

# ENCODER SOLID SHAFT J-58A

JAYASHREE ENCODERS  
**JENCODER**<sup>TM</sup>  
THE PERFECT CODER  
ISO 9001-2015



## FEATURES

- Encoder designed for industrial applications
- Industry standard 58mm diameter with diecast covers and many termination options
- High radial and axial load taking capability
- Shatter proof polycarbonate disk
- LED power compensated for aging and temperature
- Robust ASIC based design
- Robust electrical design capable of taking surge across supply voltage
- Output stage with long distance cable driving capability

## ORDERING EXAMPLE - J-58A-R-HVLD-1000-V3-10-CF-1-S-SG-N-A-2m

<b>J-58A</b>	<b>R</b>	<b>HVLD</b>	<b>1000</b>	<b>V3</b>	<b>10</b>	<b>CF</b>	<b>1</b>	<b>S</b>	<b>SG</b>	<b>N</b>	<b>A</b>	<b>2m</b>	
<b>MODEL</b> J-58A	<b>CHANNELS</b> R = ABZ Q = AB A = A				<b>SHAFT SIZE <math>\phi</math>d (h7)</b> 6 = 6 mm 8 = 8 mm 10 = 10mm	<b>MOUNTING OPTION</b> Clamping Flange		<b>TEMPERATURE</b> S = -10 to 70°C H = -20 to 100°C		<b>CE CERTIFIED</b> N = Standard CE = CE Certified		<b>CABLE LENGTH</b> 1m 2m 5m	
<b>OUT PUT</b> HV = 15mA source /sink up to 100°C without inverted channels HVLD = 15mA source /sink up to 100°C with inverted channels PP = 20mA source/sink up to 100°C without inverted channel PPLD / HTL = 20mA source/sink up to 100°C with inverted channel OC = 20mA sink type (NPN) without inverted channel TTL / RS422 = 15mA source/sink up to 70°C with inverted channel at 5VDC			<b>VOLTAGE</b> V3 = 5 to 26 VDC For TTL Output 5 Volt only			<b>CABLE OUTLET</b> SG = Side Gland, EG = End Gland S8 = 8 Pin Side M12 Connector S6 = 6 Pin Side MS Connector S7 = 7 Pin Side MS Connector S12 = 12 Pin Side M23 Connector S10 = 10 Pin Side MS Connector S17 = 17 Pin Side MS Connector			<b>GRADE OF PROTECTION</b> 1 = IP50 2 = IP65 (available only up to 70°C temperature option)			<b>Z GATING</b> A (Standard) = Quadrature A & B with 180° index gated to A AB = Quadrature A & B with 90° index gated to A and B N = Ungated	
<b>PPR</b> 100,250,256,300,360,500,512,600,625,720,1000,1024,1200,1250,1440,1800,2000,2048,2500,3000*,3600*,4000*,4096*,5000*,6000*,7200*,8000*,8192*,10000*											*These PPR available in Temperature option -10° to 70°C		

## Electrical Characteristics

	TTL / RS422	PP	PPLD / HTL	OC	HV	HVLD
<b>Power Supply</b>	4.85 ... 5.25 VDC (Ripple Peak to Peak 5%)	4.85 ... 26 VDC (Ripple Peak to Peak 5%)				
<b>Power consumption [No Load]</b>	40mA					
<b>Permissible load / Channel</b>	15mA	20mA	20mA	20mA	20mA	20mA
<b>Pulse Frequency</b>	100 kHz	300 kHz	300 kHz	50 kHz	100 kHz	100 kHz
<b>Short circuit proof output</b>	No	Yes	Yes	Yes	Yes	Yes
<b>Reverse polarity protection of the power supply</b>	Yes					
<b>Sensing Method</b>	Optical					
<b>Surge protection as per IEC61000-4-5 500V</b>	No	Yes	Yes	Yes	Yes	Yes
<b>Duty Cycle</b>	180° ± 18°					
<b>A and B Phase shift</b>	90° ± 36°					

# ENCODER SOLID SHAFT J-58A

JAYASHREE ENCODERS  
**JENCODER**<sup>TM</sup>  
THE PERFECT CODER  
ISO 9001-2015

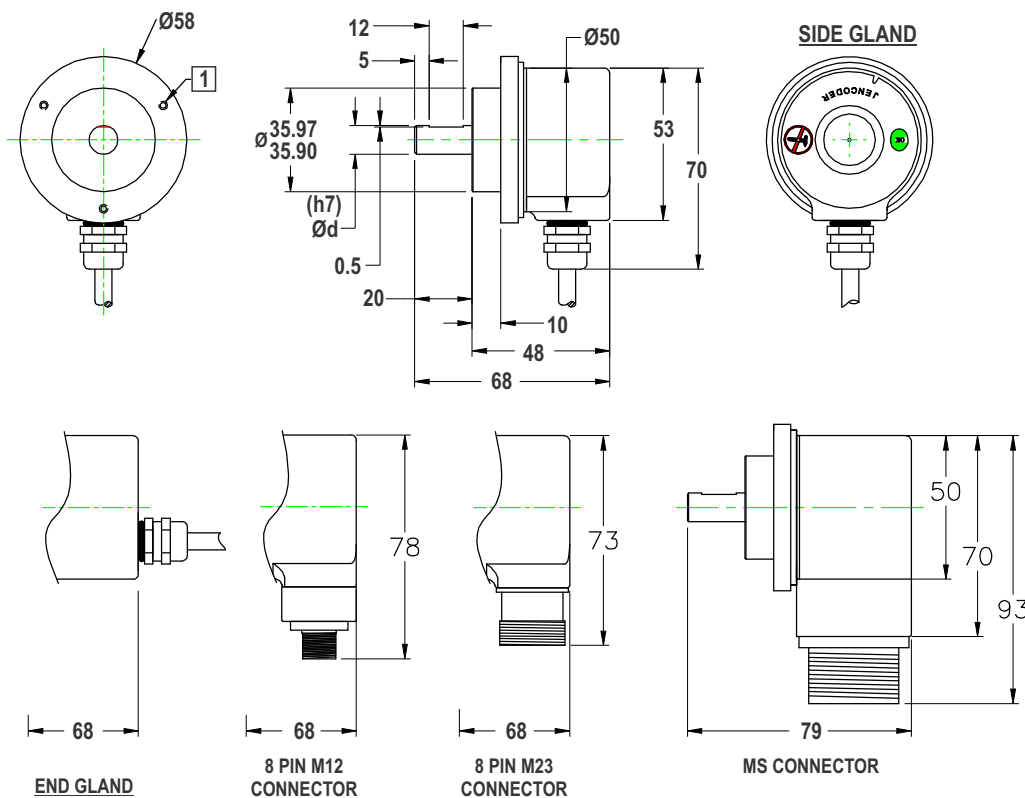
## Mechanical characteristics

<b>Shaft Load Capacity</b>	Radial 10kg, Axial 10kg
<b>Max. Speed</b>	6000 RPM
<b>Protection IEC60529</b>	IP50 IP65
<b>Working temperature range</b>	-10...+70°C -20...+100°C (IP50)
<b>Material</b>	Shaft :stainless steel Grade 303 alternative Grade 304 Housing : Aluminum / Cast Alloy Cover : Cast Alloy
<b>Weight</b>	Below 240 grams

## Environmental characteristics

<b>Vibration Resistance</b>	10G ,10---2000Hz as per IEC 60068-2-6 ,more possible contact factory
<b>Shock Resistance</b>	100G, 6ms as per IEC 60068-2-27, more possible contact factory

**Mounting Style :**  
**CF= Clamping Flange**  
1 M3X6 Deep 3 Holes on  
Ø48 ±0.1 PCD at 120°



All dimension are in mm with a tolerance of ±0.1 unless otherwise specified

Temp °C	Frequency kHz	Voltage V	Load Current	Cable Mtr
70°C	300Khz	24Vdc	20mA	5 Mtr
70°C	150Khz	15Vdc	20mA	30 Mtr
70°C	50Khz	24Vdc	20mA	100 Mtr

• Cable length depends upon by operating Voltage, Frequency, Cable capacitance & load. The figures given in above table are representative for PP & PPLD Output.

- Cable distance 30Mtr for HV & HVLD Output.
- For OC output, the rise and fall time depends on cable capacitance, hence the frequency gets limited by cable distance. In general we recommend to use OC- output upto 10meter distance only.
- OC output is limited upto 50Khz, all other output types can go upto 300Khz.

# ENCODER SOLID SHAFT J-58A

## Wiring Detail

Function	Wire color		Pin							
	HV,PP,OC	HVLD, PPLD, TTL	6 PIN CONN R-PP	6 PIN CONN Q PPLD	7 PIN CONN R PP	7 PIN CONN Q PPLD	8 PIN CONN. M12	10 PIN MS	12 PIN (M23)	17 PIN MS
+VDC	White	White	D	D	D	D	2	D	2, 12	H
COMM	Black	Black	F	F	F	F	1	F	10, 11	K
A	Brown	Brown	A	A	A	A	3	A	5	A
A <sup>-</sup>	----	Yellow	----	C	----	C	4	H	6	N
B	Red	Red	B	B	B	B	5	B	8	C
B <sup>-</sup>	----	Green	----	E	----	G	6	I	1	R
Z	Orange	Orange	C	----	C	----	7	C	3	B
Z <sup>-</sup>	----	Blue	----	----	----	----	8	J	4	P
Shield	Bare	Bare	E	NA	E	E	Body	G	9	E, L

Output Waveform :  
Viewed from Shaft End  CW Direction

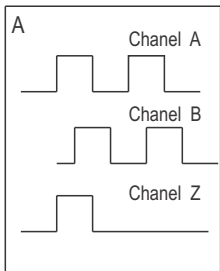


Fig 1 : Quadrature A & B with 180° Index gated to A

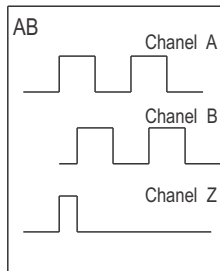


Fig 2 : Quadrature A & B with 90° Index gated to A & B

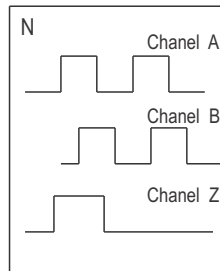
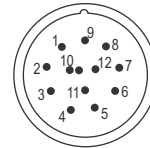
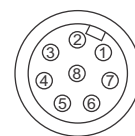


Fig 3 : Quadrature A & B with ungated Index

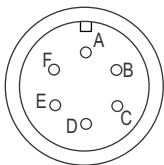
M23 Connector  
12 Pin-Male



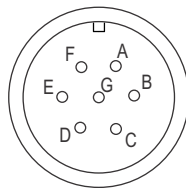
M12 Connector  
8 Pin-Male



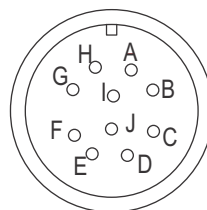
6 Pin MS Connector



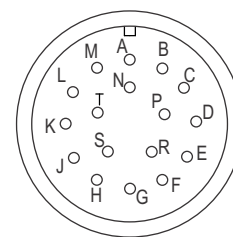
7 Pin MS Connector



10 Pin MS Connector



17 Pin MS Connector



WORLD CLASS MANUFACTURING FACILITY

## JAYASHREE ENCODERS PVT. LTD.

Sector 10, PCNTDA Industrial Area, Bhosari, Pune 411 026 (India)  
Tel. : 020 66328000 | Email : sales@jencoder.com