



Absolute encoders ARS60 SSI/Parallel

ARS60-F4B01440



Model Name > [ARS60-F4B01440](#)
Part No. > [1034790](#)



At a glance

- Absolute singleturn encoder
- Resolution: up to 15 bits (32,768 increments)
- Electrical interface: SSI with gray code type or gray capped
- Electrical interface: Parallel with gray, gray capped, binary, BCD code type
- Zero-set function
- Mechanical interfaces: face mount flange, servo flange, blind and through hollow shaft
- Enclosure rating: Up to IP66

Your benefits

- Freely programmable resolution (up to 15 bits)
- Simple zero adjustment directly by press of a button on the encoder or via signal line (cable version)
- Suitable for all mounting methods thanks to individual mechanical interfaces
- A basic device for flexible use thanks to simple interchangeable collets for blind hollow shaft and through hollow shaft
- Versions with cable and M23 connector outlet available in axial and radial designs



Performance

Max. number of steps per revolution:	1,440
Max. number of revolutions:	1
Resolution power:	1,440 x 1
Error limits:	0.035 ° (binary number of steps) 0.046 ° (non-binary number of steps)
Repeatability (Ta not constant):	0.005 °
Measuring step deviation:	0.005 °, 0.016 °
Measuring step:	360 ° /number of lines
Initialization time:	80 ms ¹⁾

¹⁾ Valid positional data can be read once this time has elapsed

Mechanical data

Mechanical interface:	Solid shaft, Face mount flange
Shaft diameter:	10 mm
Mass:	0.3 kg
Start up torque:	0.4 Ncm
Operating torque:	0.3 Ncm

Permissible Load capacity of shaft:	20 N (radial) 10 N (axial)
Maximum operating speed:	10,000 /min (without shaft seal) 6,000 /min (with shaft seal) ¹⁾
Moment of inertia of the rotor:	54 gcm ²
Bearing lifetime:	3.6 x 10 ⁹ revolutions
Max. angular acceleration:	500,000 rad/s ²
Operation of zero-set:	≥ 100 ms ²⁾

¹⁾ If the shaft seal has been removed by the customer ²⁾ Only with shaft stationary (note initialisation time)

Electrical data

Operating voltage range:	10 V DC ... 32 V DC
Operating power consumption (no load):	90 mA

Interfaces

Electrical interface:	Connector M23, 21-pin, axial
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Ambient data

EMC:	According to EN 61000-6-2 and EN 61000-6-3 ¹⁾
Enclosure rating:	IP 65, according to IEC 60529, with mating connector fitted
Permissible relative humidity:	90 % (condensation of the optical scanning not permitted)
Working temperature range:	-20 °C ... 85 °C
Storage temperature range:	-40 °C ... 100 °C
Resistance to shocks:	50 g (according to EN 60068-2-27)
Resistance to vibration:	20 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)

¹⁾

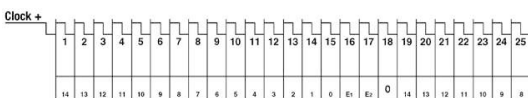
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1	PN	Leistungsbühnung	Rinder	Gray	BCD	Erklärung
2	1	Violett	2 ⁿ	Q ₃	2 ⁿ × 10 ³	
3	2	Wachsbraun	2 ⁿ	Q ₄	2 ⁿ × 10 ²	
4	3	Wachgrün	2 ⁿ	Q ₅	2 ⁿ × 10 ¹	
5	4	Wachgelb	2 ⁿ	Q ₆	2 ⁿ × 10 ⁰	
6	5	Wachgrau	2 ⁿ	Q ₇	2 ⁿ × 10 ⁻¹	
7	6	Wachrosa	2 ⁿ	Q ₈	2 ⁿ × 10 ⁻²	
8	7	Wachblau	2 ⁿ	Q ₉	2 ⁿ × 10 ⁻³	
9	8	Wachrot	2 ⁿ	Q ₁₀	2 ⁿ × 10 ⁻⁴	
10	9	Wachschwarz	2 ⁿ	Q ₁₁	2 ⁿ × 10 ⁻⁵	
11	10	Braun/grün	2 ⁿ	Q ₁₂	2 ⁿ × 10 ⁻⁶	
12	11	Braun/gelb	2 ⁿ	Q ₁₃	2 ⁿ × 10 ⁻⁷	
13	12	Braun/rot	2 ⁿ	Q ₁₄	2 ⁿ × 10 ⁻⁸	Datenleitungen, Abgriffe
14	13	Braun/rosa	2 ⁿ	Q ₁₅	2 ⁿ × 10 ⁻⁹	
15	14	Braun/blau	2 ⁿ	Q ₁₆	2 ⁿ × 10 ⁻¹⁰	
16	15	Braun/rot	2 ⁿ	Q ₁₇	2 ⁿ × 10 ⁻¹¹	
17	16	Grün	Parity	Parity	Parity	
18	17	Rosa	Store ₁	Store ₂	Store ₃	
19	18	Gelb	Enable ₁	Enable ₂	Enable ₃	
20	19	Braun	V/R ₁	V/R ₂	V/R ₃	
21	20	Grün	SET	SET	SET	
22	21	Blau	GND	GND	GND	
23	22	Rosa	V ₁	V ₂	V ₃	
24	23	Grünblau	Schirm	Schirm	Schirm	

320) Messanschluss des Encoders: Gehäuseseitig liefert eine Gehäuse-Druckluft 2,5 (DIN) bar einen Spannungspegel von 1 V.

Erklärung: Dieser Eingang aktiviert die Oszillationsgeneratoren, wenn ein „Low“ Pegel anliegt. Wird die Schaltung festgelegt, dann schaltet sich der Oszillator auf „Low“. Bei „High“ Pegel an der Eingangsleitung wird der Oszillator deaktiviert.

Dieser Eingang speichert bei Anfragen einen „Low“-Finger der Erdoberflächen in Gray-Code. Dadurch wird ein Lesefehler vermieden, falls die Abgänger im Barcode gefunden werden, ist dieser Eingang auf „Low“, wird die Daten am Encoderausgang stattdessen, unabhängig davon, ob sich der Eingangswert, umschaltet liegt dieser Eingang auf „High“.



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