SIEMENS

Data sheet

6XV1870-3QN40

product type designation product description

IE TP Cord RJ45/RJ45, 4x2

Patch cable, preferred length, preassembled with two RJ45 connectors (10/100/1000/10000MB)

Industrial Ethernet TP Cord RJ45/RJ45, CAT 6A, TP cable 4x2, preassembled with 2 RJ45 connectors, length 40 m.



number of electrical connections 2 attenuation factor per length 0.086 dB/m • at 10 MHz / maximum 0.28 dB/m • at 300 MHz / maximum 0.501 dB/m • at 300 MHz / maximum 0.501 dB/m • at 600 MHz / maximum 0.735 dB/m impedance 100 Ω • at 10 MHz 100 MHz 100 Ω • at 10 MHz 600 MHz 100 Ω relative symmetrical tolerance 100 Ω • of the characteristic impedance at 1 MHz 100 15 % MHz • of the characteristic impedance at 10 MHz 600 10 % MHz • of the characteristic impedance at 10 MHz 600 10 % MHz • of the characteristic impedance at 10 MHz 600 10 % MHz • of the characteristic impedance at 10 MHz 600 10 % MHz • of the characteristic impedance at 10 MHz 600 10 % ftransfer impedance per length / at 10 MHz 10 mΩ/m loop resistance per length / at 10 MHz 290 mΩ/m operating voltage 80 ∨ NVP value in percent 80 %		
wire length 40 m olectical dat	suitability for use	Easy connection of terminal devices to the IE FC cabling system
eloctrical data 2 number of electrical connections 2 attenuation factor per length 0.086 dB/m • at 10 MHz / maximum 0.28 dB/m • at 10 MHz / maximum 0.501 dB/m • at 300 MHz / maximum 0.735 dB/m impedance • at 100 MHz 100 MHz • at 10 MHz 100 MHz 100 Ω • at 10 MHz 100 MHz 100 Ω relative symmetrical tolerance • of the characteristic impedance at 1 MHz 100 MHz • of the characteristic impedance at 10 MHz 600 MHz 10 % • of the characteristic impedance at 10 MHz 600 MHz 10 mΩ/m operating voltage • 0 fthe characteristic impedance at 10 MHz 600 MHz 10 mΩ/m operating voltage • 0 fthe characteristic impedance at 10 MHz 600 M/m 290 mΩ/m operating voltage • RMS value 80 ∨ NVP value in percent 80 ∨ NVP value in percent moder of electrical cores 8 Overlapped aluminum-clad foll, sheathed in a braided screen of timplated copper wires core diameter • of inner conductor 0.5 mm 0.5 mm • of KW226 insulated conductor	•	LI 02YSCH 4x2x0,15 PIMF GN FRNC
number of electrical connections 2 attenuation factor per length 0.086 dB/m • at 10 MHz / maximum 0.28 dB/m • at 300 MHz / maximum 0.501 dB/m • at 600 MHz / maximum 0.735 dB/m impedance 0 • at 10 MHz 100 MHz 100 Ω • at 10 MHz 600 MHz 100 Ω • at 10 MHz 600 MHz 100 Ω • at 10 MHz 600 MHz 100 Ω relative symmetrical tolerance 0 • of the characteristic impedance at 1 MHz 100 15 % MHz 10 MHz / maximum 70 dB other characteristic impedance at 10 MHz 600 10 % MHz 10 mΩ/m 200 mΩ/m loop resistance per length / maximum 290 mΩ/m operating voltage 80 ∨ • RMS value 80 ∨ NVP value in percent 80 % mechanical data 0.5 mm ord relace insulation 0.5 mm • of the wire insulation 0.5 mm • of the wire insulation 0.5 mm • of the character of the outer diameter / of cable sheath 0.3 mm other wire insu	wire length	40 m
attenuation factor per length 0.086 dB/m at 10 MHz / maximum 0.086 dB/m at 100 MHz / maximum 0.28 dB/m at 300 MHz / maximum 0.501 dB/m at 600 MHz / maximum 0.735 dB/m impedance	electrical data	
• at 10 MHz / maximum0.086 dB/m• at 100 MHz / maximum0.28 dB/m• at 300 MHz / maximum0.735 dB/m• at 600 MHz / maximum0.735 dB/mimpedance•• at 1 MHz 100 MHz100 Ω• at 10 MHz 600 MHz100 Ωrelative symmetrical tolerance•• of the characteristic impedance at 1 MHz 60015 %MHz•• of the characteristic impedance at 10 MHz 60010 %MHz*• of the characteristic impedance at 10 MHz 60010 %MHz*• of the characteristic impedance at 10 MHz 60010 %MHz*• of the characteristic impedance at 10 MHz 60010 %MHz*• of the characteristic impedance at 10 MHz 60010 %MHz*• of the characteristic impedance at 10 MHz 60010 %MHz*• of the characteristic impedance at 10 MHz 60010 %MHz*• of the characteristic impedance at 10 MHz 60010 %MHz*• of the characteristic impedance at 0 MHz 60010 mΩ/moperating voltage*• RMS value80 ∨• RMS value80 ∨outer diameter*• of AWG26 insulated conductor0.5 mm• of inner conductor0.5 mm• of inner conductor0.5 mm• of the wire insulation1 mm• of the wire insulation6.2 mm• of able sheath6.2 mm <td>number of electrical connections</td> <td>2</td>	number of electrical connections	2
• at 100 MHz / maximum0.28 dB/m• at 300 MHz / maximum0.501 dB/m• at 600 MHz / maximum0.735 dB/mimpedance-• at 1 MHz 100 MHz100 Ω• at 10 MHz 600 MHz100 Ω• of the characteristic impedance at 1 MHz 10015 %• of the characteristic impedance at 1 MHz 10015 %• of the characteristic impedance at 10 MHz 60010 %MHz-• of the characteristic impedance at 10 MHz 60010 %MHz-• of the characteristic impedance at 10 MHz 60010 %MHz-• of the characteristic impedance at 10 MHz 60010 %MHz-• of the characteristic impedance at 10 MHz 60010 %MHz-• of the characteristic impedance at 10 MHz 60010 m/mloop resistance per length / at 10 MHz10 m/moperating voltage-• FMS value80 VNVP value in percent80 %e design of the shield-• of AWG26 insulated conductor0.5 mm• of AWG26 insulated conductor0.5 mm• of finer conductor0.5 mm• of the wire insulation1 mm• of the wire insulation1 mm• of the wire insulation0.3 mm• of the wire insulation0.3 mm• of the wire insulationpolyethylene (PE)	attenuation factor per length	
• at 300 MHz / maximum0.501 dB/m• at 600 MHz / maximum0.735 dB/mimpedance-• at 1 MHz 100 MHz100 Ω• at 1 0 MHz 600 MHz100 Ω• at 10 MHz 600 MHz100 Ω• of the characteristic impedance at 1 MHz 10015 %• of the characteristic impedance at 1 0 MHz 60010 %• of the characteristic impedance at 10 MHz 60010 %• of the characteristic impedance at 10 MHz 60010 %• of the characteristic impedance at 10 MHz 60010 mΩ/mcoupling loss / at 30 MHz 100 MHz / minimum70 dBtransfer impedance per length / at 10 MHz10 mΩ/moperating voltage00 mΩ/m• RMS value80 V• NVP value in percent80 %• cord diameter00 verlapped aluminum-clad foil, sheathed in a braided screen of tin- plated copper wires• of AWG28 insulated conductor0.5 mm• ot AWG28 insulated conductor0.5 mm• of inner conductor0.5 mm• of the wire insulation1 mm• of the wire insulation1 mm• of the wire insulation0.3 mm• material	 at 10 MHz / maximum 	0.086 dB/m
• at 600 MHz / maximum 0.735 dB/m impedance 00 Ω • at 1 MHz 600 MHz 100 Ω • at 10 MHz 600 MHz 100 Ω relative symmetrical tolerance 0 • of the characteristic impedance at 1 MHz 100 MHz 15 % • of the characteristic impedance at 10 MHz 600 MHz 10 % MHz 0 of MHz / minimum coupling loss / at 30 MHz 100 MHz / minimum 70 dB transfer impedance per length / at 10 MHz 10 mΩ/m loop resistance per length / maximum 200 mΩ/m operating voltage 0 • RMS value 80 V NVP value in percent 80 V mechanical data Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires core diameter 0.5 mm • of AWG26 insulated conductor 0.5 mm • of able sheath 6.2 mm • of able sheath 6.2 mm • of cable sheath 6.2 mm • of able sheath 6.2 mm • of the wire insulation 0.3 mm • of the wire insulation 0.3 mm	• at 100 MHz / maximum	0.28 dB/m
impedance impedance • at 1 MHz 100 MHz 100 Ω • at 10 MHz 600 MHz 100 Ω relative symmetrical tolerance - • of the characteristic impedance at 1 MHz 100 15 % MHz - • of the characteristic impedance at 10 MHz 600 10 % MHz - • of the characteristic impedance at 10 MHz 600 10 % Icoupling loss / at 30 MHz 100 MHz / minimum 70 dB transfer impedance per length / at 10 MHz 200 mΩ/m loop resistance per length / maximum 202 mΩ/m operating voltage - • RMS value 80 V NVP value in percent 80 % mechanical data - number of electrical cores 8 design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of timplated copper wires core diameter - • of niner conductor 0.5 mm • of twire insulation 1 mm • of cable sheath 6.2 mm symmetrical tolerance of the outer diameter / of cable sheath 0.3 mm </td <td> at 300 MHz / maximum </td> <td>0.501 dB/m</td>	 at 300 MHz / maximum 	0.501 dB/m
• at 1 MHz 100 MHz100 Ω• at 10 MHz 600 MHz100 Ωrelative symmetrical tolerance-• of the characteristic impedance at 1 MHz 100 MHz15 %• of the characteristic impedance at 10 MHz 600 MHz10 %• of the characteristic impedance at 10 MHz 600 MHz10 %coupling loss / at 30 MHz 100 MHz / minimum70 dBtransfer impedance per length / at 10 MHz10 mΩ/mloop resistance per length / maximum200 mΩ/moperating voltage8• of NAS value80 VNVP value in percent80 %mumber of electrical cores of the shield8ocer diameter-• of AWG26 insulated conductor0.5 mmout diameter0.5 mm• of inner conductor0.5 mm• of the wire insulation1 mm• of able sheath6.2 mmsymmetrical tolerance of the outer diameter / of cable sheath0.3 mm• of the wire insulation0.3 mm	 at 600 MHz / maximum 	0.735 dB/m
• at 10 MHz 600 MHz100 Ωrelative symmetrical tolerance-• of the characteristic impedance at 1 MHz 10015 %MHz0• of the characteristic impedance at 10 MHz 60010 %MHz70 dBcoupling loss / at 30 MHz 100 MHz / minimum70 dBtransfer impedance per length / at 10 MHz290 mΩ/mloop resistance per length / maximum290 mΩ/moperating voltage-• RMS value80 ∨NVP value in percent80 %muber of electrical cores8design of the shield0.5 mmouter diameter-• of AWG26 insulated conductor0.5 mmouter diameter0.5 mm• of inner conductor0.5 mm• of inner conductor0.5 mm• of the wire insulation1 mm• of cable sheath6.2 mm• of able sheath6.2 mm• of the wire insulation1 mm• of able sheath6.2 mm• of the wire insulation0.3 mm• of the wire insulation1 mm• of able sheath6.2 mm• of the wire insulation0.3 mm• of the wire insulation0.3 mm• of the wire insulation0.3 mm• of the wire insulation90yethylene (PE)	impedance	
relative symmetrical tolerance Note • of the characteristic impedance at 1 MHz 100 15 % • of the characteristic impedance at 10 MHz 600 10 % • of the characteristic impedance at 10 MHz 600 10 % • of the characteristic impedance at 10 MHz 100 MHz / minimum 70 dB coupling loss / at 30 MHz 100 MHz / minimum 70 dB transfer impedance per length / at 10 MHz 10 mΩ/m loop resistance per length / maximum 290 mΩ/m operating voltage 80 V • RMS value 80 V NVP value in percent 80 % mechanical data	• at 1 MHz 100 MHz	100 Ω
• of the characteristic impedance at 1 MHz 100 MHz15 %• of the characteristic impedance at 10 MHz 600 MHz10 %coupling loss / at 30 MHz 100 MHz / minimum70 dBtransfer impedance per length / at 10 MHz10 mΩ/mloop resistance per length / maximum290 mΩ/moperating voltage80 ∨• RMS value80 ∨NVP value in percent80 ∨mechanical dataOverlapped aluminum-clad foil, sheathed in a braided screen of tin- plated copper wirescore diameter0.5 mm• of AWG26 insulated conductor0.5 mmouter diameter0.5 mm• of the wire insulation1 mm• of able sheath6.2 mmsymmetrical tolerance of the outer diameter / of cable0.3 mm• of the wire insulation0.3 mm• of the wire insulation0.3 mm• of the wire insulation9 olyethylene (PE)	• at 10 MHz 600 MHz	100 Ω
MHz	relative symmetrical tolerance	
MHz MHz coupling loss / at 30 MHz 100 MHz / minimum 70 dB transfer impedance per length / at 10 MHz 10 mΩ/m loop resistance per length / maximum 290 mΩ/m operating voltage 80 V • RMS value 80 V NVP value in percent 80 % mechanical data Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires core diameter 0.5 mm • of AWG26 insulated conductor 0.5 mm outer diameter 0.5 mm • of cable sheath 6.2 mm • of the wire insulation 1 mm • of the wire insulation 6.2 mm • of the wire insulation 6.3 mm • of the wire insulation 6.3 mm • of the wire insulation 9.0 yethylene (PE)		15 %
transfer impedance per length / at 10 MHz10 mΩ/mloop resistance per length / maximum290 mΩ/moperating voltage80 V• RMS value80 VNVP value in percent80 %mechanical data0 %number of electrical cores8design of the shieldOverlapped aluminum-clad foil, sheathed in a braided screen of tim- plated copper wirescore diameter0.5 mmouter diameter0.5 mmof finer conductor0.5 mmof the wire insulation1 mmof cable sheath6.2 mmsymmetrical tolerance of the outer diameter / of cable0.3 mmwaterial0.3 mmof the wire insulation0.3 mm	•	10 %
loop resistance per length / maximum 290 mΩ/m operating voltage 80 V • RMS value 80 V NVP value in percent 80 % mechanical data V number of electrical cores 8 design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires core diameter 0.5 mm outer diameter 0.5 mm • of AWG26 insulated conductor 0.5 mm outer diameter 0.5 mm • of the wire insulation 1 mm • of cable sheath 6.2 mm symmetrical tolerance of the outer diameter / of cable 0.3 mm material uaterial • of the wire insulation 0.3 mm	coupling loss / at 30 MHz 100 MHz / minimum	70 dB
operating voltageS0 VRMS value80 VNVP value in percent80 %mechanical data0 %number of electrical cores8design of the shieldOverlapped aluminum-clad foil, sheathed in a braided screen of tin- plated copper wirescore diameter0.5 mmouter diameter0.5 mmo f hw wire insulation1 mmo f cable sheath6.2 mmsymmetrical tolerance of the outer diameter / of cable0.3 mmof the wire insulationplayethylene (PE)	transfer impedance per length / at 10 MHz	10 mΩ/m
• RMS value 80 V NVP value in percent 80 % mechanical data	loop resistance per length / maximum	290 mΩ/m
NVP value in percent 80 % mechanical data number of electrical cores 8 design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires core diameter 0.5 mm outer diameter 0.5 mm outer diameter 0.5 mm of the wire insulation 1 mm of cable sheath 6.2 mm symmetrical tolerance of the outer diameter / of cable sheath 0.3 mm material uniterial of the wire insulation polyethylene (PE)	operating voltage	
mechanical data number of electrical cores 8 design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin- plated copper wires core diameter 0.5 mm outer diameter 0.5 mm of the wire insulation 1 mm of cable sheath 6.2 mm symmetrical tolerance of the outer diameter / of cable sheath 0.3 mm of the wire insulation polyethylene (PE)	RMS value	80 V
number of electrical cores8design of the shieldOverlapped aluminum-clad foil, sheathed in a braided screen of tin- plated copper wirescore diameter0.5 mmouter diameter0.5 mmo of inner conductor0.5 mmo f the wire insulation1 mmof cable sheath6.2 mmsymmetrical tolerance of the outer diameter / of cable0.3 mmmaterialof the wire insulationof the wire insulation0.5 mm	NVP value in percent	80 %
design of the shieldOverlapped aluminum-clad foil, sheathed in a braided screen of tin- plated copper wirescore diameter0.5 mmouter diameter0.5 mmof inner conductor0.5 mmo of the wire insulation0.5 mmof cable sheath0.5 mmsymmetrical tolerance of the outer diameter / of cable0.3 mmsheath0.3 mmsheath0.3 mmof the wire insulation0.9 mmof the outer diameter / of cable0.9 mmsymmetrical tolerance of the outer diameter / of cable0.3 mmsheath0.9 mmsheath0.9 mmof the wire insulation0.9 mmof the wire insulation0.9 mmsheath0.9 mm <td>mechanical data</td> <td></td>	mechanical data	
core diameter plated copper wires of AWG26 insulated conductor 0.5 mm outer diameter 0.5 mm of inner conductor 0.5 mm of the wire insulation 0.5 mm of cable sheath 6.2 mm symmetrical tolerance of the outer diameter / of cable 0.3 mm sheath 0.3 mm material polyethylene (PE)	number of electrical cores	8
• of AWG26 insulated conductor0.5 mmouter diameter-• of inner conductor0.5 mm• of the wire insulation1 mm• of cable sheath6.2 mmsymmetrical tolerance of the outer diameter / of cable0.3 mmsheath-material-• of the wire insulationpolyethylene (PE)	design of the shield	
outer diameter	core diameter	
• of inner conductor 0.5 mm • of the wire insulation 1 mm • of cable sheath 6.2 mm • of cable sheath 0.3 mm symmetrical tolerance of the outer diameter / of cable 0.3 mm material	 of AWG26 insulated conductor 	0.5 mm
 of the wire insulation of cable sheath of the outer diameter / of cable of the outer diameter / of cable of the wire insulation polyethylene (PE) 	outer diameter	
of cable sheath of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation polyethylene (PE)	 of inner conductor 	0.5 mm
symmetrical tolerance of the outer diameter / of cable 0.3 mm sheath material • of the wire insulation polyethylene (PE)	 of the wire insulation 	1 mm
sheath material • of the wire insulation polyethylene (PE)		6.2 mm
• of the wire insulation polyethylene (PE)		0.3 mm
	material	
of cable sheath FRNC	 of the wire insulation 	polyethylene (PE)
	 of cable sheath 	FRNC

color	
color • of the insulation of data wires	white/blue white/orange white/orange white/brown
 of the insulation of data wires of cable sheath 	white/blue, white/orange, white/green, white/brown
• of cable sheath bending radius	green
with single bend / minimum permissible	31 mm
with single bend / minimum permissible with multiple bends / minimum permissible	43.5 mm
weight per length	50 kg/km
	JU KY/KII
ambient conditions	
ambient temperature	
during operation	-25 +80 °C
during storage	-25 +80 °C
during transport	-25 +80 °C
during installation	-25 +80 °C
• note	In fixed installation -40 °C to 80 °C
fire behavior	flame resistant according to IEC 60332-1-2, smoke density according to IEC 61034
class of burning behaviour / according to EN 13501-6	Eca
chemical resistance	
to mineral oil	oil resistant according to IEC 60811-2-1 (4 h / 70°C)
• to grease	Conditional resistance
radiological resistance / to UV radiation	not resistant
protection class IP	IP20
product features, product functions, product components	
product feature	
halogen-free	Yes
silicon-free	Yes
standards, specifications, approvals	
	No
UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating	Yes; E130266 AWM STYLE 21279
certificate of suitability	165, E150200 AWW STILE 21279
EAC approval	Yes
• UL approval	Yes
RoHS conformity	Yes
standard for structured cabling	Cat6A
Marine classification association	
American Bureau of Shipping Europe Ltd. (ABS)	No
 French marine classification society (BV) 	No
Det Norske Veritas (DNV)	No
Germanische Lloyd (GL)	No
Lloyds Register of Shipping (LRS)	No
 Nippon Kaiji Kyokai (NK) 	No
 Polski Rejestr Statkow (PRS) 	No
reference code	
according to IEC 81346-2	WG
• according to IEC 81346-2:2019	WGB
further information / internet-Links	
Internet-Link	
to web page: selection aid TIA Selection Tool	http://www.siemens.com/tia-selection-tool
 to web page selection and the selection root to website: Industrial communication 	http://www.siemens.com/simatic-net
to website: Industry Mall	https://www.siemens.com
 to website: Information and Download Center 	http://www.siemens.com/industry/infocenter
to website: Selection guide for cables and	https://sie.ag/2QdlxcP
connectors	
 to website: Image database 	http://automation.siemens.com/bilddb
 to website: CAx-Download-Manager 	http://www.siemens.com/cax
 to website: Industry Online Support 	https://support.industry.siemens.com
last modified:	2/14/2023 🖸