



TECHNICAL DATA SHEET

DEPTH MONITORING SYSTEM

No. SPECS-DRL-041

Rev. 0

Page 1 of 2

TITLE: DEPTH MONITORING SYSTEM

DEPARTMENT: TECHNICAL SUPPORT

DESCRIPTION:

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.

May be motion compensated for floating vessel use.



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: CENELEC: IS EEx ia IIB T4 and EEX ia IIC T4
CE: EN 50081-2 and EN 50082-2
UL: Class I, Group A, B, C & D; Class II Group E, F & G
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: 22nd July 2002

Technical Committee : ALAN MORRISON

Date: 22nd July 2002