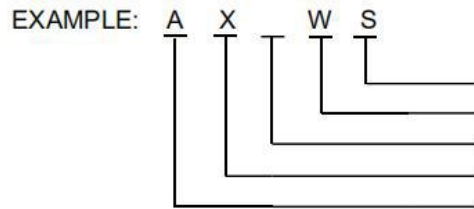


DI01A-CU/Heat Resistant PVC/OSCR/PVC/SWA/PVC Armour Digital Instrument RS485 cable is a signal transmission tool. Generally, the signal transmitted by the signal cable is very small. In order to avoid signal interference, there is a shielding layer outside the signal cable. The shielding layer of the wrapped conductor is generally conductive cloth, braided copper mesh or aluminum-plastic composite tape. The shielding layer needs to be grounded. The interference signal can be led into the ground by this layer, avoiding interference signal entering the inner conductor interference and reducing the loss of transmission signal.

Model naming:

A) SIGNAL CABLE CODE:



For ESD/F&G system
 A=Armour / U=UN-Armour
 Y= Indicates the number of pair/triple e.g. 01,02,03,05,10,20
 SEE NOTE 1
 SEE NOTE 2

NOTE-1

I = INTRINSICALLY SAFE
 N= NON INTRINSICALLY SAFE

NOTE-2

D= DIGITAL
 A= ANALOGUE
 F= FOUNDATION FIELDBUS
 R= RTD (PT 100)
 V= SOLENOID VALVE
 G= GAS DETECTOR
 K= THERMOCOUPLE "K" TYPE
 L= MODBUS

Cable structure

- Related Standard: EN 50288-7
- Conductor Material: Bare Copper Tinned Copper
- Conductor Construction: solid, 7 wires, flexible, (multi wires) superflexible
- Insulation: PVC 85 °C, PVC 105 °C, PE, XLPE PP, other,
- Conductor Size: **1.5mm²** (for single or triple cable) / **0.75mm²** (for multi cable)
2.5mm² (for Solenoid Valve)
- Core Identification: colored, **(BLACK & WHITE)** / **(Black, White, Red)**, for triples
 Numbered (for multi pair/triple: each core printed with pair/triple number)
- Max. Length of Lay: Up to 1.5 mm² ≤100 mm
2.5 mm² ≤ 150 mm
- Insulation Tape: Polyester
- Individual / Overall Screening: (Aluminum/polyester tape, metallic side down, in contact with minimum 0.5mm²/7x0.3 tinned copper drain wire)
- Bedding Material: PVC (Black)
- Cabling: in layers in bundles
- Lead Sheath: no yes
- Galvanized Armour: no yes
 Single wire armour
- Outer Sheath Material: PVC color **LIGHT BLUE** for **I.S** & **Gray** for **Non I.S**

Electrical characteristics

Electrical Data at 20 °C-----Conductor resistance maximum VTA Ω/km
 Operating voltage RMS maximum----- 300 volt DC AC
 Test voltage RMS, Core----- Core: 1000 volt AC
 Core: Screen-----1000 volt AC
 Insulation resistance -----10 MΩ x km
 Mutual capacitance (core:core) at 800 Hz max -----VTA nF/km
 Attenuation-frequency-characteristics at 800 Hz-1KHz ----- 1.3 dB/km
 Capacitance unbalances (between 2 core 2 screen)-----VTA nF/km
 Frequency range-----800 Hz
 Characteristic impedance-----VTA Ohm ±
 VTA: VENDOR TO ADVISE

DI01A-CU/Heat Resistant PVC/OSCR/PVC/SWA/PVC Armour Digital Instrument RS485 cable has five layers of protection, namely insulation layer, shielding layer, winding layer, armor layer, and sheath layer, just to ensure the accurate transmission of weak power signals. Insulation layer: Physical and chemical properties equivalent to the sheath layer. The sheath, shielding net and winding layer can be removed in a small environment and used as a wire alone. Winding layer: The winding layer is a selected polymer material, mainly to prevent the shielding net from hurting the insulation layer. It also enhances the overall mechanical properties of the cable. Shielding layer: Exquisite metal materials (using copper or tinned copper), on the one hand, must smoothly derive interference signals, and extremely thin metal wires must have sufficient bending resistance to

prevent metal debris from affecting other electrical equipment. Armoring layer: Generally, steel wire is used to wind, which greatly improves the tensile performance of the cable. Sheath layer: excellent mechanical properties, able to withstand high-strength metal impact and cutting. It has very high tensile strength and can withstand long-term repeated bending.