Market evolution: Electrical connectors and switches (CN 8536) — 2015–2025

Introduction

The EU's external trade in CN 8536 — a broad category covering low-voltage switches, relays, fuses, plugs, sockets and connection apparatus — expanded significantly between 2015 and 2025. Total extra-EU exports rose from €12.26 bn to €16.61 bn (+35.4 %), while imports climbed from €7.47 bn to €11.03 bn (+47.5 %). The trade surplus widened from €4.79 bn to €5.58 bn (+16.6 %), masking a deeper story: export volumes shrank 9.1 % while import volumes grew 18.0 %, revealing that value gains were overwhelmingly driven by higher unit prices. This report dissects the decade's main dynamics, focusing on the premiumisation of trade, the shifting geography of partners, and the structural transformation inside the EU.

Value over Volume: The Premiumisation of EU Trade in Electrical Components

The EU's trade surplus became more profitable despite a surge in import values

General Overview shows that total extra-EU exports grew by €4.35 bn over the period, while imports increased by €3.55 bn. The surplus, therefore, expanded by €0.80 bn. However, this masks a striking divergence between volume and price.

Flow	Value change (2015→2025)	Quantity change	Unit price change
Exports	+35.4 %	–9.1 %	+48.9 %
Imports	+47.5 %	+18.0 %	+25.0 %

The table reveals that export value gains were entirely due to price increases, as tonnage actually contracted. Imports, while growing in both volume and value, saw a much milder price rise.

Export unit values outpaced imports, reflecting a move up the value chain

The average export price reached €58 526 per tonne in 2025, compared with €41 197 for imports. The 48.9 % jump in export unit prices far exceeded the 25.0 % rise on the import

side. This suggests that EU manufacturers increasingly supplied higher-end, technology-intensive components—such as smart switches, industrial relays and advanced surge-protection devices—while sourcing simpler, more price-competitive goods from abroad.

Stagnant volumes hide a compositional shift towards premium products

Even though total export tonnage fell, certain high-value sub-segments expanded in volume. The price/volume dynamics show that the EU's competitiveness in this sector is no longer about selling more units, but about selling more sophisticated, higher-margin products.

Geopolitical Rebalancing: From Brexit to the Rise of Asian Suppliers

The United Kingdom's exit from the single market triggered a lasting drop in its trade share

Top Partners data show that EU imports from the UK fell from €889 mn to €673 mn (–24.3 %), and exports grew only modestly from €1.27 bn to €1.45 bn (+14.3 %). The volatility of UK trade was exceptionally high: the coefficient of variation (CV) for import volumes reached 0.60, far above any other major partner, reflecting the disruptive effect of the post-Brexit regulatory border.

China cemented its position as the dominant import source

EU imports from China more than doubled, from €2.00 bn in 2015 to €4.13 bn in 2025 (+107 %). By the end of the period, China alone accounted for a large and growing share of extra-EU purchases of electrical components.

Imports from India and Türkiye soared, but concentration still increased

New sourcing options emerged rapidly:

- Imports from India jumped 166.5 % (from €151 mn to €402 mn).
- Imports from Türkiye rose 130.5 % (from €186 mn to €428 mn).

However, the Concentration HHI for imports increased from 1 211 to 1 710 (+41.3 %), indicating that while new suppliers appeared, the weight of the largest provider (China) grew even faster. Export concentration rose more gently, from 654 to 722 (+10.5 %).

EU sanctions on Russia wiped out a legacy export market

The Supply Shock analysis detects a dramatic break in exports to the Russian Federation. Annual volumes collapsed from over 12 600 tonnes in the baseline years to just 4.5 tonnes in 2025 (–98.2 %). This entirely eliminated a market that once represented 3.1 % of EU exports of the product.

The US, Morocco and Tunisia drove export growth on the demand side

On the export front, the United States remained the top destination, growing 58.9 % to €2.86 bn. Two North African partners recorded even sharper proportional increases:

- Exports to Morocco rose 100.4 % (€414 mn → €829 mn).
- Exports to Tunisia rose 74.4 % (€373 mn → €651 mn).

These flows reflect strong regional integration and the establishment of cross-Mediterranean electrical supply chains.

Partner	Flow	2015 (€ mn)	2025 (€ mn)	Change
China	Import	1 996	4 131	+107.0 %
India	Import	151	402	+166.5 %
Türkiye	Import	186	428	+130.5 %
UK	Import	889	673	–24.3 %
US	Export	1 801	2 862	+58.9 %
Morocco	Export	414	829	+100.4 %
Tunisia	Export	373	651	+74.4 %

Structural Transformation: The Rise of Central Europe and the Surge of Connectivity Products

Czechia and Poland emerged as major import-export hubs

Top Reporters reveal a dramatic re-weighting of intra-EU trade.

- Czechia's imports soared 206.1 % (from €264 mn to €809 mn) and exports jumped 164.7 % (from €471 mn to €1 246 mn).
- Poland's imports surged 138.4 % (from €232 mn to €554 mn), while its exports also expanded strongly within the "Other" category.

These figures underline the role of Central and Eastern European member states as manufacturing and distribution centres for electrical components feeding into both EU and global supply chains.

Specialisation indices highlight a core of small, highly-focused exporters

According to the Specialisation data for 2025, Malta (RSCA 0.79) and Ireland (RSCA 0.58) exhibited the highest revealed comparative advantage in CN 8536. Bulgaria (0.38), Romania (0.37) and Czechia (0.32) also showed above-average specialisation. In contrast, Luxembourg (–0.65), Cyprus (–0.65) and Greece (–0.54) were the least specialised, confirming that the sector's European strengths are geographically concentrated.

Plugs and sockets became the bloc's biggest import item, while protection apparatus saw the steepest export price hike

The Product Segment Breakdown shows that two seven-digit headings dominated trade.

- **Plugs and sockets (853669)** recorded the largest absolute value gains:
- Imports: €1.98 bn → €3.11 bn (+56.8 %), volume +15.8 %.
- Exports: €2.13 bn → €4.16 bn (+94.9 %), volume +27.5 %.
- **Other electrical connection apparatus (853690)** stayed the biggest broad category but grew more moderately:
- Imports: €1.86 bn → €2.81 bn (+51.0 %), volume +20.2 %.
- Exports: €3.65 bn → €4.37 bn (+19.7 %), volume –16.2 % (prices rose 42.8 %).
- **Circuit-protection apparatus (853630)** illustrates the premiumisation trend most clearly:
- Export value: €0.78 bn → €0.92 bn (+18.6 %), but volume collapsed 34.3 %.
- The resulting unit price surged 80.5 %, indicating a shift from basic surge protectors to sophisticated, high-reliability devices.

Product segment (heading)	Export value change (2015→2025)	Export volume change	Export unit price change
853669 Plugs & sockets	+94.9 %	+27.5 %	+52.8 %
853690 Connection app.	+19.7 %	–16.2 %	+42.8 %
853630 Protection app.	+18.6 %	–34.3 %	+80.5 %
853650 Switches	+18.9 %	–26.8 %	+62.3 %
853620 Circ. breakers	+46.1 %	+5.5 %	+38.6 %

Conclusion

Over the 2015-2025 period, the EU external trade in low-voltage electrical connectors and switches matured from a high-volume, moderately growing sector into a high-value, innovation-driven market. Despite a moderate rise in the net surplus, the real story is the re-engineering of trade composition: stagnant or shrinking volumes were more than compensated by a sharp rise in unit prices, signalling a successful climb up the quality ladder. Geopolitically, the landscape was reshaped by Brexit, China's deepening role as supplier, the total disappearance of the Russian market due to sanctions, and a pivot towards North African partners. Inside the EU, Central European economies emerged as pivotal trade hubs, while small, specialised member states like Malta and Ireland demonstrated disproportionate strengths. Going forward, the sector's reliance on Chinese imports and the concentrated structure of supply chains will remain critical vulnerabilities, even as the shift towards more sophisticated, higher-margin components positions the EU well for the electrification of the economy.

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If you need advice on European trade policy, or representation for your interests in Brussels, feel free to contact me at support@tradedashboard.eu. You can find my CV at this address.