

Photo: HELUKABEL®

Installation Cables

Installation Cables

The most important cable for today's electricians are NYM, (N)YM(St)Y, NYIF-J etc. It is reassuring that HELUKABEL® takes care that cables are always available at the right price, in the required quantity and that cable can be supplied ex stock from all 4 HELUKABEL® stocks.

Consequently there are no delays in delivery to the building-site and no extra expense incurred utilizing alternative sizes. Our own transports deliver the required coils and drums immediately to the customer. The environmentally friendly packaging poses no waste disposal problems.

Maybe you can complete your next cable order with corresponding accessories which you can find in our latest accessories catalogue. We supply glands, identification materials, nylon binders, etc. ex stock. You can find our complete accessories program in our latest accessories catalogue, which can be ordered with the enclosed order card.

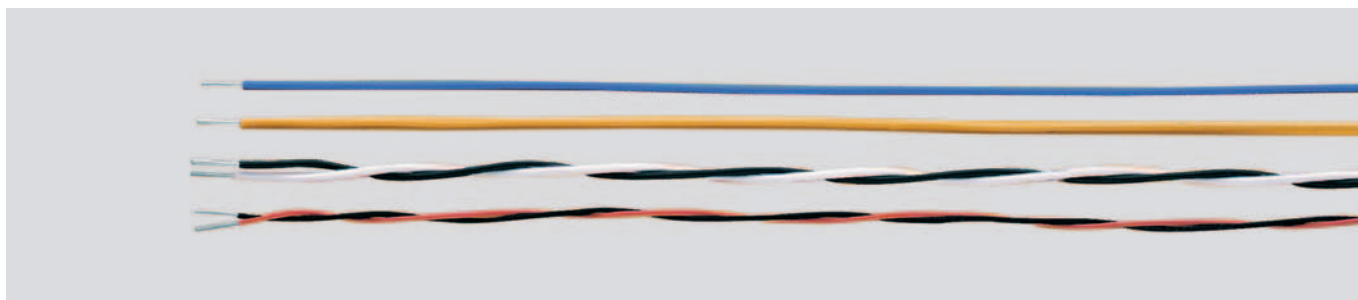
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YV-Equipment Wires (Hook-up wires) to VDE 0812

YR-Bell Sheathed Cables



Technical data YV-Equipment Wires

- Equipment wires with PVC core insulation to DIN VDE 0812
- **Temperature range** flexing - 5°C to +70°C fixed installation -30°C to +70°C
- **Electrical characteristics**

conductor resistance at 20°C		nominal voltage		test voltage		
cond. cores	single-cores	multi-cores	Ohm/ km	Ohm/ km	V	a.c., 50 Hz V
0,3/0,7	263	274	350	800		
0,4/0,8	144	148	500	1200		
0,5/0,9	92,2	95	500	1200		
0,8/1,4	36	36,7	900	2500		
1,0/1,8	22,8	23,3	900	2500		
1,4/2,2	11,6	11,9	900	2500		
1,8/2,8	7,1	7,2	1500	3000		

YR-Bell Sheathed Cables

For different applications up to max. 100 V operating voltage, for fixed installation above and beneath plaster.

- Adapted to DIN VDE 0812
- Bare copper conductor, solid 0,8 mm
- Cores stranded in layer
- PVC-Outer jacket, white

Cable structure YV-Equipment Wires

- Solid, tinned copper conductor 0,3 to 1,8 mm Ø
- PVC core insulation, Y13 to DIN VDE 0207 part 4
- Mono or twin colour wires, twin colour wires have a base colour with the second colour superimposed in ring form
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Installation notes

- The equipment wires are to be so uncoiled from drums or coils so that no kinks or twisting torsional stress can be occurred
- Those are allowed to install as self-supporting shaped wires independently ensuring the free-movements so as to gain a compensating bending
- These are used without any mechanical stress, pull, pressure, abrasion and notch
- Several equipment wires are used together in form of a bunch
- The insulating coverings are not be cut through the binding materials

Application YV-Equipment Wires

Single core cables for use in small apparatus, switching and intercom system and for data transmission. These cables are not allowed for the installation of heavy current operation.

Equipment wire are used for wiring to the switchboards, amplifiers and dial intercommunicating systems, measuring instruments, telephone exchange, clock centrals and data processing apparatus etc.

These wires are not permitted to apply outside of equipment for high power ratings.

Installation notes

- The binding materials must be nonconductive and not allowed to swell or shrink in humidity
- During the soldering process without jointing clamp, the soldering period is to be shortened so that the insulating covering should not be shrunk or injured

Note for colour code

- **YV-Equipment Wires**
Colour code to DIN 47002, see page T 47
- **YR-Bell Sheathed Cables**
Colour identification code see page T 47

CE = Das Produkt ist konform zur EG-Niederspannungsrichtlinie 73/23/EWG bzw. 93/68/EWG.

YV-Equipment Wires

Part No.	No. cores x cond Ø/cores mm	Insulation thickness Core insulation mm	Outer Ø ca. mm	Cop. weight kg/km	Weight ca. kg/km
28900	1 x 0,3/0,7	0,2	0,7	0,7	1,2
28901	2 x 0,3/0,7	0,2	1,4	1,4	2,4
28902	3 x 0,3/0,7	0,2	1,6	2,1	3,6
28903	1 x 0,4/0,8	0,2	0,8	1,3	1,8
28904	2 x 0,4/0,8	0,2	1,6	2,5	3,6
28905	3 x 0,4/0,8	0,2	1,8	3,8	5,4
28906	1 x 0,5/0,9	0,2	0,9	2,0	2,5
28907	2 x 0,5/0,9	0,2	1,8	3,9	5,0
28908	3 x 0,5/0,9	0,2	2,0	5,9	7,5
28909	4 x 0,5/0,9	0,2	2,2	7,9	10,0
28910	1 x 0,8/1,4	0,3	1,4	5,0	6,0
28911	2 x 0,8/1,4	0,3	2,8	10,0	12,0
28912	3 x 0,8/1,4	0,3	3,0	15,0	18,0
28913	4 x 0,8/1,4	0,3	3,4	20,0	24,0
28914	1 x 1,0/1,8	0,4	1,8	7,9	10,0
28915	2 x 1,0/1,8	0,4	3,6	16,0	20,0
28916	3 x 1,0/1,8	0,4	4,0	24,0	30,0
28917	1 x 1,4/2,2	0,4	2,2	15,0	17,0
28918	1 x 1,8/2,8	0,5	2,8	25,0	27,5

YR-Bell Sheathed Cables

Part No.	No. cores x cond Ø mm	Cores Ø ca. mm	Outer Ø ca. mm	Cop. weight kg/km	Weight ca. kg/km
28919	2 x 0,8	1,4	4,0	9,6	27,0
28920	3 x 0,8	1,4	4,4	14,4	33,0
28921	4 x 0,8	1,4	4,9	19,2	41,0
28922	5 x 0,8	1,4	5,3	24,0	48,0
28923	6 x 0,8	1,4	5,8	28,8	56,0
28924	8 x 0,8	1,4	6,5	38,0	70,0
28925	10 x 0,8	1,4	7,6	48,0	84,0
28926	12 x 0,8	1,4	7,7	58,0	98,0
28927	16 x 0,8	1,4	8,6	77,0	124,0
28928	24 x 0,8	1,4	10,5	115,0	188,0

PVC cables will be changed to lead free PVC successively.

(N)YM(St)-J PVC-sheathed cable screened



HELUKABEL (N)YM(St)-J 3G1,5 / 43050 300/500 V 001042640

CE

Technical data

- Screened PVC-sheathed cable
- Adapted to DIN VDE 0250 part 204/209
- VDE production accessment available
- **Direct current resistance** to DIN VDE 0295
- **Temperature range**
flexing + 5°C to +70°C
fixed installation -40°C to +70°C
- Permissible working temperature at the conductor +70°C
- **Nominal voltage** U_0/U 300/500 V
- **Test voltage** 2000 V
- **Power rating according** to VDE 0100
- Permissible **bending radius** to DIN VDE 0298, fixed installation approx. 4xcable \varnothing
- **Radiation resistance** up to 80×10^6 cJ/kg (up to 80 Mrad)

Cable structure

- Solid plain copper conductor to DIN VDE 0295 cl. 1, BS 6360 cl. 1 and IEC 60228 cl. 1
- Special PVC core insulation TI1, to DIN VDE 0281 part 1 colour code to DIN VDE 0293
- Cores stranded in layer
- Plastic filled inner sheath
- Coated aluminium foil screening
- Solid copper drain-wire, tinned
- Special PVC outer sheath TM1, to DIN VDE 0281 part 1
- Jacket colour grey (RAL 7001)
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

These installation cables are made for an effective range of electromagnetic interference alternating fields by a static screen. This screening is specially used for the installation in computer sector, hospitals or industry measuring observation points with measuring instruments which are sensitive to interferences. These cables are also ideal for installations in the living rooms of those peoples who are extreme sensitive to radiation. The cable is suitable for laying on, in and under plaster in dry and damp places as well as in concrete and masonry (a direct laying in shaken or stamped concrete is excluded).

Outdoor laying only is possible if the cable is not exposed to direct sunlight or if the cable is layed in cable conduits. Use in dangerous areas is not allowed.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cores x cross-sec. mm ²	Outer \varnothing ca. mm	Cop. weight kg/km	Weight ca. kg/km	AWG-no. *)
43050	3G1,5 /1,5	10,5	58	154	16
43051	4G1,5 /1,5	11,5	63	184	16
43052	5G1,5 /1,5	12,0	77	208	16
43053	7G1,5 /1,5	13,0	106	250	16
43054	3G2,5 /1,5	12,0	77	217	14
43055	4G2,5 /1,5	13,0	101	256	14
43056	5G2,5 /1,5	13,5	125	280	14

Part No.	No. cores x cross-sec. mm ²	Outer \varnothing ca. mm	Cop. weight kg/km	Weight ca. kg/km	AWG-no. *)
43057	3G4 /1,5	13,5	120	228	12
43058	4G4 /1,5	14,5	159	359	12
43059	5G4 /1,5	16,5	197	440	12
43060	3G6 /1,5	15,0	178	378	10
43061	4G6 /1,5	16,5	235	477	10
43062	5G6 /1,5	17,5	293	565	10
43063	5G10 /1,5	21,5	485	840	8
43064	5G16rm/2,5	26,0	773	1353	6
43065	5G25rm/2,5	31,5	1205	2017	4

*) Note

AWG sizes are approximate equivalent values.
The actual cross-section is in mm² – see page T 15.

PVC cables will be changed to lead free PVC successively.



HELUKABEL (N)HMH-O 3x1,5 / 51981 300/500 V 001042644

CE

Technical data

- Plastic-sheathed cable, halogen-free, for fixed installation
- Adapted to DIN VDE 0250 part 214
- Permissible **working temperature** at the conductor +70°C
- **Nominal voltage** U_0/U 300/500 V
- Max. **voltage** for equipment U_m 550 V
- **Power rating**
 - in accordance with DIN VDE 0298 part 4, tables 3 and 4, analogous for NYM, taking the type of installation and the appropriate factors for differing ambient temperatures and build-up of cables
 - rated short-circuit current of density acc. to DIN VDE 0298 part 4 table 15
 - fuse rating according to DIN VDE 0100 part 430
- **Corrosive nature of combustion gases (halogen-free verification)** testing acc. to DIN VDE 0472 part 813, IEC 60754-2 and HD 602
- **Behaviour in case of fire** testing according to DIN VDE 0472 part 804, test method "B" and IEC 60332-1
- **Low smoke** testing acc. to DIN VDE 0472 part 818

Caloric load values see page T 66.**Cable structure**

- Bare Cu conductor, solid or stranded on the basis of DIN VDE 0250 part 204 with the following modifications:
- Core insulation of halogen-free thermoplastic polymer compound with optimum wall thickness
- Colour coded to DIN VDE 0293
- for 1 core cable core colour black
- Cores stranded in layer
- Extruded core insulation, halogen-free
- Outer jacket of non-cross-linked, halogen-free thermoplastic polymer compound
- Jacket colour light-grey (RAL 7035)

Application

This halogen-free plastic-sheathed cable, constructed on the basis of DIN VDE 0250, is characterised in particular by the use of a polymer compound which is free of PVC and heavy metals, thus of low emission in case of fire. Fumes resulting from fire are not corrosive and do not cause any subsequent damage.

This plastic-sheathed cable of defined behaviour in case of fire is used for installations in residential dwellings, public buildings as well as in industrial constructions.

Suitable for applications in dry, damp or wet environments for installation above, on, in and beneath plaster, as well as in masonry and concrete walls, not however for embedding in vibration, compacted or tamped concrete.

The cable is also approved for outdoor applications provided these are not exposed to direct sunlight radiation. Installation of this cable in earth or in water is not permitted.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cores x cross-sec. mm ²	Outer \varnothing ca. mm	Cop. weight kg/km	Weight ca. kg/km	AWG-no.*)
51970	1 x 1,5 re	8,3	14,4	39	16
51971	1 x 2,5 re	9,0	24,0	47	14
51972	1 x 4 re	9,5	38,0	62	12
51973	1 x 6 re	10,0	58,0	83	10
51974	1 x 10 re	11,5	96,0	125	8
51975	1 x 16 rm	12,9	154,0	188	6
51976	2 x 1,5 re	8,9	29,0	82	16
51977	2 x 2,5 re	10,0	48,0	110	14
51978	2 x 4 re	11,5	77,0	160	12
51979	2 x 6 re	12,4	115,0	208	10
51980	2 x 10 re	14,9	192,0	340	8

Part No.	No. cores x cross-sec. mm ²	Outer \varnothing ca. mm	Cop. weight kg/km	Weight ca. kg/km	AWG-no.*)
51981	3 x 1,5 re	9,2	43,0	92	16
51982	3 x 2,5 re	10,6	72,0	128	14
51983	4 x 1,5 re	9,9	58,0	115	16
51984	4 x 2,5 re	11,0	96,0	152	14
51985	4 x 4 re	13,4	154,0	244	12
51986	4 x 6 re	15,9	230,0	345	10
51987	4 x 10 re	17,5	384,0	522	8
51988	4 x 16 rm	19,9	614,0	815	6
51989	4 x 25 rm	27,4	960,0	1305	4
51990	4 x 35 rm	30,4	1344,0	1750	2
51991	7 x 1,5 re	11,5	101,0	167	16

re = round conductor, single-wire
rm = round conductor, multiple-wire

X = without green-yellow earth core

***) Note**

AWG sizes are approximate equivalent values.
The actual cross-section is in mm² – see page T 15.

Note: 0-version: single-core conductor with black core insulation. Cables between two and seven cores are without green-yellow core.



HELUKABEL (N)HMH-J 3G1,5 / 51996 300/500 V 001042645



Technical data

- Plastic-sheathed cable, halogen-free, for fixed installation
- Adapted to DIN VDE 0250 part 214
- Permissible **working temperature** at the conductor +70°C
- **Nominal voltage** U_0/U 300/500 V
- Max. **voltage** for equipment U_m 550 V
- **Power rating**
 - in accordance with DIN VDE 0298 part 4, tables 3 and 4, analogous for NYM, taking the type of installation and the appropriate factors for differing ambient temperatures and build-up of cables
 - rated short-circuit current of density acc. to DIN VDE 0298 part 4 table 15
 - fuse rating according to DIN VDE 0100 part 430
- **Corrosive nature of combustion gases (halogen-free verification)** testing acc. to DIN VDE 0472 part 813, IEC 60754-2 and HD 602
- **Behaviour in case of fire** testing according to DIN VDE 0472 part 804, test method "B" and IEC 60332-1
- **Low smoke** testing acc. to DIN VDE 0472 part 818

Caloric load values see page T 66.

Cable structure

- Bare Cu conductor, solid or stranded on the basis of DIN VDE 0250 part 204 with the following modifications:
- Core insulation of halogen-free thermoplastic polymer compound with optimum wall thickness
- Colour coded to DIN VDE 0293
- Green-yellow earth core, 3 cores and above
- for 1 core cable core colour green-yellow
- Cores stranded in layer
- Extruded core insulation, halogen-free
- Outer jacket of non-cross-linked, halogen-free thermoplastic polymer compound
- Jacket colour light-grey (RAL 7035)

Application

This halogen-free plastic-sheathed cable, constructed on the basis of DIN VDE 0250, is characterised in particular by the use of a polymer compound which is free of PVC and heavy metals, thus of low emission in case of fire. Fumes resulting from fire are not corrosive and do not cause any subsequent damage.

This plastic-sheathed cable of defined behaviour in case of fire is used for installations in residential dwellings, public buildings as well as in industrial constructions.

Suitable for applications in dry, damp or wet environments for installation above, on, in and beneath plaster, as well as in masonry and concrete walls, not however for embedding in vibration, compacted or tamped concrete.

The cable is also approved for outdoor applications provided these are not exposed to direct sunlight radiation. Installation of this cable in earth or in water is not permitted.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cores x cross-sec. mm ²	Outer ∅ ca. mm	Cop. weight kg/km	Weight ca. kg/km	AWG-no.¹)
51992	1G4 re	9,5	38,0	62	12
51993	1G6 re	10,0	58,0	83	10
51994	1G10 re	11,5	96,0	125	8
51995	1G16 rm	12,9	154,0	188	6
51996	3G1,5 re	9,2	43,0	92	16
51997	3G2,5 re	10,6	72,0	128	14
51998	3G4 re	12,0	115,0	192	12
51999	3G6 re	13,5	173,0	267	10
52000	3G10 re	15,9	288,0	628	8
52001	4G1,5 re	9,9	58,0	115	16
52002	4G2,5 re	11,0	96,0	152	14
52003	4G4 re	13,4	154,0	244	12
52004	4G6 re	15,9	230,0	345	10
52005	4G10 re	17,5	384,0	522	8
52006	4G16 rm	19,9	614,0	815	6
52007	4G25 rm	27,4	960,0	1305	4
52008	4G35 rm	30,4	1344,0	1750	2

Part No.	No. cores x cross-sec. mm ²	Outer ∅ ca. mm	Cop. weight kg/km	Weight ca. kg/km	AWG-no.¹)
52009	5G1,5 re	11,0	72,0	133	16
52010	5G2,5 re	12,0	120,0	182	14
52011	5G4 re	15,0	192,0	300	12
52012	5G6 re	15,9	288,0	400	10
52013	5G10 re	19,0	480,0	620	8
52014	5G16 rm	24,4	768,0	995	6
52015	5G25 rm	29,9	1200,0	1580	4
52016	7G1,5 re	11,4	101,0	168	16
52017	7G2,5 re	13,7	158,0	250	14

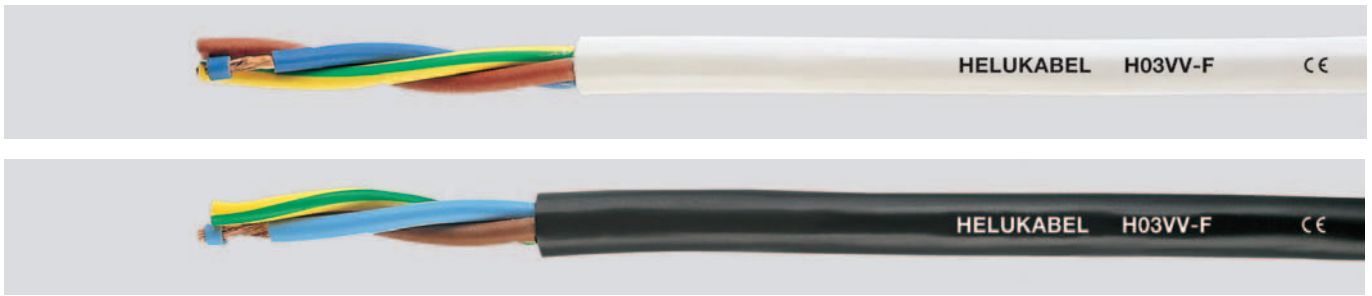
re = round conductor, single-wire
rm = round conductor, multiple-wire

¹) Note
AWG sizes are approximate equivalent values.
The actual cross-section is in mm² – see page T 15.

Note: O-version: single-core conductor with black core insulation. Cables with between two and seven cores are without green-yellow core.

Note: J-version with green-yellow core insulation.

G = with green-yellow earth core



Technical data

- PVC-control cables to DIN VDE 0281 part 5 and IEC 60227-5, HD 21.5 S3
- **Temperature range**
 - flexing - 5°C to +70°C
 - fixed installation -40°C to +70°C
- **Nominal voltage** U_0/U 300/300 V
- Max. permissible **operating voltage** in three-phase and one-phase a.c. system U_0/U 330/330 V in direct current system U_0/U 495/495 V
- **Test voltage** 2000 V
- **Breakdown voltage** min. 4000 V
- **Minimum bending radius** flexing 7,5 x cable \varnothing
- **Radiation resistance** up to 80×10^6 cJ/kg (up to 80 Mrad)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Cable structure

- Bare copper, fine wire conductors, bunch stranded to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5 and HD 383
- PVC core insulation T12 to DIN VDE 0207 part 4
- Cores colour coded to DIN VDE 0293, 7 and more cores number coded 1 x green-yellow earth core incl.
- Green-yellow earth-core, 3 cores and above
- Cores stranded in layers with optimal lay-length
- PVC outer jacket in black, white or as per requirement
- PVC outer jacket TM2 to DIN VDE 0207 part 5
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

These cable types are especially suited to use on small appliances with low mechanical stress and for connection for light household appliances, e.g. kitchen utensils, desk lamps, floor lamps, vacuum cleaners, office machines, radios, etc., as far as this cable is admitted to the relevant specifications of the equipment. These cables are not permitted to use with cooking or heating apparatus. Cables with cross-section $0,75 \text{ mm}^2$ are not suitable for outdoor use or use of industrial or farmer machineries.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cores x cross-sec. mm ²	Colour	Outer \varnothing ca. mm	Cop. weight kg/km	Weight ca. kg/km	AWG-no.¹)
29400	2x0,75	bl	5,4	14,4	49	18
29401	2x0,75	wh	5,4	14,4	49	18
29402	2x0,75	o.c.	5,4	14,4	49	18
29403	3G0,75	bl	5,7	21,6	59	18
29404	3G0,75	wh	5,7	21,6	59	18
29405	3G0,75	o.c.	5,7	21,6	59	18
29406	4G0,75	bl	6,3	29,0	72	18
29407	4G0,75	wh	6,3	29,0	72	18
29408	4G0,75	o.c.	6,3	29,0	72	18

G = with green-yellow earth core
X = without green-yellow earth core

o.c. = other colour

Part No.	No. cores x cross-sec. mm ²	Colour	Outer \varnothing ca. mm	Cop. weight kg/km	Weight ca. kg/km	AWG-no.¹)
29409	5G0,75*	bl	7,1	36,0	87	18
29410	5G0,75*	wh	7,1	36,0	87	18
29411	5G0,75*	o.c.	7,1	36,0	87	18
29412	6G0,75*	bl	7,8	43,0	98	18
29413	6G0,75*	wh	7,8	43,0	98	18
29414	6G0,75*	o.c.	7,8	43,0	98	18
29415	7G0,75*	bl	7,8	50,0	108	18
29416	7G0,75*	wh	7,8	50,0	108	18
29417	7G0,75*	o.c.	7,8	50,0	108	18

*) Note

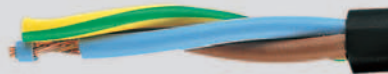
AWG sizes are approximate equivalent values.
The actual cross-section is in mm² – see page T 15.



* In adaption (H)
The above list contains a selection of the types we carry ex stock.
Other sizes available on request.



HELUKABEL H05VV-F CE



HELUKABEL H05VV-F CE

Technical data

- PVC-control cables to DIN VDE 0281 part 5 and IEC 60227-5, HD 21.5 S3
- **Temperature range**
 - flexing - 5°C to +70°C
 - fixed installation -40°C to +70°C
- **Nominal voltage** U_0/U 300/500 V
- Max. permissible **operating voltage** in three-phase and one-phase a.c. system U_0/U 318/550 V in direct current system U_0/U 413/825 V
- **Test voltage** 2000 V
- **Breakdown voltage** min. 4000 V
- **Minimum bending radius** flexing 7,5 x cable \varnothing
- **Radiation resistance** up to 80×10^6 cJ/kg (up to 80 Mrad)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Cable structure

- Bare copper, fine wire conductors, bunch stranded to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5 and HD 383
- PVC core insulation T12 to DIN VDE 0207 part 4
- Cores colour coded to DIN VDE 0293 1 x green-yellow earth core incl.
- Green-yellow earth core, 3 cores and above
- Cores stranded in layers with optimal lay-length
- PVC outer jacket in white or black
- PVC outer jacket TM2 to DIN VDE 0207 part 5
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

These cables are especially suited to use for the appliance with medium mechanical stress in households, kitchens and offices, also for household appliances in damp and wet areas, e.g. refrigerators, washing machines, spin-driver etc. As far as this cable is admitted to the relevant specifications of the equipment. These cables are suited to be used for cooking and heating apparatus under the condition that cable does not come in direct contact with hot parts of the apparatus and no other influences of heat. The cables are suitable for fixed installation in furnitures, partition walls, decoration covering and in hollow spaces of prefabricated building parts. They are not qualified for use in outdoors or for use with industrial and farmer machineries, exceptionally in tailoring, etc.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cores x cross-sec. mm ²	Colour	Outer \varnothing ca. mm	Cop. weight kg/km	Weight ca. kg/km	AWG-no. *)
29450	2x0,75	bl	6,4	14,4	50	18
29451	2x0,75	wh	6,4	14,4	50	18
29452	3G0,75	bl	6,8	21,6	60	18
29453	3G0,75	wh	6,8	21,6	60	18
29454	4G0,75	bl	7,4	29,0	73	18
29455	4G0,75	wh	7,4	29,0	73	18
29456	5G0,75	bl	8,3	36,0	88	18
29457	5G0,75	wh	8,3	36,0	88	18
29458	2x1	bl	6,8	19,0	57	17
29459	2x1	wh	6,8	19,0	57	17
29460	3G1	bl	7,2	29,0	73	17
29461	3G1	wh	7,2	29,0	73	17
29462	4G1	bl	8,0	38,0	85	17
29463	4G1	wh	8,0	38,0	85	17
29464	5G1	bl	8,8	48,0	105	17
29465	5G1	wh	8,8	48,0	105	17
29466	7G1*	bl	9,8	67,0	131	17
29467	7G1*	wh	9,8	67,0	131	17

Part No.	No. cores x cross-sec. mm ²	Colour	Outer \varnothing ca. mm	Cop. weight kg/km	Weight ca. kg/km	AWG-no. *)
29484	2x1,5	bl	7,6	29,0	82	16
29485	2x1,5	wh	7,6	29,0	82	16
29468	3G1,5	bl	8,2	43,0	95	16
29469	3G1,5	wh	8,2	43,0	95	16
29470	4G1,5	bl	9,2	58,0	117	16
29471	4G1,5	wh	9,2	58,0	117	16
29472	5G1,5	bl	9,3	72,0	144	16
29473	5G1,5	wh	9,3	72,0	144	16
29474	7G1,5*	bl	10,8	101,0	183	16
29475	7G1,5*	wh	10,8	101,0	183	16
29478	3G2,5	bl	10,1	72,0	152	14
29479	3G2,5	wh	10,1	72,0	152	14
29480	4G2,5	bl	11,2	96,0	192	14
29481	4G2,5	wh	11,2	96,0	192	14
29482	5G2,5	bl	12,4	120,0	243	14
29483	5G2,5	wh	12,4	120,0	243	14
29486	7G2,5*	bl	12,9	168,0	316	14
29487	7G2,5*	wh	12,9	168,0	316	14
29825	3G4	bl	11,3	115,0	235	12
29826	3G4	wh	11,3	115,0	235	12
29488	4G4	bl	12,5	154,0	300	12
29489	4G4	wh	12,5	154,0	300	12
29490	5G4	bl	13,7	192,0	361	12
29491	5G4	wh	13,7	192,0	361	12
29492	4G6**	bl	13,9	230,0	490	10
29493	4G6**	wh	13,9	230,0	490	10

*) Note

AWG sizes are approximate equivalent values.
The actual cross-section is in mm² – see page T 15.

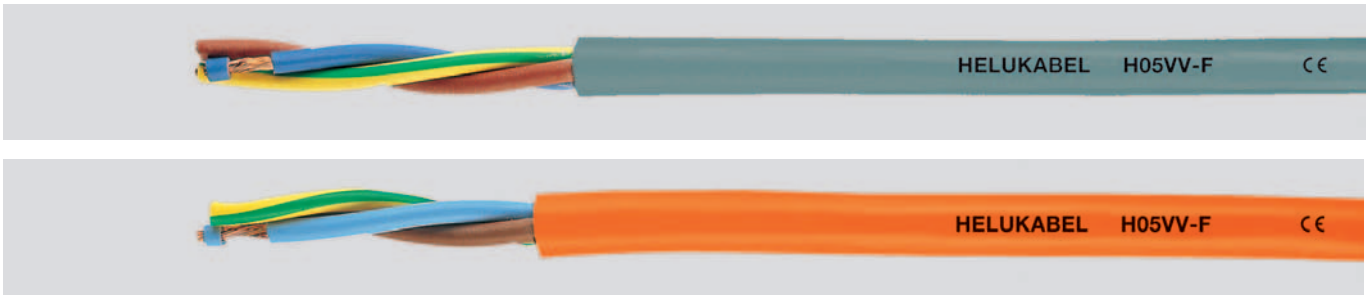
These types are also available with UL-approbation.
The above list contains a selection of the types we carry ex stock.
Other sizes available on request.

* These cables with 7 cores are only available as "A"-type.

** In adaption (H)

Extendex cross-sections see page B 1/B 5 (screened).

G = with green-yellow earth core
X = without green-yellow earth core



Technical data

- PVC-control cables to DIN VDE 0281 part 5 and IEC 60227-5, HD 21.5 S3
- **Temperature range**
 - flexing - 5°C to +70°C
 - fixed installation -40°C to +70°C
- **Nominal voltage** U_0/U 300/500 V
- Max. permissible **operating voltage** in three-phase and one-phase
 - a.c. system U_0/U 318/550 V
 - in direct current system U_0/U 413/825 V
- **Test voltage** 2000 V
- **Breakdown voltage** min. 4000 V
- **Minimum bending radius** flexing $7,5 \times$ cable \varnothing
- **Radiation resistance** up to 80×10^6 cJ/kg (up to 80 Mrad)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Cable structure

- Bare copper, fine wire conductors, bunch stranded to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5 and HD 383
- PVC core insulation T12 to DIN VDE 0207 part 4
- Cores colour coded to DIN VDE 0293
- Green-yellow earth core, 3 cores and above
- Cores stranded in layers with optimal lay-length
- PVC outer jacket, colour by request
- PVC outer jacket TM2 to DIN VDE 0207 part 5
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

These cables are especially suited to use for the appliance with medium mechanical stress in households, kitchens and offices, also for household appliances in damp and wet areas, e.g. refrigerators, washing machines, spin-driver etc. As far as this cable is admitted to the relevant specifications of the equipment. These cables are suited to be used for cooking and heating apparatus under the condition that cable does not come in direct contact with hot parts of the apparatus and no other influences of heat. The cables are suitable for fixed installation in furnitures, partition walls, decoration covering and in hollow spaces of prefabricated building parts. They are not qualified for use in outdoors or for use with industrial and farmer machineries, exceptionally in tailoring, etc.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cores x cross-sec. mm ²	Outer \varnothing ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no.†)
3011	2 x 0,75	6,4	14,4	50	18
3012	3 G 0,75	6,8	21,6	60	18
3013	4 G 0,75	7,4	29,0	73	18
3014	5 G 0,75	8,3	36,0	88	18
3015	2 x 1	6,8	19,0	57	17
3016	3 G 1	7,2	29,0	73	17
3017	4 G 1	8,0	38,0	85	17
3018	5 G 1	8,8	48,0	105	17

Part No.	No. cores x cross-sec. mm ²	Outer \varnothing ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no.†)
3020	2 x 1,5	7,6	29,0	82	16
3021	3 G 1,5	8,2	43,0	95	16
3022	4 G 1,5	9,2	58,0	117	16
3023	5 G 1,5	9,3	72,0	144	16
3024	3 G 2,5	10,1	72,0	152	14
3025	4 G 2,5	11,2	96,0	192	14
3026	5 G 2,5	12,4	120,0	243	14

G = with green-yellow earth core
X = without green-yellow earth core

Ca. RAL	5015 blue	6018 green	8003 brown	1021 yellow	3000 red	2003 orange	4005 violet	7001/7032 grey	gold	duky gold
Colour code	0	1	2	3	4	5	6	7	8	9

*) Note

AWG sizes are approximate equivalent values.
The actual cross-section is in mm² – see page T 15.

Please add the individual part no. for order with the identification colour code.
Further colours on request.

H05VV-F/SJT VDE-HAR-UL-CSA, 300 V to DIN VDE 0281 and UL 62, black



Technical data

- PVC control cable to DIN VDE 0281 part 5 and part 2, IEC 60227-5, HD 21.5 S3 and UL-Std. 62 and CSA 22.2 No. 49
- **Temperature range**
flexing - 5°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage**
DIN VDE 0281 U_0/U 300/500 V
UL 62 U 300 V
CSA U 300 V
- **Test voltage** 2500 V, 5 min.
- **Breakdown voltage** min. 5000 V
- **Spark-Test** 6000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
approx. 7,5 x cable \varnothing
- **Radiation resistance**
up to 80 x 10⁶ cJ/kg (up to 80 Mrad)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

Cable structure

- Bare copper, fine wire stranded conductor to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5, HD 383 and UL-Std. 62
- PVC insulation T12 to DIN VDE 0281 part 1 and class 43 to UL-Std. 62 (Table 50.182, UL-Std. 1581) according to CSA-Std. C 22.2 No 49 Type SJT
- Core identification according to colour code DIN VDE 0293, one coloured
- Green-yellow earth core, 3 cores and above
- Core stranded with optimal lay-length
- PVC outer jacket TM2 to DIN VDE 0281 part 1 and class 43 to UL-Std. 62 (Table 50.182, UL-Std. 1581) according to CSA-Std. C 22.2 No 49 Type SJT
- Jacket colour black
- Imprint on the outer jacket: e.g. HELUKABEL <VDE> <HAR> CE E 192384 (UL) SJT xxxx VW-1/LL 113926 CSA SJT 60°C FT1
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

These flexible PVC control cables, VDE-HAR-UL-CSA approved, are designed for the export and also for the export-oriented-equipment. These cables are especially suited to use for the appliance with medium mechanical stresses with free movement without tensile stress in households, kitchens and offices, also for household appliances in damp and wet areas, e.g. refrigerators, washing machines, spin-driver etc., as far as this cable is admitted to the relevant specifications of the equipment. These cables are suited to be used for cooking and heating apparatus under the condition that cable does not come in direct contact with hot parts of the apparatus and no other influences or heat. The cables are suitable for fixed installation in furnitures, partition walls, decoration covering and in hollow spaces of prefabricated building parts. They are not suitable for use in open air, in industries (also permitted to tailor workshops and of that kind) and in agriculture plants and for connecting commercial electrical tools.

CE = The product is conformed with the EG Low Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cond x AWG	No. cond. x cross-sec. mm ²	Jacket colour	Insulated core \varnothing Nominal value mm	Outer \varnothing ca. mm	Copper weight kg / km	Weight ca. kg / km
28034	2 x AWG 18	2 x 1	black	2,80	7,2	19,2	56
28035	3 x AWG 18	3 G 1	black	2,80	7,6	28,8	73
28036	4 x AWG 18	4 G 1	black	2,80	8,6	38,4	86
28037	5 x AWG 18	5 G 1	black	2,80	9,4	48,0	105
28038	2 x AWG 16	2 x 1,5	black	3,00	7,6	28,8	82
28039	3 x AWG 16	3 G 1,5	black	3,00	8,3	44,0	96
28040	4 x AWG 16	4 G 1,5	black	3,00	9,3	58,0	117
28041	5 x AWG 16	5 G 1,5	black	3,00	10,4	72,0	144
28042	2 x AWG 14	2 x 2,5	black	3,6	9,2	48,0	118
28043	3 x AWG 14	3 G 2,5	black	3,6	10,0	72,0	152
28044	4 x AWG 14	4 G 2,5	black	3,6	10,9	96,0	192
28045	5 x AWG 14	5 G 2,5	black	3,6	12,2	120,0	243
28046	2 x AWG 12	2 x 4	black	4,15	10,6	76,8	195
28047	3 x AWG 12	3 G 4	black	4,15	11,5	115,0	235
28048	4 x AWG 12	4 G 4	black	4,15	12,4	154,0	300
28049	5 x AWG 12	5 G 4	black	4,15	14,1	192,0	361

G = with green-yellow earth core
X = without green-yellow earth core

PVC cables will be changed to lead free PVC successively.

H05VV-F/SJT VDE-HAR-UL-CSA, 300 V to DIN VDE 0281 and UL 62, white



◁ HAR ▷



HELUKABEL ◁VDE▷ ◁HAR▷ CE E 192384 CSA SJT 18/3 VW-1/FT1

Technical data

- PVC control cable to DIN VDE 0281 part 5 and part 2, IEC 60227-5, HD 21.5 S3 and UL-Std. 62 and CSA 22.2 No. 49
- **Temperature range**
flexing - 5°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage**
DIN VDE 0281 U_0/U 300/500 V
UL 62 U 300 V
CSA U 300 V
- **Test voltage** 2500 V, 5 min.
- **Breakdown voltage** min. 5000 V
- **Spark-Test** 6000 V
- **Insulation resistance**
min. 20 MΩm x km
- **Minimum bending radius**
approx. 7,5 x cable Ø
- **Radiation resistance**
up to 80 x 10⁶ cJ/kg (up to 80 Mrad)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

Cable structure

- Bare copper, fine wire stranded conductor to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5, HD 383 and UL-Std. 62
- PVC insulation T12 to DIN VDE 0281 part 1 and class 43 to UL-Std. 62 (Table 50.182, UL-Std. 1581) according to CSA-Std. C 22.2 No 49 Type SJT
- Core identification according to colour code DIN VDE 0293, one coloured
- Green-yellow earth core, 3 cores and above
- Core stranded with optimal lay-length
- PVC outer jacket TM2 to DIN VDE 0281 part 1 and class 43 to UL-Std. 62 (Table 50.182, UL-Std. 1581) according to CSA-Std. C 22.2 No 49 Type SJT
- Jacket colour white
- Imprint on the outer jacket: e.g. HELUKABEL ◁VDE▷ ◁HAR▷ CE E 192384 (UL) SJT xxxx VW-1/LL 113926 CSA SJT 60°C FT1
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

These flexible PVC control cables, VDE-HAR-UL-CSA approved, are designed for the export and also for the export-oriented-equipment. These cables are especially suited to use for the appliance with medium mechanical stresses with free movement without tensile stress in households, kitchens and offices, also for household appliances in damp and wet areas, e.g. refrigerators, washing machines, spin-driver etc., as far as this cable is admitted to the relevant specifications of the equipment. These cables are suited to be used for cooking and heating apparatus under the condition that cable does not come in direct contact with hot parts of the apparatus and no other influences or heat. The cables are suitable for fixed installation in furnitures, partition walls, decoration covering and in hollow spaces of prefabricated building parts. They are not suitable for use in open air, in industries (also permitted to tailor workshops and of that kind) and in agriculture plants and for connecting commercial electrical tools.

CE = The product is conformed with the EG Low Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cond x AWG	No. cond. x cross-sec. mm ²	Jacket colour	Insulated core Ø Nominal value mm	Outer Ø ca. mm	Copper weight kg/km	Weight ca. kg/km
28050	2 x AWG 18	2 x 1	white	2,80	7,2	19,2	56
28051	3 x AWG 18	3 G 1	white	2,80	7,6	28,8	73
28052	4 x AWG 18	4 G 1	white	2,80	8,6	38,4	86
28053	5 x AWG 18	5 G 1	white	2,80	9,4	48,0	105
28054	2 x AWG 16	2 x 1,5	white	3,00	7,6	28,8	82
28055	3 x AWG 16	3 G 1,5	white	3,00	8,3	44,0	96
28056	4 x AWG 16	4 G 1,5	white	3,00	9,3	58,0	117
28057	5 x AWG 16	5 G 1,5	white	3,00	10,4	72,0	144
28058	2 x AWG 14	2 x 2,5	white	3,6	9,2	48,0	118
28059	3 x AWG 14	3 G 2,5	white	3,6	10,0	72,0	152
28060	4 x AWG 14	4 G 2,5	white	3,6	10,9	96,0	192
28061	5 x AWG 14	5 G 2,5	white	3,6	12,2	120,0	243
28062	2 x AWG 12	2 x 4	white	4,15	10,6	76,8	195
28063	3 x AWG 12	3 G 4	white	4,15	11,5	115,0	255
28064	4 x AWG 12	4 G 4	white	4,15	12,4	154,0	300
28065	5 x AWG 12	5 G 4	white	4,15	14,1	192,0	361

G = with green-yellow earth core
X = without green-yellow earth core

PVC cables will be changed to lead free PVC successively.

H05VV-F/SJT VDE-HAR-UL-CSA, 300 V to DIN VDE 0281 and UL 62, grey



◁ HAR ▷



HELUKABEL ◁VDE▷◁HAR▷ CE E 192384 CSA SJT 18/3 VW-1/FT1

Technical data

- PVC control cable to DIN VDE 0281 part 5 and part 2, IEC 60227-5, HD 21.5 S3 and UL-Std. 62 and CSA 22.2 No. 49
- **Temperature range**
flexing - 5°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage**
DIN VDE 0281 U_0/U 300/500 V
UL 62 U 300 V
CSA U 300 V
- **Test voltage** 2500 V, 5 min.
- **Breakdown voltage** min. 5000 V
- **Spark-Test** 6000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
approx. 7,5 x cable \varnothing
- **Radiation resistance**
up to 80 x 10⁶ cJ/kg (up to 80 Mrad)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

Cable structure

- Bare copper, fine wire stranded conductor to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5, HD 383 and UL-Std. 62
- PVC insulation T12 to DIN VDE 0281 part 1 and class 43 to UL-Std. 62 (Table 50.182, UL-Std. 1581) according to CSA-Std. C 22.2 No 49 Type SJT
- Core identification according to colour code DIN VDE 0293, one coloured
- Green-yellow earth core, 3 cores and above
- Core stranded with optimal lay-length
- PVC outer jacket TM2 to DIN VDE 0281 part 1 and class 43 to UL-Std. 62 (Table 50.182, UL-Std. 1581) according to CSA-Std. C 22.2 No 49 Type SJT
- Jacket colour grey
- Imprint on the outer jacket: e.g. HELUKABEL ◁VDE▷ ◁HAR▷ ◁CE E 192384 (UL) SJT xxxx VW-1/LL 113926 CSA SJT 60°C FT1
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

These flexible PVC control cables, VDE-HAR-UL-CSA approved, are designed for the export and also for the export-oriented-equipment. These cables are especially suited to use for the appliance with medium mechanical stresses with free movement without tensile stress in households, kitchens and offices, also for household appliances in damp and wet areas, e.g. refrigerators, washing machines, spin-driver etc., as far as this cable is admitted to the relevant specifications of the equipment. These cables are suited to be used for cooking and heating apparatus under the condition that cable does not come in direct contact with hot parts of the apparatus and no other influences or heat. The cables are suitable for fixed installation in furnitures, partition walls, decoration covering and in hollow spaces of prefabricated building parts. They are not suitable for use in open air, in industries (also permitted to tailor workshops and of that kind) and in agriculture plants and for connecting commercial electrical tools.

◁CE = The product is conformed with the EG Low Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cond x AWG	No. cond. x cross-sec. mm ²	Jacket colour	Insulated core \varnothing Nominal value mm	Outer \varnothing ca. mm	Copper weight kg / km	Weight ca. kg / km
28066	2 x AWG 18	2 x 1	grey	2,80	7,2	19,2	56
28067	3 x AWG 18	3 G 1	grey	2,80	7,6	28,8	73
28068	4 x AWG 18	4 G 1	grey	2,80	8,6	38,4	86
28069	5 x AWG 18	5 G 1	grey	2,80	9,4	48,0	105
28070	2 x AWG 16	2 x 1,5	grey	3,00	7,6	28,8	82
28071	3 x AWG 16	3 G 1,5	grey	3,00	8,3	44,0	96
28072	4 x AWG 16	4 G 1,5	grey	3,00	9,3	58,0	117
28073	5 x AWG 16	5 G 1,5	grey	3,00	10,4	72,0	144
28074	2 x AWG 14	2 x 2,5	grey	3,6	9,2	48,0	118
28075	3 x AWG 14	3 G 2,5	grey	3,6	10,0	72,0	152
28076	4 x AWG 14	4 G 2,5	grey	3,6	10,9	96,0	192
28077	5 x AWG 14	5 G 2,5	grey	3,6	12,2	120,0	243
28078	2 x AWG 12	2 x 4	grey	4,15	10,6	76,8	195
28079	3 x AWG 12	3 G 4	grey	4,15	11,5	115,0	235
28080	4 x AWG 12	4 G 4	grey	4,15	12,4	154,0	300
28081	5 x AWG 12	5 G 4	grey	4,15	14,1	192,0	361

G = with green-yellow earth core
X = without green-yellow earth core

PVC cables will be changed to lead free PVC successively.

H05VV-F/SJT VDE-HAR-UL-CSA, 300 V

to DIN VDE 0281 and UL 62



◁ HAR ▷



Technical data

- PVC control cable to DIN VDE 0281 part 5 and part 2, IEC 60227-5, HD 21.5 S3 and UL-Std. 62 and CSA 22.2 No. 49
- **Temperature range**
flexing - 5°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage**
DIN VDE 0281 U_0/U 300/500 V
UL 62 U 300 V
CSA U 300 V
- **Test voltage** 2500 V, 5 min.
- **Breakdown voltage** min. 5000 V
- **Spark-Test** 6000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
approx. 75x cable \varnothing
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

Cable structure

- Bare copper, fine wire stranded conductor to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5, HD 383 and UL-Std. 62
- PVC insulation T12 to DIN VDE 0281 part 1 and class 43 to UL-Std. 62 (Table 50.182, UL-Std. 1581) according to CSA-Std. C 22.2 No 49 Type SJT
- Core identification according to colour code DIN VDE 0293, one coloured
- Green-yellow earth core, 3 cores and above
- Core stranded with optimal lay-length
- PVC outer jacket TM2 to DIN VDE 0281 part 1 and class 43 to UL-Std. 62 (Table 50.182, UL-Std. 1581) according to CSA-Std. C 22.2 No 49 Type SJT
- Jacket colour by request
- Imprint on the outer jacket: e.g. HELUKABEL <VDE > <HAR > CE E 192384 (UL) SJT xxxx VW-1/LL 113926 CSA SJT 60°C FT1
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

These flexible PVC control cables, VDE-HAR-UL-CSA approved, are designed for the export and also for the export-oriented-equipment. These cables are especially suited to use for the appliance with medium mechanical stresses with free movement without tensile stress in households, kitchens and offices, also for household appliances in damp and wet areas, e.g. refrigerators, washing machines, spin-driver etc., as far as this cable is admitted to the relevant specifications of the equipment. These cables are suited to be used for cooking and heating apparatus under the condition that cable does not come in direct contact with hot parts of the apparatus and no other influences or heat. The cables are suitable for fixed installation in furnitures, partition walls, decoration covering and in hollow spaces of prefabricated building parts. They are not suitable for use in open air, in industries (also permitted to tailor workshops and of that kind) and in agriculture plants and for connecting commercial electrical tools.

CE = The product is conformed with the EG Low Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cond x AWG	No. cond. x cross-sec. mm ²	Jacket colour per order	Insulated core \varnothing Nominal value mm	Outer \varnothing ca. mm	Copper weight kg / km	Weight ca. kg / km
3110___	2 x AWG 18	2 x 1		2,80	7,2	19,2	56
3111___	3 x AWG 18	3 G 1		2,80	7,6	28,8	73
3112___	4 x AWG 18	4 G 1		2,80	8,6	38,4	86
3113___	5 x AWG 18	5 G 1		2,80	9,4	48,0	105
3114___	2 x AWG 16	2 x 1,5		3,00	7,6	28,8	82
3115___	3 x AWG 16	3 G 1,5		3,00	8,3	44,0	96
3116___	4 x AWG 16	4 G 1,5		3,00	9,3	58,0	117
3117___	5 x AWG 16	5 G 1,5		3,00	10,4	72,0	144
3118___	2 x AWG 14	2 x 2,5		3,6	9,2	48,0	118
3119___	3 x AWG 14	3 G 2,5		3,6	10,0	72,0	152
3120___	4 x AWG 14	4 G 2,5		3,6	10,9	96,0	192
3121___	5 x AWG 14	5 G 2,5		3,6	12,2	120,0	243
3122___	2 x AWG 12	2 x 4		4,15	10,6	76,8	195
3123___	3 x AWG 12	3 G 4		4,15	11,5	115,0	235
3124___	4 x AWG 12	4 G 4		4,15	12,4	154,0	300
3125___	5 x AWG 12	5 G 4		4,15	14,1	192,0	361

G = with green-yellow earth core
X = without green-yellow earth core

PVC cables will be changed to lead free PVC successively.

ca. RAL	5015 blue	6018 green	8003 brown	1021 yellow	3000 red	2003 orange	4005 violet	gold	dusty gold
colour code	0	1	2	3	4	5	6	7	8

Note: Please add the individual part no. for order with the identification colour code. Further colours on request.

H05VV-F/UL VDE-HAR-UL 500 V to DIN VDE 0281 and UL-Style 20195



Technical data

- PVC-control cables to DIN VDE 0281 part 5 and part 2, IEC 60227-5, HD 21.5 S3 and UL-Subj. 758 AWM-Style 20195
- **Temperature range**
flexing - 5°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage**
DIN VDE 0281 U₀/U 300/500 V
UL-Style 20195 U₀/U 300/500 V
- **Test voltage** 2500 V
- **Breakdown voltage** min. 5000 V
- **Insulation resistance**
min. 20 MΩm x km
- **Minimum bending radius**
ca. 7,5x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

Cable structure

- Bare copper, fine wire conductors, bunch stranded to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5 and HD 383
- PVC core insulation TI2 to DIN VDE 0281 part 1
- Cores colour coded to DIN VDE 0293
- Green-yellow earth core, 3 cores and above
- Cores stranded in layers with optimal lay-length
- PVC outer jacket, colour by request
- PVC outer jacket, TM2 to DIN VDE 0281 part 1
- Imprint on the outer jacket: e.g. HELUKABEL <VDE> <HAR> H05VV-F xGxx **CE** E170315 **UL** AWM-STYLE 20195 75C 300/500 V VW-1
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

These flexible PVC control cables, VDE-HAR-AWM approved, are designed for the export and also for the export-orientated equipment. These cables are especially suited to use for the appliance with medium mechanical stresses with free movement without tensile stress in households, kitchens and offices, also for household appliances in damp and wet areas, e.g. refrigerators, washing machines, spin-driver etc., as far as this cable is admitted to the relevant specifications of the equipment. These cables are suited to be used for cooking and heating apparatus under the condition that cable does not come in direct contact with hot parts of the apparatus and no other influences or heat. The cables are suitable for fixed installation in furnitures, partition walls, decoration covering and in hollow spaces of prefabricated building parts. They are not suitable for use in open air, in industries (also permitted to tailor workshops and of that kind) and in agriculture plants and for connecting commercial electrical tools.

CE = The product is conformed with the EG Low Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cores x cross-sec. mm ²	Outer Ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no.¹)
3269	2 x 0,75	6,4	14,4	50	18
3270	3 G 0,75	6,8	21,6	60	18
3271	4 G 0,75	7,4	29,0	73	18
3272	5 G 0,75	8,3	36,0	88	18
3273	2 x 1	6,8	19,0	57	17
3274	3 G 1	7,2	29,0	73	17
3275	4 G 1	8,0	38,0	85	17
3276	5 G 1	8,8	48,0	105	17

Part No.	No. cores x cross-sec. mm ²	Outer Ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no.¹)
3277	2 x 1,5	7,6	29,0	82	16
3278	3 G 1,5	8,2	43,0	95	16
3279	4 G 1,5	9,2	58,0	117	16
3280	5 G 1,5	9,3	72,0	144	16
3281	3 G 2,5	10,1	72,0	152	14
3282	4 G 2,5	11,2	96,0	192	14
3283	5 G 2,5	12,4	120,0	243	14

G = with green-yellow earth core
X = without green-yellow earth core

PVC cables will be changed to lead free PVC successively.

ca. RAL	9005 black	9003 white	5015 blue	6018 green	8003 brown	1021 yellow	3000 red	2003 orange	4005 violet	7001/7032 grey
Colour code	0	1	2	3	4	5	6	7	8	9

*) Note

AWG sizes are approximate equivalent values.
The actual cross-section is in mm² – see page T 15.

Please add the individual part no. for order with the identification colour code.
Further colours on request.



Technical data

- flexible halogen-free control cable according E DIN VDE 0281 part 14 pr HD 21.14 S1
- **Temperature range**
+5°C to +40°C
- **Nominal voltage**
U₀/U 300/300 V
- **Test voltage** 2000 V
- **Breakdown voltage** min. 4000 V
- **Minimum bending radius**
15x cable Ø
- **Radiation resistance**
up to 20x10⁶ cJ/kg (up to 20 Mrad)
- **Tests**
Tested for flame retardation to VDE 0482 part 265-2-1, EN 50265-2-1 (equivalent to VDE 0472 part 804 test method B)
- Smoke density to VDE 0482 part 268-2
- Halogen-free to HD 21.14 appendix C

¹⁾ VDE registration number requested.
²⁾ Draft

Cable structure

- Bare copper, fine wire conductors, bunch stranded to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5 and HD 383
 - Insulating jacket thermoplastic compound, T16 according DIN VDE 0281 part 14, appendix A
 - Core identification according to DIN VDE 0293
 - Green-yellow earth core (3 cores and above)
 - Cores stranded with optimal lay-length
 - Outer sheath, thermoplastic compound, TM7 according DIN VDE 0281 part 14, appendix B
 - Jacket colour by request
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

Application

These cables may be used when halogen-free, low smoke and corrosive gas properties are required in case of fire. For low mechanical demands in the house, kitchen and office, for small equipment such as, for example, office machines, radios, table and standard lamps.
Not suitable for:
Cooking and heating equipment
Use in high temperature areas (for example, in lighting equipment)
Outside use
Industrial use or industrial electrical tools
Cables with a nominal cross-section of 0.75 mm² comply with the same recommendations as for cable (H)05 Z1Z1-F

CE = The product is conformed with the EG Low Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cores x cross-sec. mm ²	Outer Ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no.*)
3233	2 x 0,5	5,0	9,6	39	20
3234	3 G 0,5	5,3	14,4	46	20
3235	4 G 0,5	5,8	19,2	56	20

Part No.	No. cores x cross-sec. mm ²	Outer Ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no.*)
3236	2 x 0,75	5,4	14,4	47	18
3237	3 G 0,75	5,7	21,6	55	18
3238	4 G 0,75	6,3	29,0	69	18

G = with green-yellow earth core
X = without green-yellow earth core

ca. RAL	9005 black	9003 white	5015 blue	6018 green	8003 brown	1021 yellow	3000 red	2003 orange	4005 violet	7001/7032 grey
Colour code	0	1	2	3	4	5	6	7	8	9

***) Note**
AWG sizes are approximate equivalent values.
The actual cross-section is in mm² – see page T 15.

Please add the individual part no. for order with the identification colour code.
Further colours on request.





Technical data

- flexible halogen-free control cable according E DIN VDE 0281 part 14 pr HD 21.14 S1
- **Temperature range**
+5°C to +40°C
- **Nominal voltage**
U₀/U 300/500 V
- **Test voltage** 2500 V
- **Breakdown voltage** min. 5000 V
- **Minimum bending radius**
15x cable ø
- **Radiation resistance**
up to 20x10⁶ cJ/kg (up to 20 Mrad)
- **Tests**
Tested for flame retardation to VDE 0482 part 265-2-1, EN 50265-2-1 (equivalent to VDE 0472 part 804 test method B)
- Smoke density to VDE 0482 part 268-2
- Halogen-free to HD 21.14 appendix C

¹⁾ VDE registration number requested.
²⁾ Draft

Cable structure

- Bare copper, fine wire conductors, bunch stranded to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5 and HD 383
 - Insulating jacket thermoplastic compound, T16 according DIN VDE 0281 part 14, appendix A
 - Core identification according to DIN VDE 0293
 - Green-yellow earth core (3 cores and above)
 - Cores stranded with optimal lay-length
 - Outer sheath, thermoplastic compound, TM7 according DIN VDE 0281 part 14, appendix B
 - Jacket colour by request
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

Application

These cables may be used when halogen-free, low smoke and corrosive gas properties are required in case of fire. For moderate mechanical demands in the house, kitchen and office, for house equipment in damp rooms (for example: washing machines, spin-dryers and refrigerators.) Suitable for cooking and heating equipment, providing the cable is not in contact with hot components or heat radiation. Not suitable for: In high temperature areas (for example, in lighting equipment) Outside buildings In industrial or agricultural buildings Connection of electrical power tools

CE = The product is conformed with the EG Low Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cores x cross-sec. mm ²	Outer ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no.*)
3027	2 x 0,75	6,2	14,4	58	18
3028	3 G 0,75	6,6	21,6	68	18
3029	4 G 0,75	7,1	29,0	81	18
3030	5 G 0,75	8,0	36,0	102	18
3031	2 x 1	6,6	19,0	67	17
3032	3 G 1	6,9	29,0	81	17
3034	4 G 1	7,7	38,0	101	17
3035	5 G 1	8,4	48,0	107	17
3036	2 x 1,5	7,4	29,0	87	16
3037	3 G 1,5	8,1	43,0	109	16
3038	4 G 1,5	9,0	58,0	117	16
3039	5 G 1,5	10,0	72,0	169	16

Part No.	No. cores x cross-sec. mm ²	Outer ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no.*)
3040	2 x 2,5	9,3	48,0	138	14
3041	3 G 2,5	10,1	72,0	172	14
3042	4 G 2,5	11,0	96,0	210	14
3043	5 G 2,5	12,3	120,0	260	14
3044	2 x 4	10,6	76,8	190	12
3045	3 G 4	11,5	115,2	242	12
3046	4 G 4	12,5	153,6	298	12
3047	5 G 4	14,1	192,0	371	12

G = with green-yellow earth core
X = without green-yellow earth core

ca. RAL	9005 black	9003 white	5015 blue	6018 green	8003 brown	1021 yellow	3000 red	2003 orange	4005 violet	7001/7032 grey
Colour code	0	1	2	3	4	5	6	7	8	9

***) Note**
AWG sizes are approximate equivalent values.
The actual cross-section is in mm² – see page T 15.

Please add the individual part no. for order with the identification colour code.
Further colours on request.

HELUKABEL® was selling in the past successfully products of BELDEN Wire & Cable, Venlo-NL, especially in the area of industry and coax cables.

Now, the two companies agreed a more intensive co-operation in the German market.

HELUKABEL® act from this year as a distributor of BELDEN Wire & Cable, Venlo-NL.

There is a clear philosophy: Both companies want to give a maximum on service to their customers. And for this HELUKABEL® with the new fully automatic LOGISTIC CENTER is an optimal partner.

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- Fieldbus
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- Flexible versions
- Audio/video combination
- Speakertechnique
- Broadband coax cables
- Twisted Pair cables



Video cables:

- Triax
- Analog and Digitalvideo
- RGB

*We are looking forward
to your inquiries*

HELUKABEL® GmbH · Data- and Network Technique · Dieselstraße 8-12 · 71282 Hemmingen
Phone: (0 7150) 92 09-134, -179, -0 · Fax: (0 7150) 97 0819