AS 581

Absolute Solid Shaft Encoder

CHARACTERISTICS

- *Industrie Standard Size 58 mm*
- *Syncro Flange Mounting*
- *Shaft Diameter from 6 to 12 mm*
- *Resolutions from 1 to 13 Bit Parallel (Gray or Binary)*
- *Resolutions from 1 to 16 Bit SSI (Gray or Binary)*
- *Supply Voltage 5 VDC, 8 to 30VDC or 10 to 30 VDC*

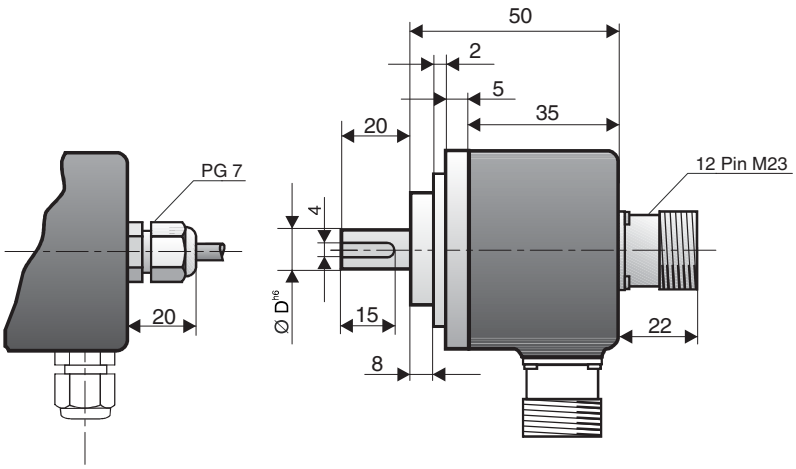
MECHANICAL SPECIFICATIONS

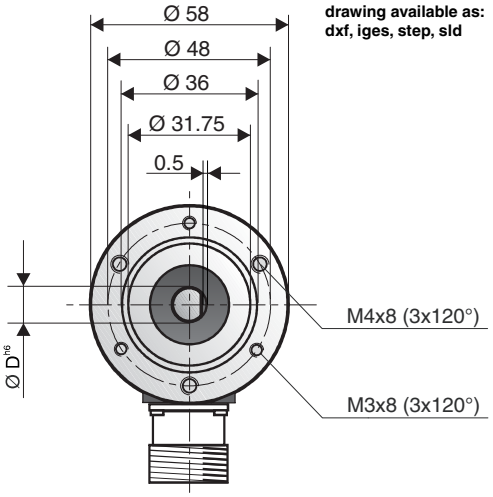
Cover & Body	Aluminum
Shaft	Stainless Steel
max. Speed	6000 RPM
Mass moment of inertia	≤ 2.5 · 10^{-6} kgm²
Starting Torque *(at 25°C)*	> 0.05 Nm
max. Loading on Shaft	Axial 40 N, Radial 30 N
Shock resistance *(6 ms)*	≤ 2000 m/s²
Vibration resistance *(55 - 2000 Hz)*	≤ 300 m/s² *(Cable)*
	≤ 150 m/s² *(Plug)*
Protection Rate *(DIN EN 60529)*	IP 65
Operating Temperature	-20° C to +70° C
	+100° C *(optional)*
Weight	ca. 0.25 kg

RoHS Compliant CE

DIMENSIONS

Dimensions in mm





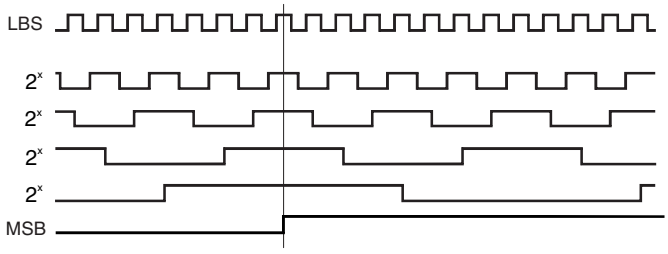
drawing available as: dxf, iges, step, sld

D = Shaft Diameter (see ordering code)

ELECTRICAL SPECIFICATIONS PARALLEL OUTPUT

Supply Voltage	5 VDC , 8 - 30 VDC
Current Consumption *(no load)*	max. 100 mA
Output Circuit	Push-Pull, TTL
Pulse frequency	max. 200 kHz
Signal Level (high)	Vcc - 0.7 Volt
Signal Level (low)	max. 0.25 Volt
Direction Setting DIR <->	DIR = NC→cw, DIR = GND→ ccw
Short Circuit Protection	100%
Reverse polarity protection per channel	100%

SIGNALS PARALLEL OUTPUT



Parallel Gray Code shown - Parallel Binary code also available

All information without guarantee, errors and changes reserved.

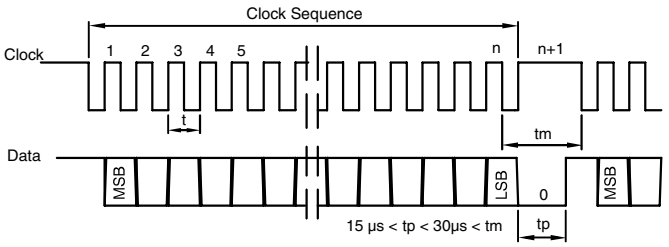
CONNECTIONS PARALLEL OUTPUT

Function	Cable Code	16 Pin M23 Plug	Function	Cable Code	16 Pin M23 Plug
GND	white	01	2^6	black	09
Vcc	brown	02	2^7	violet	10
2^0	green	03	2^8	grey/pink	11
2^1	yellow	04	2^9	red/blue	12
2^2	grey	05	2^{10}	white/green	13
2^3	pink	06	2^{11}	brown/green	14
2^4	blue	07	2^{12}	white/yellow	15
2^5	red	08	DIR <->	yellow/brown	16

ELECTRICAL SPECIFICATIONS SSI OUTPUT

Supply Voltage	5 VDC , 10 - 30 VDC
Current Consumption *(no load)*	max. 85 mA@27 VDC
Output Circuit	RS485/RS422 compatible
Pulse frequency	max. 500 kHz
Direction Setting DIR <->	DIR = GND→cw, DIR = Vcc→ ccw
Preset/Reset Setting	Set: Preset = Vcc for 2s
	Rset: Preset = GND
Short Circuit Protection	100%
Reverse polarity protection per channel	100%

SIGNALS SSI OUTPUT



SSI Single Transmission Protocol

CONNECTIONS SSI OUTPUT

Function	Cable Code	12 Pol M23 Plug
GND	white	01
Vcc	brown	02
SSI Clock +	green	03
SSI Clock -	yellow	04
SSI Data +	grey	05
SSI Data -	pink	06
Reset/Preset [*1]	blue	07
Direction Setting/DIR	red	08

Notes:

[*1] Vcc for 2 seconds to reset. Connect to GND for normal operation.

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AS 581

Absolute Solid Shaft Encoder

ORDERING CODE

AS	581	-							-						-	Sxxx [*2]
a	b		c	d	e	f	g	h								

Parallel Output: Resolution from 1 to 13 Bit available
SSI Output: Resolution from 1 to 16 Bit available

a **Group Function**
AS = Absolute Solid Shaft

b **Basic Series Number**
581

c **Shaft Diameter D**
selectable from 6 to 12 mm
08 = 8 mm, 10 = 10 mm, 12 = 12 mm

d **Mechanical Option**
0 = None
4 = Stainless Steel
Y = Blind Hole Hollow Shaft

e **Connection Type**
0 = 2 m Cable , 7 = 12 Pin M23 Plug
8 = 16 Pin M23 Plug

f **Connection Location**
A = Axial , R = Radial

g **Output Signals**
E = Binary Code Parallel
F = Gray Code Parallel
J = Binary Code SSI
Y = Gray Code SSI

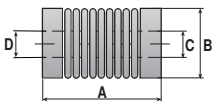
h **Output Circuit Type / Supply Voltage**
1 = Parallel / TTL 5 VDC
5 = Parallel / Push-Pull 8 to 30 VDC
F = SSI / 5 VDC
G = SSI / 10 to 30 VDC

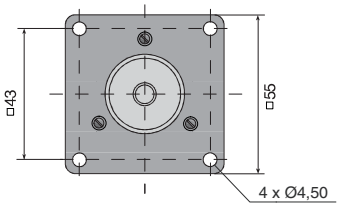
Notes:
[*2] Any special functions and design will be designated by a 4 digit code (Sxxx) at the end of the part number.
Consult our Office for your region for further details. If this encoder does not fit your need please also consult us for help.

FURTHER INFORMATION

Accessories:

Corresponding accessories, such as couplings, measuring wheels, display modules, extension cables etc., for this encoder can be found on our homepage www.globalencoder.com under „Accessories“.





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