

DEVImulti™ PVC



DEVImulti™ PVC is a high-quality, 4-conductor cable with an outer sheath made of PVC and specially designed for frost protection of long pipes.

Additionally cable is used in multiple outdoor ground, frost protection, etc., applications.

Heating cable must be used together with an appropriate thermostat to secure against overheating and reduce energy consumption.

The cable is constructed of 4 identical conductors. The conductors can be connected in different ways (parallel and/or serial), meaning that the same cable can provide up to 11 different outputs,

depending on the connection made.

DEVImulti™ PVC is very flexible and therefore perfectly suited for external installation on pipes, it can be supplied in 3 versions with different resistance values. The cables are not approved for use in contact with water for human consumption.

DEVImulti™ can be customized for the specific project, depending on voltage, required output, length of heating cable and length of cold leads.

! *Note: It is the full responsibility of the installer/designer to use proper cold lead dimensioned for the purpose and assembly sets that establish sufficient mechanical strength, flammability resistance and water tightness - and to design the heating unit with correct output for the specific application to avoid overheating of the cable or building materials.*

Benefits:

- Easy to install
- Various Ohmic output
- Safe and robust
- Long life-time

Standard compliance:

- IEC 60800:1992
- EN 50581:2012



Type	Value
Operation voltage, max.	U ₀ /U = 300/500 V~
Construction	4-conductor, round
Max. permissible use temperature, powered	70 °C
Max. permissible use temperature, unpowered	90 °C
Cable dimensions, max.	Ø 8 mm
Deformation strength, min.	600 N
Pulling strength, min	120 N
Conductor insulation	FEP
Filler sheath	PVC
Outer sheath: DEVImulti™ PVC	PVC, red
Screen	1 mm ² (16 x 0,286 mm)
Min. installation temperature	0 °C
Bending Ø, min.	6 x cable diameter
IP Class	IPX7

Types: DEVImulti™ PVC (DMIH)

Item no.	Resistance	Conductor Ø	Order length	EAN no.
89999140	4 x 2,5 Ohm/m (Constantan wire)	0,96 mm	1000-1200 m (+/- 2%)	5703466039359
89999142	4 x 0,220 Ohm/m (Brass wire)	0,771 mm		5703466039366
89999144	4 x 0,027 Ohm/m (Copper wire)	1,02 mm		5703466039373

Accessories

Item no.	Type	Description	EAN no.
19805712	DEVlcrimp assembly set DK 4-cond, type CS-4A	Assembly set for 4-conductors cable for 2 connections: cold tail and end muff.	5703466003855
19805480	DEVlcrimp assembly set DK 4-cond, type CS-4B	Assembly set for 4-conductors cable for 1 connection: either cold tail or end muff.	5703466003824
19805076	Tape aluminium 38 mm x 50 m	Self-adhesive, with 2-colour warning label, max. 75 °C	5703435003053

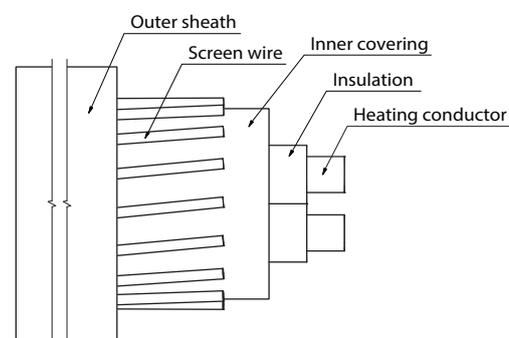
Recommended maximum output per metre cable

Installation	Output, max
Molded in concrete	30 W/m
Mounted on plastic pipes below insulation with alufoil	10 W/m
Mounted on metal pipes below insulation with alufoil	20 W/m
Fitted in a drain pipe	15 W/m
Mounted in water pipes (enclosed by water)	30 W/m

Always remember thermostat control – sensor placed on / in media.

Notice: plastic pipes can melt at too high cable linear output and max. 10 W/m should be recommended.

Cable construction

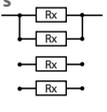
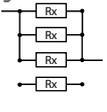
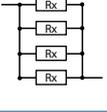
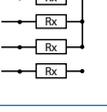


Ohm values and lengths for couplings 1-11 with different outputs for for 4-conductor heating cable

Coupling 1-10: 1 phase / 2 phase. Coupling 11: 3 phase (Y connection type).

When designing and selecting the coupling method, ensure that the load is distributed equally between heat conductors as much as possible. Connection to one cable side marked "T" – twin connection end, connection to two cable sides marked "S" – single connection ends.

Coupling diagrams	Rx = 0,027 Ohm/m						Rx = 0,22 Ohm/m						Rx = 2,5 Ohm/m					
	R _Σ Ohm/m	p, W/m	230 V		400 V		R _Σ Ohm/m	230 V		400 V		R _Σ Ohm/m	230 V		400 V			
			L, m	P, W*	L, m	P, W*		p, W/m	L, m	P, W*	L, m		P, W*	p, W/m	L, m	P, W*	L, m	P, W*
1 T 	0,108	30	128	3833	222	6667	0,88	30	45	1343	78	2335	10	30	13,3	398	23,1	693
		20	156	3130	272	5443		20	55	1096	95	1907		20	16,3	325	28,3	566
		15	181	2711	314	4714		15	63	950	110	1651		15	18,8	282	32,7	490
		10	221	2213	385	3849		10	78	775	135	1348		10	23,0	230	40,0	400
2 S 	0,081	30	148	4426	257	7698	0,66	30	52	1551	90	2697	7,5	30	15,3	460	26,7	800
		20	181	3614	314	6285		20	63	1266	110	2202		20	18,8	376	32,7	653
		15	209	3130	363	5443		15	73	1096	127	1907		15	21,7	325	37,7	566
		10	256	2556	444	4444		10	90	895	156	1557		10	26,6	266	46,2	462
3 S 	0,0675	30	162	4849	281	8433	0,55	30	57	1699	98	2954	6,25	30	16,8	504	29,2	876
		20	198	3959	344	6885		20	69	1387	121	2412		20	20,6	411	35,8	716
		15	229	3429	398	5963		15	80	1201	139	2089		15	23,8	356	41,3	620
		10	280	2799	487	4869		10	98	981	171	1706		10	29,1	291	50,6	506
4 T 	0,054	30	181	5421	314	9428	0,44	30	63	1899	110	3303	5	30	18,8	563	32,7	980
		20	221	4426	385	7698		20	78	1551	135	2697		20	23,0	460	40,0	800
		15	256	3833	444	6667		15	90	1343	156	2335		15	26,6	398	46,2	693
		10	313	3130	544	5443		10	110	1096	191	1907		10	32,5	325	56,6	566
5 T 	0,0405	30	209	6260	363	10887	0,33	30	73	2193	127	3814	3,75	30	21,7	651	37,7	1131
		20	256	5111	444	8889		20	90	1791	156	3114		20	26,6	531	46,2	924
		15	295	4426	513	7698		15	103	1551	180	2697		15	30,7	460	53,3	800
		10	361	3614	629	6285		10	127	1266	220	2202		10	37,6	376	65,3	653
6 T 	0,036	30	221	6640	385	11547	0,2933	30	78	2326	135	4045	3,333	30	23,0	690	40,0	1200
		20	271	5421	471	9428		20	95	1899	165	3303		20	28,2	563	49,0	980
		15	313	4695	544	8165		15	110	1645	191	2860		15	32,5	488	56,6	849
		10	383	3833	667	6667		10	134	1343	234	2335		10	39,8	398	69,3	693
7 T 	0,027	30	256	7667	444	13333	0,22	30	90	2686	156	4671	2,5	30	26,6	797	46,2	1386
		20	313	6260	544	10887		20	110	2193	191	3814		20	32,5	651	56,6	1131
		15	361	5421	629	9428		15	127	1899	220	3303		15	37,6	563	65,3	980
		10	443	4426	770	7698		10	155	1551	270	2697		10	46,0	460	80,0	800

Coupling diagrams	Rx = 0,027 Ohm/m						Rx = 0,22 Ohm/m						Rx = 2,5 Ohm/m					
	R _t Ohm/m	p, W/m	230 V		400 V		R _t Ohm/m	230 V		400 V		R _t Ohm/m	230 V		400 V			
			L, m	P, W*	L, m	P, W*		p, W/m	L, m	P, W*	L, m		P, W*	p, W/m	L, m	P, W*	L, m	P, W*
8 S 	0,0135	30	361	10842	629	18856	0,11	30	127	3798	220	6606	1,25	30	38	1127	65	1960
		20	443	8853	770	15396		20	155	3101	270	5394		20	46	920	80	1600
		15	511	7667	889	13333		15	179	2686	311	4671		15	53	797	92	1386
		10	626	6260	1089	10887		10	219	2193	381	3814		10	65	651	113	1131
9 S 	0,009	30	443	13279	770	23094	0,0733	30	155	4652	270	8090	0,8333	30	46	1380	80	2400
		20	542	10842	943	18856		20	190	3798	330	6606		20	56	1127	98	1960
		15	626	9390	1089	16330		15	219	3289	381	5721		15	65	976	113	1697
		10	767	7667	1333	13333		10	269	2686	467	4671		10	80	797	139	1386
10 S 	0,00675	30	511	15333	889	26667	0,055	30	179	5372	311	9342	0,625	30	53	1593	92	2771
		20	626	12520	1089	21773		20	219	4386	381	7628		20	65	1301	113	2263
		15	723	10842	1257	18856		15	253	3798	440	6606		15	75	1127	131	1960
		10	885	8853	1540	15396		10	310	3101	539	5394		10	92	920	160	1600
11 TY 	3x0,027 (0,009) Y type	30	256	7667	444	13333	3x0,027 (0,009) Y type	30	90	2686	156	4671	3x0,027 (0,009) Y type	30	26,6	797	46,2	1386
		20	313	6260	544	10887		20	110	2193	191	3814		20	32,5	651	56,6	1131
		15	361	5421	629	9428		15	127	1899	220	3303		15	37,6	563	65,3	980
		10	443	4426	770	7698		10	155	1551	270	2697		10	46,0	460	80,0	800

***Notice:** Some cables have super high output and correct size of power cold lead should be chosen according to local norms and regulations. Normally do not allowed more than 10 A for a 1,5 mm² cold lead, 16 A for a 2,5 mm² cold lead.