## **SIEMENS**

Data sheet 6XV1861-2A

## product type designation

## product description



## PCF Standard Cable GP

PCF fiber-optic cable with plastic cladding, sold by the meter, unassembled

PCF Standard Cable, (200/230), standard cable splittable, UL approval, without connector, sold by the meter, minimum order quantity 20 m, max. length 2000 m.

version of the assembled FO cable cable designation AT-V(ZN)YY 2K 200/230  optical data attenuation factor per length	suitability for use	Cable for permanent installation indoors and outdoors, UL approval		
attenuation factor per length  at 650 nm / maximum  at 650 nm / maximum  at 650 nm / maximum  bandwidth length product  at 650 nm  a	version of the assembled FO cable			
attenuation factor per length  • at 650 mm / maximum  • at 660 mm / maximum  bandwidth length product  • at 650 mm  mochanical data number of Flo cores / per FOC core  number of FO cores / per FOC cable  2 version of the FO conductor fiber  outer diameter  • of the optical fibers seath  • of the optical fiber sheath  • of the optical fiber sheath  • of the FOC core sheath  • outer diameter / of the cable  symmetrical deviation / of the outer diameter of the FOC core  sheath  outer diameter / of the cable  youter diameter / of the outer diameter of the FOC core  sheath  outer diameter / of the outer diameter of the line  naterial  • of the fiber-optic cable core  of the fiber-optic cable sheath  of the FOC core sheath	cable designation	AT-V(ZN)YY 2K 200/230		
at 650 nm / maximum at 650 nm / maximum bandwidth length product at 650 nm rechanical data number of fibers / per FOC core number of FO cores / per FOC cable 2 version of the FO conductor fiber outer diameter of the optical fibers of the optical fibers of the optical fiber sheath of the FOC core sheath symmetrical deviation / of the outer diameter of the FOC core sheath  outer diameter / of the optical fiber sheath of the FOC core sheath 2.2 mm symmetrical deviation / of the outer diameter of the FOC core sheath  outer diameter / of the cable xymmetrical deviation / of the outer diameter of the line material  of the fiber-optic cable core of the optical fiber sheath of the FOC core sheath  o	optical data			
• at 660 nm / maximum bandwidth length product • at 650 nm  mechanical data  number of fibers / per FOC core 1 number of FO cores / per FOC cable 2 version of the FO conductor fiber outer diameter • of the optical fibers seath • of the optical fiber sheath • of the OC core sheath symmetrical deviation / of the outer diameter of the line symmetrical deviation / of the outer diameter of the line  • of the fiber-optic cable core • of the fiber-optic cable sheath • of the FOC core sheath • of the FOC core sheath • of the fiber-optic cable sheath • of the FOC core sheath • of the fiber-optic cable sheath • of the FOC core sheath • of the strain relief color • of the FOC core sheath • of able sheath • of cable sheath • of able sheath • with single bend / minimum permissible • with single bend / minimum permissible • with single bend / minimum permissible • during operation / maximum • during operation / maximum 100 N short-term shear force per length	attenuation factor per length			
bandwidth length product  at 850 nm  17 GHz·m  mechanical data  number of fibers / per FOC core  number of FO cores / per FOC cable  2 version of the FO conductor fiber  outer diameter  of the optical fibers sheath 230 µm of the FOC core sheath 2.2 mm  symmetrical deviation / of the outer diameter of the FOC core sheath  outer diameter / of the cable  ymmetrical deviation / of the outer diameter of the line  material  of the fiber-optic cable core of the office fiber sheath 2 ymmetrical deviation / of the outer diameter of the line  material  of the fiber-optic cable core of the fiber-optic cable sheath 2 ymmetrical pymer  of the fiber-optic cable sheath 3 ymmetrical pymer  of the fiber-optic cable core  of the fiber-optic cabl	• at 650 nm / maximum	10 dB/km		
e at 650 nm 17 GHz-m  mechanical data  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  • of the optical fibers 9 • of the optical fiber sheath 230 µm • of the FOC core sheath 22.7 mm  symmetrical deviation / of the outer diameter of the FOC core sheath 22.7 mm  symmetrical deviation / of the outer diameter of the FOC core sheath 30.5 mm  outer diameter / of the cable 7.2 mm  symmetrical deviation / of the outer diameter of the line 30.5 mm  material • of the fiber-optic cable core Quartz glass • of the optical fiber sheath Special polymer • of the fiber-optic cable sheath PVC • of the fiber-optic cable sheath PVC • of the fiber-optic cable sheath PVC • of the strain relief Aramid fibers  color • of the FOC core sheath green • of able sheath green  bending radius • with single bend / minimum permissible 70 mm • with multiple bends / minimum permissible 105 mm  tensile load • during installation / short-term 800 N • during operation / maximum 100 N short-term shear force per length 500 N/cm	• 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  • of the optical fibers 200 µm • of the optical fiber sheath 230 µm symmetrical deviation / of the outer diameter of the FOC core sheath  symmetrical deviation / of the outer diameter of the FOC core sheath  outer diameter / of the cable 7.2 mm symmetrical deviation / of the outer diameter of the FOC core sheath  outer diameter / of the cable 7.2 mm symmetrical deviation / of the outer diameter of the line 0.5 mm material  • of the fiber-optic cable core Quartz glass • of the optical fiber sheath Special polymer • of the FOC core sheath PVC • of the fiber-optic cable sheath PVC • of the fiber-optic cable sheath PVC • of the strain relief Aramid fibers  color • of the FOC core sheath green  bending radius • with single bend / minimum permissible 70 mm • with multiple bends / minimum permissible 105 mm  tensile load • during installation / short-term 800 N • during operation / maximum 100 N  short-term shear force per length 500 N/cm	bandwidth length product			
number of fibers / per FOC core  number of FO cores / per FOC cable  2 version of the FO conductor fiber  outer diameter  • of the optical fibers  • of the optical fibers  • of the optical fiber sheath  • of the FOC core sheath  2.2 mm  symmetrical deviation / of the outer diameter of the FOC core sheath  outer diameter / of the cable  7.2 mm  symmetrical deviation / of the outer diameter of the line  material  • of the fiber-optic cable core  • of the optical fiber sheath  • of the fiber-optic cable core  • of the optical fiber sheath  • of the FOC core sheath  • of the FOC core sheath  • of the fiber-optic cable sheath  • of the fiber-optic cable sheath  • of the FOC core sheath  • of the strain relief  color  • of the STC core sheath  • of cable sheath  • of cable sheath  • of cable sheath  • of cable sheath  • or ange/black  • or ange/black  • or ange/black  • or mm  • with multiple bends / minimum permissible  • with multiple bends / minimum permissible  • during installation / short-term  • during operation / maximum  • during operation / maximum  • found in the short-term  • during operation / maximum  • found in the strain of the core length  • found in the strain of the short-term  • during operation / maximum  • found in the strain of the strain of the short-term  • during operation / maximum  • found in the strain of the strain of the strain of the short-term  • during operation / maximum  • found in the strain of the strai	• at 650 nm	17 GHz·m		
number of FO cores / per FOC cable  version of the FO conductor fiber  outer diameter  of the optical fibers of the optical fiber sheath of the FOC core sheath version of the FOC core sheath outer diameter / of the outer diameter of the FOC core sheath  outer diameter / of the cable version of the outer diameter of the FOC core sheath  outer diameter / of the cable version of the outer diameter of the Iine  material of the fiber-optic cable core of the optical fiber sheath of the fiber-optic cable sheath of the FOC core sheath of the FOC core sheath PVC of the fiber-optic cable sheath of the strain relief  color of the FOC core sheath of cable sheath of manifer in the FOC core sheath of cable sheath of manifer in the FOC core sheath of cable sheath of manifer in the FOC core sheath of cable sheath of manifer in the FOC core sheath of manifer in the FOC core sheath of cable sheath of cable sheath of manifer in the FOC core sheath of cable sheath of manifer in the FOC core sheath of cable sheath of manifer in the FOC core sheath of the FOC co	mechanical data			
version of the FO conductor fiber  outer diameter  of the optical fibers  of the optical fiber sheath  of the FOC core sheath  symmetrical deviation / of the outer diameter of the FOC core sheath  outer diameter / of the cable  symmetrical deviation / of the outer diameter of the FOC core sheath  outer diameter / of the cable  7.2 mm  symmetrical deviation / of the outer diameter of the line  material  of the fiber-optic cable core  of the optical fiber sheath  of the optical fiber sheath  of the FOC core sheath  PVC  of the fiber-optic cable sheath  of the strain relief  color  of the FOC core sheath  orange/black  of cable sheath  bending radius  with single bend / minimum permissible  with multiple bends / minimum permissible  of uning installation / short-term  during operation / maximum  short-term shear force per length  500 N/cm	number of fibers / per FOC core	1		
outer diameter  • of the optical fibers • 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 outer diameter / of the cable symmetrical deviation / of the outer diameter of the line outer diameter / of the cable symmetrical deviation / of the outer diameter of the line of the fiber-optic cable core of the fiber-optic cable core of the optical fiber sheath of the FOC core sheath PVC of the fiber-optic cable sheath of the FOC core sheath of the FOC core sheath of the strain relief color of the FOC core sheath orange/black of cable sheath bending radius with single bend / minimum permissible with single bend / minimum permissible of uduring installation / short-term of during operation / maximum short-term shear force per length  500 N/cm	number of FO cores / per FOC cable	2		
of the optical fibers of the optical fiber sheath of the FOC core sheath 2.2 mm  symmetrical deviation / of the outer diameter of the FOC core sheath  outer diameter / of the cable 7.2 mm  symmetrical deviation / of the outer diameter of the line outer diameter / of the cable 7.2 mm  symmetrical deviation / of the outer diameter of the line material  of the fiber-optic cable core Other of the potical fiber sheath of the of the potical fiber sheath of the FOC core sheath of the FOC core sheath of the strain relief  color  of the strain relief color  of the FOC core sheath orange/black of cable sheath  e of cable sheath bending radius with single bend / minimum permissible with multiple bends / minimum permissible of uduring installation / short-term of during operation / maximum 100 N  short-term shear force per length 500 N/cm	version of the FO conductor fiber	Step index fiber 200/230 µm		
of the optical fiber sheath     of the FOC core sheath     symmetrical deviation / of the outer diameter of the FOC core sheath     outer diameter / of the cable     outer diameter / of the cable     symmetrical deviation / of the outer diameter of the line     of the fiber-optic cable core     of the optical fiber sheath     of the FOC core sheath     of the FOC core sheath     of the FOC core sheath     of the strain relief     of the strain relief     of the FOC core sheath     of the strain relief     of the FOC core sheath     of the strain relief     of the FOC core sheath     of cable sheath     of the FOC core	outer diameter			
of the FOC core sheath     symmetrical deviation / of the outer diameter of the FOC core sheath     outer diameter / of the cable     symmetrical deviation / of the outer diameter of the line     symmetrical deviation / of the outer diameter of the line     material     of the fiber-optic cable core     of the optical fiber sheath     of the FOC core sheath     of the fiber-optic cable sheath     of the fiber-optic cable sheath     of the strain relief     of the strain relief     color     of the FOC core sheath     of cable sheath     orange/black     of cable sheath     orange/black	<ul> <li>of the optical fibers</li> </ul>	200 μm		
symmetrical deviation / of the outer diameter of the FOC core sheath  outer diameter / of the cable  symmetrical deviation / of the outer diameter of the line  symmetrical deviation / of the outer diameter of the line  of the fiber-optic cable core  of the of the optical fiber sheath  of the FOC core sheath  of the fiber-optic cable sheath  of the fiber-optic cable sheath  of the strain relief  of the strain relief  color  of the FOC core sheath  orange/black  of cable sheath  bending radius  with single bend / minimum permissible  with multiple bends / minimum permissible  orange/black  orange/bl	<ul> <li>of the optical fiber sheath</li> </ul>	230 μm		
sheath outer diameter / of the cable symmetrical deviation / of the outer diameter of the line of the fiber-optic cable core of the optical fiber sheath of the FOC core sheath of the fiber-optic cable sheath of the fiber-optic cable sheath of the strain relief color of the FOC core sheath of the FOC core sheath of the strain relief color of the FOC core sheath of cable sheath orange/black of cable sheath sheating radius with single bend / minimum permissible owith multiple bends / minimum permissible tensile load of during installation / short-term of during operation / maximum short-term shear force per length  7.2 mm 0.5 mm  Quartz glass Special polymer PVC Aramid fibers  orange/black green  800 N  800 N  105 mm	<ul> <li>of the FOC core sheath</li> </ul>	2.2 mm		
symmetrical deviation / of the outer diameter of the line material  of the fiber-optic cable core of the optical fiber sheath of the FOC core sheath of the fiber-optic cable sheath  of the fiber-optic cable sheath  of the fiber-optic cable sheath  PVC  of the strain relief Aramid fibers  color of the FOC core sheath orange/black of cable sheath  bending radius with single bend / minimum permissible owith multiple bends / minimum permissible tensile load of during installation / short-term of the fock of t		0.1 mm		
material  of the fiber-optic cable core of the optical fiber sheath of the FOC core sheath of the fiber-optic cable sheath of the fiber-optic cable sheath of the fiber-optic cable sheath of the strain relief  color of the FOC core sheath orange/black of cable sheath orange/black of cable sheath  bending radius with single bend / minimum permissible with multiple bends / minimum permissible owith multiple bends / minimum permissible owith multiple sheath  tensile load of during installation / short-term of the FOC core sheath orange/black orange/black green  800 N  of the FOC core sheath orange/black orange/bl	outer diameter / of the cable	7.2 mm		
<ul> <li>of the fiber-optic cable core</li> <li>of the optical fiber sheath</li> <li>of the FOC core sheath</li> <li>of the fiber-optic cable sheath</li> <li>of the strain relief</li> <li>of the strain relief</li> <li>of the FOC core sheath</li> <li>of cable sheath</li> <li>orange/black</li> <li>of cable sheath</li> <li>green</li> <li>bending radius</li> <li>with single bend / minimum permissible</li> <li>with multiple bends / minimum permissible</li> <li>tensile load</li> <li>during installation / short-term</li> <li>during operation / maximum</li> <li>short-term shear force per length</li> <li>Quartz glass</li> <li>Special polymer</li> <li>PVC</li> <li>Aramid fibers</li> <li>orange/black</li> <li>orange/black</li></ul>	symmetrical deviation / of the outer diameter of the line	0.5 mm		
<ul> <li>of the optical fiber sheath</li> <li>of the FOC core sheath</li> <li>of the fiber-optic cable sheath</li> <li>of the strain relief</li> <li>of the FOC core sheath</li> <li>of the FOC core sheath</li> <li>of cable sheath</li> <li>of cable sheath</li> <li>with single bend / minimum permissible</li> <li>with multiple bends / minimum permissible</li> <li>tensile load</li> <li>during installation / short-term</li> <li>during operation / maximum</li> <li>short-term shear force per length</li> </ul>	material			
<ul> <li>of the FOC core sheath</li> <li>of the fiber-optic cable sheath</li> <li>of the strain relief</li> <li>Aramid fibers</li> </ul> color <ul> <li>of the FOC core sheath</li> <li>of cable sheath</li> <li>of cable sheath</li> <li>green</li> </ul> bending radius <ul> <li>with single bend / minimum permissible</li> <li>with multiple bends / minimum permissible</li> <li>tensile load</li> <li>during installation / short-term</li> <li>during operation / maximum</li> <li>short-term shear force per length</li> </ul> 500 N/cm	<ul> <li>of the fiber-optic cable core</li> </ul>	Quartz glass		
of the fiber-optic cable sheath     of the strain relief Color     of the FOC core sheath     of cable sheath     of cable sheath     bending radius     with single bend / minimum permissible     with multiple bends / minimum permissible     indicate the sheath  tensile load     during installation / short-term     during operation / maximum     short-term shear force per length  PVC Aramid fibers  PVC Aramid fibers  PVC Aramid fibers  70 mm  90 mm  105 mm  105 mm  105 mm	<ul> <li>of the optical fiber sheath</li> </ul>	Special polymer		
● of the strain relief  color  ● of the FOC core sheath  orange/black  of cable sheath  bending radius  ● with single bend / minimum permissible  • with multiple bends / minimum permissible  tensile load  • during installation / short-term  of the FOC core sheath  orange/black  green  70 mm  105 mm  tensile load  of during installation / short-term  of during operation / maximum  100 N  short-term shear force per length	<ul> <li>of the FOC core sheath</li> </ul>	PVC		
color  • of the FOC core sheath orange/black • of cable sheath green  bending radius  • with single bend / minimum permissible • with multiple bends / minimum permissible tensile load • during installation / short-term • during operation / maximum short-term shear force per length  orange/black green  70 mm 105 mm  105 mm	<ul> <li>of the fiber-optic cable sheath</li> </ul>	PVC		
<ul> <li>of the FOC core sheath</li> <li>of cable sheath</li> <li>bending radius</li> <li>with single bend / minimum permissible</li> <li>with multiple bends / minimum permissible</li> <li>tensile load</li> <li>during installation / short-term</li> <li>during operation / maximum</li> <li>short-term shear force per length</li> <li>orange/black</li> <li>green</li> <li>70 mm</li> <li>105 mm</li> <li>800 N</li> <li>500 N/cm</li> </ul>	of the strain relief	Aramid fibers		
● of cable sheath  bending radius  ● with single bend / minimum permissible 70 mm  ● with multiple bends / minimum permissible 105 mm  tensile load  ● during installation / short-term 800 N  ● during operation / maximum 100 N  short-term shear force per length 500 N/cm	color			
bending radius  • with single bend / minimum permissible  • with multiple bends / minimum permissible  tensile load  • during installation / short-term  • during operation / maximum  short-term shear force per length	<ul> <li>of the FOC core sheath</li> </ul>	orange/black		
<ul> <li>with single bend / minimum permissible</li> <li>with multiple bends / minimum permissible</li> <li>tensile load</li> <li>during installation / short-term</li> <li>during operation / maximum</li> <li>short-term shear force per length</li> <li>70 mm</li> <li>800 N</li> <li>100 N</li> <li>500 N/cm</li> </ul>	of cable sheath	green		
<ul> <li>with multiple bends / minimum permissible</li> <li>tensile load</li> <li>during installation / short-term</li> <li>during operation / maximum</li> <li>short-term shear force per length</li> </ul>	bending radius			
tensile load  • during installation / short-term  • during operation / maximum  100 N  short-term shear force per length  500 N/cm	<ul><li>with single bend / minimum permissible</li></ul>	70 mm		
<ul> <li>during installation / short-term</li> <li>during operation / maximum</li> <li>short-term shear force per length</li> <li>500 N/cm</li> </ul>	with multiple bends / minimum permissible	105 mm		
● during operation / maximum 100 N short-term shear force per length 500 N/cm	tensile load			
short-term shear force per length 500 N/cm	<ul> <li>during installation / short-term</li> </ul>	800 N		
	during operation / maximum	100 N		
continuous shear force per length 300 N/cm	short-term shear force per length	500 N/cm		
	continuous shear force per length	300 N/cm		

weight per length	45 kg/km		
ambient conditions			
ambient temperature			
during operation	-40 +90 °C		
during storage	-40 +90 °C		
during transport	-40 +90 °C		
during installation	-5 +50 °C		
fire behavior	flame-resistant acc. to IEC 60332-1-2 and IEC 60332-3-22 (Cat. A)		
class of burning behaviour / according to EN 13501-6	Eca		
chemical resistance			
• to mineral oil	acc. to IEC 60811-404 with test oil IRM 902 (acc. to ISO 1817), +70 °C, 4 h		
• to grease	conditional resistance		
• to water	conditional resistance		
radiological resistance / to UV radiation	resistant		
product features, product functions, product components / gene	eral		
product feature			
• halogen-free	No		
• silicon-free	Yes		
product component / rodent protection	No		
wire length			
for PCF FOC / for Industrial Ethernet / maximum	100 m		
• for PCF FOC / with PROFIBUS / maximum	400 m		
standards, specifications, approvals			
certificate of suitability			
UL approval	Yes; c(UL)us OFN FT4		
RoHS conformity	Yes		
reference code	160		
according to IEC 81346-2	WH		
• according to IEC 81346-2:2019	WHA		
further information / internet links	WHA		
internet link			
	https://support.industry.siemens.com/cs/ww/en/view/109766358		
<ul> <li>to website: Selection guide for cables and connectors</li> <li>to web page: selection aid TIA Selection Tool</li> </ul>	https://www.siemens.com/tstcloud		
to web page. selection and TIA selection Tool     to website: Industrial communication	https://www.siemens.com/simatic-net		
to web page: SiePortal     to web page: detablese	https://sieportal.siemens.com/		
to website: Image database     to website: CAy Download Manager	https://www.automation.siemens.com/bilddb		
to website: CAx-Download-Manager     to website: Industry Online Support	https://www.siemens.com/cax		
to website: Industry Online Support	https://support.industry.siemens.com		
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	no longer supported, and failure to apply the latest updates may increase		
	no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)		

**General Product Approval** 

Manufacturer Declaration



Declaration of Conformity







other	Environment	Industrial Communication	
<u>Confirmation</u>	<u>Confirmation</u>	PROFINET	
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