



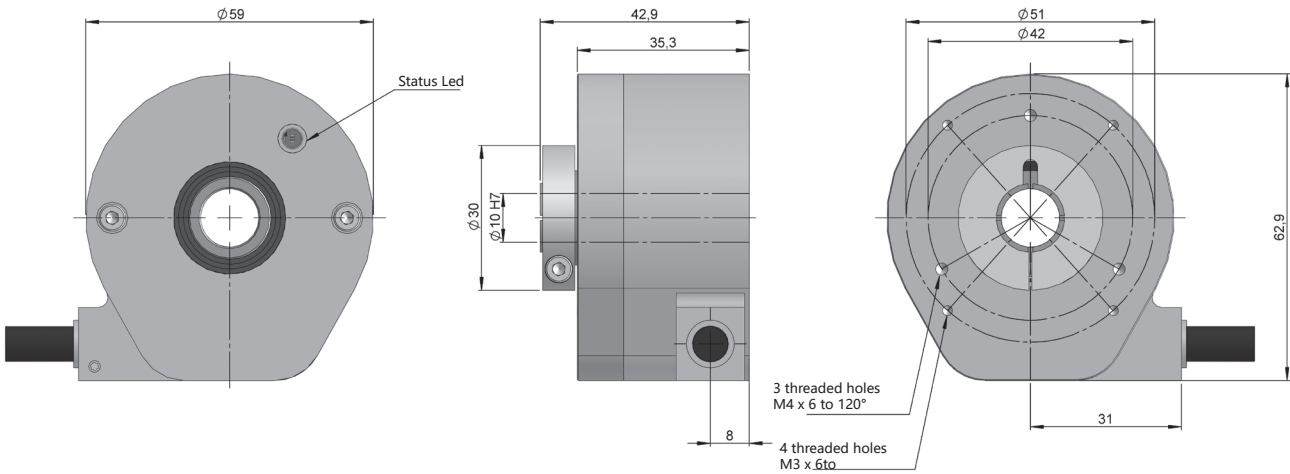
SERIE Q58 TM

MULTITURN ABSOLUTE AND INCREMENTAL HOLLOW SHAFT ENCODER

SSI SSI
SSI + Incremental

BiSS INTERFACE BiSS-C
BiSS-C + Incremental

- Singleturn resolution up to 21 bits
- Multiturn resolution up to 21 bits
- External diameter 59 mm
- Compact dimensions Ø 63 x 43 mm
- Hollow shaft Ø 8, 10, 12, 14 and 15 mm
- Protection class IP65 according to DIN EN 60529
- Connection by cable (other cable length available)



REFERENCE

Reference example: Q58TM-SSI-25134-1212

Serie	Interface	Anti-rotation system	Hollow shaft	Connection	Code	Interface / Supply Voltage	Singleturn resolution	Multiturn resolution	Special customer
Q58TM -	SSI -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	SSI, SSI	1. None	3. Ø 8 mm	1. Helicoidal cable	1. Binary CW	1. SSI, BiSS / 5...30 VDC	10. 10 bits	12. 12 bits	T00Z. Status Led
	BiSS, BiSS (*)	2. Flexible flange (90.1075)	4. Ø 10 mm		2. Binary CCW	2. SSI, BiSS + 2048 SinCos / 5...30 VDC	11. 11 bits	16. 16 bits	T01Z. Halogen-free cable
		3. Flexible flange (90.1134)	5. Ø 12 mm		3. Gray CW	3. SSI, BiSS + 2048 Push-Pull / 5...30 VDC	12. 12 bits	21. 21 bits (**)	
			7. Ø 14 mm		4. Gray CCW	4. SSI, BiSS + 2048 RS422 / 5...30 VDC	13. 13 bits		
			8. Ø 15 mm				14. 14 bits		
							17. 17 bits		
							21. 21 bits (**)		

Order your reference
Step file 3D

info@encoderhohner.com
service available in 24 h

Anti-rotation system is supplied disassembled and includes the screws required for assembly to the encoder.

(*) BiSS Interface only available with Binary Code (1/2).

(**) Any resolution up to 21 bits



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SSI/SSI + Incremental
BISS-C/BISS-C + Incremental

MECHANICAL SPECIFICATIONS

Materials	Cover: PA12-HP-Nylon Housing: Aluminium Shaft: Stainless Steel
Bearings	Ballraces
Bearings lifetime	1x10 ¹⁰ rev.
Maximum number of revolutions permitted mechanically	6000 rpm
Protection against dust and splashes according to DIN EN 60529	IP65
Rotor inertia moment	60 gcm ²
Starting torque at 20°C (68°F)	≤0,03 Nm
Maximum load permitted on axial shaft	40 N
Maximum load permitted on radial shaft	80 N
Weight aprox.	0,2 Kg
Operating temperature range	-40°C to +85°C - Standard
Vibration according to DIN EN 60068-2-6	100 m/s ² (10Hz...2000Hz)
Shock according to DIN EN 60068-2-27	1000 m/s ² (6ms)
Helicoidal connection	2 meters cable (other cable lengths available or connector mounted at the end of the cable, upon request)

STATUS OUTPUT AND LED

Electronic output	Open Collector, internal pull up resistor 20 kOhm
Permissible load	Max. 20 mA
“High” signal level	+UB / Low: < 1 V
Active	“LOW”




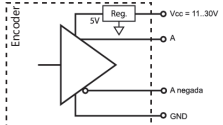
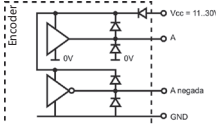
The optional LED (red) and the status output are used to display various alarm or error messages. In normal operation, the LED is OFF and the status output is HIGH (open collector with int. pull up 20 kOhm).

An active status output (LOW) displays:
- Sensor error (dirt, glass breakage, etc.)
- LED failure or ageing
- Temperature too high or too low

In SSI mode, the fault indication can only be reset by turning off the power supply.

ABSOLUTE OUTPUT

INCREMENTAL OUTPUT

Interface					
Electronic output	RS422	RS422	SIN/COS	RS422 (TTL compatible)	Push-Pull Differential
Power supply (VCC)	5...30 VDC	5...30 VDC	5...30 VDC	5...30 VDC	5...30 VDC
Consumption	≤ 80 mA	≤ 80 mA	Typical: 80 mA Max: 160 mA	Typical: 80 mA Max: 180 mA	Typical: 80 mA Max: 180 mA
Code	Binary, Gray	Binary			
Protocol	SSI	BISS-C			
Singleturn resolution	up to 21 bits	up to 21 bits	2048 ppr	2048 ppr	2048 ppr
Multiturn resolution	up to 21 bits	up to 21 bits			
Linearity	± ½ LSB	± ½ LSB			
Max. load capability / channel	±20 mA	±20 mA	20 mA	±30 mA	±30 mA
“Low” signal level	< 0,8 VDC	< 0,8 VDC	Differential 1 Vpp Offset: 2,5 VDC	Low: <0.5 VDC High: >2.5 VDC	Low: <2 VDC High: >+UB - 3 VDC
“High” signal level	2 ... 5,5 VDC	2 ... 5,5 VDC			
Frequency	50 kHz...2 MHz	50 kHz...10 MHz	100 kHz	500 kHz	500 kHz
Short circuit protection	Yes	Yes	Yes	Yes	Yes
Protection polarity inversion	Yes	Yes	Yes	Yes	Yes

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SSI/SSI + Incremental
BiSS-C/BiSS-C + Incremental

SET / DIR Input

Inputs	Active to +UB
Signal level(+V = Supply Voltage)	"HIGH" min.: 60 % of +UB, max.: +UB "LOW" max. 30 % of +UB
Inputs Current	< 10 mA

SignalSET

The encoder can be set to zero at any position by means of a HIGH signal on the SET input. Other preset values can be factory-programmed. The SET function should be carried out whilst the encoder is at rest. If this input is not used, it should be connected to 0 V (Encoder ground GND) in order to avoid interferences.

Signal DIR

A high signal switches the direction of rotation from the default CW to CCW. If this input is not used, it should be connected to 0 V (Encoder ground GND) in order to avoid interferences.

CONNECTION



	Cable 6x2x0,14 mm ² Up to 100°C 95.0008072 (**)		Cable 6x2x0,14 mm ² Halogen-free cable up to 90°C 95.0008073 (**)	
	BISS/SSI	BiSS/SSI + INC	BISS/SSI	BiSS/SSI + INC
GND	White (WH)	White (WH)	White (WH)	White (WH)
+UB	Brown (BN)	Brown (BN)	Brown (BN)	Brown (BN)
DT+	Pink (PK)	Pink (PK)	Pink (PK)	Pink (PK)
DT-	Grey (GY)	Grey (GY)	Grey (GY)	Grey (GY)
CK+	Yellow (YE)	Yellow (YE)	Yellow (YE)	Yellow (YE)
CK-	Green (GN)	Green (GN)	Green (GN)	Green (GN)
DIR	Red (RD)-Blue (BU)	Red (RD)-Blue (BU)	Red (RD)-Blue (BU)	Red (RD)-Blue (BU)
SET	Grey (GY)-Pink (PK)	Grey (GY)-Pink (PK)	Grey (GY)-Pink (PK)	Grey (GY)-Pink (PK)
A (cos)		Red (RD)		Red (RD)
B (sin)		Black (BK)		Black (BK)
\bar{A} (cos)		Blue (BU)		Blue (BU)
\bar{B} (sin)		Violet (VT)		Violet (VT)
STAT	Violet (VT)		Violet (VT)	
Case (*)	Shield	Shield	Shield	Shield

(*) Shield connected to the encoder housing. It is recommended to connect the end of the wire shield to the ground of the equipment where the encoder is connected. \perp

(**) The recommended maximum cable length is 10 meters. The 95.0008073 cable for special customer T10Z.



Cable length	< 25 m	< 50 m	< 100 m	< 200 m	< 400 m
Transmission speed	< 1 MHz	< 400 kHz	< 300 kHz	< 200 kHz	< 100 kHz



Cable length	< 10 m	< 25 m	< 60 m	< 100 m
Transmission speed	< 10 MHz	< 5 MHz	< 2 MHz	< 1 MHz

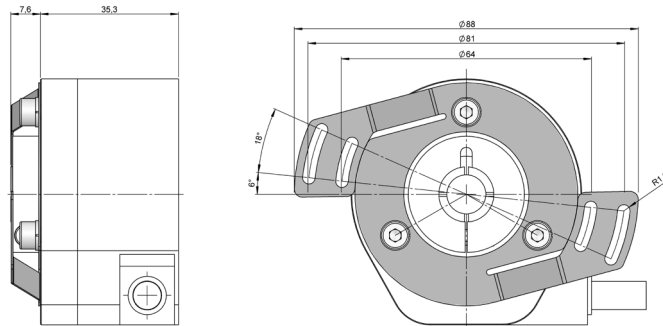
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SSI/SSI + Incremental
BiSS-C/BiSS-C + Incremental

ANTI-ROTATION SYSTEMS DIMENSIONS

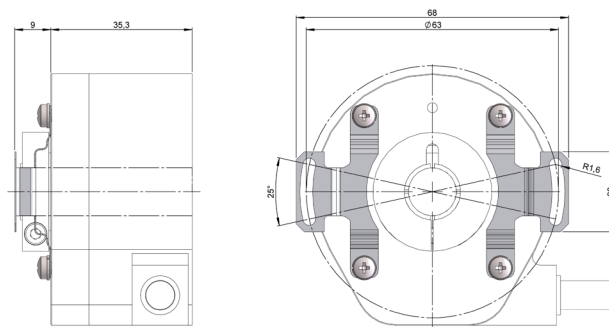
Anti-rotation
system 2
Flexible flange
90.1075



90.1075



Anti-rotation
system 3
Flexible flange
90.1134



90.1134

