AJWASYS
INDUSTRIAL SURVEILLANCE • COMMUNICATION • NETWORK & SAFETY SYSTEMS

COMPOSITE ARMOURED CABLE • PRODUCT CATALOGUE

Hybrid Armoured Composite Cable

Power + Data + Signal + Earth in One Armoured Run

4-Pair Network | #18 Power ×2 | #16 Earth | #26 Signal Pair | 95% TC Armour | Φ14.5 mm | 600V / 105°C

PRODUCT ITEM CODE

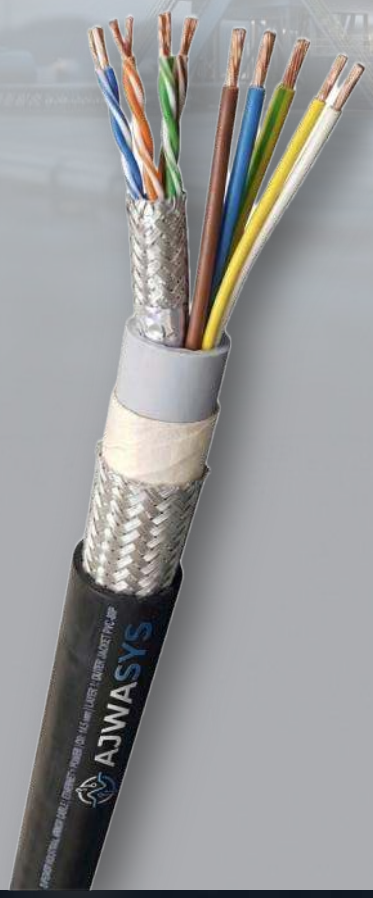
AJSHACC14

OEM Ref: NS-HY-G0030-N

- ✓ Single armoured run — power, data, signal & earth
- ✓ 95% tinned-copper armour braid for rig duty
- ✓ Foil-screened CM network element — EMI immune
- ✓ 600V / 105°C • VW-1 flame • RoHS compliant



Cutaway — armour braid & internal cores



PTZ & IP Camera Runs
For rig-mounted surveiliance

Drilling Packages
For top-drive, SCR house, and mud-pump devices

Field Instrumentation
Combined power and signal for sensors and control

Perimeter & Yard
Armoured outdoor runs

ORDER CODE: AJSHACC14 (OEM Ref: NS-HY-G0030-N)

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PRODUCT OVERVIEW

The AJSHACC14 is a heavy-duty hybrid composite cable that delivers network data, control signals, power and a dedicated earth conductor through a single armoured run. By integrating a CM-certified 4-pair network element, two #18 power cores, a #16 earth conductor and a shielded signal pair beneath one tinned-copper armour braid, it replaces several separate cable runs — cutting tray congestion, installation time and potential failure points across the rig.

Engineered for demanding oilfield and drilling-rig environments, its 95%-coverage armour braid provides robust mechanical protection and continuous EMI/RFI shielding, while the foil-screened network element preserves data integrity amid generators, VFDs and top-drive systems. With 600V / 105°C UL1015 power cores, a VW-1 flame rating and a –40 to 105°C jacket, the cable is built for fixed installation across drilling packages, SCR houses, mud-pump areas and perimeter device runs.

COMPOSITE ELEMENTS — ONE CABLE, FOUR FUNCTIONS

EL.	CONSTRUCTION	FUNCTION
A	**(#26 × 4PR + MADB) × 1C**	Shielded 4-pair network element (CM-rated) — Ethernet / data
B	**#26 × 1PR (WF)**	Twisted signal pair — control / sensor signalling
C	**UL1015 #18 × 2C (WF)**	Power conductors — device / PoE injector supply
D	**UL1015 #16 × 1C (WF)**	Dedicated earth / ground (Yellow-Green)

KEY FEATURES



95% Armour Braid

Tinned-copper armour for crush, abrasion and rodent protection in harsh routing.



Power + Data Hybrid

Carries power, Ethernet, signal and earth in a single rugged run.



Full EMI Shielding

Foil-screened network element plus overall armour rejects field interference.



Wide Temp Range

Rated –40°C to +105°C for extreme outdoor and engine-area service.



VW-1 Flame Rated

Flame-retardant cores (no flame >60 s) with 600 V UL1015 power rating.



RoHS Compliant

Environment-friendly construction suited to modern HSE standards.

CABLE CONSTRUCTION

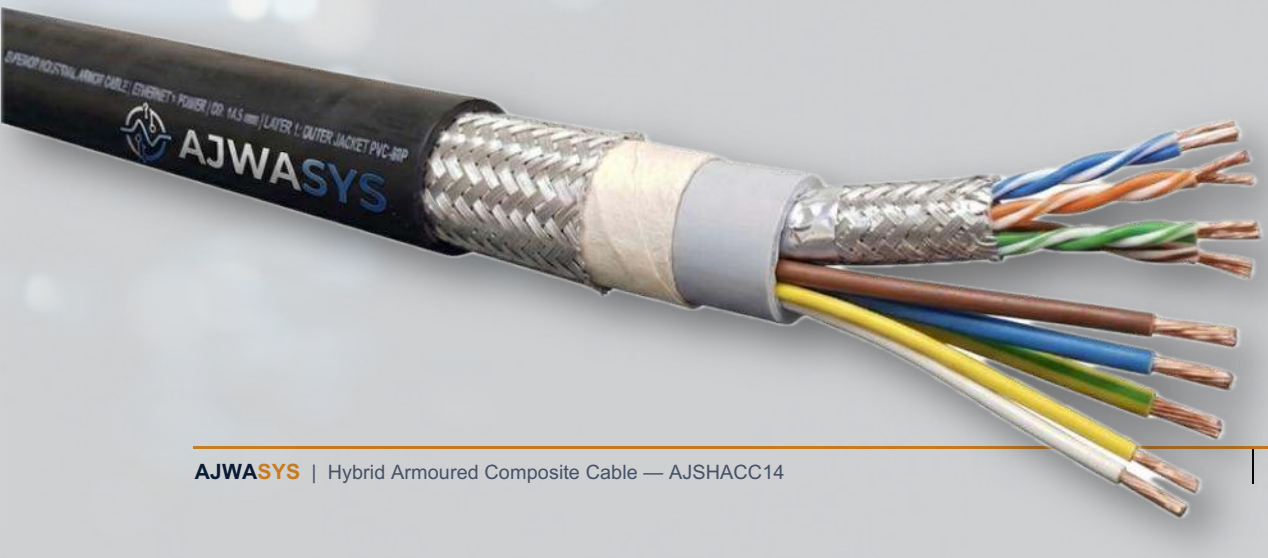


LAYER STRUCTURE (OUTER → INNER)

1. Outer Jacket — PVC-80P, Φ14.5 mm
2. Armour Braid — Tinned Copper, 95% coverage
3. Cotton-Paper Wrap (≥25% overlap)
4. Inner Sheath — PVC-70P, Φ10.7 mm
5. Network Element A — foil + braid + 4 pairs
6. Power #18 ×2 (Brown / Blue)
7. Earth #16 (Yellow-Green)
8. Signal Pair #26 (Yellow / White)

CONDUCTORS & INSULATION

PROPERTY	A — Network	B — Signal	C — Power	D — Earth
Element	(#26×4PR+MADB)×1C	#26×1PR (WF)	UL1015 #18×2C	UL1015 #16×1C
Conductor	Tinned Copper	Tinned Copper	Tinned Copper	Tinned Copper
Stranding (pcs/mm)	7/0.15ST	7/0.16ST	41/0.16ST	65/0.16ST
Stranded Ø (mm)	0.48	0.48	1.18	1.48
Conductor Pitch	11–13	11–13	27–32	32–38
Insulation	(HD-PE)×4PR	SR-PVC	50P-PVC 105°C	50P-PVC 105°C
Avg. Thickness (mm)	0.23	0.26	0.81	0.81
Insulation O.D. (mm)	0.95±0.05	1.00±0.05	2.80±0.05	3.10±0.05
Colour	Per Code	Yellow + White	Brown / Blue	Yellow / Green



SHIELDING & ASSEMBLY

NETWORK ELEMENT A — SHIELDING & FINISHED CABLE

Pair Twist Direction	Right (S)
Pair Twist Pitch	As per colour code
Core Cabling	Right (S) • Pitch 100±5 mm (Ref) • Stranded Ø 4.2 mm
Inside Shield (Foil)	AL / Mylar 20 × 0.025 mm • conductive side outward • overlap 25% min
Drain Wire	Tinned Copper 7/0.16ST
Braid Shield	Tinned Copper 16/6/0.12ST • coverage 69% min (6 mesh)
Covering (中被)	PVC-55P 80°C • Φ6.00±0.10 mm • avg 0.65 mm • Black

OVERALL CABLE ASSEMBLY

Cabling (A+B+C+D)	Right (S) • Pitch 250 mm (Ref) • Stranded Ø 9.5 mm
Inner Sheath	PVC-70P (–40 to 105°C) • Φ10.7±0.5 mm • avg 0.65 mm • Black
Inner Wrap	Cotton paper 35 × 0.040 mm • overlap ≥25%
Armour Braid (铠装)	Tinned Copper 24 × 12 / 0.12±0.08 mm • coverage 95% min • 12 mesh
Outer Jacket	PVC-80P (–40 to 105°C) • Φ14.5±0.20 mm • avg 1.6 mm • solid / plane
Jacket Colour	Per customer requirement
Compliance	RoHS / environment-friendly (环保)

COLOUR CODE — NETWORK PAIRS & CORES

CONDUCTOR	COLOUR	PITCH (mm)
Network Pair 1	Brown + White / Brown	19.43 ± 1
Network Pair 2	Green + White / Green	13.75 ± 1
Network Pair 3	Orange + White / Orange	16.5 ± 1
Network Pair 4	Blue + White / Blue	11.9 ± 1
Signal Pair (B)	Yellow + White	20 ± 3
Power #18 (C)	Brown, Blue	—
Earth #16 (D)	Yellow / Green	—

PERFORMANCE & APPLICATIONS

ELECTRICAL (UL1015 #18)	
Voltage Rating	600 V
Temperature Rating	105°C
Spark Test	6.0 KV / 0.15 sec min
Max Conductor Resistance	23.2 Ω/km
Min Insulation Resistance	15 MΩ/km

PHYSICAL / MECHANICAL	
Flame Test	VW-1 (no flame > 60 s)
Tensile (before aging)	1.05 kgf/mm²
Tensile (after aging)	≥70% (136°C × 168 h)
Elongation (before / after)	≥100% / ≥65%
Deformation	≤50% (121°C × 1 h)
Heat Shock	136°C × 1 h — no crack

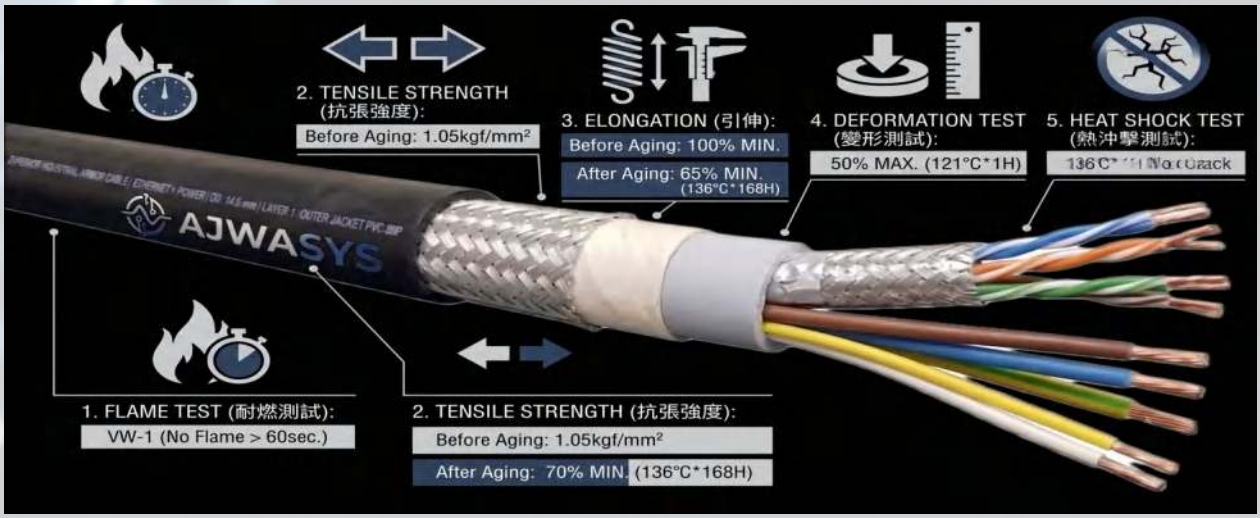
RECOMMENDED RIG & INDUSTRIAL APPLICATIONS

PTZ & IP Camera Runs
One armoured cable powers and connects rig-mounted surveillance cameras.

Drilling Packages
Top-drive, SCR house and mud-pump device wiring with full mechanical protection.

Field Instrumentation
Combined power and signal for sensors, beacons and control devices.

Perimeter & Yard
Armoured outdoor runs across stacking yards and facility perimeters.



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For pricing, drum lengths, jacket-colour options or project quotations, contact AJWASYS — your authorised partner for industrial surveillance, network and safety systems across Saudi Arabia, Qatar, Bahrain and India.

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