



TECHNICAL DATA SHEET

No. SPECS-DRL-042

GEOGRAPH DEPTH COMPENSATION SYSTEM

Rev. 0

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TITLE: GEOGRAPH DEPTH COMPENSATION SYSTEM

DEPARTMENT: TECHNICAL SUPPORT

DESCRIPTION:

The Geograph retriever system is used to provide motion compensation for the depth / block height depth system.

The system is used on drillships and semi-submersibles.

A draw-works mounted Quadrature encoder system. Is used to monitor drillstring movement, and by calculations within the DLS software; Depth, Rate Of Penetration, Block Speed, Block Position.



A. Standard Unit Specifications.

GENERIC DESCRIPTION:	Drawworks Encoder
BRAND:	BEI Technologies
MODEL (Sensor):	HS35F-1-14-SS-100-ABC-4469-SM18-EX-S
MODEL (Barrier):	924-60004-002
SENSOR TYPE:	Quadrature Encoder
INSTALLATION LOCATION:	Drawworks Drum Shaft
PRECISION:	100 counts per shaft turn – translates to 0.0035-0.01 meter (0.01148-0.03281 feet) depends on drum diameter
FREQUENCY RESPONSE:	150 kHz
BEARING LIFE:	7.5×10^9 revs (50,000 hrs at 2500 RPM)
MAXIMUM RPM:	6,000 RPM
OPERATING TEMPERATURE:	0 to 70°C (32°F to 158°F)
VIBRATION:	5 to 2000 Hz @ 20 G's
HUMIDITY:	98% RH without condensation
APPROVALS/CERTIFICATION:	<u>CENELEC</u> : IS EEx ia IIB T4 and EEX ia IIC T4 <u>CE</u> : EN 50081-2 and EN 50082-2 <u>UL</u> : Class I, Group A, B, C & D; Class II Group E, F & G

GEOLOGRAPH DEPTH
COMPENSATION SYSTEM

CUL: Class I, Zone 0, Group IIB & IIC

Enclosure Rating (Sensor): NEMA 4 & 13 (IP 65)

OUTPUT:

DLS System, Digital Monitors

DESCRIPTION:

A Proximity Switch used in conjunction with magnets placed on the Sheave Wheels of the Crown Block this is used to monitor drillstring movement, and by calculations within the DLS software; Depth, Rate Of Penetration, Block Speed, Block Position.

May be motion compensated for floating vessel use.

**B. Standard Unit Specifications.**

BRAND: Pepperl + Fuchs
MODEL: NCN30+U1+NO
SENSOR TYPE: Discrete Inductive NAMUR-type Proximity Sensor
INSTALLATION LOCATION: Crown Block Fast Sheave (Block Speed)
OPERATING DISTANCE: 30 mm (24.3 mm Assured)
SWITCHING FREQUENCY: 150 Hz (Max)
OPERATING TEMPERATURE: -25°C to +100°C (-13°F to 212°F)
APPROVALS/CERTIFICATION: Factory Mutual (FM):

Class I, Division 1, Groups A, B, C, D

Class II, Division 1, Groups E, F, G

Class III, Division 1 or

Class I, Zone 0, Groups IIC T6 (Ta = 60°C)

EEx ia IIC, EEx ib, IIC

OUTPUT:

Chart Recorder, DLS System, Digital Monitors

APPROVAL:

Dept. Supervisor : VICTOR SAET

Date: 23rd July 2002

Technical Committee : ALAN MORRISON

Date: 23rd July 2002