HW limit switch box series

Control unit that combines a limit switch box and solenoid valve into a single device. Maximum efficiency with minimum customer effort.

Features

- Twin shaft design
- Self lubricating bushings
- Optional integrated solenoid valve for maximum efficiency and compactness
- 3 or 5 way pneumatic valve with single or double coil configurations
- Aluminium enclosure with thick powder coat paint and integrated NAMUR mounting kit
- Up to 3 cable entries either metric or imperial
- Multiple indicator options

- Easy wiring through the terminal PCB board
- Optional position transmitter boards
- Optional Profibus communication board for complete process handling

Approvals

EAC, UL general purpose

SIL certificate: Up to SIL 2 approval on request
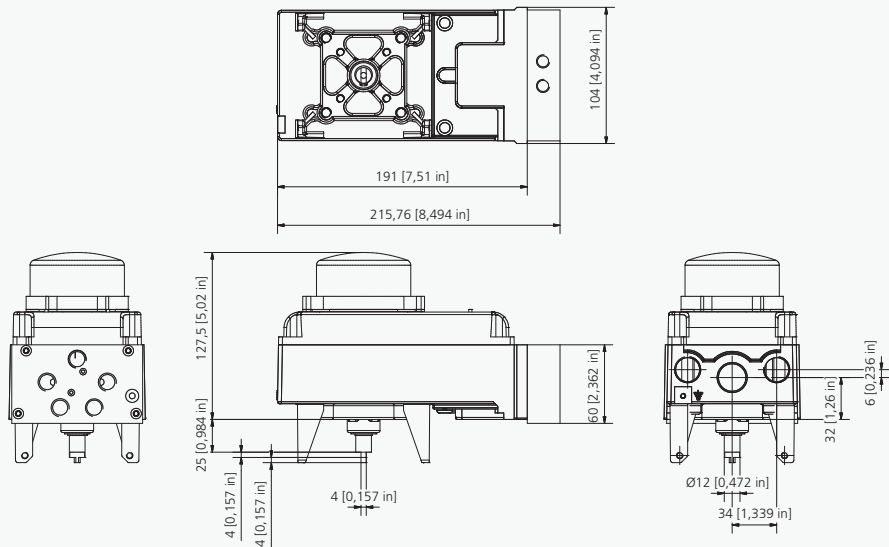
Protection rating: IP66 / 67
Nema 4 4X on request

Temperature:
-60 to +105 °C (-76 to +221 °F) standard temperature range

HW limit switch box

rotork
Instruments

Limit Switch Boxes

HW limit switch box series

Nomenclature

HW N1 2 2 2 - 3 T W 9 7 P 3 0 A

Box
HW = Aluminium control unit enclosure

Switch
01 = SPDT electromechanical switches, silver plated contacts
03 = SPDT electromechanical switches, gold plated contacts
1F = DPDT electromechanical switches silver plated contacts
70 = NAMUR inductive proximity sensor P+F type NJ2-V3-N, NAMUR NC 2 wire (for Ex'ia')
73 = Inductive proximity P+F NBB2-V3-E2, 3 wire PNP NO
C4 = Magnetic SPDT hermetically sealed switch (suitable for Ex'ia')
C8 = Magnetic DPDT hermetically sealed switch (suitable for Ex'ia')
N1 = Magnetic proximity SPDT hermetically sealed switch, silver plated snap acting contacts
N3 = Magnetic proximity SPDT hermetically sealed switch, gold plated snap acting contacts
N4 = Magnetic proximity DPDT hermetically sealed switch, silver plated snap acting contacts
DB = 3 position control system for single acting actuators, 5/3 way, double coil sov
DA = 3 position control system for double acting actuators, 5/3 way, double coil sov
A1 = Asi board with 2 SPDT switches and solenoid valve control
T0 = 4-20 mA analog position transmitter
H0 = 4-20 mA HART transmitter Exia IIC certified
PG = Profibus communication board
See additional information and options on pages 14-19

Switch Quantity
0 = No switches for digital limit position feedback
1 = 1 switch or sensor (for DB, DA switch options)
2 = 2 switches or sensors
3 = 3 switches or sensors
4 = 4 switches or sensors

Terminals
0 = Screw type terminals with sov connection
2 = Blue screw type terminals with sov connection

Coating
0 = Black polyester powder coating (only for aluminium)

Cable Entries
1 = 2 cable entries 1/2 " NPT
2 = 2 cable entries M20x1.5
3 = 2 x 1/2 " NPT + 1 x 3/4 " NPT cable entries
4 = 2 x M20 x 1.5p + 1 x M25 x 1.5p cable entries

Visual Position Indicator
0 = Red and green visual position indicator
See additional information and options on page 11

Approval
W = Weather proof limit switch box
G = EAC certified box for Russian market, with RTN permit
U = UL certified box
See additional information and options on page 13

Marking
0 = Ordinary location
A = CULUS normally location
See additional information and options on page 13

IP Protection rating
1 = Weather proof IP66/IP67
7 = Nema 4 4X

Temperature
S = Ambient temperature range: -10 to +50 °C (+14 to +122 °F)
7 = Ambient temperature range: -10 to +40 °C (+14 to +104 °F)
5 = Ambient temperature range: -5 to +50 °C (+23 to +122 °F)
A = Ambient temperature range: -20 to +80 °C (-4 to +176 °F) without solenoid valve

Material and solenoid valve selection
3 = Aluminium heavy duty body and cover
A = Aluminium heavy duty body and cover die-cromated, 5/2 way aluminium solenoid valve, single coil
B = Aluminium heavy duty body and cover die-cromated, 5/2 way aluminium solenoid valve, double coil
C = Aluminium heavy duty body and cover die-cromated, 5/3 way aluminium solenoid valve, blocked centre, double coil (DB switch option)
D = Aluminium heavy duty body and cover die-cromated, 5/3 way aluminium solenoid valve, exhaust centre, double coil (DA switch option)

Coil Rating
0 = No solenoid valve available
2 = Coil rating: 12 VDC 2, 3 W
3 = Coil rating: 24 VDC 2, 3 W
4 = Coil rating: 24 VAC 2, 8 VA
5 = Coil rating: 110 VAC 2, 8 VA
6 = Coil rating: 230 VAC 2, 8 VA
1 = Ex'ia' certified pilot valve coil rating: 6 VDC
7 = Ex'ia' certified pilot valve coil rating: 12 VDC
8 = Ex'ia' certified pilot valve coil rating: 24 VDC
9 = Ex'n' certified pilot valve coil rating: 24 VDC
A = Ex'n' certified pilot valve coil rating: 110 VAC

Pneumatical Connection
0 = No pneumatic connections
A = ¼" NPT/F pneumatical connections