





Environmental Product Declaration

DEVI & EC Basic heating cables



29.8.2023
29.8.2028
Danfoss Climate Solutions
Cradle-to-gate with options (A4, A5, C1-C4 & D)
1 m of cable with packaging
DEVI & EC Basic heating cables (sales codes present in Annex 1)
Grodzisk, Poland
Norway
Multiple indoor floor constructions and pipe tracing applications
47,63 g without packaging (net weight) 61,63 g with packaging (gross weight)
1 m
[] External [X] Internal [] None
Danfoss Product Category Rules (2022-09)
Danfoss Power Solutions

DISCLAIMER

This EPD was prepared to the best of knowledge of Danfoss A/S. The life cycle assessment calculations were performed in accordance with ISO 14040 & 14044 and EN15804+A2.

All results were internally reviewed by independent experts. While this declaration has followed the guidance of ISO 14025, it has not been externally verified or registered by an EPD programme and therefore does not fully comply with the ISO 14025 standard.

This EPD has been published by Danfoss A/S on Danfoss Product Store and Danfoss Website. For questions, feedback or requests please contact your Danfoss sales representative.



Introduction

This Environmental Product Declaration (EPD) follows the Danfoss Product Category Rules (PCR) (2022-09-20). These rules provide a consistent framework for calculating and reporting the environmental performance of Danfoss' products and is aligned with relevant international standards, particularly ISO 14025:2006 and EN 15804+A2:2019.

This document has been produced by Danfoss A/S following an internal verification process, but it is not a third-party verified document.

What is an EPD?

An EPD is a document used to communicate transparently, the quantified environmental impacts of a product over its lifecycle stages. This quantification is done by performing a Life Cycle Assessment (LCA) in line with a consistent set of rules known as a PCR (Product Category Rules).

An EPD provides:

- A product's carbon footprint together with other relevant environmental indicators, including air pollution, water use, energy consumption and waste, over its own life cycle (Modules A-C), as well as the expected benefits of reuse and recycling in reducing the impact of future products (Module D). See Table 1 for module descriptions.
- Environmental data allowing customers to calculate LCAs and produce EPDs for their own products.

Type of EPD

This EPD is of the type 'cradle-to-gate with options' and includes all relevant modules: production (A1-A3), shipping (A4), deconstruction (C1), waste collection and transport (C2), treatment (C3) and disposal (C4). It also includes potential net benefits to future products from recycling or reusing post-consumer waste (D). The codes in brackets are the module labels from EN 15804+A2. Module for installation and models concerning use, maintenance, repair, replacement, refurbishment, energy and operational water use (B7) are excluded, following the cut-off rules from EN 15804.

Table 1: Modules of the product's life cycle included in the EPD

Prod	duct st	age	Instal	llation		Use stage					End-of-life stage			Benefits		
Raw materials	Transport	Manufacture	Transport	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-install.	Transport	Waste processing	Disposal	Benefits and loads outside system boundaries
A1	A2	А3	A4	A 5	B1	B2	В3	B4	B5	B6	В7	C1	C2	С3	C4	D
X	Х	Х	Х	Х	MNR	MNR	MNR	MNR	MNR	MNR	MNR	X	X	X	Х	Х

(X = declared module; MNR = module not relevant)



Product Description

DEVIbasic[™] is a high-quality, braided screen, single conductor cable with a non-UV stable outer sheath. Its round profile and robust construction ensure a fast, simple and safe installation in multiple indoor, outdoor and pipe tracing applications.

The two cold leads have clearly visible connections to avoid accidentally installing the heated cable in the wall. To ensure a long lifetime, all cables are minutely inspected including tests for Ohmic resistance, high voltage and material controls to ensure the quality. This means that we are proud to supply our extended DEVIwarranty™

See more information about DEVIBasic™ on <u>Danfoss product store</u>.



Figure 1: DEVIbasic™ heating cables.

Intended market.

The intended market of this study is Norway, and the baseline scenario involves the distribution, installation, and end-of-life in Norway.

Table 2: Product composition

Object description	Net weight	Unit	%
Resin PEX LDPE	7,73	g	16%
Masterbatch XLPE	0,42	g	1%
Wire Cu 0.4mm	20,98	g	44%
Resin PVC	18,49	g	39%
Total product	47,63	g	100%
Cardboard	13,72	g	98%
PS	0,28	g	2%
Total packaging	14,00	g	100%
Product	47,63	g	77%
Packaging	14,00	g	23%
Total product &	61,63	g	100%
packaging	02,00	8	



Product Description

The EPD values were calculated for this composition, this composition represents the highest environmental values for all the product codes in DEVI & EC Basic heating cables, therefor it represents all the products in the Basic heating cables product group. All sales codes covered by this EPD are shown in table 14.

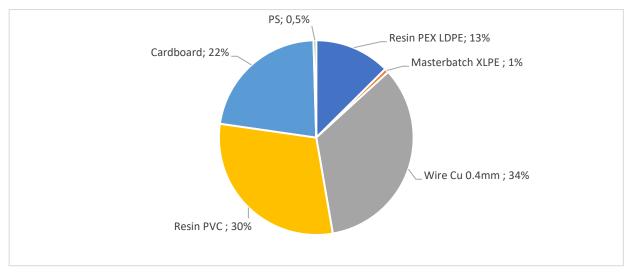


Figure 3: Material Composition Overview

The declared unit is 1 m of cable with packaging, with the mass of 61,63 g

This EPD covers multiple sales codes for Basic heating cables. The outer insulation of the heating cables is made from the same material for all sales coded. Within these sales codes, there are 4 material combinations for the heating part (metal wire) of the heating cables. Table 3 shows the material compositions for all 4 combinations.

Table 3: Product composition for Basic heating cables codes

Cable type	Basic cable combinations
a	Copper
b	Stainless steel
	Copper
С	Kevlar
d	Stainless steel
a	Kevlar

Overview of LCA study

Data quality

Data quality of the selected datasets is generally assessed as good and very good in terms of geographical, time and technology representativeness and applicability. Background data is from LCA software LCA for experts (Sphera) database version 2023.1.

Allocation and cut-off criteria

The allocation is made in accordance with the provisions of EN 15804+A2. All major raw materials and all the essential energy are included. All hazardous materials and substances are considered in the inventory. Data sets within the system boundary are complete and fulfil the criteria for the exclusion of inputs and output criteria. No known material or energy flows were ignored, including those which fell below the limit of 1%. Accordingly, the total sum of input flows ignored is certainly less than 5% of the energy and mass applied.

Due to its low mass Kevlar is excluded from the study. LDPE was used to represent XLPE.

Accordingly, the total sum of input flows ignored is certainly less than 5% of the energy and mass applied.

System boundaries

The results in this EPD are split into life cycle modules following EN 15804 (Figure 1): production (A1-A3), distribution (A4), (A5) installation and the end of the product's life (C1-C4). Module D represents environmental benefits and loads that occur beyond the system boundary (i.e., in future products).

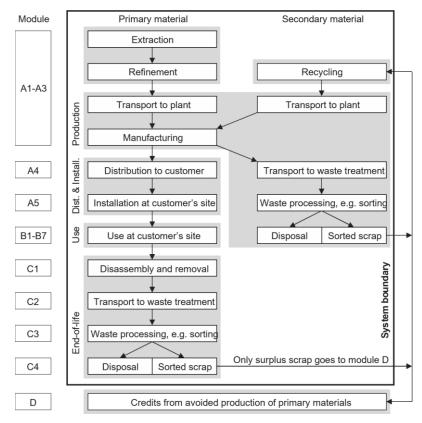


Figure 4: Modular structure used in this EPD (following EN 15804+A2)



Overview of LCA study

Product and packaging manufacture (A1-A3)

Final manufacturing occurs in the Grodzisk plant, Poland, data collected for year 2022. The raw materials are mainly sourced from Europe. Electricity is used to press the heating metal core together with the outside shell. Electricity consumption was calculated as the sum of total yearly electricity consumption divided by total m of cables made. The product is then cut to desired length and shipped to the costumer. The facility is certified according to ISO 9001 & ISO 14001. Where waste generated on-site is recyclable, it is separated and recycled. For further information, see here. The manufacturing plant also uses GOs, for its electricity consumption (Wind powered electricity).

Table 4: Biogenic carbon content in product

	Total (excluding recycling)
Biogenic carbon content in packaging [kg]	5,90E-03

Note: 1 kg biogenic carbon is equivalent to 44/12 kg of CO₂.

Shipping and installation (A4-A5)

The intended market for Basic heating cables is Norway. The assembly factory is in Poland, so a distance of 1162 km by truck and 163 km by container ship (representing a ferry) was used to represent the distance between the factory and the final customer.

Module A5 includes disposal of packaging materials only, the benefits from e.g., energy recovered after plastic incineration are allocated to module D. The product is assumed to be installed by hand and there is no loss of product during installation. Energy use in handheld tools during installation is not included as it falls under the cut-off criteria.

End-of-life (C1-C4)

The following end-of-life procedure has been applied:

- Manual dismantling is used to separate recyclable bulk materials, e.g. bulk metals and plastics.
- Shredding is used for the remaining parts, such as printed circuit board assemblies.
- Ferrous metals, non-ferrous metals and bulk plastics are recovered through recycling.
- The remaining materials go to either energy recovery or landfill.

In line with EN 15804+A2, only the 'net scrap' (i.e., the leftover recyclable materials remaining after inputs of recycled content required in the manufacturing phase are first satisfied) is used to calculate the benefits and loads beyond the system boundary (Module D).

For this EPD an average scenario with 50% of the product sent to recycling & 50% of the product sent to landfill (C3, C4, D) was used.

This scenario is designed to represent an average end-of-life scenario.

For the EPD this average scenario was chosen as it is assumed that it represents the majority of cases on average.

Overview of LCA study

1. Recycling scenario with 100% of the product sent to recycling at the end-of-life, excluding fractions that cannot be recycled or incinerated (e.g., glass reinforcing in glass-filled plastics) and are sent to landfill.

This scenario illustrates best case performance. It assumes a 100% collection rate and best available recycling technologies. Under this scenario electrical cables, and all metals, flat glass and unreinforced plastics found within the body and chassis of the product are recycled. Printed circuit board assemblies are incinerated, and the copper and precious metals (gold, silver, palladium, and platinum) are recycled.

2. Landfill scenario with 100% of the product sent to landfill.

This scenario assumes that the whole product, including its packaging, is landfilled. It is designed to represent a poor end of-life-route where valuable resources are lost.

Benefits and loads beyond the system boundary (D)

Module D considers the net benefit of recycling (including energy recovery) of materials in the product and packaging, taking account of losses in the recycling process and the recycled material used in the production of the product. Module D covers the two end-of-life scenarios, as described above.



Environmental performance

This section presents the environmental performance of 1 m of Basic heating cable with packaging. Figure 5 presents the environmental impact of 1m of Basic heating cable across a number of environmental impact categories (following EN 15804+A2:2019) per life cycle stage, over its full life cycle, including Global Warming Potential.

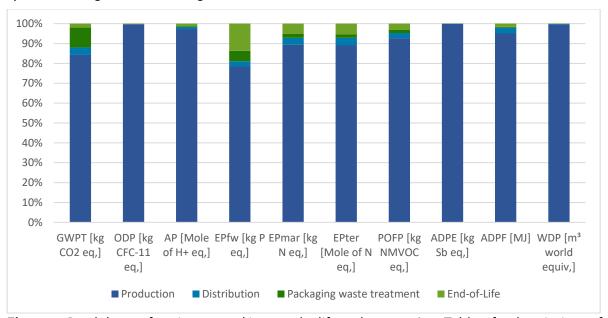


Figure 5: Breakdown of environmental impacts by life cycle stages (see Table 7 for descriptions of environmental impact indicators).

Table 5: Environmental impact indicators

	Production	Distribution	Packaging waste treatment		End-of-Life			
Life cycle stages based on EN 15804+A2	A1-A3	A4	A 5	C1	C2	C3	C4	D
Description Environmental Impact Indicators	Manufacture of the product from 'cradle-to-gate'	Transport of the product to the customer	Installation of the product and disposal of used packaging	Deinstallation of the product from the site	Transport of the product to waste treatment	Processing waste for recycling	Disposal of waste that cannot be recycled (through landfill and incineration)	Potential benefits and loads beyond the system boundary due to reuse, recycling, and energy recovery
GWPT [kg CO2 eq.]	1,93E-01	8,55E-03	2,30E-02	0,00E00	4,86E-04	2,73E-03	1,25E-03	-6,22E-02
GWPF [kg CO2 eq.]	2,14E-01	8,47E-03	1,35E-03	0,00E00	4,86E-04	2,71E-03	1,25E-03	-6,20E-02
GWPB [kg CO2 eq.]	-2,16E-02	0,00E+00	2,16E-02	0,00E00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWPLULUC [kg CO2 eq.]	4,50E-04	7,66E-05	1,36E-06	0,00E00	1,17E-08	2,48E-05	1,23E-06	-1,78E-04
ODP [kg CFC-11 eq.]	1,09E-12	1,09E-15	8,96E-16	0,00E00	5,68E-20	3,48E-16	1,78E-15	-2,87E-13
AP [Mole of H+ eq.]	1,76E-03	1,96E-05	7,17E-06	0,00E00	6,67E-07	1,69E-05	5,25E-06	-8,60E-04
EPfw [kg P eq.]	9,08E-07	3,03E-08	6,08E-08	0,00E00	1,05E-10	9,80E-09	1,48E-07	-1,03E-07
EPmar [kg N eq.]	1,75E-04	6,93E-06	3,87E-06	0,00E00	2,65E-07	8,20E-06	1,68E-06	-5,30E-05
EPter [Mole of N eq.]	1,84E-03	7,89E-05	3,53E-05	0,00E00	2,92E-06	9,10E-05	1,84E-05	-5,55E-04
POFP [kg NMVOC eq.]	5,91E-04	1,65E-05	9,66E-06	0,00E00	6,31E-07	1,56E-05	4,25E-06	-2,09E-04
ADPE [kg Sb eq.]	6,60E-05	5,46E-10	6,89E-11	0,00E00	1,73E-11	1,76E-10	3,86E-11	-3,78E-05
ADPF [MJ]	3,72E+00	1,15E-01	1,83E-02	0,00E00	7,01E-03	3,65E-02	1,79E-02	-9,65E-01
WDP [m³ world equiv.]	6,58E-02	1,00E-04	8,23E-05	0,00E00	8,21E-07	3,23E-05	1,05E-05	-3,00E-02

EPD for Basic heating cables

Table 6: GWPT-GHG indicator

	Production	Distribution	Packaging waste treatment		End-of-Life			
Life cycle stages based on EN 15804+A2	A1-A3	A4	A 5	C1	C2	C3	C4	D
Description Environmental Impact Indicators	Manufacture of the product from 'cradle-to-gate'	Transport of the product to the customer	Installation of the product and disposal of used packaging	Deinstallation of the product from the site	Transport of the product to waste treatment	Processing waste for recycling	Disposal of waste that cannot be recycled (through landfill and incineration)	Potential benefits and loads beyond the system boundary due to reuse, recycling, and energy recovery
GWPT-GHG [kg CO2 eq.]	2,14E-01	8,55E-03	1,35E-03	0,00E+00	4,86E-04	2,73E-03	1,25E-03	-6,22E-02

^{*}the GWPT-GHG environmental indicator is calculated without the biogenic global warming potential (GWPB), the formula is GWPT-GHG = GWPF + GWPLULUC

How to read scientific numbers:

e.g.
$$2,05E02 = 2,05 \times 10^2 = 205$$

$$2,04E-01 = 2,04 \times 10^{-1} = 0,204$$

Table 7: Environmental impact indicator descriptions

Acronym	Unit	Indicator
GWPT	kg CO₂ eq.	Carbon footprint (Global Warming Potential) – total
GWPF	kg CO₂ eq.	Carbon footprint (Global Warming Potential) – fossil
GWPB	kg CO₂ eq.	Carbon footprint (Global Warming Potential) – biogenic
GWPLULUC	kg CO₂ eq.	Carbon footprint (Global Warming Potential) – land use and land use change
ODP	kg CFC-11 eq.	Depletion potential of the stratospheric ozone layer
AP	Mole H+ eq.	Acidification potential
EPfw	kg P eq.	Eutrophication potential – aquatic freshwater
EPmar	kg N eq.	Eutrophication potential – aquatic marine
EPter	Mole of N eq.	Eutrophication potential – terrestrial
POFP	kg NMVOC eq.	Summer smog (photochemical ozone formation potential)
ADPE*	kg Sb eq.	Depletion of abiotic resources – minerals and metals
ADPF*	MJ	Depletion of abiotic resources – fossil fuels
WDP*	m³ world eq.	Water deprivation potential (deprivation-weighted water consumption)

Results for module A1-A3 are specific to the product. All results from module A4 onwards should be considered as scenarios that represent one possible outcome. The true environmental performance of the product will depend on actual use.

The results in this section are relative expressions only and do not predict actual impacts, the exceeding of thresholds, safety margins, or risks. EPDs from others may not be comparable.

Carbon footprint

The total carbon footprint (GWPT), cradle-to-grave, of the product is 2,29E-01 kg CO2-eq (A1-C4). The carbon footprint (GWPT) of production of this product, cradle-to-gate, is 1,93E-01 kg CO2-eq (A1-A3).

Table 8: Resource use

	A1-A3	A4	A 5	C1	C2	С3	C4	D
PERE [MJ]	1,20E+00	8,21E-03	1,11E-03	0,00E00	2,31E-05	2,65E-03	1,46E-03	-1,75E-01
PERM [MJ]	0,00E00	0,00E00	0,00E+00	0,00E00	0,00E00	0,00E+00	0,00E+00	0,00E+00
PERT [MJ]	1,20E+00	8,21E-03	1,11E-03	0,00E00	2,31E-05	2,65E-03	1,46E-03	-1,75E-01
PENRE [MJ]	3,41E+00	1,15E-01	1,91E-02	0,00E00	7,02E-03	3,66E-02	1,79E-02	-1,07E+00
PENRM [MJ]	3,11E-01	0,00E00	0,00E+00	0,00E00	0,00E00	0,00E+00	0,00E+00	0,00E+00
PENRT [MJ]	3,72E+00	1,15E-01	1,91E-02	0,00E00	7,02E-03	3,66E-02	1,79E-02	-1,07E+00
SM [kg]	9,75E-03	0,00E00	0,00E+00	0,00E00	0,00E00	0,00E+00	0,00E+00	0,00E+00
RSF [MJ]	0,00E00	0,00E00	0,00E+00	0,00E00	0,00E00	0,00E+00	0,00E+00	0,00E+00
NRSF [MJ]	0,00E00	0,00E00	0,00E+00	0,00E00	0,00E00	0,00E+00	0,00E+00	0,00E+00
FW [m3]	1,71E-03	9,00E-06	2,62E-06	0,00E00	3,71E-08	2,91E-06	7,75E-07	-5,69E-04

Table 9: Resource use indicator descriptions

Acronym	Unit	Indicator
PERE	MJ	Use of renewable primary energy excluding renewable primary energy resources used as raw materials
PERM	MJ	Use of renewable primary energy resources used as raw materials
PERT	MJ	Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)
PENRE	MJ	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials
PENRM	MJ	Use of non-renewable primary energy resources used as raw materials
PENRT	MJ	Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)
SM	kg	Use of secondary material
RSF	MJ	Use of renewable secondary fuels
NRSF	MJ	Use of non-renewable secondary fuels
FW	m³	Net use of fresh water

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Table 10: Waste categories and output flows

	A1-A3	A4	A 5	C1	C2	С3	C4	D
HWD [kg]	2,69E-08	3,56E-13	6,42E-13	0,00E00	4,83E-14	1,13E-13	1,05E-12	-1,10E-08
NHWD [kg]	3,64E-02	1,74E-05	5,20E-03	0,00E00	7,02E-07	5,55E-06	2,38E-02	-1,69E-02
RWD [kg]	1,00E-04	2,14E-07	1,15E-07	0,00E00	7,51E-09	6,85E-08	1,69E-07	2,06E-06
CRU [kg]	0,00E00	0,00E00	0,00E00	0,00E00	0,00E00	0,00E+00	0,00E+00	0,00E+00
MFR [kg]	0,00E00	0,00E00	0,00E00	0,00E00	0,00E00	0,00E+00	2,38E-02	0,00E+00
MER [kg]	0,00E00	0,00E00	0,00E00	0,00E00	0,00E00	0,00E+00	0,00E+00	0,00E+00
EEE [MJ]	0,00E00	0,00E00	0,00E00	0,00E00	0,00E00	0,00E+00	0,00E+00	0,00E+00
EET [MJ]	0,00E00	0,00E00	0,00E00	0,00E00	0,00E00	0,00E+00	0,00E+00	0,00E+00

Table 11: Waste category and output flow descriptions

Acronym	Unit	Indicator
HWD	kg	Hazardous waste disposed
NHWD	kg	Non-hazardous waste disposed
RWD	kg	Radioactive waste disposed
CRU	kg	Components for reuse
MFR	kg	Materials for recycling
MER	kg	Materials for energy recovery
EEE	kg	Exported energy (electrical)
EET	kg	Exported energy (thermal)

Table 12: Additional indicators*

	A1-A3	A4	A5	C1	C2	С3	C4	D
PM [Disease incidences]	1,48E-08	1,93E-10	5,32E-11	0,00E00	9,26E-12	1,09E-10	4,90E-11	-7,09E-09
IRP [kBq U235 eq.]	1,55E-02	3,19E-05	1,51E-05	0,00E00	1,06E-06	1,02E-05	2,40E-05	7,40E-04
ETPfw [CTUe]	2,23E+00	8,14E-02	1,59E-02	0,00E00	5,08E-03	2,59E-02	5,90E-02	-8,13E-01
HTPc [CTUh]	1,01E-10	1,66E-12	4,54E-13	0,00E00	9,46E-14	5,30E-13	7,65E-13	-4,36E-11
HTPnc [CTUh]	7,11E-09	9,31E-11	4,37E-11	0,00E00	4,13E-12	3,33E-11	6,80E-11	-3,49E-09
SQP [Pt]	2,51E+00	4,71E-02	2,72E-03	0,00E00	1,79E-05	1,52E-02	1,62E-03	-5,91E-01

Table 13: Optional indicator descriptions

Acronym	nym Unit Indicator	
PM	Disease incidence	Potential incidence of disease due to particulate matter emissions
IRP**	kBq U235 eq.	Potential human exposure efficiency relative to U235
ETPfw*	CTUe	Potential Comparative Toxic Unit for ecosystems (fresh water)
HTPc*	CTUh	Potential Comparative Toxic Unit for humans (cancer)
HTPnc*	CTUh	Potential Comparative Toxic Unit for humans (non-cancer)
SQP*	Dimensionless	Potential soil quality index

^{*}Disclaimer for ADPE, ADPF, WDP, ETPfw, HTPc, HTPnc, SQP: The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

^{**}Disclaimer for ionizing radiation: This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

Annex 1: The sales codes of all cables covered in this EPD

To calculate the actual GWPT of purchased product, just multiply the GWPT form this EPD with the length [m] of the purchased product sales code.

Example:

Sales code: 088L2130

Length: 9,00 m

GPWT: 0,229 kgCO2eq/m

Greenhouse gases from the cable 9,00 m x 0,229 kgCO2eq/m = 2,061 kgCO2eq

Table 14: Basic sales codes, covered by this EPD

	Devi BASIC				
Sales code	Product description	Lengt [m]	Combination		
088L2130	ECbasic 20S 9m 230V 170W	9,00	d		
088L2131	ECbasic 20S 14m 230V 260W	14,00	С		
088L2132	ECbasic 20S 18m 230V 375W	18,00	ь		
088L2133	ECbasic 20S 26m 230V 520W	26,00	Ь		
088L2134	ECbasic 20S 32m 230V 640W	32,00	Ь		
088L2135	ECbasic 20S 39m 230V 800W	39,00	ь		
088L2136	ECbasic 20S 53m 230V 1070W	53,00	a		
088L2137	ECbasic 20S 63m 230V 1260W	63,00	a		
088L2138	ECbasic 20S 74m 230V 1465W	74,00	a		
088L2139	ECbasic 20S 91m 230V 1820W	91,00	a		
088L2140	ECbasic 20S 110m 230V 2025W	110,00	a		
088L2141	ECbasic 20S 131m 230V 2640W	131,00	a		
088L2142	ECbasic 20S 159m 230V 3170W	159,00	a		
088L2143	ECbasic 20S 192m 230V 3855W	192,00	a		
088L2144	ECbasic 20S 228m 230V 4565W	228,00	a		
140F0163	DEVIbasic 0,0320 Ohm/m	1,00	a		
140F0164	DEVIbasic 0,650 Ohm/m	1,00	a		
140F0165	DEVIbasic 0,0134 Ohm/m	1,00	a		
140F0166	DEVIbasic 0,0322 Ohm/m	1,00	a		
140F0167	DEVIbasic 0,0508 Ohm/m	1,00	a		
140F0168	DEVIbasic 0,0715 Ohm/m	1,00	a		
140F0169	DEVIbasic 0,105 Ohm/m	1,00	a		
140F0170	DEVIbasic 0,153 Ohm/m	1,00	a		
140F0171	DEVIbasic 0,217 Ohm/m	1,00	a		
140F0172	DEVIbasic 0,267 Ohm/m	1,00	a		
140F0173	DEVIbasic 0,319 Ohm/m	1,00	a		
140F0174	DEVIbasic 0,488 Ohm/m	1,00	a		

140F0175	DEVIbasic 0,666 Ohm/m	1,00	a
140F0176	DEVIbasic 0,934 Ohm/m	1,00	a
140F0177	DEVIbasic 1,15 Ohm/m	1,00	a
140F0178	DEVIbasic 1,70 Ohm/m	1,00	ь
140F0179	DEVIbasic 2,58 Ohm/m	1,00	ь
140F0180	DEVIbasic 3,90 Ohm/m	1,00	ь
140F0181	DEVIbasic 5,01 Ohm/m	1,00	ь
140F0182	DEVIbasic 7,82 Ohm/m	1,00	b
140F0183	DEVIbasic 12,9 Ohm/m	1,00	С
140F0184	DEVIbasic 34,1 Ohm/m	1,00	d
140F0185	DEVIbasic 0,0500 Ohm/m	1,00	a
140F0186	DEVIbasic 0,100 Ohm/m	1,00	a
140F0187	DEVIbasic 0,150 Ohm/m	1,00	a
140F0188	DEVIbasic 0,210 Ohm/m	1,00	a
140F0189	DEVIbasic 0,340 Ohm/m	1,00	a
140F0190	DEVIbasic 0,500 Ohm/m	1,00	a
140F0191	DEVIbasic 0,900 Ohm/m	1,00	a
140F0192	DEVIbasic 1,20 Ohm/m	1,00	a
140F0193	DEVIbasic 1,60 Ohm/m	1,00	a
140F0194	DEVIbasic 2,50 Ohm/m	1,00	b
140F0195	DEVIbasic 0,270 Ohm/m	1,00	a
140F0196	DEVIbasic 0,410 Ohm/m	1,00	a
140F0197	DEVIbasic 3,80 Ohm/m	1,00	b
140F0198	DEVIbasic 5,90 Ohm/m	1,00	b
140F0215	DEVIbasic 20S 14m 230V 260W	14,00	С
140F0216	DEVIbasic 20S 18m 230V 375W	18,00	b
140F0217	DEVIbasic 20S 26m 230V 520W	26,00	b
140F0218	DEVIbasic 20S 32m 230V 640W	32,00	b
140F0219	DEVIbasic 20S 39m 230V 800W	39,00	b
140F0220	DEVIbasic 20S 53m 230V 1070W	53,00	a
140F0221	DEVIbasic 20S 63m 230V 1260W	63,00	a
140F0222	DEVIbasic 20S 74m 230V 1465W	74,00	a
140F0223	DEVIbasic 20S 91m 230V 1820W	91,00	a
140F0224	DEVIbasic 20S 110m 230V 2215W	110,00	a
140F0225	DEVIbasic 20S 131m 230V 2640W	131,00	a
140F0226	DEVIbasic 20S 159m 230V 3170W	159,00	a
140F0227	DEVIbasic 20S 192m 230V 3855W	192,00	a
140F0228	DEVIbasic 20S 228m 230V 4565W	228,00	a
140F0229	DEVIbasic 20S 56m 400V 1100W	56,00	b
140F0230	DEVIbasic 20S 69m 400V 1375W	69,00	b
140F0231	DEVIbasic 20S 93m 400V 1850W	93,00	a
140F0232	DEVIbasic 20S 126m 400V 2550W	126,00	a

140F0233	DEVIbasic 20S 158m 400V 3175W	158,00	a
140F0234	DEVIbasic 20S 192m 400V 3850W	192,00	a
140F0235	DEVIbasic 20S 229m 400V 4575W	229,00	a
140F0260	DEVIbasic 20S 9m 230V 170W	9,00	d
140F9996	DEVIsport Cable Special Order	1,00	a
140F9998	DEVIbasic Cable Special Order	1,00	a
84001500	DEVIbasic 10S 21m 230V 202W	21,00	a
84001505	DEVIbasic 10S 26m 230V 268W	26,00	Ь
84001510	DEVIbasic 10S 30m 230V 299W	30,00	ь
84001515	DEVIbasic 10S 37m 230V 376W	37,00	ь
84001520	DEVIbasic 10S 46m 230V 446W	46,00	Ь
84001525	DEVIbasic 10S 50m 230V 501W	50,00	ь
84001530	DEVIbasic 10S 58m 230V 570W	58,00	a
84001535	DEVIbasic 10S 66m 230V 668W	66,00	a
84001540	DEVIbasic 10S 77m 230V 763W	77,00	a
84001545	DEVIbasic 10S 90m 230V 904W	90,00	a
84001550	DEVIbasic 10S 103m 230V 1027W	103,00	a
84001555	DEVIbasic 10S 114m 230V 1133W	114,00	a
84001560	DEVIbasic 10S 125m 230V 1245W	125,00	a
84001565	DEVIbasic 10S 140m 230V 1400W	140,00	a
84001570	DEVIbasic 10S 159m 230V 1584W	159,00	a
84001575	DEVIbasic 10S 170m 230V 1707W	170,00	a
84001580	DEVIbasic 10S 188m 230V 1876W	188,00	a
84001585	DEVIbasic 10S 230m 230V 2300W	230,00	a
84001590	DEVIbasic 10S 275m 230V 2741W	275,00	a
84001595	DEVIbasic 10S 325m 230V 3245W	325,00	a
84001600	DEVIbasic 10S 407m 230V 4069W	407,00	a



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