

Reading a Telemecanique OsiSense XS Part Number — XS108B3PAM12 Decoded Field by Field

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A field-by-field decode of OsiSense XS inductive sensor designations — series, barrel size, body style, output technology, PNP/NPN, NO/NC and connection — so a worn sensor label or a competitor cross-reference resolves to the right replacement.

The anatomy

Take XS108B3PAM12 — a stocked M8 sensor (catalogue entry) — and read left to right:

Field | Value | Meaning |

XS | | OsiSense inductive family |

1 | 1 | Series/generation (XS1 general purpose; XS2 extended distance; XS5/XS7 Optimum-class; XS6/XS8/XS9 application series) |

08 | 08 | Barrel: 06 = Ø6.5 smooth, 08 = M8, 12 = M12, 18 = M18, 30 = M30; letters for block styles (C/D/E/F/J on XS7) |

B | B | Body/length style (short/long, metal/plastic per series table) |

3 | 3 | Electrical technology: 3-wire DC here; 1 = 2-wire DC, 4 = AC/DC or AC per series |

P | P | Output transistor: P = PNP, N = NPN (XS108B3NAM12 is the NPN twin), K/M = 2-wire variants |

A | A | Switching function: A = NO, B = NC (XS108B3PBM12 = PNP NC), C = complementary NO+NC |

M12 | M12 | Connection: M12 / M8 connector; L05/L1/L2/L5/L10 = pre-wired cable 0.5–10 m (...PAL5 = 5 m); suffix TF = low-temperature version |

Worked examples from stock

XS106B3NAM8 — XS1, Ø6.5 smooth barrel, 3-wire DC, NPN, NO, M8 connector.

XS130B3PBM12 — M30, PNP, NC, M12 connector (Sn 15 mm).

XS512B1DBL2 — Optimum Ø12, 2-wire DC (B1D block), NC, 2 m cable.

XS7E1A1PAL01M12 — XS7 block 26×26, PNP NO, 0.1 m pigtail to M12.

XS1N30PA349L2 — XS1 M30 variant with application code 349, PNP NO, cable.

Using the decode for replacement

Three rules keep a swap safe. (1) Match the electrical interface exactly — wire count, PNP/NPN, NO/NC and connector; the mechanical fields (body style letter) tolerate equivalents if length and thread agree. (2) Check Sn class, not just barrel: within one barrel size, series differ in rated distance (XS2/XS6 extended-distance types exist); the machine was gapped for the original. (3) Respect application suffixes: TF (cold), food-grade, weld-immune and under-speed (XSAV) codes are the function — an XSAV rotation monitor (XSAV11373L10) is not a generic M30 proximity switch even though it looks like one.

Cross-referencing other makes

Competitor inductives (IFM IF/IG..., Sick IME, Omron E2E, P+F NBB/NJ...) map on the same five parameters: barrel, Sn + flush class, supply/wiring, output, connection. Build the cross-reference by decoding both part numbers into that table rather than trusting "equivalent" lists; the catalogue's per-product spec blocks (diameter, output type, switching distance, connector) give the target values directly — e.g. the Omron E2E-X8B1TL18 listing carries the same fields. When the label is gone entirely: measure thread and length, count wires, meter the output against +24 V and 0 V with a steel target, and the table above rebuilds the designation.

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