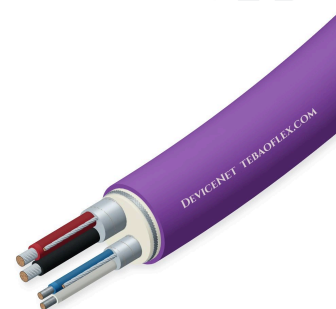




CAN Bus, SAE J1939, DeviceNet & CC-Link Cables

DeviceNet Cable

ODVA 120 Ω data + 24 V DC power 2-pair Individually & Overall Shielded
DeviceNet Thick &



ODVA DeviceNet Volume I

120 Ω Data + 24 V DC Power

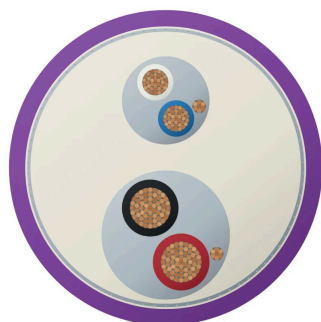
Thick (15/18 AWG) & Thin (22/24 AWG)

Application

DeviceNet Cable is the ODVA-compliant hybrid 2-pair fieldbus cable combining a 120 $\Omega \pm 12 \Omega$ foamed-PE CAN data pair (Blue CAN_L / White CAN_H) and a 24 V DC bus-power pair (Red V+ / Black V-) with individual Al/PET pair foils, an uninsulated tinned copper

Typical uses: Automotive stamping & body shops, Semiconductor & vacuum tool networks, Conveyor & sortation logistics, Robotic welding & motor control centres

Construction



Cross-section, not to scale

- 1 Stranded tinned copper data & power
- 2 Foamed PE (data) & PVC/PE (power)
- 3 Individual Al/PET pair screens
- 4 Overall tinned copper braid + drain
- 5 Industrial outer sheath

UL 13 PLTC / UL 444 CMG

Technical data

Typical values

Data pair impedance Z0	120 Ω ± 12 Ω at 1 MHz (Blue / White)	Data pair capacitance & VoP	≈ 39.4 pF/m · VoP ≈ 75 % (delay ≤ 4.46 ns/m)
Data pair attenuation (125 / 500)	Thick: 0.42 / 0.81 / 1.31 dB/100m · Thin	Power pair DC resistance @ 20 °C	Thick (15 AWG): ≤ 11.8 Ω/km · Thin (22
Data pair DC resistance @ 20 °C	Thick (18 AWG): ≤ 22.6 Ω/km · Thin (24	Operating voltage & current	300 V (CL2/CMG/PLTC) / 600 V AWM · 8 A
Operating temp. (fixed / flex)	-40 °C to +80 °C fixed · -30 °C to +75 °C	Storage temperature	-40 °C to +80 °C
Outer diameter (Thick / Thin)	12.2 mm ± 0.3 mm (Thick) · 6.9 mm ± 0.2 mm	Min. bending radius	6 × D fixed · 10 × D drag-chain
Oil & coolant resistance	UL Oil Res I/II · EN 60811-404	Flame retardancy	UL 1685 FT4 / CMG / PLTC · IEC 60332-1-2
Standards	ODVA DeviceNet Specification Volume I		

Sizes

5 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Configuration	Conductor size	Outer Ø ≈ mm	Copper kg/km	Weight ≈ kg/km	Min. bend R fixed mm
Standard DeviceNet configurations 5 sizes						
☐ DeviceNet Thick Trunk Fixed PVC (15/18 AWG)	2×15 AWG + 2×18 AWG (Thick PVC)	1.65 / 0.82 mm ²	12.2	82	185	73
☐ DeviceNet Thick Drag-Chain PUR (15/18 AWG)	2×15 AWG + 2×18 AWG (Thick Chain PUR)	1.65 / 0.82 mm ²	12.2	84	178	73
☐ DeviceNet Mid-Size Trunk (16/20 AWG)	2×16 AWG + 2×20 AWG (Mid Trunk)	1.31 / 0.52 mm ²	9.8	56	122	59
☐ DeviceNet Thin Drop Fixed PVC (22/24 AWG)	2×22 AWG + 2×24 AWG (Thin PVC)	0.34 / 0.22 mm ²	6.9	29	64	41
☐ DeviceNet Thin Drag-Chain PUR (22/24 AWG)	2×22 AWG + 2×24 AWG (Thin Chain PUR)	0.34 / 0.22 mm ²	6.9	30	62	41

– Outer diameters and weights are nominal factory values subject to ±5 % manufacturing tolerance per ODVA DeviceNet Volume I (Thick Trunk & Thin Drop).

Impedance, capacitance & attenuation

5 sizes

Configuration	Impedance Z0	Max. DC R @ 20 °C Ω/km	Mutual C pF/m≈	VoP %	Attenuation @ 20 °C dB/100m	Dielectric test V
2×15 AWG + 2×18 AWG (Thick PVC)	120 Ω	45.2	39.4	75	0.42 @ 0.125 · 0.81 @ 0.5 · 1.31 @ 1 MHz	2,000
2×15 AWG + 2×18 AWG (Thick Chain PUR)	120 Ω	45.2	39.4	75	0.45 @ 0.125 · 0.85 @ 0.5 · 1.38 @ 1 MHz	2,000
2×16 AWG + 2×20 AWG (Mid Trunk)	120 Ω	72.0	39.4	75	0.60 @ 0.125 · 1.15 @ 0.5 · 1.75 @ 1 MHz	2,000
2×22 AWG + 2×24 AWG (Thin PVC)	120 Ω	183.6	39.4	75	0.95 @ 0.125 · 1.64 @ 0.5 · 2.29 @ 1 MHz	1,500
2×22 AWG + 2×24 AWG (Thin Chain PUR)	120 Ω	183.6	39.4	75	0.98 @ 0.125 · 1.70 @ 0.5 · 2.35 @ 1 MHz	1,500

– Transmission values (characteristic impedance Z0, mutual capacitance, VoP, and attenuation) are measured at +20 °C per ODVA DeviceNet Volume I (Thick Trunk & Thin Drop).

Standards and approvals

- ✓ ODVA Volume I
- ✓ UL CL2 / CMG / PLTC
- ✓ CSA CMG FT4 / CE

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/devicenet-cable



Typical values for this cable type, based on ODVA DeviceNet Volume I (Thick Trunk & Thin Drop). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.