# SIEMENS

### Data sheet

## 6XV1821-1CN75

#### product type designation product description

#### PROFIBUS PCF Fiber Optic standard cable

PCF fiber-optic cable with plastic cladding, preferred length, preassembled PROFIBUS PCF Fiber Optic, with 4 PCF Simplex connectors, length 75 m.



attenuation factor per length     10 dB/km       • at 650 nm / maximum     10 dB/km       • at 660 nm / maximum     10 dB/km       bandwidth length product     11 dB/km       • at 650 nm     17 GHz·m	suitability for use	Cable for indoor applications
wire length75 mptriad datasternuation factor per length• at 650 nm / maximum• at 650 nm / maximum10 dB/kmbandwith length product• at 650 nm / maximum• at 650 nm / maximumbandwith length product• at 650 nm / maximum• at 650 nm / maximumnumber of FDC corenumber of FDC core1 1number of FDC coreversion of the FOC core for FDC cable• of the optical fibers• of the optical fiber sheath• of the fiber-optic cable core• of the fiber-optic cable core• of the fiber-optic cable core• of the fiber-optic cable sheath• of the fiber optical sheath<	version of the assembled FO cable	Assembled with four Simplex connectors
attenuation factor per length         attenuation factor per length           • at 660 nm / maximum         10 dB/km           bandwidth length product         at 650 nm           • at 650 nm         17 GHz·m           nechanical data         number of fbers / per FOC core           number of fbers / per FOC core         1           number of fbers / per FOC core         1           outer diameter         2           • of the optical fibers         200 µm           • of the optical fiber sheath         230 µm           • of the optical fiber sheath         230 µm           • of the optical fiber sheath         220 µm           • of the optical fiber sheath         230 µm           • of the optical fiber sheath         21 nm           • of the optical fiber sheath         22 nm           • of the fOC core sheath         21 nm           • of the FOC core sheath         22 nm           • of the foC core sheath         PVC           • of the FOC core sheath <t< td=""><td>cable designation</td><td>I-V(ZN)Y 2K 200/230</td></t<>	cable designation	I-V(ZN)Y 2K 200/230
attenuation factor per length • at 660 nm / maximum • at 660 nm / maximum • at 660 nm / maximum • at 660 nm / maximum bandwidth length product • at 650 nm • of the colores / per FOC cable 2 version of the FOC cores / per FOC cable 2 version of the FOC cores / per FOC cable 2 • of the coloral fibers • of the coloral fibers • of the coloral fibers • of the coloral fiber sheath • of the coloral fiber sheath • of the coloral fiber sheath • of the fiber-optic cable core • of the colical fiber sheath • of the fiber-optic cable core • of the colical fiber sheath • of the fiber-optic cable core • of the fiber-optic cable sheath • of the FOC core sheath • of	wire length	75 m
• at 650 nm / maximum10 dB/kmbandwidh lengh product10 dB/km• at 650 nm / maximum10 dB/kmbandwidh lengh product1• at 650 nm1number of fibers / per FOC core1number of FOC cores / per FOC cable2version of the FOC conductor fiberStep index fiber 200/230 µmouter diameter200 µm• of the optical fibers sheath200 µm• of the optical fiber sheath230 µm• of the optical fiber sheath2.2 nm• of the optical fiber sheath2.2 nm• of the optical fiber sheath2.2 nm• of the foC core sheath2.4 nmmaterialQuartz glass• of the fold riber sheathPVC• of the fold cable sheathPVC• of the fold riber sheathVolet• of the fold cable sheath70 mm• of the fold riber sheath70 mm• of the fold cable sheath70 mm• with multi	optical data	
• at 660 nm / maximum10 dB/kmbandwidth length product7 GHz:m• at 650 nm17 GHz:mmuchanical data1number of FDC core1number of FDC core / per FOC cable2version of the FO conductor fiber20 lpmouter diameter200 µm• of the optical fibers200 µm• of the optical fiber sheath230 µm• of the optical fiber sheath230 µm• of the optical fiber sheath2.2 mm• of the fDC core sheath0.1 mm• of the fiber-optic cable core0.1 mm• of the fiber-optic cable core0.1 cm• of the fiber-optic cable sheathPVC• of the fiber-optic cable sheathPVC• of the fiber-optic cable sheathViolet• of the sheath relief0 range/black• of the sheath relief0 range/black• of the sheath relief7 mm• of the sheath relief70 mm• of the sheath reliminum permissible800 N• with multiple bends / minimum permissible800 N• during installation / short-term800 N<	attenuation factor per length	
bandwidth length product         IT GHz:m           nochanical data         It GHz:m           number of fibers / per FOC core         1           number of Coroers / per FOC cable         2           version of the FO conductor fiber         Step index fiber 200/230 µm           outer diameter         200 µm           of the optical fibers sheath         230 µm           of the optical fiber sheath         230 µm           of the optical fiber sheath         22 mm           of the FOC core sheath         2.2 mm           symmetrical deviation / of the outer diameter of the FOC core         0.1 mm           outer diameter / of the cable         4.7 mm           material         FUvoridated special polymer           of the fiber-optic cable core         Quartz glass           of the FOC core sheath         FUvoridated special polymer           of the fiber-optic cable sheath         FVC           of the fiber-optic cable sheath         Voc           of the fiber-optic cable sheath         Volet           of the fib	• at 650 nm / maximum	10 dB/km
• at 650 nm17 GHzmnmber of fibers / per FOC core1number of fibers / per FOC cores2version of the FO conductor fiberStep index fiber 200/230 µmouter diameter-• of the optical fibers heath200 µm• of the optical fiber sheath230 µm• of the optical fiber sheath230 µm• of the optical fiber sheath230 µm• of the optical fiber sheath2.2 mmsymmetrical deviation / of the outer diameter of the FOC core0.1 mmsymmetrical deviation / of the outer diameter of the FOC core0.1 mmnaterial-• of the fiber-optic cable coreQuartz glass• of the optical fiber sheathFluoridated special polymer• of the fiber-optic cable coreQuartz glass• of the fiber-optic cable coreQuartz glass• of the fiber-optic cable coreYCC• of the fiber-optic cable sheathPVC• of the fiber-optic cable sheathViolet• of the fiber-optic cable sheathViolet• of the fiber-optic cable sheathViolet• of the strain relief47 mm• of the sheathViolet• of the sheath70 mm• with single bend / minimum permissible70 mm• with single bend / minimum permissible800 N• during installation / short-term200 N• during operation / maximum200 N	• at 660 nm / maximum	10 dB/km
number of fibers / per FOC core         1           number of FO cores / per FOC cable         2           version of the FO conductor fiber         Step index fiber 200/230 µm           outer diameter         200 µm           • of the optical fibers         200 µm           • of the optical fiber sheath         230 µm           • of the optical fiber sheath         230 µm           • of the optical fiber sheath         2.2 mm           • of the FOC core sheath         2.2 mm           outer diameter / of the cuter diameter of the FOC core         0.1 mm           outer diameter / of the cable         4.7 mm           material         0utartz glass           of the fiber-optic cable core         Quartz glass           • of the fiber-optic cable sheath         PVC           • of the fiber-optic cable sheath         PVC           • of the fiber-optic cable sheath         PVC           • of the FOC core sheath         PVC           • of the FOC core sheath         Volet           bending radius         47 mm           • of the FOC minimum permissible         47 mm           • with single bend / minimum permissible         47 mm           • with single bend / minimum permissible         40 mm           • udring installation / short-term<	bandwidth length product	
number of fibers / per FOC core         1           number of FO cores / per FOC cable         2           version of the FO conductor fiber         Step index fiber 200/230 µm           outer diameter         0           • of the optical fibers         200 µm           • of the optical fiber sheath         230 µm           • of the optical fiber sheath         230 µm           • of the optical fiber sheath         2.2 mm           • of the FOC core sheath         2.1 mm           outer diameter / of the cube         4.7 mm           outer diameter / of the cable         4.7 mm           • of the fiber-optic cable core         Quartz glass           • of the fiber-optic cable core         Quartz glass           • of the fiber-optic cable sheath         PVC           • of the fiber-optic cable sheath         PVC           • of the fiber-optic cable sheath         PVC           • of the FOC core sheath         PVC           • of the fiber-optic cable sheath         PVC           • of the fore-optic cable sheath         PVC           • of the fore core sheath         Orange/black           • of cable sheath         Violet           bending radius         47 mm           • with single bend / minimum permissible         70 mm <td>● at 650 nm</td> <td>17 GHz·m</td>	● at 650 nm	17 GHz·m
number of FO cores / per FOC cable         2           version of the FO conductor fiber         Step index fiber 200/230 µm           outer diameter         200 µm           • of the optical fibers         200 µm           • of the optical fiber sheath         230 µm           • of the FOC core sheath         2.2 mm           symmetrical deviation / of the outer diameter of the FOC core sheath         0.1 mm           outer diameter / of the cable         4.7 mm           outer diameter / of the optica fiber sheath         Quartz glass           • of the fiber-optic cable core         Quartz glass           • of the fiber-optic cable sheath         PVC           • of the FOC core sheath         Yoilet           bending radius         Tamge/black           • with single bend / minimum permissible         70 mm           • during installat	mechanical data	
version of the FO conductor fiber         Step index fiber 200/230 µm           outer diameter         200 µm           • of the optical fibers         200 µm           • of the optical fiber sheath         230 µm           • of the optical fiber sheath         2.2 mm           • of the FOC core sheath         0.1 mm           symmetrical deviation / of the outer diameter of the FOC core sheath         4.7 mm           outer diameter / of the cable         4.7 mm           material         Volartz glass           • of the fiber-optic cable core         Quartz glass           • of the optical fiber sheath         FVC           • of the foor optic cable sheath         PVC           • of the foor optic cable sheath         PVC           • of the foor optic cable sheath         Violet           • of the FOC core sheath         orange/black           • of the FOC core sheath         Violet           • of the FOC core sheath         Violet           • of the FOC core sheath         70 mm           • of optical fiber sheath         Step index fibers           • outing installation / minimum permissible         70 mm           • with single bend / minimum permissible         70 mm           • during installation / short-term         800 N	number of fibers / per FOC core	1
outer diameter         200 µm           • of the optical fibers         200 µm           • of the optical fiber sheath         230 µm           • of the FOC core sheath         2.2 mm           symmetrical deviation / of the outer diameter of the FOC core         0.1 mm           outer diameter / of the cable         4.7 mm           outer diameter / of the cable         4.7 mm           material         Fluoridated special polymer           • of the fiber-optic cable core         Quartz glass           • of the optical fiber sheath         Fluoridated special polymer           • of the optic cable sheath         PVC           • of the fiber-optic cable sheath         PVC           • of the fiber-optic cable sheath         Vice           • of the fiber-optic cable sheath         Vice           • of the fiber-optic cable sheath         Vice           • of the FOC core sheath         orange/black           • of the FOC core sheath         vice           • of the FOC core sheath         Orange/black           • of othe FOC core sheath         orange/black           • oting installedo / minimum permissible         70 mm           • with single bend / minimum permissible         70 mm           • withing operation / maximum         200 N	number of FO cores / per FOC cable	2
• of the optical fibers200 µm• of the optical fiber sheath230 µm• of the FOC core sheath2.2 mmsymmetrical deviation / of the outer diameter of the FOC core sheath0.1 mmouter diameter / of the cable4.7 mmouter diameter / of the cable coreQuartz glass• of the fiber-optic cable coreQuartz glass• of the optical fiber sheathFluoridated special polymer• of the fiber-optic cable sheathPVC• of the fiber-optic cable sheathPVC• of the fiber-optic cable sheathOver fibers• of the fiber-optic cable sheathPVC• of the fiber-optic cable sheathOver fibers• of the fiber-optic cable sheathPVC• of the fiber-optic cable sheathOver fibers• of the fiber-optic cable sheathPVC• of the strain reliefColor• of the FOC core sheathOver fibers• of cable sheathYole• of cable sheathYole• of the FOC core sheath70 mm• with single bend / minimum permissible47 mm• with single bend / minimum permissible800 N• during installation / short-term800 N• during operation / maximum200 N	version of the FO conductor fiber	Step index fiber 200/230 µm
• of the optical fiber sheath230 µm• of the FOC core sheath2.2 mmsymmetrical deviation / of the outer diameter of the FOC core sheath0.1 mmouter diameter / of the cable4.7 mmouter diameter / of the cable coreQuartz glass• of the fiber-optic cable coreQuartz glass• of the optical fiber sheathFluoridated special polymer• of the fiber-optic cable sheathPVC• of the fiber-optic cable sheathPVC• of the fiber-optic cable sheathVC• of the strain reliefKevlar fiberscolor• of the FOC core sheathorange/black• of able sheath70 mm• of able sheath70 mm• with single bend / minimum permissible70 mm• with single bend / minimum permissible800 N• during installation / short-term800 N• during operation / maximum200 N	outer diameter	
• of the FOC core sheath2.2 mmsymmetrical deviation / of the outer diameter of the FOC core sheath0.1 mmouter diameter / of the cable4.7 mmmaterial-• of the fiber-optic cable coreQuartz glass• of the optical fiber sheathFluoridated special polymer• of the FOC core sheathPVC• of the fiber-optic cable sheathorange/black• of the FOC core sheathorange/black• of the FOC core sheathYiolet• of the FOC core sheath70 mm• of the sheath70 mm• with nultiple bends / minimum permissible800 N• during installation / short-term800 N• during operation / maximum200 N• short-term shear force per length100 N/cm	<ul> <li>of the optical fibers</li> </ul>	200 μm
symmetrical deviation / of the outer diameter of the FOC core sheath0.1 mmouter diameter / of the cable4.7 mmmaterial• of the fiber-optic cable coreQuartz glass• of the optic alliber sheathFluoridated special polymer• of the FOC core sheathPVC• of the fiber-optic cable sheathPVC• of the strain reliefKevlar fiberscolororange/black• of the FOC core sheathorange/black• of the FOC core sheathVioletbending radius70 mm• with single bend / minimum permissible47 mm• with nultiple bends / minimum permissible70 mmtensile load200 N• during operation / maximum200 N/cm	<ul> <li>of the optical fiber sheath</li> </ul>	230 μm
sheath         Image: Constraint of the cable           outer diameter / of the cable         4.7 mm           material         Constraint of the cable core           of the fiber-optic cable core         Quartz glass           of the optical fiber sheath         Fluoridated special polymer           of the FOC core sheath         PVC           of the fiber-optic cable sheath         PVC           of the fiber-optic cable sheath         VC           of the strain relief         Kevlar fibers           color         Violet           of the FOC core sheath         orange/black           of the FOC core sheath         orange/black           of the FOC core sheath         orange/black           of cable sheath         Violet           bending radius         To mm           owith single bend / minimum permissible         70 mm           tensile load         S00 N           oluring installation / short-term         800 N           oluring operation / maximum         200 N	<ul> <li>of the FOC core sheath</li> </ul>	2.2 mm
material         Guartz glass           • of the fiber-optic cable core         Quartz glass           • of the optical fiber sheath         Fluoridated special polymer           • of the FOC core sheath         PVC           • of the fiber-optic cable sheath         PVC           • of the strain relief         Kevlar fibers           color         relief           • of the FOC core sheath         orange/black           • of the FOC core sheath         orange/black           • of the FOC core sheath         orange/black           • of the FOC core sheath         Violet           • of the FOC core sheath         70 mm           • with single bend / minimum permissible         47 mm           • with multiple bends / minimum permissible         800 N           tensile load         200 N           • during operation / maximum         200 N		0.1 mm
of the fiber-optic cable coreQuartz glass• of the optical fiber sheathFluoridated special polymer• of the FOC core sheathPVC• of the fiber-optic cable sheathPVC• of the strain reliefKevlar fiberscolorrange/black• of the FOC core sheathorange/black• of the FOC core sheathVioletbending radius70 mm• with single bend / minimum permissible47 mm• with nultiple bends / minimum permissible70 mmtensile load200 N• during operation / maximum200 N/cm	outer diameter / of the cable	4.7 mm
of the optical fiber sheathFluoridated special polymerof the FOC core sheathPVCof the fiber-optic cable sheathPVCof the strain reliefKevlar fiberscolor-of the FOC core sheathorange/blackof the FOC core sheathVioletbending radius-with single bend / minimum permissible47 mmwith single bend / minimum permissible50 mmtensile load-of during installation / short-term800 Nof during operation / maximum200 Nshort-term shear force per length100 N/cm	material	
• of the FOC core sheathPVC• of the fiber-optic cable sheathPVC• of the strain reliefKevlar fiberscolor-• of the FOC core sheathorange/black• of cable sheathVioletbending radius-• with single bend / minimum permissible47 mm• with single bend / minimum permissible70 mm• during installation / short-term800 N• during operation / maximum200 N• short-term shear force per length100 N/cm	<ul> <li>of the fiber-optic cable core</li> </ul>	Quartz glass
• of the fiber-optic cable sheathPVC• of the strain reliefKevlar fiberscolor-• of the FOC core sheathorange/black• of cable sheathVioletbending radius-• with single bend / minimum permissible47 mm• with multiple bends / minimum permissible70 mmtensile load-• during installation / short-term800 N• during operation / maximum200 Nshort-term shear force per length100 N/cm	<ul> <li>of the optical fiber sheath</li> </ul>	Fluoridated special polymer
• of the strain reliefKevlar fiberscolor-• of the FOC core sheathorange/black• of cable sheathVioletbending radius-• with single bend / minimum permissible47 mm• with multiple bends / minimum permissible70 mmtensile load-• during installation / short-term800 N• during operation / maximum200 Nshort-term shear force per length100 N/cm	<ul> <li>of the FOC core sheath</li> </ul>	PVC
colorImage: color color sheathorange/black• of the FOC core sheathorange/black• of cable sheathVioletbending radius-• with single bend / minimum permissible47 mm• with multiple bends / minimum permissible70 mmtensile load-• during installation / short-term800 N• during operation / maximum200 Nshort-term shear force per length100 N/cm	<ul> <li>of the fiber-optic cable sheath</li> </ul>	PVC
• of the FOC core sheathorange/black• of cable sheathVioletbending radius-• with single bend / minimum permissible47 mm• with multiple bends / minimum permissible70 mmtensile load-• during installation / short-term800 N• during operation / maximum200 Nshort-term shear force per length100 N/cm	of the strain relief	Kevlar fibers
• of cable sheath       Violet         bending radius       -         • with single bend / minimum permissible       47 mm         • with multiple bends / minimum permissible       70 mm         tensile load       -         • during installation / short-term       800 N         • during operation / maximum       200 N         short-term shear force per length       100 N/cm	color	
bending radius       47 mm <ul> <li>with single bend / minimum permissible</li> <li>47 mm</li> </ul> <ul> <li>with multiple bends / minimum permissible</li> <li>70 mm</li> </ul> tensile load <ul> <li>during installation / short-term</li> <li>800 N</li> <li>200 N</li> </ul> short-term shear force per length       100 N/cm	<ul> <li>of the FOC core sheath</li> </ul>	orange/black
• with single bend / minimum permissible     47 mm       • with multiple bends / minimum permissible     70 mm       tensile load     70 mm       • during installation / short-term     800 N       • during operation / maximum     200 N       short-term shear force per length     100 N/cm	of cable sheath	Violet
• with multiple bends / minimum permissible     70 mm       tensile load     70 mm       • during installation / short-term     800 N       • during operation / maximum     200 N       short-term shear force per length     100 N/cm	bending radius	
tensile load     800 N       • during installation / short-term     800 N       • during operation / maximum     200 N       short-term shear force per length     100 N/cm	with single bend / minimum permissible	47 mm
• during installation / short-term     800 N       • during operation / maximum     200 N       short-term shear force per length     100 N/cm	<ul> <li>with multiple bends / minimum permissible</li> </ul>	70 mm
• during operation / maximum 200 N short-term shear force per length 100 N/cm	tensile load	
short-term shear force per length 100 N/cm	<ul> <li>during installation / short-term</li> </ul>	800 N
	<ul> <li>during operation / maximum</li> </ul>	200 N
weight per length 22 kg/km	short-term shear force per length	100 N/cm
	weight per length	22 kg/km

ambient conditions	
ambient temperature	
during operation	-30 +70 °C
during storage	-30 +70 °C
during transport	-30 +70 °C
during installation	-5 +50 °C
fire behavior	flame-resistant acc. to IEC 60332-1-2
chemical resistance	
• to mineral oil	conditional resistance
• to grease	conditional resistance
radiological resistance / to UV radiation	not resistant
protection class IP	IP20
product features, product functions, product components / general	
product feature	
halogen-free	No
silicon-free	Yes
product component / rodent protection	No
wire length	
<ul> <li>for PCF FOC / with PROFIBUS / maximum</li> </ul>	400 m
standards, specifications, approvals	
certificate of suitability	
RoHS conformity	Yes
reference code	
<ul> <li>according to IEC 81346-2</li> </ul>	WH
<ul> <li>according to IEC 81346-2:2019</li> </ul>	WHA
further information / internet links	
internet link	
<ul> <li>to web page: selection aid TIA Selection Tool</li> </ul>	http://www.siemens.com/tia-selection-tool
<ul> <li>to website: Industrial communication</li> </ul>	http://www.siemens.com/simatic-net
<ul> <li>to website: Industry Mall</li> </ul>	https://mall.industry.siemens.com
<ul> <li>to website: Information and Download Center</li> </ul>	http://www.siemens.com/industry/infocenter
<ul> <li>to website: Selection guide for cables and connectors</li> </ul>	https://sie.ag/2QdlxcP
<ul> <li>to website: Image database</li> </ul>	http://automation.siemens.com/bilddb
<ul> <li>to website: CAx-Download-Manager</li> </ul>	http://www.siemens.com/cax
<ul> <li>to website: Industry Online Support</li> </ul>	https://support.industry.siemens.com

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5/10/2022 🖸