

GENERAL SPECIFICATIONS

Electrical Capacity

Resistive Load: HS13: 6A @ 125V AC, 3A @ 250V AC, or 5A @ 30V DC
 HS16: 12A @ 125V AC or 6A @ 250V AC
 TS: 6A @ 125/250V AC
 PS: 30A @ 125/250V AC

Other Ratings

Contact Resistance: 10 milliohms maximum
Insulation Resistance: 200 megohms minimum @ 500V DC
Dielectric Strength: 1,500V AC minimum for 1 minute minimum
Mechanical Life: HS: 15,000 operations minimum
 TS: 30,000 operations minimum
 PS: 10,000 operations minimum
Electrical Life: HS: 7,500 operations minimum
 TS: 10,000 operations minimum
 PS: 5,000 operations minimum
Indexing: 30° for HS16, TS & PS; 45° for HS13
Contact Timing: Nonshorting HS-13; Shorting & Nonshorting HS-16; Nonshorting TS; Nonshorting PS
Range of Operating Torque: HS16: 0.54 ~ 0.64Nm for first pole & 0.05Nm for each additional pole
 HS13: 0.15 ~ 0.24Nm
 TS: 0.09Nm for first pole & (0.07Nm x total number of poles) + 0.13Nm for additional poles
 PS: 0.14Nm for each pole

Materials & Finishes

Knob: Phenolic resin
Shaft: HS13: brass; HS16, TS, & PS: brass with nickel plating
Bushing: HS13: brass; HS16, TS, & PS: brass with nickel plating
Case: Phenolic resin
Movable Contacts: HS13, HS16, & TS phosphor bronze; PS silver alloy
Stationary Contacts: HS13, HS16, & PS: brass with silver plating; TS: phosphor bronze
Terminals: HS: phosphor bronze; TS & PS: copper with silver plating

Environmental Data

Operating Temp Range: -10°C through +70°C (+14°F through +158°F)
Humidity: 90 ~ 98% humidity for 96 hours @ 40°C (104°F)
Vibration: 10 ~ 55 Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock: 50G (490m/s²) acceleration (tested in 3 right angled directions, with 3 shocks in each direction)

Installation

Mounting Torque: 2.94Nm (26 lb•in)
Maximum Panel Thickness: Shown with panel cutouts in following drawings
Soldering Time & Temperature: 4 seconds maximum @ 410°C maximum for manual soldering (HS series only)

Standards & Certifications

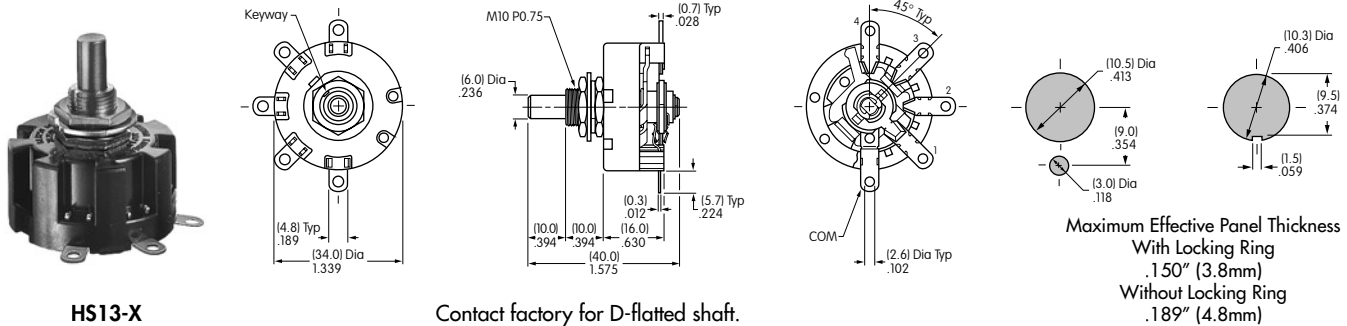
UL Recognized: HS-16 models 1- through 6-pole are recognized at 12A @ 125V AC & 6A @ 250V AC
 See Supplement section to find UL rating details. UL File No. WOYR2.E44145
 Add "/U" to end of part number to order UL mark on switch.



6 AMP SINGLE POLE/NONSHORTING/45° INDEXING

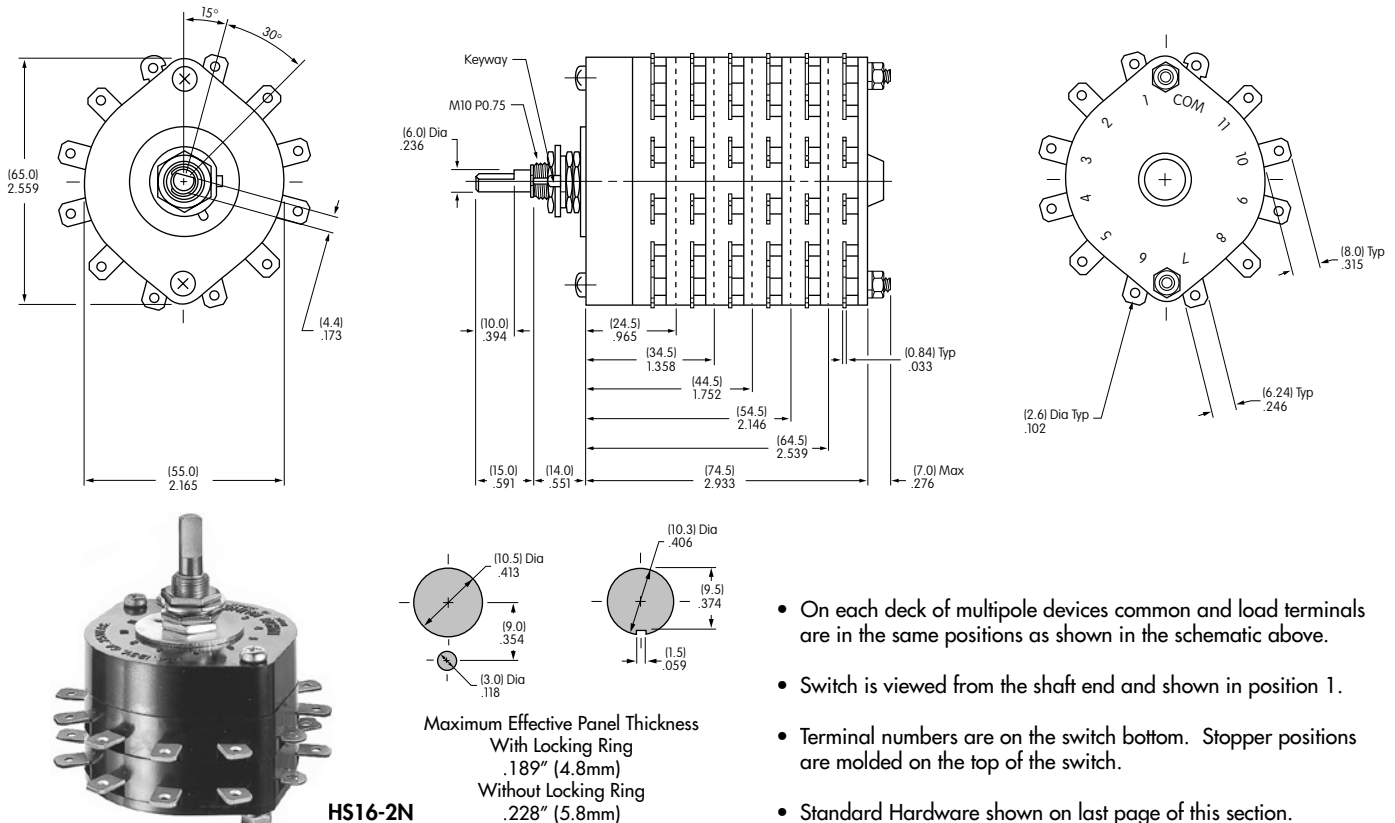
Model	Number of Positions	Stopper Settings	Number of Terminals	Load Terminals	Schematics		
					HS13-X ϕ of Keyway	HS13-Y ϕ of Keyway	HS13-Z ϕ of Keyway
HS13-X	2	Fixed	1 COM, 2 LOAD	1 & 2			
HS13-Y	3	Fixed	1 COM, 3 LOAD	1, 2, & 3			
HS13-Z	4	Fixed	1 COM, 4 LOAD	1, 2, 3, & 4			

Switch is viewed from shaft end and shown in position 1. Terminal numbers are not on switch. Standard Hardware shown on last page of this section.

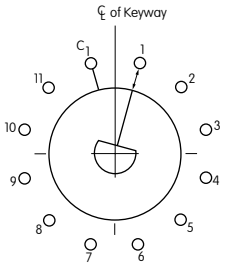


12 AMP/SHORTING & NONSHORTING/30° INDEXING

Knurled Shaft		D-flat Shaft		Pole	Number of Positions	Stopper Settings	Number of Terminals	Schematic
Nonshorting	Shorting	Nonshorting	Shorting					
HS16-1	HS16-1S	HS16-1N	HS16-1SN	1P	2-11	2, 3, 4 . . . 11	1 COM, 11 LOAD	
HS16-2	HS16-2S	HS16-2N	HS16-2SN	2P	2-11	2, 3, 4 . . . 11	2 COM, 22 LOAD	
HS16-3	HS16-3S	HS16-3N	HS16-3SN	3P	2-11	2, 3, 4 . . . 11	3 COM, 33 LOAD	
HS16-4	HS16-4S	HS16-4N	HS16-4SN	4P	2-11	2, 3, 4 . . . 11	4 COM, 44 LOAD	
HS16-5	HS16-5S	HS16-5N	HS16-5SN	5P	2-11	2, 3, 4 . . . 11	5 COM, 55 LOAD	
HS16-6	HS16-6S	HS16-6N	HS16-6SN	6P	2-11	2, 3, 4 . . . 11	6 COM, 66 LOAD	

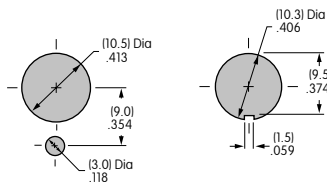


6 AMP/NONSHORTING/ADJUSTABLE STOP/30° INDEXING

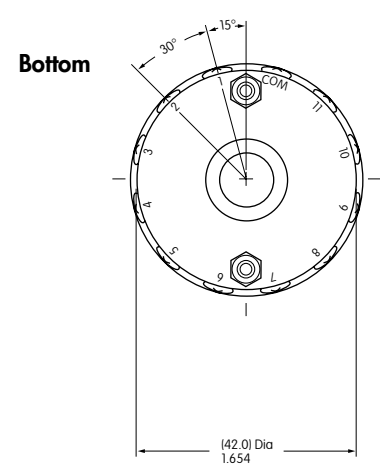
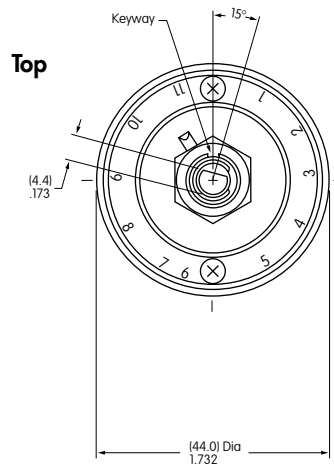
Model	Pole	Number of Positions	Stopper Settings	Number of Terminals	Shaft Type	Schematic
TS-1N	1P	2-11	2, 3, 4 . . . 11	1 COM, 11 LOAD	D Flat	 <p>On each deck of multipole devices common & load terminals are in the same positions as shown in this schematic.</p> <p>Switch is viewed from the shaft end and shown in position 1.</p> <p>Terminal numbers are on the switch bottom. Stopper positions are molded on the top of the switch.</p>
TS-2N	2P	2-11	2, 3, 4 . . . 11	2 COM, 22 LOAD	D Flat	
TS-3N	3P	2-11	2, 3, 4 . . . 11	3 COM, 33 LOAD	D Flat	
TS-4N	4P	2-11	2, 3, 4 . . . 11	4 COM, 44 LOAD	D Flat	
TS-5N	5P	2-11	2, 3, 4 . . . 11	5 COM, 55 LOAD	D Flat	

- Standard Hardware shown on last page of this section.

Panel Cutouts



Maximum Effective Panel Thickness
 With Locking Ring
 .189" (4.8mm)
 Without Locking Ring
 .228" (5.8mm)



TS-5N

