

# **CobiNet Fibre- and Data Cable covered by the European Construction Products Regulation**

Clear Labeling of  
Fire Protection Classes

# Construction Products Regulation

## The European Construction Products Regulation and its Impact on Fire Resistant Cables

The European Union (EU) has recognized the significance of cables in regard to their reaction on fire and reorganized the different national regulation of its member states into a unified valuation system. The Construction Products Regulation (Regulation (EU) No. 305/2011) came into effect on 1 July 2013 for all member states of the European Union.

From 1 July 2016 cables could be labeled with a CE marking and a declaration of performance. From 1 July 2017 these labels and an attached declaration of performance become obligatory.

For many years, CobiNet has developed and sold cables and lines without PVC or halogens. Ecological friendliness and security have always been central issues to all new CobiNet products.

When on fire, these PVC and halogen free cables do only release a small amount of smoke (low smoke density) and no corrosive vapours or toxic gases. As a consequence, the period of time available for escape or emergency pro-

cedures in case of fire gets extended and the security for persons and the building itself increases.

Before CobiNet warrants a fire class to a fire resistant cable, these cables have to undergo elaborate testing procedures.

The formerly known procedure for fire resistant cables and fire protection lines which fall under the low-voltage directive, provides that the fire behavior of cables and lines is almost only evaluated according to DIN VDE.

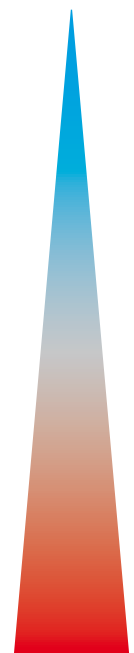
For fire resistant cables covered by the European Construction Products Regulation (EU Construction Products Regulation - CPR), this procedure is no longer sufficient.

From 1 July 2017 our cables will thus be delivered with a CE marking and a label of the respective performance class according to CPR.

## Euroclasses for Cables according to DIN EN 13501-6:2014-7

Class	test procedure	classification criteria	additional classification
A <sub>ca</sub>	EN ISO 1716	PCS ≤ 2,0 MJ/kg	
B1 <sub>ca</sub>	EN 50399 (30 kW burner) THR <sub>1200s</sub> ≤ 10 MJ and FIGRA ≤ 120 Ws <sup>-1</sup>	FS ≤ 1,75 m and flaming droplets/particles Peak HRR ≤ 20 kW	smoke production and acidity
	EN 60332-1-2	H ≤ 425 mm	
B2 <sub>ca</sub>	EN 50399 (20,5 kW burner) THR <sub>1200s</sub> ≤ 15 MJ and FIGRA ≤ 150 Ws <sup>-1</sup>	FS ≤ 1,25 m and flaming droplets/particles Peak HRR ≤ 30 kW	smoke production and acidity
	EN 60332-1-2	H ≤ 425 mm	
C <sub>ca</sub>	EN 50399 (20,5 kW burner) THR <sub>1200s</sub> ≤ 30 MJ and FIGRA ≤ 300 Ws <sup>-1</sup>	FS ≤ 2,0 m and flaming droplets/particles Peak HRR ≤ 60 kW	smoke production and acidity
	EN 60332-1-2	H ≤ 425 mm	
D <sub>ca</sub>	EN 50399 (20,5 kW burner) Peak HRR ≤ 400 kW	THR <sub>1200s</sub> ≤ 70 MJ; and flaming droplets/particles FIGRA ≤ 1300 Ws <sup>-1</sup>	
	EN 60332-1-2	H ≤ 425 mm	
E <sub>ca</sub>	EN 60332-1-2	H ≤ 425 mm	
F <sub>ca</sub>	does not meet the requirements of Euroclass E <sub>ca</sub>		

non-combustible



easily inflammable

## The Scope of the Construction Products Regulation

All cables which are permanent and integral to the building, for example cables and lines which are flush-mounted or running inside cable channels, on cable trays or in ducts, are regarded as “construction products” according to CPR.

Connections between terminal devices and the permanent structured cabling, however, are explicitly excluded from this regulation. This concerns for example all classic power cords which connect machines or lamps with power supply or data networks. CobiNet Patch Cables are thus not affected by CPR since they are not intended for permanent installation.

## Declaration of Performance

The classification table of the CPR comprises six categories from A to F. The categories are applied depending on the criteria of thermal release and flame propagation. For additional requirements such as smoke development (s),

corrosiveness (a) and flaming droplets (d), three additional categories in each case are assigned.

In order to assess the fire protection for buildings, the declaration of performance for each CobiNet installation cable indicates the Euroclasses (see table p. 12) among other things.

## Certification

Certification is carried out by independent and accredited testing institutes. Depending on the Euroclass of the products, the testing institutes' participation in regard to the attestation of conformity varies (see table below).

## System of Attestation of Conformity according to DIN EN 50575:2015-4; VDE 0482-575:2015-4

Euroclasses Reaction to Fire	system of attestation of conformity	tasks of the notified body
A <sub>ca</sub> , B1 <sub>ca</sub> , B2 <sub>ca</sub> , C <sub>ca</sub>	1+	homologation test regular factory auditing regular sampling from current production
D <sub>ca</sub> , E <sub>ca</sub>	3	homologation test
F <sub>ca</sub>	4	none

# Euro Fire Protection Classes for CobiNet Data Cables

## Clear Labeling

With the CPR symbol (Construction Products Regulation) introduced by CobiNet you will instantly have an eye of the Euroclass of the respective cable.



cable type	CobiNet Data Cable 1500 S/FTP Kat. 7A	CobiNet Data Cable 1500 S/FTP Kat. 7A	CobiNet Data Cable 1200 S/FTP Kat. 7A	CobiNet Data Cable 1200 S/FTP Kat. 7A	CobiNet Data Cable 1150 S/FTP Kat. 7A	CobiNet Data Cable 1150 S/FTP Kat. 7A	CobiNet Data Cable 1000 S/FTP Kat. 7	CobiNet Data Cable 1000 S/FTP Kat. 7
cable structure	simplex	duplex	simplex	duplex	simplex	duplex	simplex	duplex
<b>test on the fire behaviour of cable bundles</b>	<b>9301 1520.1</b>	<b>9302 1520.1</b>	<b>9301 1220</b>	<b>9302 1220</b>	<b>9301 1130</b>	<b>9302 1130</b>	<b>9301 1030</b>	<b>9302 1030</b>
ACR <sup>1)</sup>	92	92	85	85	83	83	82	82
200 MHz	77	77	74	74	70	70	70	70
300 MHz	69	69	67	67	62	62	62	62
500 MHz	59	59	54	54	47	47	47	47
600 MHz	50	50	46	46	41	41	40	40
1000 MHz	31	31	27	27	22	22	20	20
1150 MHz					16	16		
1200 MHz	25	25	21	21				
1500 MHz	13	13						
attenuation <sup>2)</sup>	16,2	16,2	16,5	16,5	17,3	17,3	17,6	17,6
max. bandwidth (MHz)	1500	1500	1200	1200	1150	1150	1000	1000
NVP (%)	0,78	0,78	0,79	0,79	0,78	0,78	0,78	0,78
AWG	22	22	22	22	23	23	23	23
outside diameter (mm)	8,2	16,6	7,9	16,0	7,6	15,4	7,5	15,2
weight (kg/km )	82 kg	140 kg	82 kg	140 kg	60 kg	120 kg	60 kg	120 kg
flame retardance <sup>3)</sup>	LSHF-FR	LSHF-FR	LSHF-FR	LSHF-FR	LSHF-FR	LSHF-FR	LSHF-FR	LSHF-FR
fire load (MJ/m)	0,78	1,56	0,75	1,50	0,65	1,30	0,63	1,26
copper number	37	74	35	70	30	60	28	56



1) ACR at frequency (MHz) (dB / 100 m) 2) attenuation (dB/100 m at 100 MHz) 3) LSHF-FR: flame retardant according to IEC 60332-3-24 (test on the fire behaviour of cable bundles)

## Euro Fire Protection Classes for CobiNet Data Cables

### CobiNet Fibre Universal Cable, stranded loose tubes



Article No.	type designation	number of fibres	fibre quality	type of fibre	tensile load (N)	Euro fire protection class
F353B0000	A/I-DQ(ZN)BH	2x12	OS2	E9/125	1500	Dca s2,d2,a2
F953B0000	A/I-DQ(ZN)BH	2x12	OS2	E9/125	3000	Dca s2,d2,a2
F353D0000	A/I-DQ(ZN)BH	2x12	OM2	G50/125	1500	Dca s2,d2,a2
F953D0000	A/I-DQ(ZN)BH	2x12	OM2	G50/125	3000	Dca s2,d2,a2
F353E0000	A/I-DQ(ZN)BH	2x12	OM3	G50/125	1500	Dca s2,d2,a2
F953E0000	A/I-DQ(ZN)BH	2x12	OM3	G50/125	3000	Dca s2,d2,a2
F353F0000	A/I-DQ(ZN)BH	2x12	OM4	G50/125	1500	Dca s2,d2,a2
F953F0000	A/I-DQ(ZN)BH	2x12	OM4	G50/125	3000	Dca s2,d2,a2



Article No.	type designation	number of fibres	fibre quality	type of fibre	tensile load (N)	Euro fire protection class
F573B0000	A/I-DQ(ZN)BH	4x12	OS2	E9/125	1500	Eca
F973B0000	A/I-DQ(ZN)BH	4x12	OS2	E9/125	3000	Eca
F573D0000	A/I-DQ(ZN)BH	4x12	OM2	G50/125	1500	Eca
F973D0000	A/I-DQ(ZN)BH	4x12	OM2	G50/125	3000	Eca
F573E0000	A/I-DQ(ZN)BH	4x12	OM3	G50/125	1500	Eca
F973E0000	A/I-DQ(ZN)BH	4x12	OM3	G50/125	3000	Eca
F573F0000	A/I-DQ(ZN)BH	4x12	OM4	G50/125	1500	Eca

## Euro Fire Protection Classes for CobiNet Data Cables

### CobiNet Fibre Universal Cable, central loose tubes



Article No.	type designation	number of fibres	fibre quality	type of fibre	tensile load (N)	Euro fire protection class
F303B0000	A/I-DQ(ZN)BH	1x4	OS2	E9/125	1500	Dca s2,d2,a2
F703B0000	A/I-DQ(ZN)BH	1x4	OS2	E9/125	3000	Dca s2,d2,a2
F303D0000	A/I-DQ(ZN)BH	1x4	OM2	G50/125	1500	Dca s2,d2,a2
F703D0000	A/I-DQ(ZN)BH	1x4	OM2	G50/125	3000	Dca s2,d2,a2
F303E0000	A/I-DQ(ZN)BH	1x4	OM3	G50/125	1500	Dca s2,d2,a2
F703E0000	A/I-DQ(ZN)BH	1x4	OM3	G50/125	3000	Dca s2,d2,a2
F303F0000	A/I-DQ(ZN)BH	1x4	OM4	G50/125	1500	Dca s2,d2,a2
F703F0000	A/I-DQ(ZN)BH	1x4	OM4	G50/125	3000	Dca s2,d2,a2



Article No.	type designation	number of fibres	fibre quality	type of fibre	tensile load (N)	Euro fire protection class
F323B0000	A/I-DQ(ZN)BH	1x8	OS2	E9/125	1500	Dca s2,d2,a2
F723B0000	A/I-DQ(ZN)BH	1x8	OS2	E9/125	3000	Dca s2,d2,a2
F323D0000	A/I-DQ(ZN)BH	1x8	OM2	G50/125	1500	Dca s2,d2,a2
F723D0000	A/I-DQ(ZN)BH	1x8	OM2	G50/125	3000	Dca s2,d2,a2
F323E0000	A/I-DQ(ZN)BH	1x8	OM3	G50/125	1500	Dca s2,d2,a2
F723E0000	A/I-DQ(ZN)BH	1x8	OM3	G50/125	3000	Dca s2,d2,a2
F323F0000	A/I-DQ(ZN)BH	1x8	OM4	G50/125	1500	Dca s2,d2,a2
F723F0000	A/I-DQ(ZN)BH	1x8	OM4	G50/125	3000	Dca s2,d2,a2



Article No.	type designation	number of fibres	fibre quality	type of fibre	tensile load (N)	Euro fire protection class
F333B0000	A/I-DQ(ZN)BH	1x12	OS2	E9/125	1500	Dca s2,d2,a2
F733B0000	A/I-DQ(ZN)BH	1x12	OS2	E9/125	3000	Dca s2,d2,a2
F333D0000	A/I-DQ(ZN)BH	1x12	OM2	G50/125	1500	Dca s2,d2,a2
F733D0000	A/I-DQ(ZN)BH	1x12	OM2	G50/125	3000	Dca s2,d2,a2
F333E0000	A/I-DQ(ZN)BH	1x12	OM3	G50/125	1500	Dca s2,d2,a2
F733E0000	A/I-DQ(ZN)BH	1x12	OM3	G50/125	3000	Dca s2,d2,a2
F333F0000	A/I-DQ(ZN)BH	1x12	OM4	G50/125	1500	Dca s2,d2,a2
F733F0000	A/I-DQ(ZN)BH	1x12	OM4	G50/125	3000	Dca s2,d2,a2

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