

## ACCUTRAK™ ROTARY POSITION MONITORS

WEATHERPROOF – IEC

Weatherproof rotary position monitors with the option of high-performance polyamide resin, powder-coated aluminium or stainless steel enclosures they offer a variety of switching options



### TECHNICAL DATA

#### Agency approvals

Enclosure standards (IEC)

All enclosures

IP66/67

Resin enclosures (except 8500)

IP66/67/68

#### Switches

3200/3500/8500 Series

V3 SPDT mechanical switches

DPDT mechanical switches

Magnum SPDT (hermetically sealed proximity type) switches

V3 inductive proximity sensors

Pneumatic 3/2 operation

3500/8500 only

#### Enclosures

3200/3500/8500 Series

Engineered resin

3200/3500/8500 Series

Aluminium

3200/3500/8500 Series

Stainless steel

### FEATURES

#### 3200,3500,8500 Series

- Weatherproof design meeting a wide range of worldwide approvals.
- Touch set cams are hand adjustable, spring loaded and self-locking providing quick calibration of position switches and sensors.
- Terminal strips are pre-wired and numbered with generous working space for ease of use.
- Strong durable Beacon™ offers 360° visual indication available in a choice of styles and colors.
- Additional conduit for easy field wiring and mounting accessories as standard.
- Wide range of switches and sensors.
- Switch stabilisation plate.
- Standardized mounting pattern for easy adaptation to common bracketry.
- Range of drive shaft options.
- Engineered resin enclosure is robust yet lightweight; allows broad operating temperatures and provides exceptional chemical, UV and impact resistance.
- Aluminium enclosures with ultra-low copper content (0.2% maximum) ensure robust performance in corrosive environments.
- Rugged stainless steel enclosure.
- IP rated plugs certified where applicable.

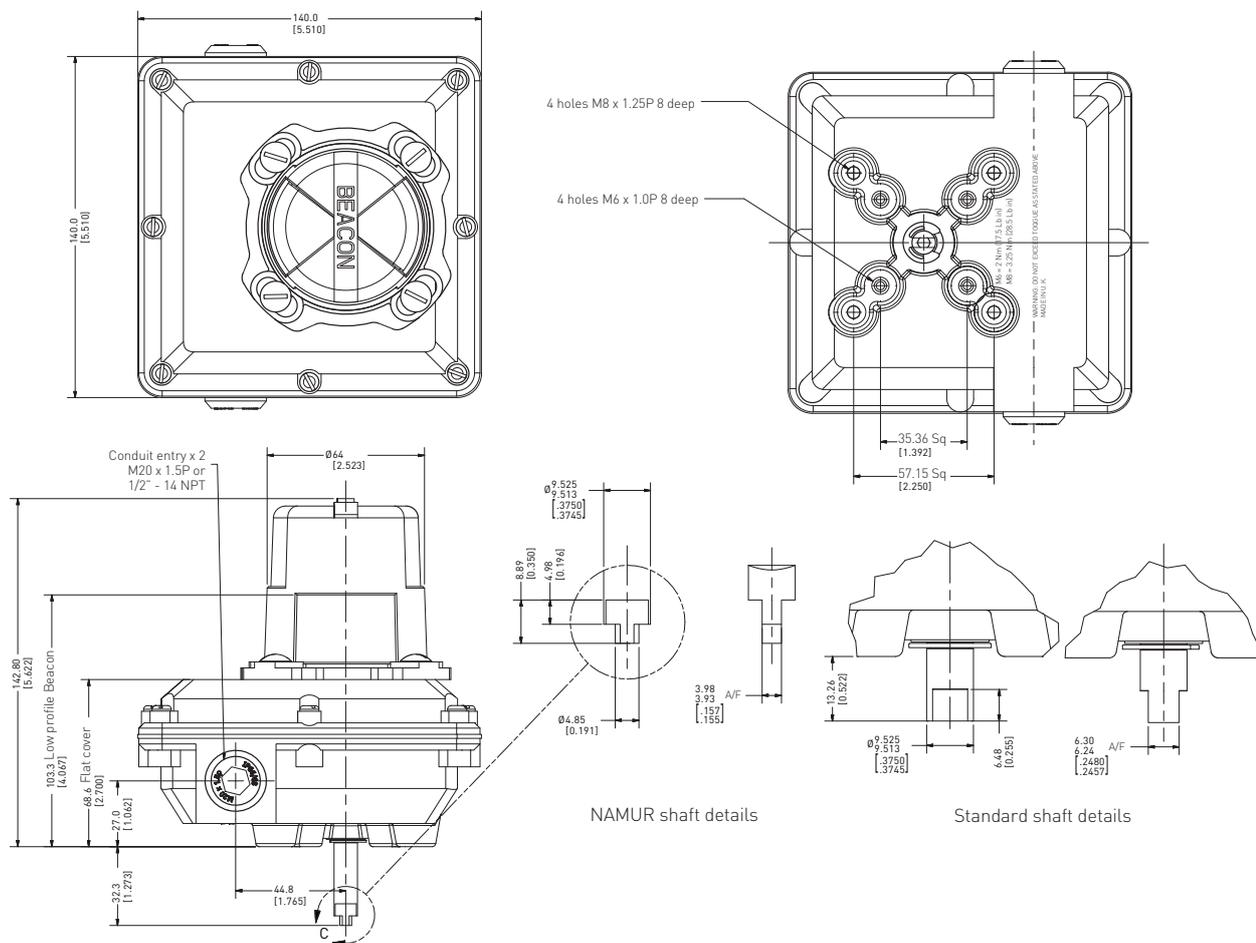
### GENERAL APPLICATION

AccuTrak position monitors are ideal for manual and automated rotary valves. They provide consistent and accurate valve monitoring in a compact unit which can be mounted directly or via a valve actuator.

# ACCUTRAK™ ROTARY POSITION MONITORS

WEATHERPROOF – IEC

## 3200 SERIES RESIN ENCLOSURE DIMENSIONS



Dimensions in mm, imperial dimensions (inches) in parenthesis

## TECHNICAL SPECIFICATIONS

### Materials of construction

Enclosure	Engineered resin
Shaft and hardware	Stainless steel
Bushing	Nylon
Beacon visual indicator	Co-polyester

### Drive shaft

Westlock standard	Double-D with 1/4" A/F
NAMUR standard	NAMUR standard VDI/VDE 3845

### Available switches

V3 SPDT mechanical switches
DPDT mechanical switches
Magnum SPDT (hermetically sealed proximity type) switches
V3 inductive proximity sensors

## NOTES

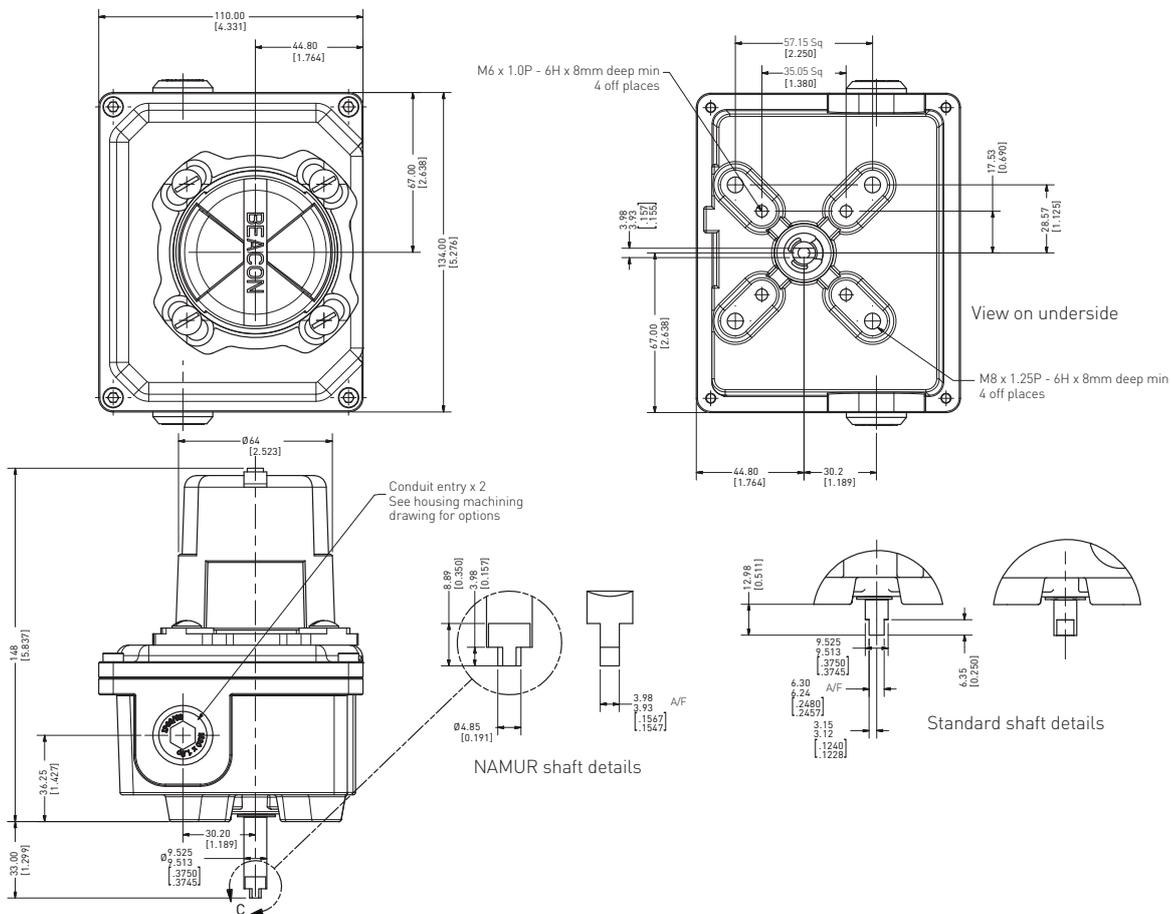
1. See selection guide for standard conduit entries
2. See switches & sensors data sheet for further information
3. Please consult your sales office for any other requirements



# ACCUTRAK™ ROTARY POSITION MONITORS

WEATHERPROOF – IEC

## 3200 SERIES ALUMINIUM & STAINLESS STEEL ENCLOSURE DIMENSIONS



Dimensions in mm, imperial dimensions (inches) in parenthesis

### TECHNICAL SPECIFICATIONS

#### Materials of construction

Enclosure	Aluminum with powder coat finish Stainless steel with electropolished finish
Shaft and hardware	Stainless steel
Bushing	Oil impregnated bronze (aluminum enclosure) PTFE (stainless steel enclosure)
Beacon visual indicator	Co-polyester

#### Drive shaft

Westlock standard	Double-D with ¼" A/F
NAMUR standard	NAMUR standard VDI/VDE 3845

#### Available switches

V3 SPDT mechanical switches
DPDT mechanical switches
Magnum SPDT (hermetically sealed proximity type) switches
V3 inductive proximity sensors

### NOTES

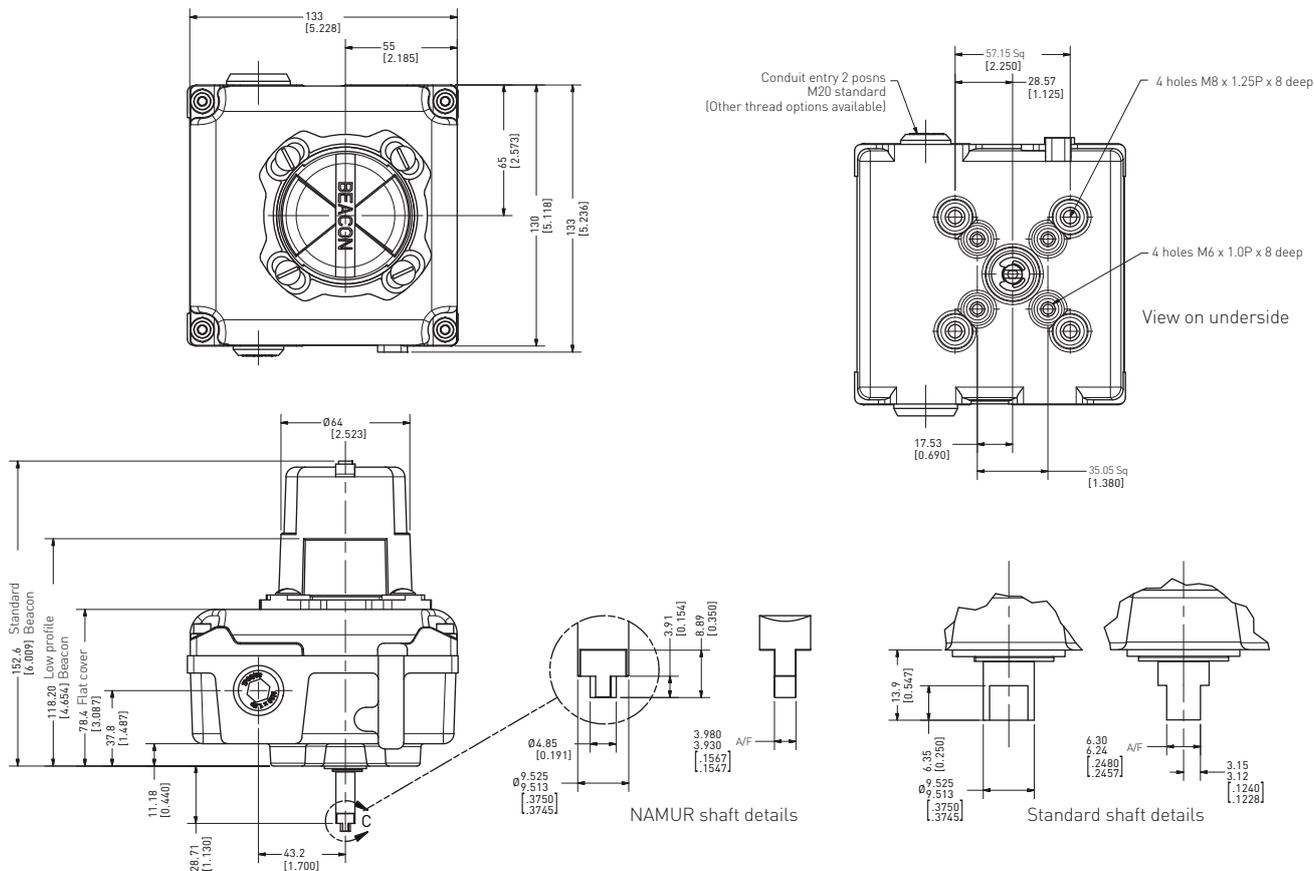
1. See selection guide for standard conduit entries
2. See switches & sensors data sheet for further information
3. Please consult your sales office for any other requirements



# ACCUTRAK™ ROTARY POSITION MONITORS

WEATHERPROOF – IEC

## 3500 SERIES RESIN ENCLOSURE DIMENSIONS



Dimensions in mm, imperial dimensions (inches) in parenthesis

## TECHNICAL SPECIFICATIONS

### Materials of construction

Enclosure	Engineered resin
Shaft and hardware	Stainless steel
Bushing	Nylon
Beacon visual indicator	Co-polyester

### Drive shaft

Westlock standard	Double-D with 1/4" A/F
NAMUR standard	NAMUR standard VDI/VDE 3845

### Available switches

V3 SPDT mechanical switches
DPDT mechanical switches, contacts
Magnum SPDT (hermetically sealed proximity type) switches
V3 inductive proximity sensors
Pneumatic 3/2 operation

## NOTES

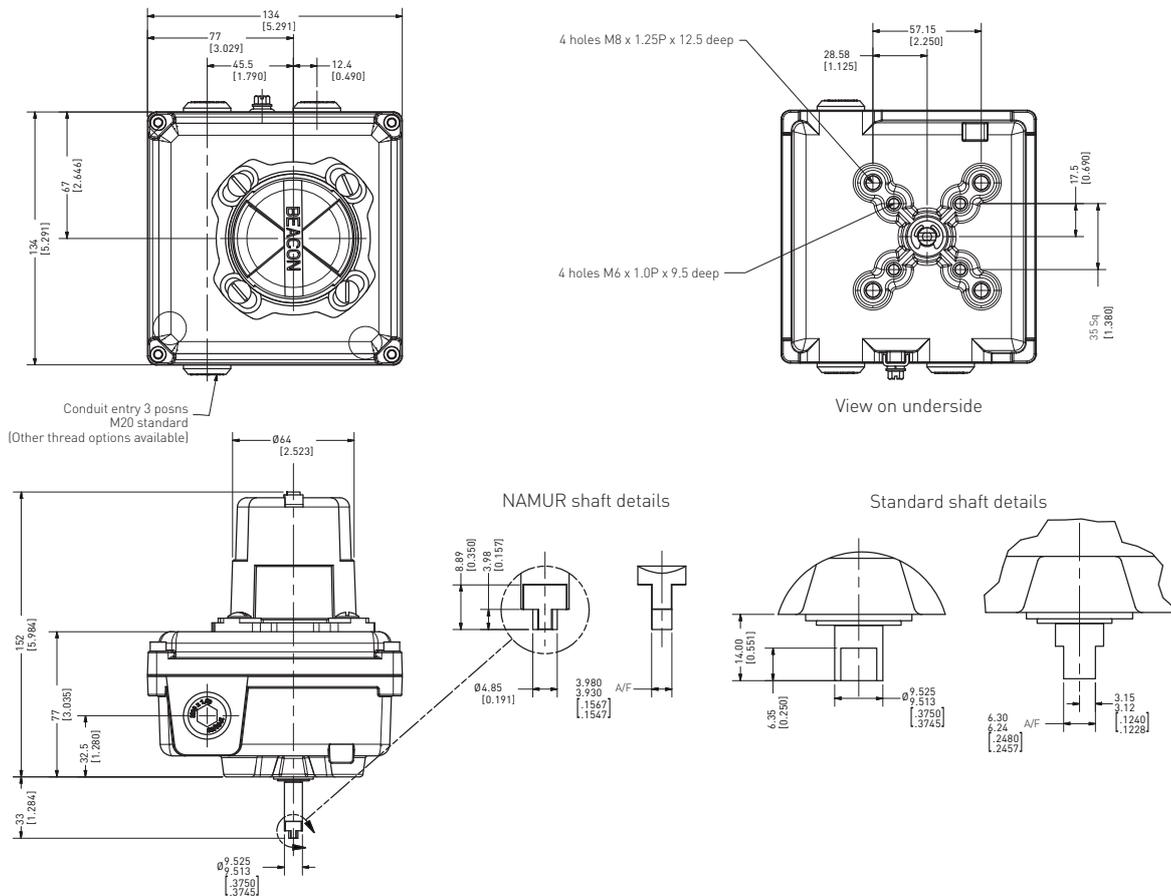
1. See selection guide for standard conduit entries
2. See switches & sensors data sheet for further information
3. Please consult your sales office for any other requirements



# ACCUTRAK™ ROTARY POSITION MONITORS

WEATHERPROOF – IEC

## 3500 SERIES ALUMINIUM & STAINLESS STEEL ENCLOSURE DIMENSIONS



Dimensions in mm, imperial dimensions (inches) in parenthesis

### TECHNICAL SPECIFICATIONS

#### Materials of construction

Enclosure	Aluminum with powder coat finish Stainless steel with electropolished finish
Shaft and hardware	Stainless steel
Bushing	Oil impregnated bronze (aluminum enclosure) PTFE (stainless steel enclosure)
Beacon visual indicator	Co-polyester

#### Drive shaft

Westlock standard	Double-D with 1/4" A/F
NAMUR standard	NAMUR standard VDI/VDE 3845

#### Available switches

V3 SPDT mechanical switches
DPDT mechanical switches
Magnum SPDT (hermetically sealed proximity type) switches
V3 inductive proximity sensors
Pneumatic 3/2 operation

### NOTES

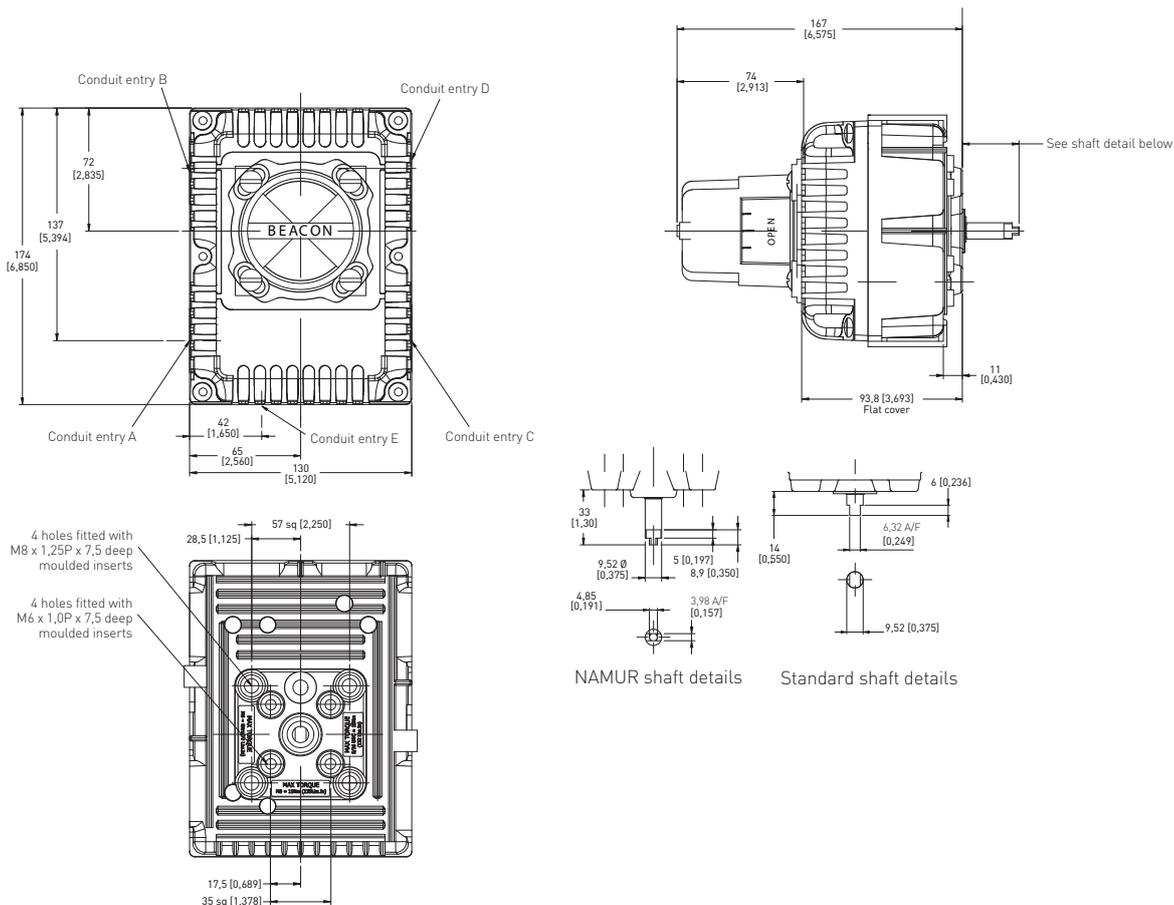
1. See selection guide for standard conduit entries
2. See switches & sensors data sheet for further information
3. Please consult your sales office for any other requirements



# ACCUTRAK™ ROTARY POSITION MONITORS

WEATHERPROOF – IEC

## 8500 SERIES RESIN ENCLOSURE DIMENSIONS



Dimensions in mm, imperial dimensions (inches) in parenthesis

## TECHNICAL SPECIFICATIONS

### Materials of construction

Enclosure	Engineered Resin
Shaft and hardware	Stainless steel
Bushing	Nylon
Beacon visual indicator	Co-polyester

### Drive shaft

Westlock standard	Double-D with 1/4" A/F
NAMUR standard	NAMUR standard VDI/VDE 3845

### Available switches

	V3 SPDT mechanical switches
	DPDT mechanical switches
	Magnum SPDT (hermetically sealed proximity type) switches
	V3 inductive proximity sensors
	Pneumatic 3/2 operation

## NOTES

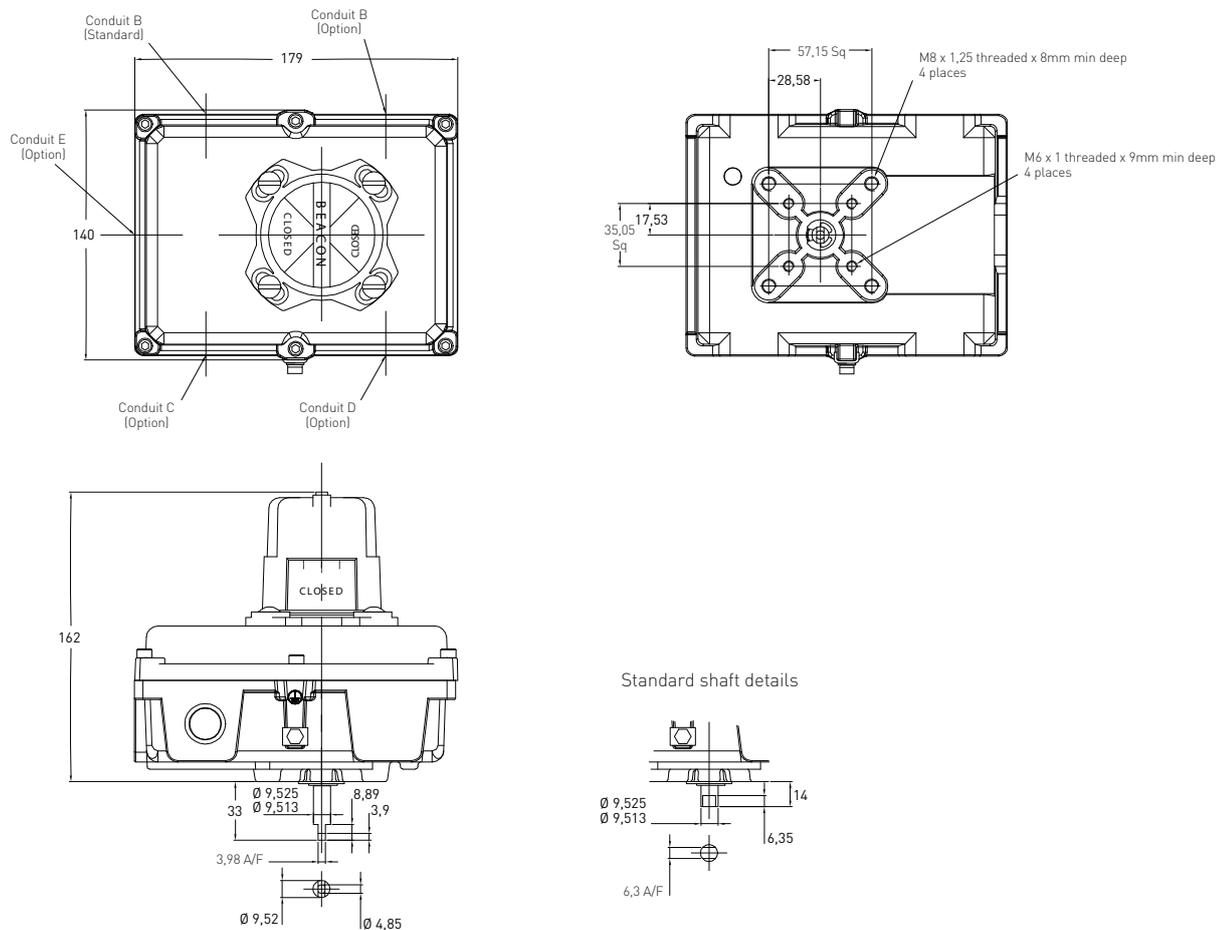
1. See selection guide for standard conduit entries
2. See switches & sensors data sheet for further information
3. Please consult your sales office for any other requirements



# ACCUTRAK™ ROTARY POSITION MONITORS

WEATHERPROOF – IEC

## 8500 SERIES ALUMINIUM & STAINLESS STEEL ENCLOSURE DIMENSIONS



Dimensions in mm, imperial dimensions (inches) in parenthesis

### TECHNICAL SPECIFICATIONS

#### Materials of construction

Enclosure	Aluminum with powder coat finish Stainless steel with electropolished finish
Shaft and hardware	Stainless steel
Bushing	Oil impregnated bronze (aluminum enclosure) PTFE (stainless steel enclosure)
Beacon visual indicator	Co-polyester

#### Drive shaft

Westlock standard	Double-D with 1/4" A/F
NAMUR standard	NAMUR standard VDI/VDE 3845

#### Available switches

	V3 SPDT mechanical switches
	DPDT mechanical switches
	Magnum SPDT (hermetically sealed proximity type) switches
	V3 inductive proximity sensors
	Pneumatic 3/2 operation

### NOTES

1. See selection guide for standard conduit entries
2. See switches & sensors data sheet for further information
3. Please consult your sales office for any other requirements

# ACCUTRAK™ WEATHERPROOF ROTARY POSITION MONITORS

## 3200/3500 SERIES SELECTION GUIDE

### Housing

- 32 3200 with flanged lid
- 35 3500 with flanged lid

### Cover style

- 4 With Beacon
- 6 Flat cover

### Switch type

- 1 Pneumatic (3500 only)
- 5 Microswitch SPDT
- 6 Microswitch DPDT
- 7 P&F inductive sensor
- 8 Other inductive proximity
- 9 Magnum SPDT
- 0 No switches fitted

### Material

- A Aluminium
- R Engineered resin
- S Stainless steel

### Beacon type and color

- |    |                          |    |                    |
|----|--------------------------|----|--------------------|
| BY | Black/Yellow             | B1 | BM3-1 pattern 90°  |
| LY | Black/Yellow low profile | B3 | BM3-3 pattern 90°  |
| AR | ANSI Red/White           | B5 | BM3-5 pattern 90°  |
| GR | Green/Red                | B7 | BM3-7 pattern 180° |
| 00 | No Beacon fitted         | B9 | BM3-9 pattern 180° |

### Drive shaft type

- S Westlock standard – ¼" A/F (6.32 mm)
- N NAMUR standard shaft – VDI/VDE 3845
- \* Non-standard material and build (consult sales office)

### Ancillary options

- 000 No ancillary options
- \*\*\* Non-standard material and build (consult sales office)

### Switch/sensor quantity

- 0 No switch/sensor fitted
- 1 One switch/sensor
- 2 Two switches/sensors
- 3 Three switches/sensors (consult sales office for 3500 Series only)
- 4 Four switches/sensors (consult sales office for 3500 Series only)

### Conduit entries supplied

- 2 Two entries – All enclosures
- 3 Three entries (consult sales office for 3500 Series only)

### Unit specification

- AAA Standard build- M20 conduit entries
- ADZ ¾" NPT conduit entries
- DAV M25 conduit entries
- FAN ½" NPT conduit entries
- \*\*\* Non-standard material (consult sales office)

### Certification

- 0 Non-hazardous

### Revision

- R\* Internal revision #

32 4 6 R BY N 000 2 2 AAA 0 R1 = Model number **3246RBYN0002AAA-0R1**

### NOTES

1. Please contact your sales office for guidance on selecting the best possible combination for your control and monitoring requirements.
2. See Hazardous area classification technical bulletin for further information on global standards.

# ACCUTRAK™ WEATHERPROOF ROTARY POSITION MONITORS

## 8500 SERIES SELECTION GUIDE

<b>Housing</b>												
85	8500 with flanged lid											
<b>Cover style</b>												
4	With Beacon											
6	Flat cover											
<b>Switch type</b>												
1	Pneumatic											
5	Microswitch SPDT											
6	Microswitch DPDT											
7	P&F inductive sensor											
8	Other inductive proximity											
9	Magnum SPDT											
0	No switches fitted											
<b>Material</b>												
A	Aluminium											
R	Engineered resin											
S	Stainless steel											
<b>Beacon type and color</b>												
BY	Black/Yellow					B1	BM3-1 pattern 90°					
LY	Black/Yellow low profile					B3	BM3-3 pattern 90°					
AR	ANSI Red/White					B5	BM3-5 pattern 90°					
GR	Green/Red					B7	BM3-7 pattern 180°					
00	No Beacon fitted					B9	BM3-9 pattern 180°					
<b>Drive shaft type</b>												
S	Westlock standard – ¼" A/F (6.32 mm)											
N	NAMUR standard shaft – VDI/VDE 3845											
*	Non-standard material and build (consult sales office)											
<b>Ancillary options</b>												
000	No ancillary options											
***	Non-standard material and build (consult sales office)											
<b>Switch/sensor quantity</b>												
0	No switch/sensor fitted											
1	One switch/sensor											
2	Two switches/sensors											
3	Three switches/sensors (consult sales office)											
4	Four switches/sensors (consult sales office)											
<b>Conduit entries supplied</b>												
2	Two entries – All enclosures											
3	Three entries – All enclosures											
4	Four entries – All enclosures											
5	Five entries (consult sales office)											
<b>Unit specification</b>												
AAA	Standard build- M20 conduit entries											
ADZ	¾" NPT conduit entries											
DAV	M25 conduit entries											
FAN	½" NPT conduit entries											
***	Non-standard material (consult sales office)											
<b>Certification</b>												
0	Non-hazardous											
<b>Revision</b>												
R*	Internal revision #											
85	4	6	A	BY	N	000	2	2	AAA	0	R1	= Model number <b>8546ABYN0002AAA-0R1</b>

### NOTES

1. Please contact your sales office for guidance on selecting the best possible combination for your control and monitoring requirements.
2. See Hazardous area classification technical bulletin for further information on global standards.

## ACCUTRAK™ ROTARY POSITION MONITORS

WEATHERPROOF – GENERAL PURPOSE

Compact rotary position monitor in engineered ABS resin with dome shaped visual indicator and mechanical switch



### FEATURES

- Dome shaped visual indicator provides clear feedback.
- Switch stabilisation plate allows accurate switch setting, improves repeatability and minimizes hysteresis.
- Quality mechanical switches roller arm; soldered and sheathed wires.
- Quick release terminal strip aids wiring.
- IP66 ABS enclosure provides high strength and corrosion resistance.
- IP rated plugs prevent ingress during site storage and transportation.
- Extra conduit and terminal strip points entrance allows electrical integration of solenoid valves.
- NAMUR VDI/VDE standard mounting arrangement with centralization ring for easy mounting (via an optional bracket) onto NAMUR actuators.

### GENERAL APPLICATION

AccuTrak position monitors are ideal for manual and automated rotary valves. They provide consistent and accurate valve monitoring in a compact unit which can be mounted directly or via a valve actuator.

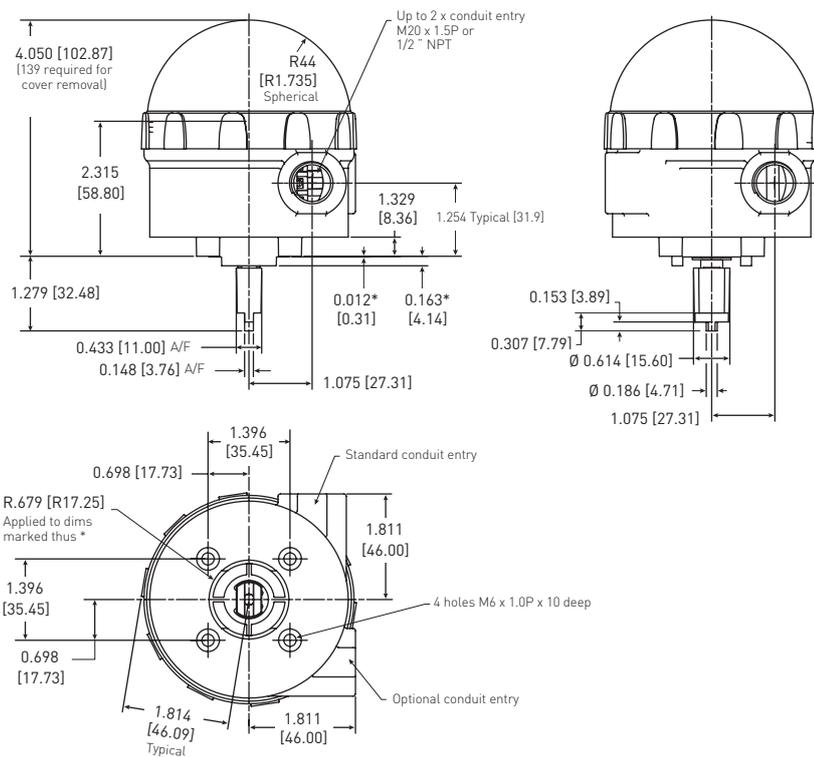
### TECHNICAL DATA

<b>Agency approvals</b>	
Enclosure (IEC)	IP66
<b>Switches</b>	
Mechanical	V3 mechanical, SPDT
<b>Materials</b>	
Enclosure	Engineered ABS resin

# ACCUTRAK™ ROTARY POSITION MONITORS

## WEATHERPROOF – GENERAL PURPOSE

### 1100 SERIES DIMENSIONS



Dimensions in inches, where available metric dimension (mm) in parentheses

### TECHNICAL SPECIFICATIONS

#### Materials of construction

Enclosure	ABS Resin
Shaft	ABS Resin
Beacon indication	ABS Resin
Temperature rating	-4°F to 176°F [-20°C to 80°C]

#### Drive shaft

Westlock standard	Double-D with 1/4" A/F
NAMUR standard	NAMUR standard VDI/VDE 3845

#### Available switches

V3 mechanical switches, SPDT

### NOTES

1. See switches data sheet for further information
3. Please consult your sales office for any other requirements



# ACCUTRAK™ WEATHERPROOF ROTARY POSITION MONITORS

## 1100 SERIES SELECTION GUIDE

<b>Housing</b>												
11	1100 with screwed lid											
<b>Cover style</b>												
4	With Beacon											
<b>Switch type</b>												
5	Microswitch SPDT											
<b>Material</b>												
R	Engineered ABS											
<b>Beacon type and color</b>												
BY	Black/Yellow standard height											
<b>Drive shaft type</b>												
N	NAMUR standard shaft – VDI/VDE 3845											
<b>Ancillary options</b>												
000	Not applicable											
<b>Switch quantity</b>												
2	Two switches											
<b>Conduit entries supplied</b>												
2	Two entries											
<b>Unit specification</b>												
AAA	M20 Conduits – Std. material and build											
FAN	½" NPT conduit entries											
***	Non-standard material (consult sales office)											
<b>Certification</b>												
0	Non-hazardous											
<b>Revision</b>												
R*	Internal revision #											
11	4	5	R	BY	N	000	2	2	AAA	0	R1	= Model number <b>1145RBYN00022AAA-0R1</b>

### NOTES

1. Please contact your sales office for guidance on selecting the best possible combination for your control and monitoring requirements.
2. See Hazardous area classification technical bulletin for further information on global standards.

## 1145 POSITION MONITOR INSTALLATION AND OPERATING INSTRUCTIONS

1145 Position monitor with SPDT V3 microswitches or V3 inductive proximity sensors

The following document details the installation and operation instructions for the Westlock 1145 series giving 360° visual and electrical valve position.

### 1 MOUNTING INSTRUCTIONS

- 1.1 Please refer to Figure 1 below this determines the type of mounting that is required. Figure 1 details the NAMUR option.
- 1.2 Operate the actuator to the fully closed position.
- 1.3 NAMUR mount - secure the appropriately sized NAMUR bracket using the screws / washers supplied with the NAMUR kit. Mount the 1145 switchbox to the mounting bracket by engaging the NAMUR shaft drive into the actuator pinion slot.
- 1.4 Secure the 1145 switchbox using the 4 off M6 x 10 mm Hex head screws using an 8 mm A/F spanner.

### 2 COVER REMOVAL

- 2.1 Remove the 1145 cover assembly by unscrewing in a counter clockwise direction. The cover assembly consists of the inner and outer visual indicators and the indicator to shaft coupler. See Figure 2.

#### NOTE

Take care when storing the 1145 cover assembly as this will be required when reassembling. Any damage to the assembly may affect the ingress protection of the enclosure.

FIGURE 1

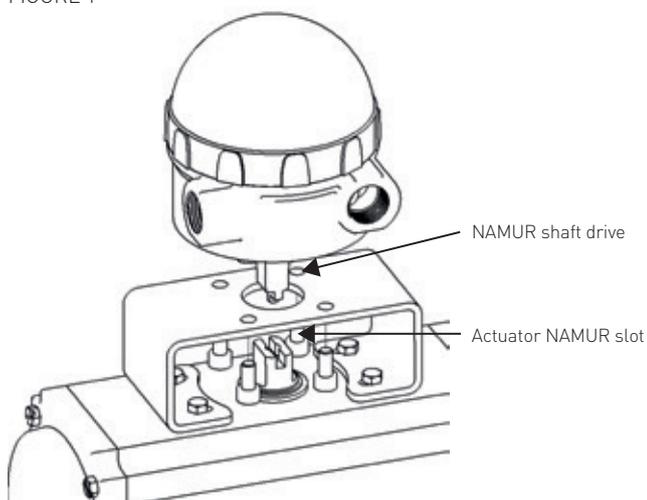
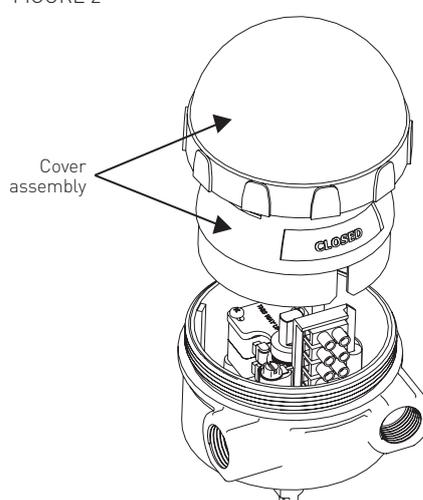


FIGURE 2



# 1145 POSITION MONITOR

## INSTALLATION AND OPERATING INSTRUCTIONS

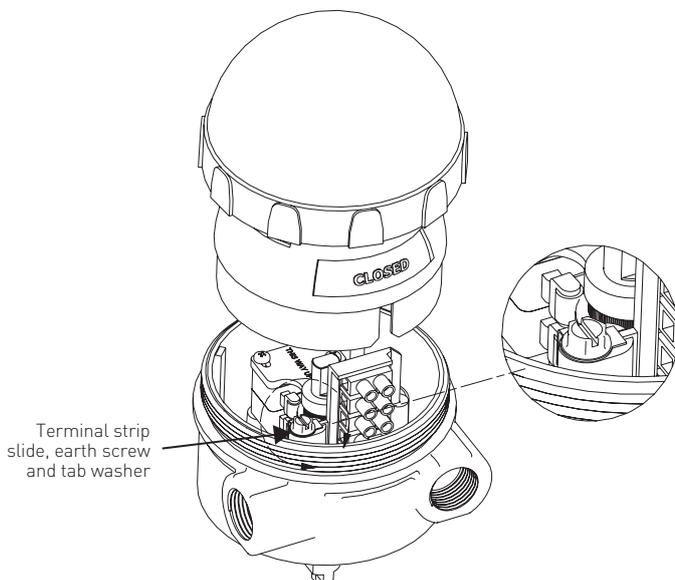
### 3 FIELD WIRING

#### ATTENTION

Before installing the conduit entry gland, please ensure that it is the correct size and thread form. The incorrect gland will affect the enclosure ingress protection.

- 3.1 To remove the terminal strip slide first release the green 8-32 UNC earth screw by approx one full turn. Then rotate the tab washer so that the small tab allows the terminal strip slide to move vertical. The wiring diagram for the model ordered will be on the reverse of the terminal strip slide. See Figure 3.
- 3.2 Secure the field wiring by tightening the conductors in the left hand side of the terminal strip corresponding to the switch / sensor wires.
- 3.3 Insert the terminal strip slide into the enclosure by simply lining up runners into the guide slots. When fully home rotate the tab washer so that the small tab is over the terminal strip slide runner. Secure by hand tightening the earth screw using an appropriately sized screw driver or ¼" A/F socket drive.
- 3.4 Before proceeding with the switch / sensor cam setting, ensure that the switch / sensor wires are neatly positioned between the wire barrier and enclosure wall.

FIGURE 3

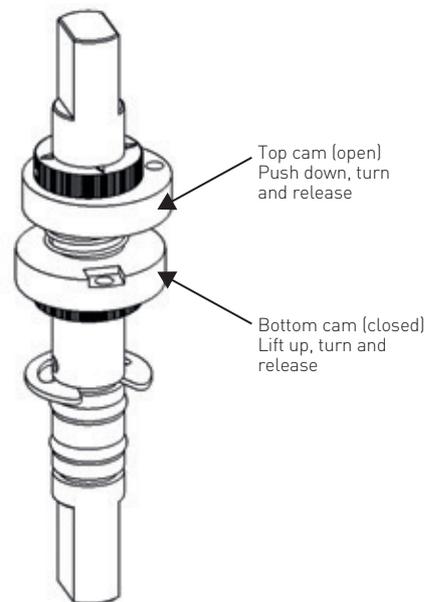


### 4 TOUCHSET CAM SETTING

Refer to Figure 4

- 4.1 To set the switch or sensor cam, lift the bottom cam and turn until switch / sensor is activated and then release. The spring will push the cam back onto the splined shaft.
- 4.2 Operate the actuator to the opposite extreme, push down on the top cam and turn until the upper switch / sensor is activated.
- 4.3 Operate the actuator from one extreme to the other several times to ensure that the switches / sensors activate correctly.

FIGURE 4



# 1145 POSITION MONITOR

## INSTALLATION AND OPERATING INSTRUCTIONS

### 5 COVER ASSEMBLY

- 5.1 To aid the assembly of the cover orientate the cover assembly coupler so that the flats are in line with the long vertical groove in the inner indicator.
- 5.2 Align the vertical groove of the inner indicator with the vertical rib in the housing positioned behind the terminal strip. See Figure 5.
- 5.3 Rotate the cover in a clockwise direction whilst pushing the cover assembly towards the housing. This action will engage the cover assembly coupler onto the shaft.
- 5.4 Tighten the cover to the housing to a hand tight feel.

### 6 READY FOR USE

- 6.1 The 1145 switchbox is now ready for use.
- 6.2 If there are any un-used conduit entries, please ensure that they are plugged using correctly rated IP blanking plugs.

### 7 TECHNICAL DATA

Area classification: Non hazardous  
 Ingress protection: IP66

#### Switch / sensor options

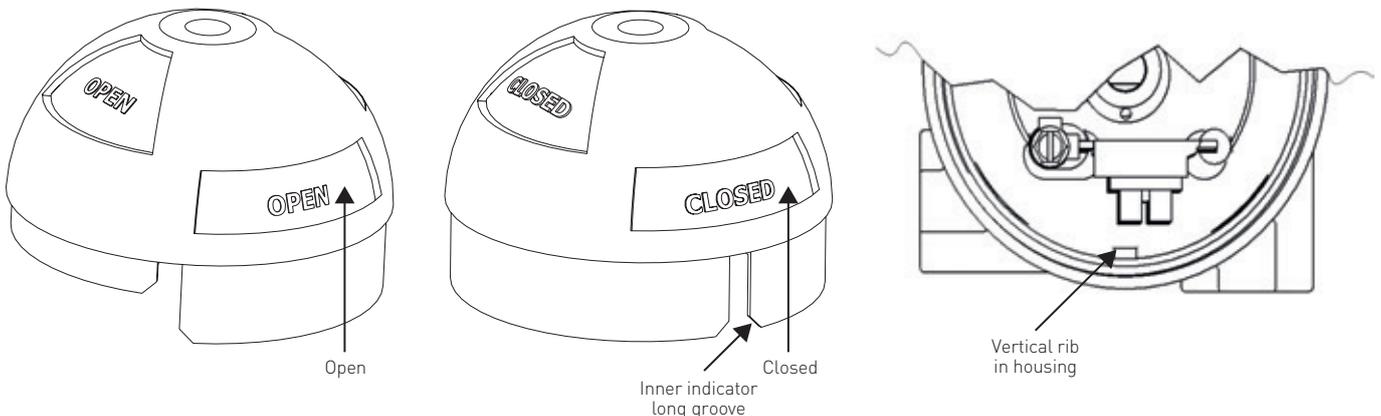
Mechanical switch: SPDT Form C,  
 Electrical rating: 15 A - 125/250 VAC;  
 6 A - 24 VDC

Alternative inductive proximity sensors:

- P&F: NJ2-V3-N, NBB3-V3-Z4,  
 NBB2-V3-E2
- IFM: IS5026, IS5001, IS0003, IS5003,  
 NS5002
- Turck: Bi2-Q10S-AP6X, Bi2-Q10S-YOX
- Telemecanique: XS7-H10PA340

Terminal strip: Weco 302 HDS,  
 6 or 8 points  
 Conduit options: Up to 2 x M20 x 1.5p or  
 ½" -14 NPT  
 Ambient  
 temperature range: Minus 20°C to +80°C

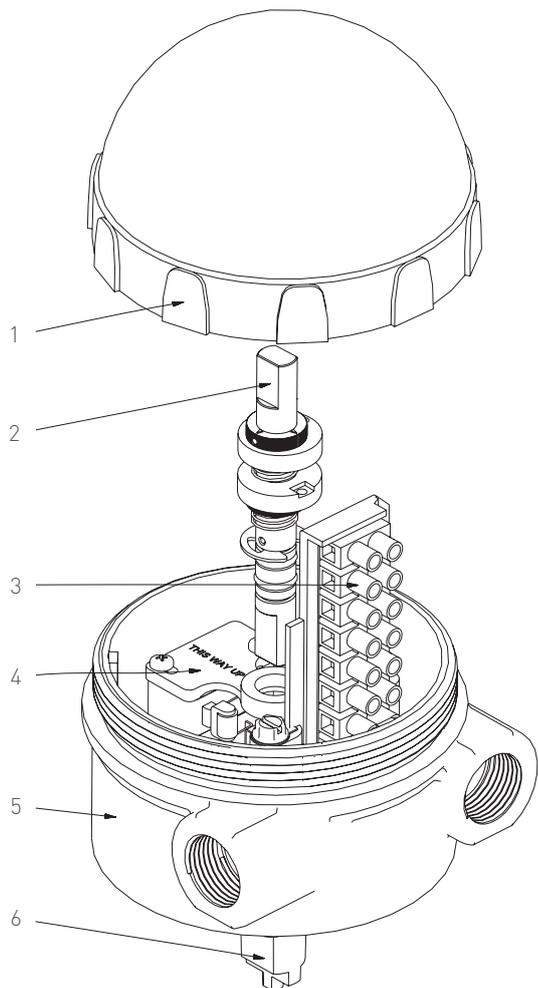
FIGURE 5



# 1145 POSITION MONITOR

## INSTALLATION AND OPERATING INSTRUCTIONS

FIGURE 6



### PARTS LIST

Item	Qty	Description
1	1	Cover assembly with HiVue indicator
2	1	Shaft assembly with NBR O-rings
3	1	Terminal strip and switch assembly
4	1	Switch to shaft support plate
5	1	Housing with EPDM O-ring
6	4	Actuator mounting screws
7	4	NAMUR and 11 x 16 mm shaft coupler
8	1	Modmount bracket
9	4	Bracket to housing screws

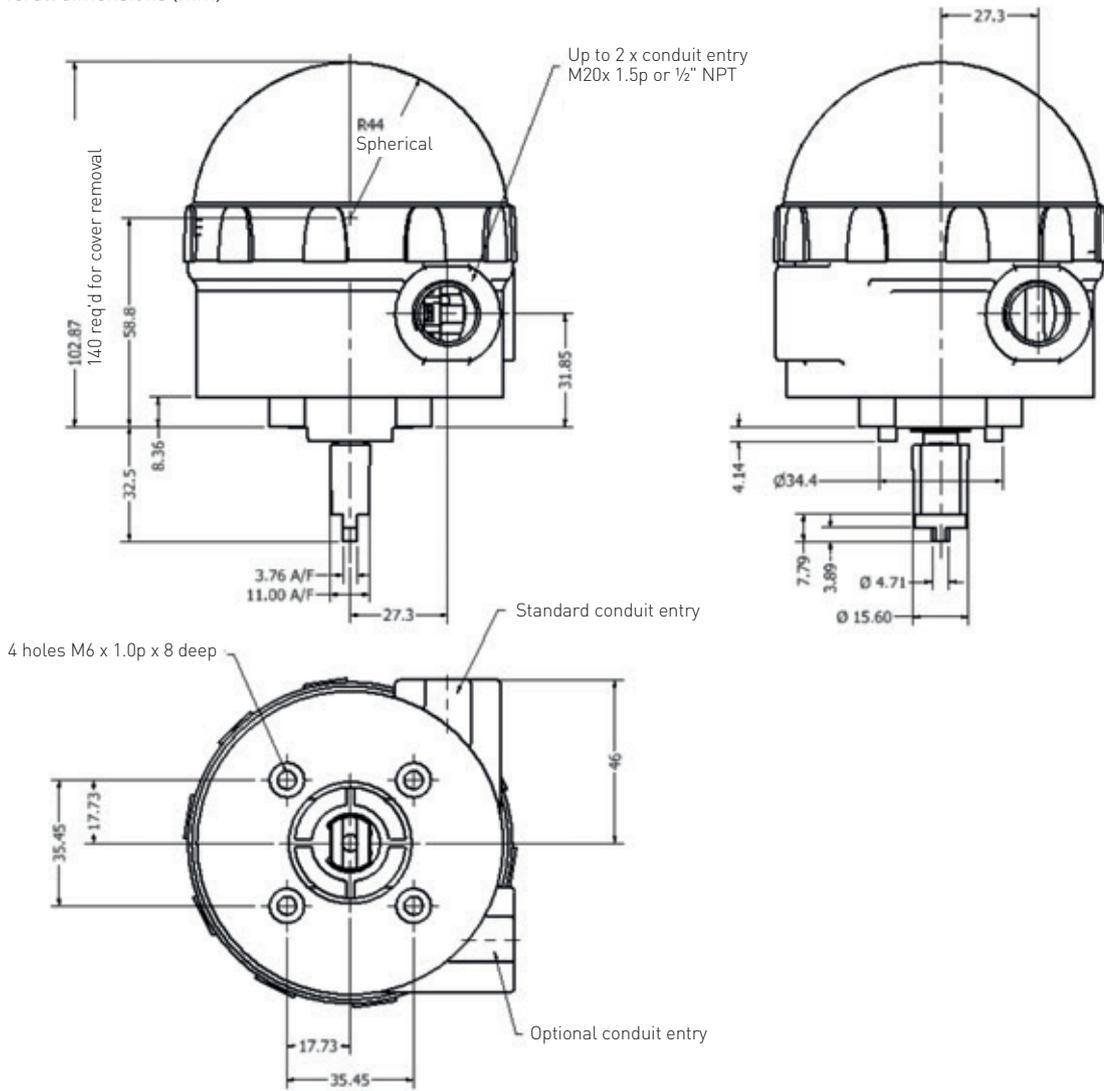
### NOTE

Westlock do not offer replacement assemblies for the 1145 switchbox.

# 1145 POSITION MONITOR

## INSTALLATION AND OPERATING INSTRUCTIONS

FIGURE 7  
Overall dimensions (mm)



These installation and operating instructions are based on document TECHUK-71 Rev 1 ECN#12787

### Translations

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