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## 3300 Ex ia Accutrak 3500 Non-Hazardous Accutrak Valve Position Monitor — Marketing Release September 2009





## Purpose of Document

From Monday 31st August 2009 all Intrinsically Safe Certified Accutrak Monitors that were previously identified as 3400 Series will change to 3300 Series. At the same time all Non-Hazardous Accutrak Monitors listed as 3400 will change to 3500 Series. This change has been made due to update in certification programme (ATEX and IEC) where by we have to provide a dedicated part number for each Hazardous Area standard.

3300 Series – Intrinsically Safe Certified Ex ia (See ATEX and IECEx certificates for schedule).

3400 Series – Encapsulation Increased Safety Certified Ex mb e (See ATEX and IECEx certificates for schedule).

3500 Series – Non-Hazardous Applications only.

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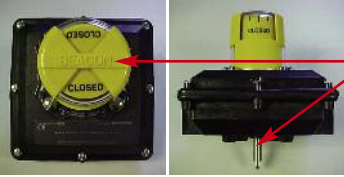
## Overview of Changes

- **Certification**



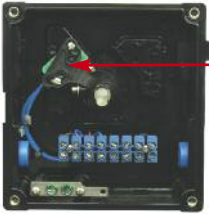
Due to the change in the ATEX/IEC Harmonised Standards for Intrinsic Safety, it has been necessary to create a specific part number for IS Certified (3300 Series) product compared to Non-Hazardous (3500 Series) equipment.

- **Shaft Rationalisation:**



Along with a global shaft rationalisation strategy the LG1 Shafts have been updated to include double O-Ring positions as standard. In line with customer requests the Namur 'Tang' has also been rotated 90° so the Beacon can be fitted in a standard orientation for most conventional applications.

- **Centralisation Plate:**



Standard supply of a centralising plate for two switch products offers a product improvement with regards to the linearity of the Shaft/Cam arrangement in line with the Switch/Sensor triggering position. This will allow more accurate setting of switches by fixing the shaft position while setting occurs and cover bearing is removed.

- **Inductive Proximity Cam Assembly:**



With the above centralisation plate, tolerances allow an improvement to the Cam arrangement for the Inductive Proximity sensor option within the LG1 range of products. This has incorporated a metallic 'Slug' with an increased diameter and density that is located within the Cam to allow for improved accuracy when setting the sensors.



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## Magnum Rhodium Switches

**Subject:**

Adoption of Rhodium 'Low Power' Switches in all 'IS' certified Westlock product supplied with Magnum switches.

**Proposal:**

The Rhodium contact Magnum is designed for, and fully capable of handling all low power and 'IS' circuit applications, and Westlock Controls believe the adoption of this switch in all certified IS products will be a major product improvement.

**Comparison of relevant Properties:**

Magnum Type	Rhodium Contact
Contact Protection	98% N <sub>2</sub> ; 2% O <sub>2</sub>
Min Switching capacity	10 m Watt
Max Switching capacity	25 Watts
Max contact Resistance	0.1 Ohm





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## Technical Information

### Accutrak 3300 Series – Ex ia Intrinsically Safe

High performance polyamide resins offer a viable alternative to metal enclosures for applications where caustics wash downs, chloride atmospheres and salt water environments are a daily occurrence. The Accutrak 3300 Series combines chemical resistance with high impact strength and immunity to weathering. Unaffected by electrolytic corrosion and high concentrates of alkalis, the 3300 Series is remarkably resistant to attack from bacteria and fungi; a feature especially important in food and beverage processing plants.

The 3300 Series is certified ATEX/IECEX to latest intrinsically safe harmonised standards.

#### Certified Options Available

- TR90 UV Grilamid, Anodised Aluminium (A360) or Stainless Steel Enclosure Material (AMS 5360-316)
- Beacon or Flat Covers
- Standard Height - Black / Yellow, Red / White, Blue / White, Green / White, 3 Way Flow Path Beacon Indicators, Various Languages
- Low Profile – Black / Yellow, Red / White, Blue / White, Green / White
- M20, M25, 1/2"NPT and 3/4"NPT Conduit Entry Options
- 3 Position Conduit Entries
- 1, 2, 3 or 4 x V3 Mechanical Switches SPDT Contacts Gold Plated
- 1, 2, 3 or 4 x V3 Inductive Proximity Sensors
- 1, 2, 3 or 4 x Magnum XT90 Hermetically Sealed Proximity SPDT Rhodium Contacts
- Namur or Westlock Standard Shaft
- Terminal Strips – Blue Weco 12 Max

#### Technical Specifications

##### ● ENCLOSURE

Material Specification	Nylon 12 TR90-UV
Finish	Natural
Aluminium	
Material Specification	A360
Finish	Black Polyester, Powder Coating
Stainless Steel	
Material Specification	AMS 5360-316
Finish	Electropolish

##### ● BEACON INDICATOR

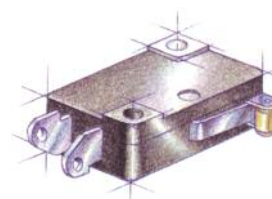
Material Specification	Eastar Copolyester
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##### ● SHAFT

Material Specification	303 Stainless Steel (STD)
	316 Stainless Steel (Optional)

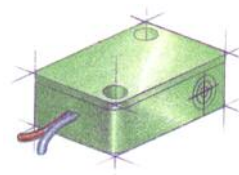
##### ● SENSORS/SWITCHES

– V3 Mechanical Switches SPDT Gold Plated Contacts	<b>Electrical Rating (SPDT):</b>
	15amps / 125/250VAC
	.5amps / 125VDC
	6amps / 24VDC
	.25amps / 250VDC
	5amps / 125VAC
	<b>Hysteresis:</b>
	3%



##### – Pepperl & Fuchs (NJ2-V3-N)

	<b>Input Voltage Range:</b>
	5 – 25VDC
	<b>Output / Current Consumption:</b>
	≥ 1 mA - ≤ 3 mA
	<b>Nominal Voltage:</b>
	8VDC
	<b>Switching Frequency:</b>
	1 KHz
	<b>Hysteresis:</b>
	1%





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## Technical Information Continued

### Accutrak 3300 Series – Ex ia Intrinsically Safe

– Magnum XT90 Hermetically Sealed Rhodium Contacts



0.295amps / 120VAC

0.15amps / 240VAC

1amps / 24VDC

**Hysteresis:**  
6%

#### ● TERMINAL STRIP

– Type	WECO Series 300 type 302 HDS
– Colour	Blue
– Material Specification	Polymide
– Nominal Cross Section	1.5mm <sup>2</sup>
– Wire Tripping Length	5mm

#### ● O-RINGS/GASKETS

– Material Specification	Buna N (other variations on request)
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#### ● E CLIPS

– Material Specification	Stainless Steel PH15-7M0
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#### ● FASTENERS

– Material Specification	Stainless Steel A2 (Standard) Stainless Steel A4 (Optional)
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#### ● CERTIFICATION APPLICABLE



ATEX

Certificate Number:	SIRA 09 ATEX 2147X
Approval Detail:	II* GD Ex ia II* T* G* Ex t IIIC T135°C Da IP6X T amb – *°C to + *°C

#### ● CERTIFICATION APPLICABLE



IECEX

Certificate Number:	IEC EX SIR 09.0061X
Approval Detail:	Ex ia II* T* G* Ex t IIIC T135°C Da IP6X T amb – *°C to + *°C



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## Technical Information

### Accutrak 3500 Series – Non-Hazardous

High performance polyamide resins offer a viable alternative to metal enclosures for applications where caustics wash downs, chloride atmospheres and salt water environments are a daily occurrence. The Accutrak 3500 Series combines chemical resistance with high impact strength and immunity to weathering. Unaffected by electrolytic corrosion and high concentrates of alkalis, the 3500 Series is remarkably resistant to attack from bacteria and fungi; a feature especially important in food and beverage processing plants.

#### Certified Options Available

- TR90 UV Grilamid Anodised Aluminium (A360) or Stainless Steel enclosure material (AMS 5360-316)
- Beacon or Flat Covers
- Standard Height - Black / Yellow, Red / White, Blue / White, Green / White, 3 Way Flow Path Beacon Indicators, Various Languages
- Low Profile – Black / Yellow, Red / White, Blue / White, Green / White
- M20, M25, 1/2" NPT and 3/4" NPT Conduit Entry Options
- 3 Position Conduit Entries
- 1, 2, 3 or 4 x V3 Mechanical Switches SPDT Contacts
- 1, 2, 3 or 4 x Inductive Proximity Sensors dependent on sensor size (Contact Sales Office for Options)
- 1, 2, 3 or 4 x Magnum XT90 Hermetically Sealed Proximity SPDT Tungsten Contacts
- Namur or Westlock Standard Shaft
- Terminal Strips – Weco 16pt Max (others on request)

#### Technical Specifications

##### ● ENCLOSURE

Material Specification	Nylon 12 TR90-UV
Finish	Natural
Aluminium	
Material Specification	A360
Finish	Black Polyester Powder Coating
Stainless Steel	
Material Specification	AMS 5360-316
Finish	Electropolished

##### ● BEACON INDICATOR

Material Specification Eastar Copolyester

##### ● SHAFT

Material Specification 303 Stainless Steel

##### ● SENSORS/SWITCHES

– V3 Mechanical Switches SPDT

##### Electrical Rating (SPDT):

15amps / 125/250VAC

.5amps / 125VDC

6amps / 24VDC

.25amps / 250VDC

5amps / 125VAC

##### Hysteresis:

3%



– DPDT Mechanical Switch

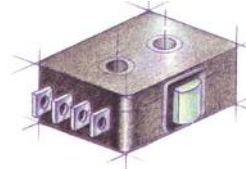
##### Electrical Rating (DPDT):

10amps / 125VAC

10amps / 250VAC

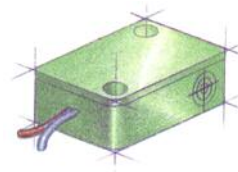
##### Hysteresis:

5%



– Inductive Proximity Sensors

Contact Sales Office for Options





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## Technical Information Continued

### Accutrak 3500 Series – Non-Hazardous

– Magnum XT90 Hermetically Sealed Tungsten Contacts

**Electrical Rating:**  
3amps / 120VAC

1.5amps / 240VAC

2amps / 24VDC

**Hysteresis:**

6%



#### ● TERMINAL STRIP (others on request)

– Type WECO Series 300 type 302 HDS (STD)

– Colour Natural

– Material Specification Polymide

– Nominal Cross Section 1.5mm<sup>2</sup>

– Wire Tripping Length 5mm

#### ● O-RINGS/GASKETS

– Material Specification Buna N (STD) – others on request

#### ● E CLIPS

– Material Specification Stainless Steel PH15-7M0

#### ● FASTENERS

– Material Specification  
Stainless Steel A2 (Standard)  
Stainless Steel A4 (Optional)





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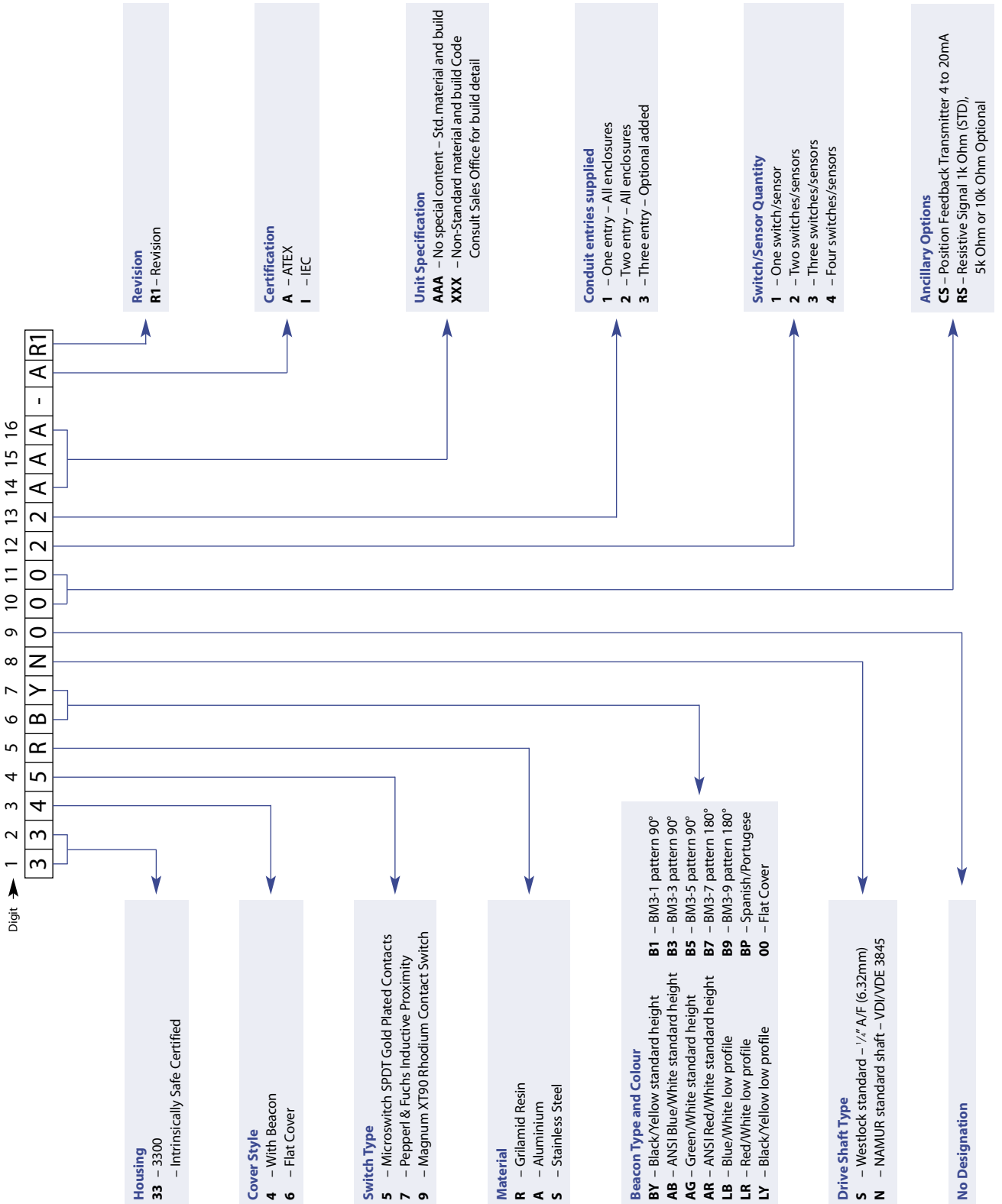
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### 3300 Series Accutrak Coding





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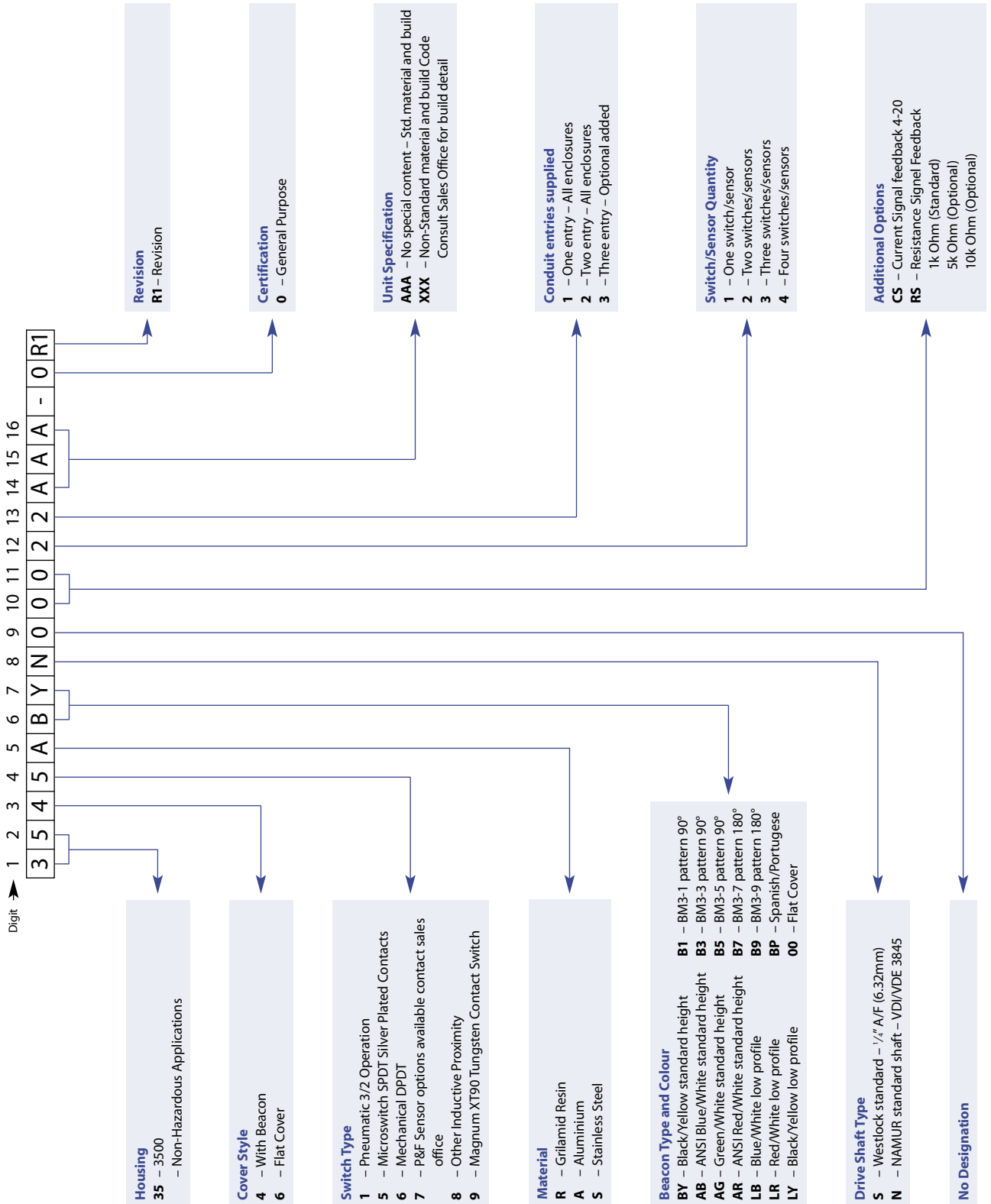
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## 3500 Series Accutrak Coding





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## Part Number Examples

### 3300 Series Monitor

**Description:** Westlock Grilamid, 3300 Series Monitor, Black/Yellow Beacon Indicator, Namur Shaft, 2 x M20 Conduit Entries, 2 x Magnum XT90 Hermetically Sealed Proximity Switches with Rhodium SPDT Contacts pre-wired to 8 Point Blue Terminal Strip. Unit ATEX Certified – Intrinsically Safe.

*Part Number: 3349R-BY-N-000-22AAA-AR1.*

**Description:** Westlock Stainless Steel, 3300 Series Monitor, Black/Yellow Beacon Indicator, Namur Shaft, 2 x M20 Conduit Entries, 2 x Pepperl & Fuchs Inductive Proximity Sensors NJ2-V3-N pre-wired to 8 Point Blue Terminal Strip. Unit IECEx Certified – Intrinsically Safe.

*Part Number: 3347S-BY-N-000-22AAA-IR1.*

**Description:** Westlock Aluminium, 3300 Series Monitor, Black/Yellow Beacon Indicator, Namur Shaft, 2 x M20 Conduit Entries, 2 x V3 Mechanical Switches with Gold Plated SPDT Contacts pre-wired to 8 Point Blue Terminal Strip. Unit ATEX Certified – Intrinsically Safe.

*Part Number: 3345A-BY-N-000-22AAA-AR1.*

### 3500 Series Monitor

**Description:** Westlock Grilamid, 3500 Series Monitor, Black/Yellow Beacon Indicator, Namur Shaft, 2 x M20 Conduit Entries, 2 x Magnum XT90 Hermetically Sealed Proximity Switches with Tungsten SPDT Contacts pre-wired to 8 Point Terminal Strip. Unit for use in a Non-Hazardous Area.

*Part Number: 3549R-BY-N-000-22AAA-OR1.*

**Description:** Westlock Aluminium, 3500 Series Monitor, Black/Yellow Beacon Indicator, Namur Shaft, 2 x M20 Conduit Entries, 2 x V3 Mechanical Switches with Silver Plated SPDT Contacts pre-wired to 8 Point Terminal Strip. Unit for use in a Non-Hazardous Area.

*Part Number: 3545A-BY-N-000-22AAA-OR1.*