

NOTES:

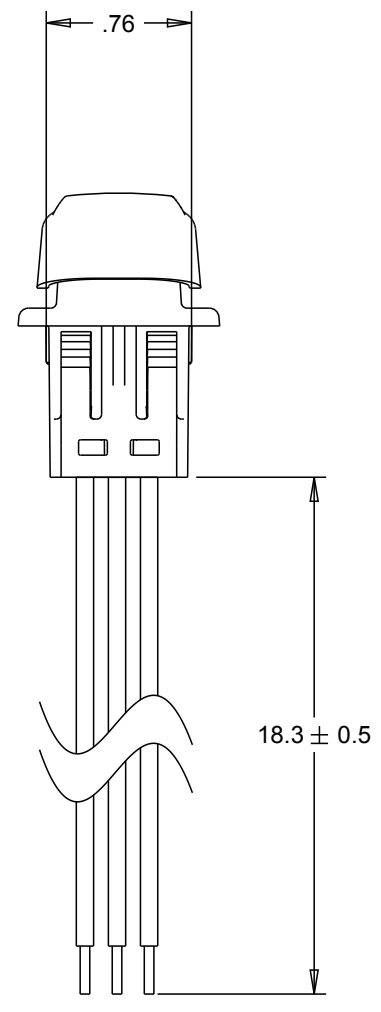
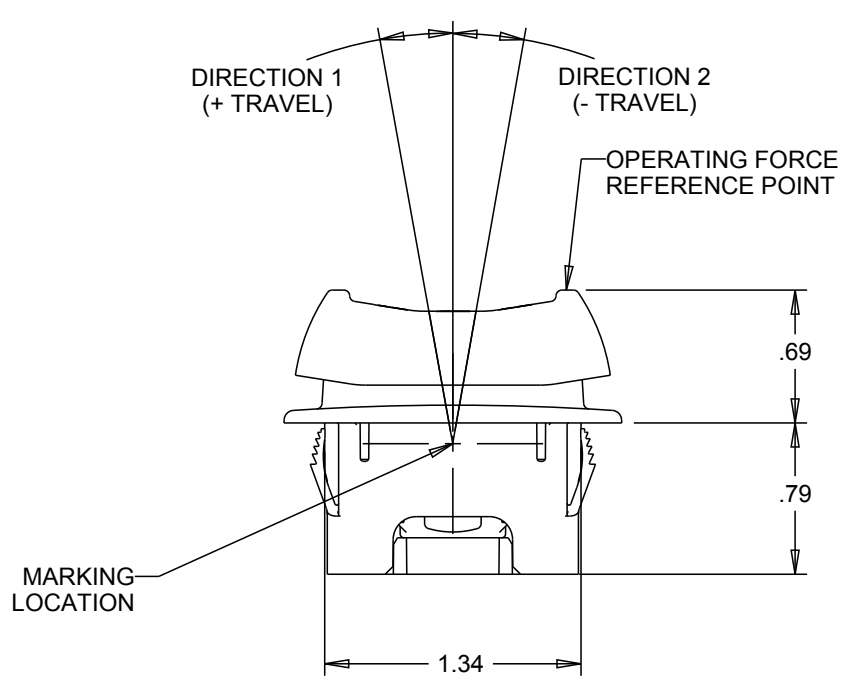
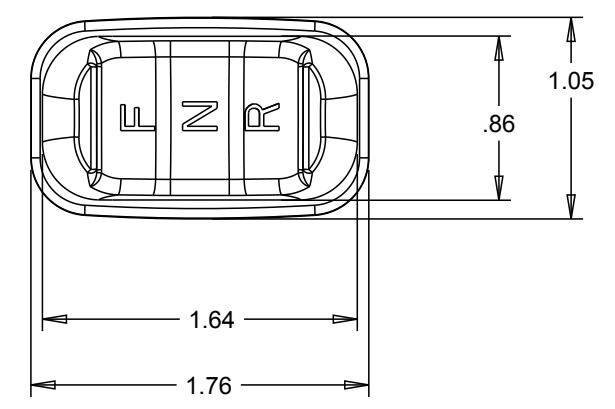
- DRAWING TO BE INTERPRETED IN ACCORDANCE WITH THE CURRENT REVISION OF ASME Y14.5.
- THIS PART/PRODUCT IS TO BE MANUFACTURED WITH THE LATEST APPLICABLE REGULATIONS OF EC DIRECTIVES FOR THE RESTRICTION OF THE USE OF HAZARDOUS SUBSTANCES IN ELECTRICAL AND ELECTRONIC EQUIPMENT (ROHS), WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) AND REGISTRATION, EVALUATION, AUTHORIZATION AND RESTRICTION OF CHEMICALS (REACH).
- MARKING TO INCLUDE:
 "OTTO" P/N & DATE CODE "YYWW"
 4. OUTPUTS ARE WHEN SWITCH IS IN DETENTED POSITION.
 5. FOR SINGLE OUTPUT SWITCHES, WIRING OPTION 1 SHOULD BE SELECTED.
 6. ONLY BUTTON COLOR BLACK IS AVAILABLE ON BACKLIT VERSIONS.
 7. ONLY LEGEND COLOR WHITE IS AVAILABLE ON BACKLIT VERSIONS.

HFNR-

REV	OCN #	DATE	APR
A	045980	30 OCT 08	LBG
B	054906	07 APR 10	LBG
C	071059	25 JUN 13	DCF

- LIGHT SOURCE**
 A = NONE
 B = 2V GREEN LED
 C = 2V AMBER LED
 D = 5V GREEN LED
 E = 5V AMBER LED
 F = 12V GREEN LED
 G = 12V AMBER LED
 H = 24V GREEN LED
 J = 24V AMBER LED
- OUTPUT(S):**
 DIRECTION 1 / CENTER / DIRECTION 2
 OUTPUT 1 OUTPUT 2
 A = 4.5/2.5/0.5 VDC NONE
 B = 4.5/2.5/0.5 VDC 4.5/2.5/0.5 VDC
 C = 4.5/2.5/0.5 VDC 0.5/2.5/4.5 VDC
 D = 4.0/2.5/1.0 VDC NONE
 E = 4.0/2.5/1.0 VDC 4.0/2.5/1.0 VDC
 F = 4.0/2.5/1.0 VDC 1.0/2.5/4.0 VDC
 G = 1.0/2.5/4.0 VDC 4.0/2.5/1.0 VDC
 H = 1.0/1.0/4.0 VDC 4.0/1.0/1.0 VDC
- WIRING OPTION**
 1 = COMMON POWER 1 = 2.6 / 3.6 LBS AND GROUND
 2 = SEPARATE POWER AND GROUND
- OPERATE FORCE: DIRECTION 1 & 2 TO CENTER / CENTER TO DIRECTION 1 & 2**
 1 = ROCKER A = 20 AWG WIRES 18.3" LONG, STRIPPED ENDS
- BEZEL COLOR**
 1 = RED
 2 = BLACK
 4 = YELLOW
 6 = BLUE
 8 = GRAY
- BUTTON COLOR**
 1 = RED
 2 = BLACK
 3 = ORANGE
 4 = YELLOW
 5 = GREEN
 6 = BLUE
 7 = VIOLET
 8 = GRAY
 9 = WHITE
- LEGEND / COLOR**
 A = NONE
 B = FNR / WHITE

SWITCH CHARACTERISTICS				
ELECTRICAL				
RATED AT V _{cc} = 5V @ 25° C LOAD = 1ma (4.7KΩ)	UNITS	MIN	TYP	MAX
SUPPLY VOLTAGE	VDC	4.50	5.00	5.50
OUTPUT VOLTAGE, TOLERANCE AT CENTER	VDC AT 5V V _{cc}	-35	NA	+35
OUTPUT VOLTAGE, TOLERANCE AT FULL TRAVEL	VDC AT 5V V _{cc}	-35	NA	+35
SUPPLY CURRENT PER SENSOR B=0, V _{cc} =5V, I _{out} =0	mA	NA	NA	10
MECHANICAL				
MECHANICAL LIFE FULL FORWARD TO FULL BACK		3,000,000		
ANGLE OF THROW BETWEEN ADJACENT POSITIONS	°	8	10	12
MAXIMUM ALLOWABLE RADIAL LOAD	LBS	NA	NA	30
ENVIRONMENTAL				
OPERATING TEMPERATURE	°C	-40	20	85
HUMIDITY		96% RH, 70° C, 96 HRS		
VIBRATION		PER MIL-810F MINIMUM INTEGRITY		
ELECTRONICS SEAL INTEGRITY		WATERTIGHT PER IP68S, 1 METER		
MECHANICAL SEAL INTEGRITY		UNSEALED		
EMI/RFI WITHSTAND		PER SAE J1113 CONTACT FACTORY FOR DETAILS		
MATERIAL				
BUTTON TOP		THERMOPLASTIC		
BEZEL		THERMOPLASTIC		



WIRING OPTION 1 COMMON POWER AND GROUND



OUTPUT 2 AND LED ARE NOT PRESENT IN ALL CONFIGURATIONS

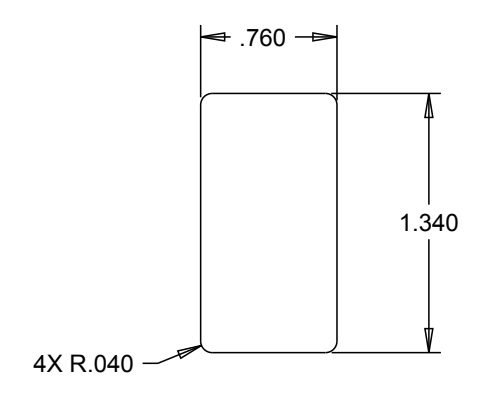
WIRING OPTION 2 SEPARATE POWER AND GROUND



OUTPUT 2 AND LED ARE NOT PRESENT IN ALL CONFIGURATIONS

MOUNTING:

- RECOMMENDED PANEL THICKNESS: 0.112 OPTIMUM THICKNESS (0.040 MIN. - 0.205 MAX.)
- RECOMMENDED PANEL OPENING: 0.760 X 1.340 OPTIMUM (0.760/.770 X 1.335/1.345)
- RECOMMENDED PANEL RADIUS: 0.040 OPTIMUM (0.070 MAX.)



LEGEND OPTION B SHOWN

- MANUFACTURING
- SPC
- SPECIAL REQUIREMENT

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES.
 TOLERANCES:
 .XX ±.03
 .XXX ±.010
 ANGLES ±2°
 DO NOT SCALE



THIS DOCUMENT IS THE CONFIDENTIAL PROPERTY OF OTTO ENGINEERING, INC. IT IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTERESTS OF OTTO ENGINEERING, INC.

DESCRIPTION			
HFNR, HALL EFFECT, 3 POSITION ANALOG OUTPUT ROCKER WITH BACKLIGHTING OPTION			
DRWN. DCF	SIZE C	FSCM NO 21649	DRAWING NO. HFNR-
CHKD. DCF			REV. C
APPD. AH			
THIRD ANGLE PROJECTION		Scale 1:1	Sheet 1 OF 1