



Worcester WS/WM Series UltraSwitch™
Switch box



Experience In Motion

**Compact
Reliable
Great Value**



WS/WM Series UltraSwitch™

Description

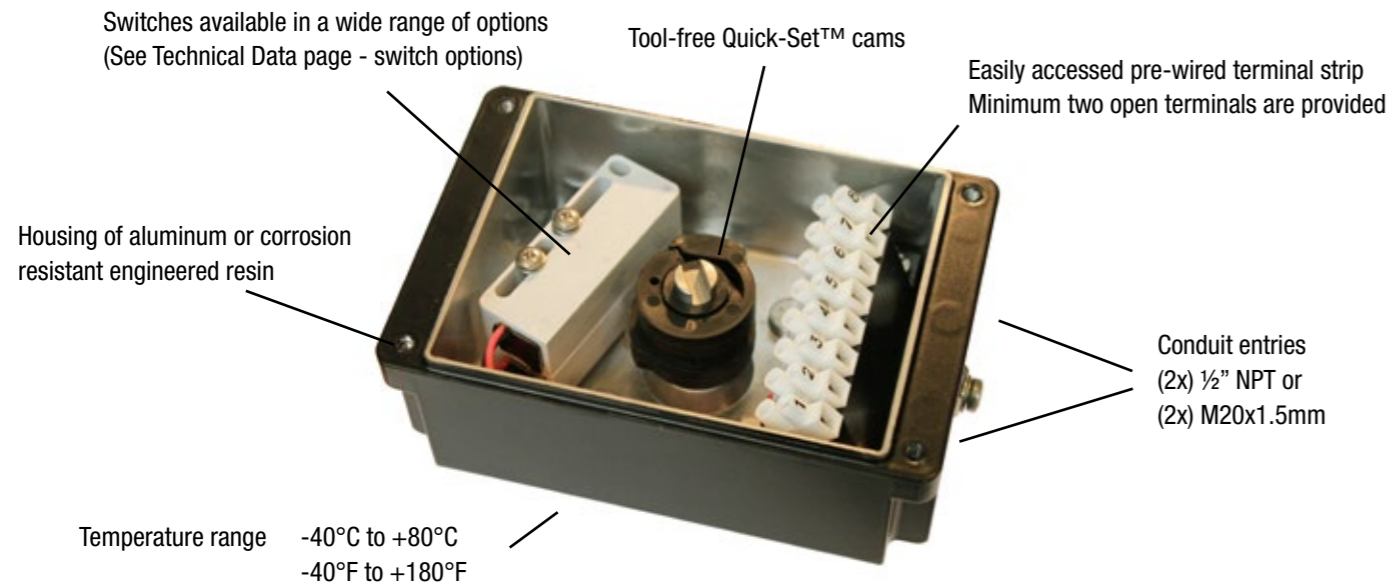
The WS/WM Series UltraSwitch™ provides cost efficient, accurate and reliable position signaling. The compact enclosure is offered in aluminum or corrosion resistant engineered resin and is provided with multiple switch options. A variety of covers and indicators are available in aluminum and resin.

The range covers domed and flat indicators as well as covers without indicator for a lower profile.

The WS/WM is designed to be directly and easily mounted onto actuators for both rotary and linear indication. It may also be used as a junction box for direct connection of solenoid valves. Minimum two open terminals are always provided.

Its compact housing has multiple mounting possibilities, up to four conduit entries and pre-wired switches to enable easy installation. It is designed to meet IP66/67 and NEMA Type 4X standards and is offered both for Intrinsically Safe and Non-Incendive hazardous locations.

Features and Benefits



**Hazardous
Locations
Approvals**



Typical applications / industries suitable for the WS/WM-Series UltraSwitch™ are:

- Chemical & Petrochemical
- Food & Beverage
- Municipal & Wastewater
- Pharmaceutical
- Power

Hazardous locations approvals and communication

Intrinsically safe:

Approvals for ATEX and cCSAus hazardous locations, Intrinsically Safe and Non-Incendive.



AS-Interface (AS-i)

The WS/WM-series can be equipped with optional AS-i communication capabilities. This technology offers a very simple, flexible and cost efficient network system.



Mounting options

NAMUR or optional low profile mounting

Standard NAMUR EN15714 mounting kits are available for standard NAMUR shafts. In applications where space is limited, the optional "S" shaft reduces the height 15% providing a significantly lower mounting profile. Available for 80x30 and 130x30 actuator top patterns with an actuator shaft height of 20, 30 or 50mm.



NAMUR actuator mounting kit



Low profile mounting kit KL01 & KL02

Cover and Indicator Options



Technical Data



Aluminum or engineered resin housing with multiple cover options



Aluminum or Resin cover
Dome indicator



Aluminum or Resin cover
Blank without indicator



Aluminum or Resin cover
Flat indicator



Polycarbonate transparent cover
Dome indicator



Polycarbonate transparent cover
Flat indicator



Aluminum housing
(Cover materials: Aluminum and Polycarbonate)



Resin housing
(Cover materials: Resin and Polycarbonate)

Switch Options

Code	Cert.	Switch Option	Manufacturer	Load Capacity
M1		SPDT Mechanical	Honeywell MicroSwitch	15A @ 125/250 VAC; 0,5A @ 125 VDC; 0,25A @ 250VDC; 5A @ 120VAC
MG	A, B	SPDT Gold Mechanical	Honeywell MicroSwitch	1A @ 125 VAC; 50 mA @ 24 VDC
F1		IN5129	IFM	10-36VDC
F3		IF5250	IFM	10-36VDC NC PNP, 150mA, 3-wire NC
F5		IF6001	IFM	18-32VDC, NO PNP, 150mA@50 C
F6		IF6034	IFM	10-36VDC, NO PNP, 150mA, Stainless Steel
F7		IN0074	IFM	20-250 AC/DC NO, 350mA/100mA
F8		IN0081	IFM	20-250 AC/DC NO, 350mA/100mA w/LED
FJ		IN5263	IFM	IN-2002-FRKG/PH RT
P4	A, B, C	SPST Proximity	Aleph	0.35A @ 140 VAC; 0.25A @ 200VDC (50 W Max.)
P5	A, B, C	SPDT Proximity	Hamlin	0.25A @ 120 VAC; 0.25A @ 28 VDC (3 W Max.)
PE	A, B, C	SPDT Sabre Proximity	Flowserve	1A @ 120 VAC; 1A @ 24 VDC
PP	C	SPDT Phazer Proximity	Flowserve	3A @ 120 VAC; 2A @ 24 VDC
PT	A, B, C	SPST BRS Proximity	Flowserve	3A @ 120 VAC; 0.5 @ 24 VDC
N8	A	Solid State Proximity	PF NJ2 V3 N	NAMUR NC Sensor; 8 VDC
NP	A	Solid State Proximity	PF SJ3.5-N	NAMUR Sensor Output; 5-25 VDC Supply
NQ	A	Solid State Proximity	PF NJ4-12GK-N	NAMUR NC Sensor; 8 VDC
NR		Solid State Proximity	PF NJ4-12GM40-E1	PNP Sinking; 200 mA max. Current; 10-60 VDC
NS		Solid State Proximity	PF NJ4-12GM40-E2	NPN Sourcing; 200 mA max. Current; 10-60 VDC
NT		Solid State Proximity	PF NJ4-12GK40-E2	NPN Sourcing; 200 mA max. Current; 10-60 VDC
N9		Solid State Proximity	PF NBB3-V3-Z4	NPN Sourcing; 100 mA max. Current; 5-60 VDC
NW	A	Solid State Proximity	PF SJ3.5-SN	NAMUR NC Sensor; 8 VDC

More switch options available

Data/Materials

Data	
Ingress protection	IEC 529 IP 66/67, NEMA Type 4X
Weight maximum	0.7kg / 1.55 lbs

Part	Material
Housings	Powder epoxy painted Aluminum or PA6/PA66 engineered resin, 25 – 30% fiberglass filled
Covers	Powder epoxy painted Aluminum or PA6/PA66 engineered resin, 25 – 30% fiberglass filled or Transparent Polycarbonate
Shaft	Stainless Steel SS EN 2346 / AISI 303
Cams/Splines	Nylon
Terminal Block	Nylon
Internal Brackets	Nylon, Aluminum or Stainless Steel
All External Fasteners	Stainless Steel
All Internal Fasteners	Stainless Steel
All Molded in Fasteners	Anodized Aluminum
Indicators	Polycarbonate or PA66
Label	Polyester
Plug	Nylon

Code	Certificate
A	ATEX II 1GD Ex ia IIC T4/T5/T6 ATEX II 1GD Ex ia IIB T4/T5/T6
B	cCSAus IS
C	cCSAus NI

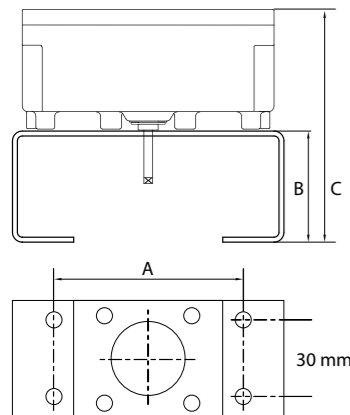
WS/WM-Series Ultraswitch™ Switchbox Nomenclature

- A = Brand sticker**
W Worcester Controls
- B = Shaft type**
N Namur shaft, EN 15714
S Short shaft, low profile style
T For NAF Turnex
D Double "D" 1/4 Inch Flats
- C = Body style**
WS General Purpose/I.S. Enclosure / 1/2" NPT Conduit entries
WM General Purpose/I.S. Enclosure / M20x1.5mm Conduit entries
- D = Number of conduit entries**
2 2 conduit entries
4 4 conduit entries (2 according to "C" + entries opposite side with different type of threading)
- E = Body material**
A Aluminum
R Engineered resin
- F = Cover material**
A Aluminum
R Engineered resin (J=14 only)
P Polycarbonate Cover (clear)
- G = Indicator**
1 No indicator
2 Flat Indicator
H Black / Yellow UltraDome™ (Black Close/Yellow Open)
U UltraDome™ (Red Close/Green Open)
- H = Number of switch elements**
0 No switches (empty housing)
1 1 Switch
2 2 Switches
- I = Switch type** - See section with switch options
- J = Certificate**
14 General Purpose
15 ATEX Ex ia
28 cCSAus Ni
29 cCSAus IS

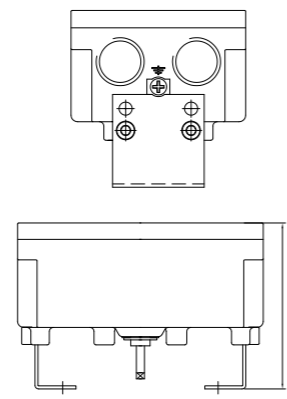
Ordering code example													
A	B	C	C	D	E	F	G	H	I	I	J	J	
W	N	W	S	2	A	R	U	2	P	P	2	8	

A = brand, NAMUR shaft, 1/2" NPT Housing with 2 conduits, Aluminum body, Resin cover, standard UltraDome™, 2 proximity switches "PP", cCSAus certificate (2 open terminals)

Mounting kits



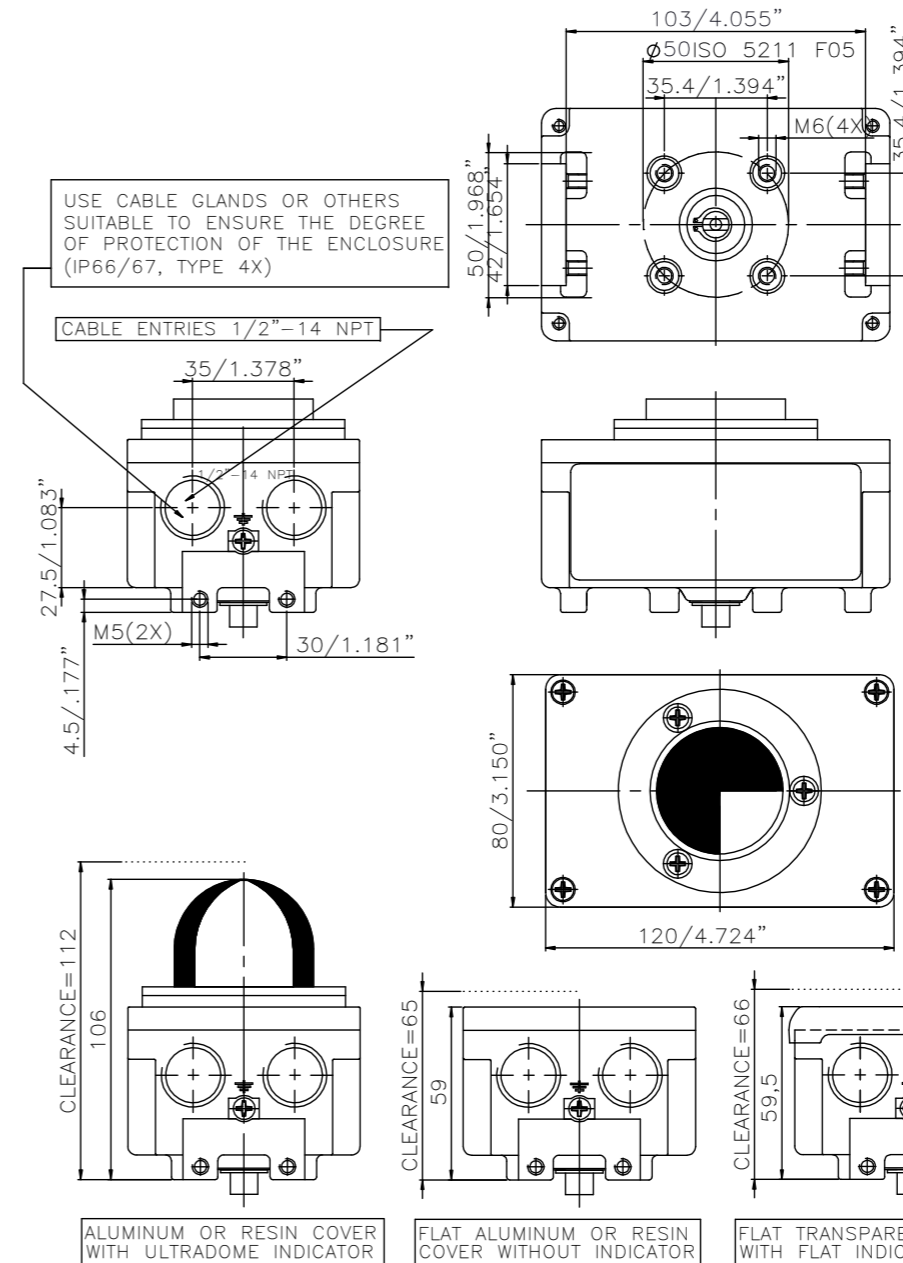
Mounting kit NAMUR p/n	A = Bolt pattern length (mm)	B = Bracket height (mm)	C = Height (mm)
23648	80	45	105
23649	80	55	115
23650	130	55	115



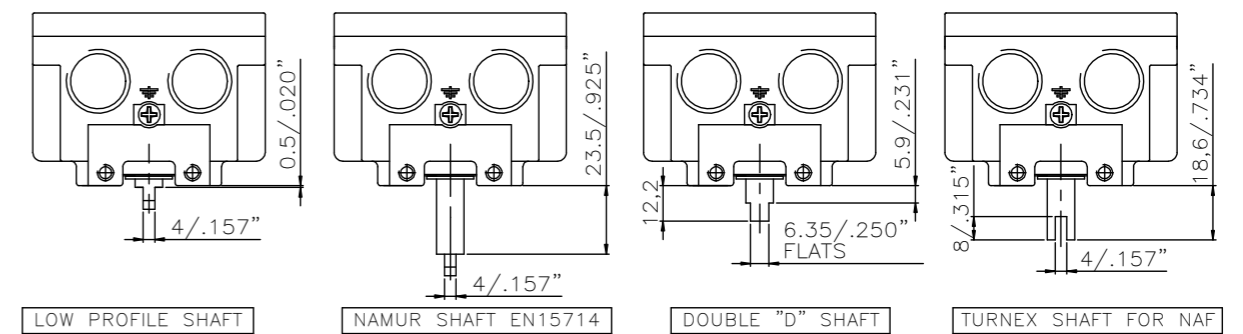
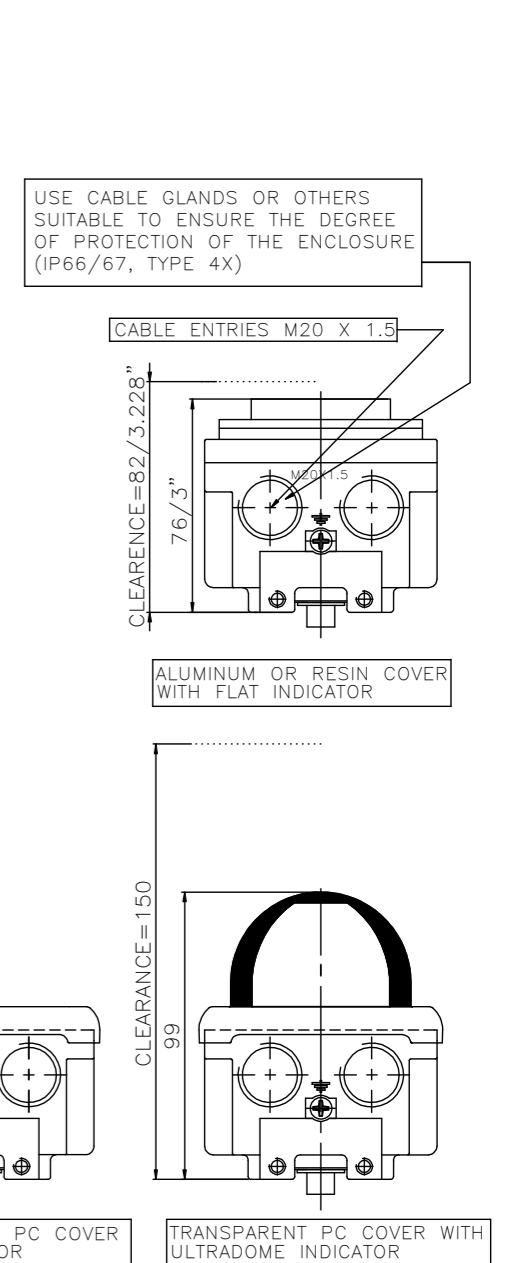
Mounting kit p/n	Actuator shaft height (mm)	Bolt pattern 80/30 (mm)	Bolt pattern 130/30 (mm)	C = Height (mm)
KL01	20/30	yes	yes	80/90
KL02	50	yes	yes	110

Dimensions WS/WM (mm/Inch)

WS body enclosure



WM body enclosure





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To find your local Flowserve representative:

For more information about Flowserve Corporation, visit flowserve.com

Hazardous Locations

ATEX II 1 GD Ex ia IIC T4/T5/T6
 ATEX II 1 GD Ex ia IIB T4/T5/T6
 cCSAus Cl. I, Div. 1 Grp. A,B,C,D; Cl. II Div. 1 Grp. F,G; Cl. III
 cCSAus Cl. I, Div. 2, Grp. A,B,C,D; Cl. II, Div. 2, Grp F,G; Cl. III

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