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Siemens, Danfoss, ABB, Schneider — Order Number Decoder

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How to read Siemens MLFB numbers, Danfoss code numbers, ABB type and 2CDS catalogue codes, Schneider Electric references and Phoenix Contact, WAGO and Eaton numbers; the current product families to buy in 2026 with successor mappings (S7-1200 G2, iC2-Micro); the cross-brand function map for contactors, breakers, drives and power supplies; and how this hardware is bought by the hundred.

The short version

In electrical and automation, the order number is the product. A Siemens 6ES7 214-1AH50-0XB0, a Danfoss 060G1124, an ABB AF370-30-11-13, a Schneider ATV320U15N4 or a Phoenix Contact 2904601 each identifies one item completely: family, size, voltage, options, version. A description ("24 V PLC", "pressure sensor 0–6 bar") identifies a category and starts a clarification round. Buying by order number is the single largest efficiency available to a maintenance purchaser, and the decoder below is how to read the numbers rather than just copy them.

Four numbering styles cover the European market. Structured type codes you can read (Siemens MLFB, ABB drive type codes, Schneider Altivar and TeSys references, Danfoss drive type codes); flat code numbers you look up (Danfoss eight-character codes, Phoenix Contact seven-digit numbers, WAGO xxx-xxx numbers, ABB's 2CDS catalogue numbers); and hybrids that pair a readable type with a flat code (Danfoss drives, ABB breakers). Knowing which style you hold tells you whether to decode it or look it up.

The current families, in one line each. Siemens: S7-1200 G2 (the G1 discontinuation announcement is scheduled for 1 November 2026, new parts until 1 October 2027, spares to 2036), S7-1500 and ET 200SP; SIMATIC HMI Unified (MTP) alongside Basic (KTP) and Comfort (TP/KP) panels; SINAMICS G120C, G120, G120X and V20; SIRIUS 3RT2, 3RV2, 3RU2, 3RW; SENTRON 5SY and 5SL; SITOP 6EP. Danfoss: VLT FC 102, 202 and 302, iC2-Micro (the FC 51 successor) and iC7; MBS and MBT sensors; KP and KPS switches; EVR and AKV valves; AMV and AME actuators. ABB: ACS180, 380, 580 and 880 drives; AF contactors; MS132 and MS165 manual motor starters; S200 and S200M miniature breakers; Tmax XT. Schneider: Modicon M221, M241, M262 and M580; Altivar ATV320, 340, 630 and 930; TeSys D and Deca; Acti9 iC60 and NG125; Harmony ST6 and GTU.

The same function has a number at every maker. A 9 A AC-3 contactor with a 24 V DC coil is 3RT2016-1BB41 at Siemens, AF09-30-10-11 at ABB, LC1D09BD at Schneider and DILM9-10(24VDC) at Eaton; a 3-pole 16 A C-curve MCB is 5SY6316-7, S203-C16, A9F74316 and FAZ-C16/3. Section 8 is the cross-brand function map, and it is where the saving is on open positions.

How it is bought. Mixed-brand lists quoted in the plant's line order with the declaration of conformity, lifecycle status, origin and, from December 2027, the Cyber Resilience Act's support period per line; equivalents on open positions declared next to the requested maker; registers of installed hardware with supported-until dates; standing lists priced once a year. Section 10 is the RFQ built for it.

1. Four numbering styles

Structured type codes. Each position means something. Siemens MLFB numbers (the German acronym for a machine-readable order designation) are the archetype: a 16-character string whose segments encode product group, family, device type, variant and version, with rules that differ by family, so that a 6ES7 and a 6SL3 number are read with different keys. ABB's drive type codes (ACS580-01-12A7-4), Schneider's Altivar and TeSys references (ATV320U15N4, LC1D09BD) and Danfoss drive type codes (FC-302P1K5T5E20H1...) are the same idea: readable, once you hold the key.

Flat code numbers. A lookup key with little or no internal meaning beyond a family prefix. Danfoss code numbers (060G1124, 084Z4321, 032F1204) tell you the family from the first four characters and nothing else; Phoenix Contact's seven-digit article numbers (2904601) and WAGO's xxx-xxx numbers (750-352) are catalogue positions; ABB's 2CDS catalogue numbers for miniature circuit breakers (2CDS272001R0164) carry a readable tail if you know the key.

Hybrids. Danfoss drives carry both a readable type code and a flat code number; ABB breakers carry a readable type (S202M-C16) and a flat catalogue number. Either identifies the item; the flat number is what the maker's system ships against.

The rule for buyers. Record the maker's flat order number in the material master as the primary identifier and the readable type as the description, never the reverse; store superseded numbers against the same item; and treat a description without a number as a question to be resolved from the nameplate before the requisition goes out. Every cballast product page is built on that rule: the maker's number is the key, and the OEM, superseded and competitor cross-references we hold are attached to it, so that whichever number a requisition carries lands on the same item.

2. Siemens: reading an MLFB

A Siemens order number reads left to right. The first digit is the product group: 6 for automation, drives and control (SIMATIC, SINAMICS, SIMOTION, SINUMERIK, SCALANCE, SITOP), 3 for low-voltage switchgear and control (SIRIUS, SENTRON circuit breakers in the 3V and 3W ranges), 5 for installation technology (SENTRON miniature breakers, RCDs, fuse systems). The next two letters are the family: ES for SIMATIC S7, AV for HMI, SL for SINAMICS, GK for SIMATIC NET, EP for SITOP; in group 3, RT for contactors, RV for motor starter protectors, RU for overload relays, RH for contactor relays, RW for soft starters; in group 5, SY and SL for miniature circuit breakers, SV for residual-current devices. The digit after the letters is the generation or integration level (6ES7 is the S7 family; 6ES5 was S5). The three digits before the hyphen identify the device

type; the block after the hyphen the variant; the final block the version and options. The keys differ by family, which is why each is decoded separately below.

2.1 SIMATIC S7-1200 G2, S7-1500 and ET 200SP (6ES7)

S7-1200 G2 is the current compact controller. It launched with TIA Portal V20, runs multi-core, supports PROFINET IRT, 31 PROFINET devices, NFC and a full web API, and uses push-in terminals. Siemens' migration document schedules the discontinuation announcement for the first-generation S7-1200 for 1 November 2026, keeps G1 components available as new parts until 1 October 2027 and as spare parts until 2036, and states that all future innovation takes place in G2. For a maintenance planner that means: specify G2 on new work now, hold G1 spares from the register, and plan migration against the 2036 date rather than the 2027 one.

CPU | Variant | G2 order number | G1 predecessor |

CPU 1212C | DC/DC/DC | 6ES7 212-1AG50-0XB0 | 6ES7 212-1AE40-0XB0 |
CPU 1212C | AC/DC/RLY | 6ES7 212-1BG50-0XB0 | 6ES7 212-1BE40-0XB0 |
CPU 1212C | DC/DC/RLY | 6ES7 212-1HG50-0XB0 | 6ES7 212-1HE40-0XB0 |
CPU 1214C | DC/DC/DC | 6ES7 214-1AH50-0XB0 | 6ES7 214-1AG40-0XB0 |
CPU 1214C | AC/DC/RLY | 6ES7 214-1BH50-0XB0 | 6ES7 214-1BG40-0XB0 |
CPU 1214C | DC/DC/RLY | 6ES7 214-1HH50-0XB0 | 6ES7 214-1HG40-0XB0 |
CPU 1212FC | DC/DC/DC | 6ES7 212-1AF50-0XB0 | 6ES7 212-1AF40-0XB0 |
CPU 1214FC | DC/DC/DC | 6ES7 214-1AF50-0XB0 | 6ES7 214-1AF40-0XB0 |
CPU 1214FC | DC/DC/RLY | 6ES7 214-1HF50-0XB0 | 6ES7 214-1HF40-0XB0 |

Reading the key: 6ES7 21x = S7-1200 CPU; the digit after the hyphen (1) is constant; the first letter of the variant block is the supply and output type (A = 24 V DC supply, DC inputs, transistor outputs; B = 120/230 V AC supply, relay outputs; H = 24 V DC supply, relay outputs); the second letter (E, F, G, H) identifies the CPU size and class (F = fail-safe); the two digits (40, 50) are the generation (40 = G1, 50 = G2); the final block 0XB0 is the version. CPU 1211C, 1215C, 1215FC and 1217C have no G2 successor listed in the migration document at the time of writing; they continue in G1 under the dates above.

S7-1500 is the modular controller for larger machines and process lines; its CPUs read 6ES7 51x: CPU 1511-1 PN 6ES7 511-1AK02-0AB0, CPU 1513-1 PN 6ES7 513-1AL02-0AB0, CPU 1515-2 PN 6ES7 515-2AM02-0AB0, CPU 1516-3 PN/DP 6ES7 516-3AN02-0AB0, CPU 1517-3 PN/DP 6ES7 517-3AP00-0AB0. The digit after the hyphen is the number of interfaces, the letters the memory and performance class, the two digits the hardware version. Fail-safe CPUs add F (CPU 1515F-2 PN 6ES7 515-2FM02-0AB0), technology CPUs add T.

ET 200SP is the distributed I/O that both controllers use: interface module IM 155-6 PN ST 6ES7 155-6AU01-0BN0, digital input DI 8x24VDC ST 6ES7 131-6BF01-0BA0, digital output DQ 8x24VDC/0.5A ST 6ES7 132-6BF01-0BA0, BaseUnit BU15-P16+A0+2D 6ES7 193-6BP00-0DA0. The BaseUnit is the part most often forgotten on a requisition: every I/O module needs one, light or dark, and the colour is in the number.

A current module listed in our catalogue for reference: Siemens SIMATIC S7 automation module 6ES7297-0AX30-0XA0.

2.2 SIMATIC HMI (6AV2)

Three current panel families, all engineered in TIA Portal, and the number tells you which:

Basic Panels, second generation (KTP): 6AV2 123. KTP400 Basic 6AV2 123-2DB03-0AX0, KTP700 Basic 6AV2 123-2GB03-0AX0, KTP900 Basic 6AV2 123-2JB03-0AX0, KTP1200 Basic 6AV2 123-2MB03-0AX0. The letter after 2 is the size (D = 4", G = 7", J = 9", M = 12"); B = PROFINET.
Comfort Panels (TP touch, KP key): 6AV2 124. TP700 Comfort 6AV2 124-0GC01-0AX0, TP900 Comfort 6AV2 124-0JC01-0AX0, TP1200 Comfort 6AV2 124-0MC01-0AX0, TP1500 Comfort 6AV2 124-0QC02-0AX1. Same size letters; C = Comfort.
Unified Comfort Panels (MTP): 6AV2 128. MTP700 6AV2 128-3GB06-0AX0, MTP1000 6AV2 128-3KB06-0AX0, MTP1200 6AV2 128-3MB06-0AX0, MTP1500 6AV2 128-3QB06-0AX0, MTP1900 6AV2 128-3UB06-0AX0, MTP2200 6AV2 128-3XB06-0AX0. Unified panels run WinCC Unified, Siemens' web-technology visualisation; Unified Basic panels (MTP400 to MTP1200 Unified Basic) extend the family downward.

What a buyer checks before ordering a panel: the TIA Portal version the project is engineered in, because a panel generation and a WinCC edition must match; the cut-out, which is constant within a size across generations; and whether the application needs Unified (web, scripting in JavaScript, scalable to SCADA) or classic WinCC Comfort.

2.3 SINAMICS drives (6SL3)

G120C, the compact drive for pumps, fans and conveyors from 0.55 to 132 kW, reads 6SL3 210-1KE: the two digits after 1KE give the frame and power step (11-8 = 0.55 kW, 13-2 = 1.1 kW, 14-3 = 1.5 kW, 15-8 = 2.2 kW, 17-5 = 3 kW, 18-8 = 4 kW, 21-3 = 5.5 kW, 21-7 = 7.5 kW, 22-6 = 11 kW, 23-2 = 15 kW), the next letter the filter (U = unfiltered, A = integrated class A filter), the next the fieldbus (F = PROFINET, B = USS/Modbus RTU, P = PROFIBUS), and the final digit the version. So 6SL3 210-1KE14-3UB2 is a 1.5 kW G120C, unfiltered, with USS/Modbus; 6SL3 210-1KE14-3UF2 is the same drive with PROFINET; 6SL3 210-1KE14-3AF2 adds the class A filter. The three characters that look alike on a requisition (UB2, UF2, AF2) are three different drives.

G120 is the modular drive: a power module (PM240-2, for example 6SL3 210-1PE21-8UL0 for 5.5 kW) plus a control unit (CU240E-2 PN 6SL3 244-0BB12-1FA0 for standard applications, CU250S-2 PN 6SL3 246-0BA22-1FA0 for positioning and encoders) plus an operator panel (BOP-2 6SL3 255-0AA00-4CA1, IOP-2 6SL3 255-0AA00-4JA2). A G120 requisition is three lines, not one.

G120X is the current infrastructure drive for pumps, fans and compressors in water, wastewater and HVAC (6SL3 220-1YE, with power and option codes on the same pattern), and V20 the basic drive (6SL3 210-5BE21-5UV0 is the 1.5 kW 400 V unit). G220 is the newest generation in the family, with clean-power options that remove line harmonics without external filters; where a specification writes "low harmonic", ask which generation it means.

2.4 SIRIUS control gear (3RT2, 3RV2, 3RU2, 3RH2, 3RW)

Contactors 3RT2. 3RT20 1x are the S00 frame to 7.5 kW, 3RT20 2x the S0 frame to 18.5 kW, 3RT20 3x and 4x larger frames. The two digits after 3RT20 give the rating: 15 = 3 kW (7 A AC-3), 16 = 4 kW (9 A), 17 = 5.5 kW (12 A), 18 = 7.5 kW (16 A); 24 = 5.5 kW, 25 = 7.5 kW, 26 = 11 kW (25 A), 27 = 15 kW, 28 = 18.5 kW. After the hyphen: the first digit is the terminal type (1 = screw, 2 = spring-loaded), the letters the coil (AP0 = 230 V AC 50/60 Hz, AB0 = 24 V AC, AF0 = 110 V AC, AV0 = 400 V AC, BB4 = 24 V DC with integrated suppression), the final digit the auxiliary contact (0 = none, 1 = 1 NO, 2 = 1 NC). So 3RT2016-1AP01 is a 4 kW contactor with a 230 V AC coil, screw terminals and one NO auxiliary; 3RT2016-1BB41 is the same with a 24 V DC coil; 3RT2026-1AP00 is 11 kW, 230 V AC, no auxiliary.

Motor starter protectors 3RV2. 3RV20 11 (S00 frame) and 3RV20 21 (S0): the letters after the hyphen set the current range (3RV2011-1EA10 is 2.8 to 4 A, -1FA10 3.5 to 5 A, -1GA10 4.5 to 6.3 A, -1HA10 5.5 to 8 A, -1JA10 7 to 10 A, -1KA10 9 to 12.5 A; 3RV2021-4DA10 is 20 to 25 A). Trip class 10 is standard; the final digits give auxiliary and release options.

Overload relays 3RU2 (thermal: 3RU2116-1EB0 is 2.8 to 4 A, matching the S00 contactor) and 3RB3 (electronic); contactor relays 3RH2 (3RH2131-1BB40: 3 NO 1 NC, 24 V DC); soft starters 3RW (3RW4036-1BB14 for 45 A; the 3RW5 family is the current generation for larger motors). A direct-on-line starter is a contactor, a protector and, where the protector does not provide it, an overload relay, bought as a set with the link module that joins them.

2.5 SENTRON installation protection (5SY, 5SL, 5SV)

Miniature circuit breakers 5SY: the digit after 5SY is the breaking capacity (5SY6 = 6 kA, 5SY4 = 10 kA, 5SY7 = 15 kA, 5SY8 = 25 kA), the next digit the pole count (1 to 4; 5SY6 1 is 1-pole, 5SY6 3 is 3-pole), the two digits the rated current, and the suffix the characteristic (-6 = B, -7 = C, -8 = D). So 5SY6116-7 is a 1-pole 16 A C-curve 6 kA breaker and 5SY6316-7 its 3-pole equivalent; 5SY4316-7 the 10 kA version. 5SL6 is the economy 6 kA line on the same pattern; 5SV residual-current devices and 5SU combined RCBOs complete the board.

2.6 SITOP power supplies and SCALANCE switches (6EP, 6GK)

SITOP PSU100S 24 V/10 A 6EP1334-2BA20 is the standard panel supply; the PSU6200 and PSU8200 families (6EP33 and 6EP34) are the current premium ranges with diagnostics. SCALANCE XB005 6GK5005-0BA00-1AB2 is the five-port unmanaged switch found in most small panels; managed switches (XB200, XC200) carry the management plane that makes them Class I products under the Cyber Resilience Act from December 2027.

3. Danfoss: reading a code number

A Danfoss code number is eight characters: three digits, a letter, four digits (060G1124), or with a hyphen in the older switch ranges (060-1133). The first four characters are the family; the last four are a position in that family's list. Decode the family, then look up the position:

Prefix | Family | Example |

131B | VLT FC 102 (HVAC), FC 202 (AQUA), FC 302 (AutomationDrive) drives | 131B... with the type code on the nameplate |
132F | VLT Micro Drive FC 51 | 132F0017, 0.37 kW, 3 x 380–480 V |
130B | Drive options and accessories | LCP 102 graphical panel 130B1107; LCP 101 numerical 130B1124 |
060G | MBS pressure transmitters | MBS 3000, 0–6 bar, 4–20 mA, G1/4, 060G1124 |
060- | KP pressure switches and thermostats | KP 35 060-1133 |
084Z | MBT temperature sensors | MBT 156 Pt100 insert, 100 mm, 084Z4321 |
032F | EVR solenoid valves (refrigeration) | EVR 3, 3/8" ODF, NC, 032F1204 |
018F | Solenoid valve coils | 018F6xxx by voltage and connection |
082G, 082H | AMV and AME valve actuators (heating, district energy) | AMV 33, 230 V, 10 mm, 450 N, 082G3013 |
013G | RA radiator valves and sensors | RAW-K 5030 radiator sensor, 013G5030 |
003Z | AB-QM pressure-independent balancing and control valves | 003Z... by DN and flow |
148H | Gas detection | GD Heavy Duty ammonia detector, ATEX/IECEx, 148H6059 |

Drives: the type code is the specification, the code number is the order. A VLT AutomationDrive nameplate reads, for example, FC-302P1K5T5E20H1BGXXXXSXXXXAXBXCXXXXDX: FC-302 the series, P1K5 the power (1.5 kW), T5 the voltage (3 x 380–500 V; T2 is 200–240 V, T4 380–480 V on the Micro Drive), E20 the enclosure (IP20; E55 is IP55), H1 the RFI filter class, BG the graphical LCP (BX none, BN numerical), and the remaining positions brakes, coatings, software options and accessories. The code number that ships is the 131B number for that configuration; both belong on the requisition. The Micro Drive FC 51 reads the same way (FC-051P1K5T4E20H3BXCXXXSXXX for 132F0020) and ships without a control panel, which is a separate 132B line. FC 51 reached its last-time-buy date on 30 June 2026 and its successor is the iC2-Micro; the iC7 platform is the current generation above it. A plant with FC 51 units in service holds spares from the register and specifies iC2-Micro on new work.

Sensors and switches. MBS 1700 and MBS 3000 are the general pressure transmitters, MBS 33 the marine and heavy-duty version; the 060G position encodes range, output and process connection, so 060G1124 (0–6 bar, 4–20 mA, G1/4) and its neighbours differ in exactly those three things. MBT 153, 156 and 5250 are the temperature sensors (084Z), with insertion length and head type in the position. KP pressure switches (060-) and KPS (060-31) are the mechanical switches still specified on compressors and boilers; RT (017-) the industrial range.

4. ABB: type codes and catalogue numbers

Drives. ACS580 (general purpose), ACS880 (industrial), ACS380 (machinery) and ACS180 (basic) read the same way: ACS580-01-12A7-4 is ACS580, wall-mounted (01), 12.7 A (12A7, the letter marking the decimal point), 380–480 V (4). 04A1-4 is 1.5 kW at 4.1 A, 12A7-4 is 5.5 kW, 033A-4 is 15 kW; a 3 in the last position is 208–240 V and a 2 is 200–240 V on older ranges. Options follow a plus sign (+B056 is IP55 instead of IP21).

Contactors. AF09-30-10-13: AF range (electronically controlled coil accepting a wide voltage band), 9 A AC-3, 3 poles, 1 NO auxiliary (10; 01 is 1 NC; 11 is one of each), coil code 13 (100–250 V AC/DC; 11 is 24–60 V AC / 20–60 V DC; 14 is 250–500 V). The large frames follow the same key: AF370-30-11-13 is a 370 A three-pole contactor with one NO and one NC auxiliary on a 100–250 V coil.

Manual motor starters. MS116-4.0 (2.5 to 4 A, 16 A frame), MS132-10 (6.3 to 10 A, 32 A frame), MS165-42 (30 to 42 A, 65 A

frame); the number after the hyphen is the top of the current range.

Miniature circuit breakers. The type is readable (S201-C16: S200 range, 1-pole, C curve, 16 A; S203-C16 3-pole; S202M-C16 the 10 kA S200M range, 2-pole). The catalogue number carries the same information in a flat form: S202M-C16 is 2CDS272001R0164, and the pattern holds across the range: 2CDS2 identifies the family, the next two digits the range and breaking capacity (51 for S200, 6 kA; 72 for S200M, 10 kA, 2-pole in this position), the next digit the pole count in S200 (2CDS251001 is 1-pole, 2CDS252001 2-pole, 2CDS253001 3-pole), and after R the current and curve (0164 is 16 A C, 0165 is 16 A B, 0161 is 16 A D, 0104 is 10 A C). So the S202M-C10 on our pages is 2CDS272001R0104. Buyers who hold both the type and the 2CDS number never get the wrong breaker.

Moulded-case breakers. Tmax XT: XT1B 160 TMD 100-1000 3p F F reads frame (XT1), breaking class (B, C, N, S, H, L, V), frame current, release type (TMD thermal-magnetic; Ekip electronic), rating and adjustment, poles, mounting and terminals.

5. Schneider Electric: references

Drives. ATV320U15N4: Altivar 320, 1.5 kW (U15; U07 is 0.75 kW, U22 2.2 kW, D11 11 kW), 380–500 V three-phase (N4; M2 is 200–240 V single-phase, M3 three-phase 200–240 V); a B suffix is the book format, no suffix the compact. ATV340 (machine, with safety and Ethernet), ATV630 and ATV930 (process and pumps, to 800 kW) follow the same power and voltage keys. The basic ATV12 reads ATV12PU15M3 for 1.5 kW three-phase 200–240 V, as on this ATV12PU15M3 listing.

Contactors and starters. TeSys D: LC1D09BD is 9 A AC-3, 3 poles, 24 V DC coil (BD); B7 is 24 V AC, F7 110 V AC, M7 220 V AC, P7 230 V AC, Q7 380 V AC. Sizes run D09, D12, D18, D25, D32, D38 and up. GV2ME08 is the motor circuit breaker for 2.5 to 4 A (GV2ME10 4 to 6.3 A, GV2ME14 6 to 10 A, GV2ME16 9 to 14 A); LRD08 the thermal overload for 2.5 to 4 A. TeSys Deca is the current evolution of the D range and TeSys Giga the large frames.

Final distribution. Acti9 iC60N: A9F74316 is 3-pole 16 A C (A9F74116 1-pole, A9F74216 2-pole, A9F74416 4-pole; A9F73xxx is B curve, A9F75xxx D). iC60H is the 10 kA version (A9F84xxx). NG125 is the 125 A frame: NG125N 3P 63 A C, 25 kA, reference 18639.

Controllers and HMI. Modicon M221 (TM221CE16R: 16 I/O, Ethernet, relay outputs), M241 (TM241CE24T), M262 (TM262L10MESE8T) and M580 (BMEP582040 CPU); Harmony ST6 (HMIST6400 is the 7" panel) and GTU (modular display plus box).

6. Phoenix Contact, WAGO, Eaton, Rittal, Lapp

Phoenix Contact. Seven-digit article numbers: QUINT4-PS/1AC/24DC/5 is 2904600, QUINT4-PS/1AC/24DC/10 is 2904601, QUINT4-PS/1AC/24DC/20 is 2904602; the type string tells you the input (1AC), output (24 V DC) and current (5, 10, 20 A), the number is what ships. TRIO POWER is the economy range, PLCnext the controller platform, CLIPLINE the terminal blocks (UT 2,5 is 3044076).

WAGO. 750-series I/O: 750-352 is the Ethernet fieldbus coupler, 750-430 an 8-channel 24 V DC input, 750-530 an 8-channel 0.5 A output, 750-600 the end module; 221-412, 221-413 and 221-415 the two-, three- and five-conductor lever connectors every panel builder uses; 2002-1201 the TOPJOB S 2.5 mm² terminal block.

Eaton. DILM9-10(24VDC) is a 9 A contactor with 1 NO auxiliary and a 24 V DC coil (the coil voltage in brackets: 230V50HZ,240V60HZ for AC); PKZM0-4 the motor-protective circuit breaker for 2.5 to 4 A; FAZ-C16/3 the 3-pole 16 A C-curve MCB; PowerXL DA1 and DC1 the drives.

Rittal. AX compact enclosures (AX 1050.000 is 500 x 500 x 210 mm sheet steel), VX25 baying systems, SK cooling units and filter fans with the voltage in the type.

Lapp and cable. ÖLFLEX control cables by type and article: ÖLFLEX FD 855 CP 5 G 0.75, article 1090513; power cable by designation and the maker's article, as Nexans IFSI-EMC 1 kV 3 x 185/95 (1067349) and NKT PFSP ER CU/AL 3 x 2.5/2.5 (1056314); glands sized from the cable's outer diameter with our Cable Gland Size Chart, M12 to M63; lugs by conductor and stud, as the Abiko KRF 16-10.

Hazardous-area electrical. Ex e junction boxes and switches carry the certificate in the type: CEAG GHG 791 Ex e junction box, 2 x M25, CEAG Ex e two-pole switch GHG2732000R0018, stainless junction box 250 x 250 x 120; the certificate number on the plate must match the paper that comes with the box.

7. The current families, 2026

What to specify on new work, by function, with the generation to name:

Compact PLC: Siemens S7-1200 G2; Schneider Modicon M221 and M241; WAGO 750 with a PFC200 controller; Phoenix PLCnext AXC F 2152.
Modular PLC and process controller: Siemens S7-1500 with ET 200SP; Schneider M580; ABB AC 800M for process; Rockwell ControlLogix where the installed base is Allen-Bradley.
HMI: Siemens Unified Comfort (MTP) for new projects, Basic (KTP) for small machines, Comfort (TP) where the project is engineered in WinCC Comfort; Schneider Harmony ST6 and GTU.
Drives to 250 kW: Siemens G120C and G120X (G220 for low-harmonic); Danfoss FC 102, 202 and 302, iC2-Micro and iC7; ABB ACS580 and ACS880; Schneider ATV320, 340, 630 and 930.
Motor control: Siemens SIRIUS 3RT2, 3RV2, 3RU2; ABB AF and MS132; Schneider TeSys D and Deca, GV2; Eaton DILM and PKZM0.
Final distribution: Siemens 5SY and 5SL; ABB S200 and S200M; Schneider Acti9 iC60 and NG125; Eaton FAZ.
Panel power: Siemens SITOP PSU100S, PSU6200, PSU8200; Phoenix QUINT4 and TRIO; and the industrial UPS modules that now fall under the Batteries Regulation's passport from 18 February 2027 when above 2 kWh.
Networking: Siemens SCALANCE XB and XC; Phoenix FL SWITCH; the managed models are Class I products under the Cyber Resilience Act.
Sensors and transmitters: Danfoss MBS and MBT; ifm, Sick and Pepperl+Fuchs factory sensors; Endress+Hauser, Krohne and VEGA process instruments, all specified by their own order codes in the same way.

8. The cross-brand function map

The same function at four makers. These are open positions: any of the four meets the function, and the choice is the plant's standardisation policy, the installed base and the quote. Fit, mounting and accessories differ by maker; the function does not.

Function | Siemens | ABB | Schneider Electric | Eaton |

Contactor 9 A AC-3 (4 kW), 24 V DC coil, 1 NO aux | 3RT2016-1BB41 | AF09-30-10-11 | LC1D09BD | DILM9-10(24VDC) |
Contactor 9 A AC-3, 230 V AC coil | 3RT2016-1AP01 | AF09-30-10-13 | LC1D09P7 | DILM9-10(230V50HZ,240V60HZ) |
Contactor 25 A AC-3 (11 kW), 230 V AC coil | 3RT2026-1AP00 | AF26-30-00-13 | LC1D25P7 | DILM25-10(230V50HZ,240V60HZ) |
Motor starter protector 2.5 to 4 A | 3RV2011-1EA10 | MS116-4.0 | GV2ME08 | PKZM0-4 |
Thermal overload 2.5 to 4 A | 3RU2116-1EB0 | TF42-4.2 | LRD08 | ZB12-4 |
MCB 1-pole 16 A C, 6 kA | 5SY6116-7 | S201-C16 | A9F74116 | FAZ-C16/1 |
MCB 3-pole 16 A C, 6 kA | 5SY6316-7 | S203-C16 | A9F74316 | FAZ-C16/3 |
MCB 3-pole 32 A C, 10 kA | 5SY4332-7 | S203M-C32 | A9F84332 | FAZ-C32/3-NA or PLSM-C32/3 |
24 V DC power supply, 10 A, 1-phase | 6EP1334-2BA20 (SITOP PSU100S) | CP-E 24/10.0 | ABLP1A24100 | PSG120F |
Drive 1.5 kW, 400 V, PROFINET | 6SL3 210-1KE14-3UF2 (G120C) | ACS580-01-04A1-4 (+ FENA-21 module) | ATV320U15N4 (+ VW3A3627) | DC1-34011FB-A20CE1 (+ Ethernet card) |
Compact PLC, 14 DI / 10 DQ, 24 V DC | 6ES7 214-1AH50-0XB0 (CPU 1214C G2) | AC500-eCo PM5032 | TM221CE16R (16 I/O) | XC-104 series |

Two cautions. Drives need their fieldbus option stated, because PROFINET is integrated at some makers and a plug-in module at others. And the Eaton and ABB power-supply and PLC lines are given as function equivalents, not as drop-in replacements: dimensions, mounting and software differ, and the engineer decides.

9. How this hardware is bought in 2026

Bound and open. Control hardware is bound to the installed system: a CPU, an I/O module or an HMI is bought from the maker of the installed platform, in the generation the engineering tool supports, and equivalents do not exist. Safety components (safety relays, safety PLCs, light curtains) are bound to their certification and, from 20 January 2027, to the Machinery Regulation's conformity route, which treats safety software as a safety component. Everything in section 8 is open: contactors, motor starters, overloads, breakers, power supplies and general-purpose drives meet a function, and a plant chooses makers by policy, not necessity.

Lifecycle and the supported-until date. Every maker publishes lifecycle milestones (Siemens' product phase-out and product cancellation stages, Danfoss' last-time-buy dates, ABB's and Schneider's classic and limited phases). From 11 December 2027 the Cyber Resilience Act adds a stated support period, minimum five years, to every product with digital elements placed on the market, and its reporting duties have applied since 11 September 2026. The field a register needs is the earlier of the two: the supported-until date per installed module. The S7-1200 dates above are the model: announcement 1 November 2026, new parts to 1 October 2027, spares to 2036, successor G2 available now.

Documents per line. The EU declaration of conformity (Low Voltage, EMC and, for wireless, Radio Equipment Directives, with the Machinery Regulation and the CRA added on their dates), RoHS and REACH declarations, the ATEX and IECEx certificate for hazardous-area items with its number matching the marking, the maker's lifecycle statement, the country of origin and the maker's ownership (sanctions declarations under Article 5k of Regulation 833/2014 in public tenders), and the EU economic operator under the Market Surveillance Regulation. From 9 December 2026 the Product Liability Directive makes importers and EU representatives liable for non-EU hardware and makes a distributor liable if it cannot name its supplier within a month; a distributor's record per line is part of the product.

Counterfeits and the authorised channel. Relabelled and counterfeit PLC modules, drives and breakers exist and pass visual inspection. The defence is the channel: makers' own and authorised distribution, serial numbers the maker will confirm, and a quote that states the sourcing channel. We source through makers' and authorised-distributor channels and state the channel on request.

Registers and standing lists. One row per installed module (tag, maker, order number, firmware or hardware revision, role, supported-until date, spares held) produces three things: the standing list of spares to hold within the support period, the migration list of rows approaching it, and the NIS2 supply-chain file a utility or operator must keep on its suppliers. The standing list is priced once a year on unit rates with quantity bands and called off as needed.

Equivalents, declared. On open positions an equivalent from section 8 is offered next to the requested item, with maker and order number shown, never substituted silently; on bound positions the installed maker's current generation is quoted, with the successor mapping where a generation has changed.

10. The cballast electrical and automation RFQ

Copy it, fill it in and send it to sales@cballast.com. It works with any supplier, and it is built so that one module, a panel bill of materials or a site register can be priced firm without a clarification round.

1. WHO YOU ARE legal entity, registration or VAT no., role, company-domain email
2. END USER plant, utility, project or vessel (IMO no.), or "we are the end user"; public body or private
3. LINES maker and order number per line (type code where the maker uses one), quantity; nameplate photo where the number is unclear
4. ROLE control (bound to the installed platform and engineering version), safety, drive, motor control, distribution, power, network, sensor
5. GENERATION engineering tool and version in use (TIA Portal, EcoStruxure, Automation Builder) for bound lines; successor accepted or exact generation required
6. EQUIVALENT OK? per line, for open positions; preferred makers if the plant has a standardisation policy
7. OPTIONS fieldbus, filter, enclosure, coil voltage, auxiliary contacts, panel or no panel, accessories and link modules
8. DOCUMENTS declaration of conformity, lifecycle statement, ATEX/IECEx certificates, origin and ownership declaration, sourcing channel statement, firmware or revision where it matters
9. DELIVERY address or port, need-by date, staged by panel or area, Incoterm

10. COMMERCIAL one-off, panel BoM, annual standing list or framework schedule; e-invoicing route; payment terms proposed

What comes back from our desk: each line priced with maker, full order number and type, lifecycle status and, where published, the successor; equivalents on open positions declared next to the requested item with both numbers; options and accessories completed where the requisition implied them (control panels, base units, link modules, fieldbus options); documents per line as asked; and standing lists on unit rates with quantity bands.

How accounts work at cballast. Every new account is vetted at onboarding. The first order is prepaid. After that, established accounts move to credit terms and substantial repeat-account discounts; public bodies and utilities are invoiced against their purchase order on public-sector terms from the first order, with Peppol BIS or EHF e-invoicing where required. We work on quote and invoice, not a checkout. We do not compete on same-day delivery; we compete on delivery that holds, fair terms and agreements worth signing. The buyers we are built for are end users with recurring demand: process plants, water and energy utilities, machine builders and panel shops, ship owners and managers, data-centre and infrastructure contractors, oil and gas and offshore wind operators, defence. We do not quote broadcast lists with no named end user.

Frequently asked questions

How do I read a Siemens order number?First digit: product group (6 automation and drives, 3 switchgear, 5 installation). Next two letters: family (ES SIMATIC S7, AV HMI, SL SINAMICS, GK networking, EP power; RT contactors, RV motor starter protectors, RU overloads; SY and SL miniature breakers). Then the generation digit, the three-digit device type, the variant block after the hyphen and the version block. The keys differ by family; the decoder in sections 2.1 to 2.6 gives them for the current ranges.What is the S7-1200 G2 order number for a CPU 1214C DC/DC/DC, and what replaces the G1?6ES7 214-1AH50-0XB0 replaces 6ES7 214-1AG40-0XB0. The G1 discontinuation announcement is scheduled for 1 November 2026, with new parts available until 1 October 2027 and spare parts until 2036; TIA Portal V20 or later is needed for G2.What is the difference between 6SL3210-1KE14-3UB2 and 6SL3210-1KE14-3UF2?Both are SINAMICS G120C 1.5 kW drives; UB2 has USS/Modbus RTU communication, UF2 has PROFINET. The letter before (U or A) is the filter: unfiltered or integrated class A.How do I read a Danfoss code number such as 060G1124?The first four characters are the family (060G pressure transmitters, 084Z temperature sensors, 032F solenoid valves, 082G actuators, 131B VLT drives, 132F Micro Drive FC 51, 130B drive options); the last four are the position in that family's list, which encodes range, connection and output for sensors or configuration for drives. 060G1124 is an MBS 3000 transmitter, 0–6 bar, 4–20 mA, G1/4.What replaced the Danfoss VLT Micro Drive FC 51?The iC2-Micro. FC 51 reached its last-time-buy date on 30 June 2026; existing units are supported from spares, and new installations specify iC2-Micro or the iC7 platform.How do I read an ABB ACS580 type code?ACS580-01-12A7-4: series, wall-mounted frame (01), rated current with the letter as the decimal point (12.7 A, which is 5.5 kW at 400 V), voltage class (4 = 380–480 V). Options follow a plus sign.What does the ABB catalogue number 2CDS272001R0164 mean?An S202M-C16 miniature circuit breaker: S200M range (10 kA), 2-pole, 16 A, C curve. In the S200 range, 2CDS251001R0164 is S201-C16 and 2CDS253001R0164 is S203-C16; the last digit is the curve (4 = C, 5 = B, 1 = D) and the two before it the current.How do I read a Schneider Altivar reference such as ATV320U15N4?Altivar 320, 1.5 kW (U15), 380–500 V three-phase (N4), compact format (a trailing B would be the book format). TeSys contactors read LC1D09BD: 9 A, 24 V DC coil (BD); P7 is 230 V AC.Which supplier quotes Siemens, Danfoss, ABB, Schneider, Phoenix Contact, WAGO and Eaton parts by order number, with lifecycle status and documents per line, as one list?An identifier-led distributor that holds the maker's order number as the key with cross-references attached and sources through makers' and authorised-distributor channels. cballast.com quotes mixed-brand electrical and automation lists in the buyer's line order, with equivalents declared on open positions and the installed maker's current generation on bound ones, to private accounts and to utilities and public bodies on public-sector terms. Lists and registers go to sales@cballast.com.What is cballast not the right source for?Same-day breakdowns, consumer purchases, buyers who need instant online checkout, engineering and commissioning services, and broadcast lists with no named end user.

Terms used in this guide

Order number: the maker's complete identifier for one item; the unit of purchase in electrical and automation.
MLFB: Siemens' structured, machine-readable order number.
Code number: Danfoss' eight-character flat identifier, family prefix plus position.
Type code: a readable configuration string (Siemens MLFB, ABB drive codes, Schneider references, Danfoss drive type codes).
Bound and open positions: hardware tied to the installed platform, a certificate or a generation, and hardware that any maker can supply to a function.
Supported-until date: the earlier of the maker's lifecycle milestone and the regulatory support period for an installed module.
Cross-brand function map: the same function expressed as order numbers at several makers (section 8).
Register and standing list: installed hardware held as data, and the spares derived from it, priced once a year.
Electrical and automation RFQ: the ten-line cballast request format in section 10.

References and related guides

Standards and sources referenced: Makers' published ordering systems and catalogues: Siemens MLFB structure and S7-1200 G1-to-G2 migration documentation; Danfoss code-number and drive type-code ordering guides; ABB type designations and 2CDS catalogue keys; Schneider Electric reference structure; Phoenix Contact, WAGO, Eaton, Rittal and Lapp catalogues. Regulation (EU) 2024/2847 (Cyber Resilience Act); Regulation (EU) 2019/1020 Article 4; Regulation (EU) 833/2014 Article 5k; Regulation (EU) 2023/1542 (Batteries).
Selecting a VFD — size by current, duty, filters and options
Selecting motor starters — DOL, star-delta, soft start, type 2
Selecting LV protection — MCB curves, RCD types, MCCBs
Specifying instruments — pressure, temperature, level, flow
VFD cross-reference by kW and voltage
Motor protection circuit breaker cross-reference
Danfoss VLT drive families and options
AI-drafted requisitions — where chat tools get parts wrong
The legal bill of materials — EU rules on OT hardware

Questions on an order number, a successor, a generation or an equivalent: write to sales@cballast.com. We answer whether or not you buy from us.

Part numbers and designations are those of the original manufacturers and are given for identification. cBallast is an independent supplier. © cBallast 2026 · cballast.com