc: duty cycle ps: phase shift	1ch. dc: 50% 2ch. Quadrature dc:50% / ps:25% 2ch. 500µS oneshot ps:50% 3ch. dc:50% / ps:33%/0%
Duty-cycle accuracy	40% ≤ dc ≤ 60%
Phase Shift accuracy 2channels	ps: (90°) 20% ≤ dc ≤ 30%
Phase Shift accuracy 3channels	ps: ch1→ch2: (90°) 28% ≤ ps ≤ 38% ps: ch2→ch3: (0°) -5% ≤ ps ≤ 5%
Output types	NPN / PNP / TOT
Output options	Pullup resistor 1k / 3k3 / 4k7 Pulldown resistor 1k / 3k3 / 4k7
Electrical Protection	Reverse polarity protected
Noise Immunity	EN 61000-6-4:2007 / A1:2011 EN 61000-6-2:2005
Labels	Marking plate Wire connection label

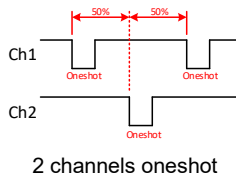
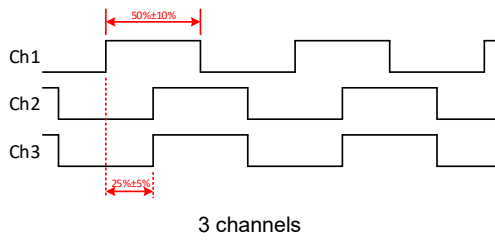
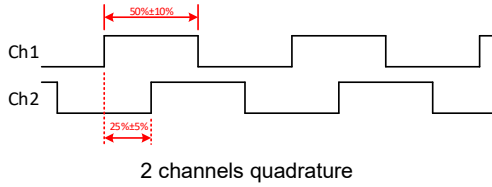
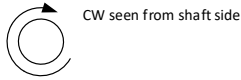
Approvals and EX marking	
Flameproof enclosure	ATEX / IECEx / UKCA II 2 G Ex db IIB T6 Gb
MID	Parts certificate: TC8656 Parts certificate: ZR 140/17-0158 Parts certificate: ZR 141/21-0217

Mechanical Specification	
Material enclosure	Housing: Aluminium Cover: Aluminium
Material shaft coupling	Brass / Stainless steel / POM plastic
Bearing	Self-lubricating bronze
Weight	≈310g incl. 2m. cable
Shaft speed	Max. 1000rpm
Sealing	1 screw in cover
Mounting	4 x M4 screws

Environmental Specification	
Approved Temp.	-30°C to +60°C

Connection options	
Cable	4wires 0.25mm ² shielded 6wires 0.25mm ² shielded 4wires 0.25mm ² armoured and shielded

Output waveform



Code Disc resolution or software resolution

1	10	20	25	32
50	64	100	125	200
400				

Accessories

Kits for mechanical registers

With printer
Without printer

Cover aluminium



Cover aluminium small



Mounting brackets

Convert encoder 01-07 to 01-09

Shaft coupling many variants



Mechanical Deminsions

