

**Power & Control Cable**

**IEC 60502-1**

(2-, 3-, 4- and 5-cores)

**U<sub>0</sub>/U 0.6 / 1 kV**

**PVC-Insulation, PVC-Sheath**

**YY-fl**

**Application**

For electricity supply and control in public networks and industrial plants; suitable for use in zone 1 and zone 2 group II classified areas (IEC 60079-14).

Recommended for direct burial. For indoor or and outdoor installation in dry and wet locations, on racks, in conduits. (Local and / or legal requirements to be noted)

**Construction**

**Conductor** plain annealed copper, class 1 or class 2 resp., acc. to IEC 60228,  
 ≤ 35 mm<sup>2</sup>: circular solid (RE) or circular stranded (RM),  
 > 35 mm<sup>2</sup>: sector-shaped stranded (SM)<sup>1)</sup>

**Insulation** polyvinyl chloride PVC

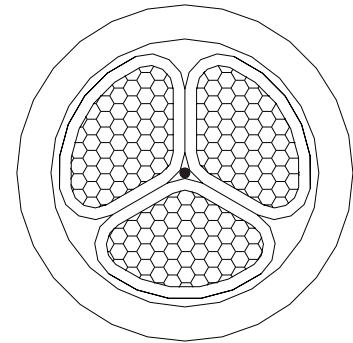
**Colour code**<sup>2)</sup> 2-core: blue, brown  
 3-core: brown, black, grey  
 4-core: blue, brown, black, grey  
 5-core: blue, brown, black, grey, black

**Laying up** cores twisted in layers (if necessary with filling element(s))

**Inner Covering** extruded filler of regenerated rubber

**Outer Sheath** extruded polyvinyl chloride PVC, black

**Cable marking** ELECTRIC CABLE 0.6/1 kV IEC 60502-1,  
 KERPEN , YEAR, LENGTH MARKING



**Technical Data**

**Flame retardancy:** IEC 60332-1  
**Flame propagation:** IEC 60332-3 cat. A  
**Outer sheath:**  
**Amount of halogen acid gas:** max. 17 %  
 (IEC 60754-1)  
**Limiting Oxygen Index (LOI):** min. 30 %  
 (IEC 60332-3 ann. B)  
**Temperature Index (TI):** min. 300 °C  
 (ASTM-D-2863)

**Temperature range:**  
 - 30 °C up to + 70 °C  
 (during operation)  
 - 5° C up to +50 °C  
 (during installation)  
 ≤ 300 mm<sup>2</sup>: max. +160 °C  
 > 300 mm<sup>2</sup>: max. +140 °C  
 (under short circuit)  
**Min. bending radius:**  
 8 x cable-Ø

**Abbreviations**

**Y** insulation & outer sheath of PVC  
**-fl** reduced flame propagation

**Electrical Data at 20 °C**

	Character	Unit	Values
<b>Conductor resistance</b>	max.	Ohm/km	acc. to IEC 60228
<b>Test voltage U<sub>rms</sub> core:core</b>		V	3500
<b>Nominal voltage U<sub>0</sub> /U</b>		V	600 / 1000
<b>Highest system voltage U<sub>m</sub></b>	max.	V	1200 (for three phase systems)

<sup>1)</sup> 5core cables only with circular conductors  
<sup>2)</sup> other colours on request

for further details see appendix

Power & Control Cable						IEC 60502-1
(2-, 3-, 4- and 5-cores)						U <sub>0</sub> /U 0.6 / 1 kV
PVC-Insulation, PVC-Sheath						
YY-fl						
Geometrical Data						
No. of cores and cross-section  (nom.) n / mm <sup>2</sup>	Radial thickness of insulation  (nom.) mm	Radial thickness of outer sheath  (nom.) mm	Overall diameter  (approx.) mm	Weight of cable  (approx.) kg / km	Part number	
2 x 1.5 RE	0.8	1.8	10.1	150	20230251	
2 x 1.5 RM	0.8	1.8	10.6	160	20230003	
2 x 2.5 RE	0.8	1.8	10.9	190	20230252	
2 x 2.5 RM	0.8	1.8	11.4	200	20230253	
2 x 4 RE	1.0	1.8	12.7	260	20230254	
2 x 4 RM	1.0	1.8	13.4	290	20230255	
2 x 6 RE	1.0	1.8	13.7	320	20230256	
2 x 6 RM	1.0	1.8	14.4	350	20230257	
2 x 10 RE	1.0	1.8	15.2	430	20230258	
2 x 10 RM	1.0	1.8	16.3	480	20230259	
2 x 16 RE	1.0	1.8	17.1	600	20230260	
2 x 16 RM	1.0	1.8	18.5	660	20230261	
2 x 25 RM	1.2	1.8	21.4	920	-	
2 x 35 RM	1.2	1.8	23.6	1020	-	
2 x 50 SM	1.4	1.8	23.1	1320	20230264	
2 x 70 SM	1.4	1.9	26.3	1730	20230265	
2 x 95 SM	1.6	2.0	30.0	2360	20230266	
2 x 120 SM	1.6	2.1	31.9	2850	20230267	
2 x 150 SM	1.8	2.2	35.3	3480	20230268	
2 x 185 SM	2.0	2.4	39.7	4340	20230269	
2 x 240 SM	2.2	2.6	44.6	5600	20230270	
2 x 300 SM	2.4	2.7	51.7	7200	20230013	
3 x 1.5 RE	0.8	1.8	10.6	170	20230271	
3 x 1.5 RM	0.8	1.8	11.1	190	20230272	
3 x 2.5 RE	0.8	1.8	11.5	220	20230273	
3 x 2.5 RM	0.8	1.8	12.0	230	20230274	
3 x 4 RE	1.0	1.8	13.3	300	20230275	
3 x 4 RM	1.0	1.8	14.1	310	20230276	
3 x 6 RE	1.0	1.8	14.4	390	20230277	
3 x 6 RM	1.0	1.8	15.2	410	20230278	
3 x 10 RE	1.0	1.8	16.1	540	20230279	
3 x 10 RM	1.0	1.8	17.2	580	20230280	
3 x 16 RE	1.0	1.8	18.2	750	20230281	
3 x 16 RM	1.0	1.8	19.6	820	20230282	
3 x 25 RM	1.2	1.8				

RE: circular solid • RM: circular stranded • SM: sector shaped stranded

**Power & Control Cable**

**IEC 60502-1**

**(2-, 3-, 4- and 5-cores)**

**U<sub>0</sub>/U 0.6 / 1 kV**

**PVC-Insulation, PVC-Sheath**

**YY-fl**

**Geometrical Data**

No. of cores and cross-section  (nom.) n / mm <sup>2</sup>	Radial thickness of insulation  (nom.) mm	Radial thickness of outer sheath  (nom.) mm	Overall diameter  (approx.) mm	Weight of cable  (approx.) kg / km	Part number
3 x 35 RM	1.2	1.8			
3 x 50 SM	1.4	1.8	26.8	1870	20230285
3 x 70 SM	1.4	2.0	30.2	2510	20230286
3 x 95 SM	1.6	2.1	33.7	3410	20230287
3 x 120 SM	1.6	2.2	36.2	4080	20230288
3 x 150 SM	1.8	2.3	40.3	5010	20230289
3 x 185 SM	2.0	2.5	45.8	6290	20230290
3 x 240 SM	2.2	2.7	51.8	8170	20230291
3 x 300 SM	2.4	2.8	59.4	10460	20230292
3 x 400 SM	2.6	3.1	66.5	13260	20230293
4 x 1.5 RE	0.8	1.8	11.4	190	20230294
4 x 1.5 RM	0.8	1.8	11.9	200	20230295
4 x 2.5 RE	0.8	1.8	12.3	240	20230296
4 x 2.5 RM	0.8	1.8	12.9	250	20230297
4 x 4 RE	1.0	1.8	14.4	340	20230298
4 x 4 RM	1.0	1.8	15.3	370	20230299
4 x 6 RE	1.0	1.8	15.6	440	20230300
4 x 6 RM	1.0	1.8	16.5	470	20230301
4 x 10 RE	1.0	1.8	17.6	640	20230302
4 x 10 RM	1.0	1.8	19.0	680	20230303
4 x 16 RE	1.0	1.8	19.8	910	20230304
4 x 16 RM	1.0	1.8	21.4	980	20230305
4 x 25 RM	1.2	1.8	25.3	1530	-
4 x 35 RM	1.2	1.8	28.0	2000	-
4 x 50 SM	1.4	1.9	30.8	2400	20230308
4 x 70 SM	1.4	2.1	34.2	3210	20230309
4 x 95 SM	1.6	2.2	38.4	4440	20230310
4 x 120 SM	1.6	2.3	41.6	5390	20230311
4 x 150 SM	1.8	2.5	46.0	6620	20230312
4 x 185 SM	2.0	2.7	50.4	8240	20230313
4 x 240 SM	2.2	2.9	59.0	10770	20230314
4 x 300 SM	2.4	3.1	66.1	13780	20230315
4 x 400 SM	2.6	3.4	77.0	17580	20230316
5 x 4 RE	1.0	1.8	15.7	440	20230317
5 x 4 RM	1.0	1.8	16.6	470	20230318

RE: circular solid • RM: circular stranded • SM: sector shaped stranded



**Power & Control Cable**

**IEC 60502-1**

**(Multicores)**

**U<sub>0</sub>/U 0.6/1 kV**

**PVC-Insulation, PVC-Sheath**

**YY-fl**

**Application**

For electricity supply and control in public networks and industrial plants; suitable for use in zone 1 and zone 2 group II classified areas (IEC 60079-14).

Recommended for direct burial. For indoor and outdoor installation in dry and wet locations, on racks, in conduits

**Construction**

**Conductor** plain annealed copper, class 1 or class 2 resp., acc. to IEC 60228,  
 ≤ 35 mm<sup>2</sup>: circular solid (RE) or circular stranded (RM),  
 > 35 mm<sup>2</sup>: sector-shaped stranded (SM)

**Insulation** polyvinyl chloride PVC

**Colour code <sup>1)</sup>** Two-core: blue, brown  
 Three-core: brown, black, grey  
 Four-core: blue, brown, black, grey

**Laying up** cores twisted in layers (if necessary with filling element(s))

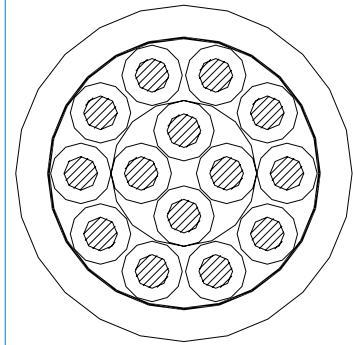
**Wrapping** at least 1 layer of plastic tape

**Bedding** extruded polyvinyl chloride PVC, black

**Armour** galvanized round steel wires

**Outer Sheath** extruded polyvinyl chloride PVC, black

**Cable marking** ELECTRIC CABLE 0.6/1 kV IEC 60502-1  
 KERPEN, YEAR, LENGTH, MARKING



**Technical Data**

**Abbreviations**

**Flame retardancy:** IEC 60332-1  
**Flame propagation:** IEC 60332-3 cat. A  
**Outer Sheath:**  
**Amount of halogen acid gas:** max. 17 %  
 (IEC 60754-1)  
**Limiting Oxygen Index (LOI):** min. 30 %  
 (IEC 60332-3 ann. B)  
**Temperatur Index (TI):** min. 300 °C  
 (ASTM-D-2863)

**Temperature range:**  
 -30 °C up to +70 °C  
 (during operation)  
 -5°C up to +50 °C  
 (during installation)  
 ≤ 300 mm<sup>2</sup>: max. +160 °C  
 > 300 mm<sup>2</sup>: max. +140 °C  
 (under short circuit)  
**Min. bending radius:**  
 8 x cable-Ø

**Y** insulation, bedding & outer sheath of PVC  
**R** round steel wire armour  
**-fl** reduced flame propagation

**Electrical Data at 20 °C**

	Character	Unit	Values
<b>Conductor resistance</b>	max.	Ω/km	acc. to IEC 60228
<b>Test voltage U<sub>rms</sub> core: core</b>		V	3500
<b>Test voltage U<sub>rms</sub> core: armour</b>		V	3500
<b>Nominal voltage U<sub>0</sub> /U</b>		V	600 / 1000
<b>Highest system voltage U<sub>m</sub></b>	max.	V	1200 (for three phase systems)

For further electrical details see appendix

Power & Control Cable						IEC 60502-1	
(multicores)						U <sub>0</sub> /U 0.6/1 kV	
PVC-Insulation, PVC-Sheath							
YY-fl							
Geometrical Data							
No. of cores and cross-section			Radial thickness of insulation	Radial thickness of outer sheath	Overall diameter	Weight of cable	Part number
(nom.) n / mm <sup>2</sup>			(nom.) mm	(nom.) mm	(approx.) mm	(approx.) kg / km	
5 x 1.5 RE	0.8	1.8	11.9	190	20230045		
7 x 1.5 RE	0.8	1.8	12.8	230	20230046		
10 x 1.5 RE	0.8	1.8	15.7	330	20230047		
12 x 1.5 RE	0.8	1.8	16.2	360	20230048		
19 x 1.5 RE	0.8	1.8	18.7	510	20230049		
27 x 1.5 RE	0.8	1.8	22.2	700	20230050		
37 x 1.5 RE	0.8	1.8	24.8	920	20230051		
48 x 1.5 RE	0.8	1.9	28.3	1160	20230052		
5 x 1.5 RM	0.8	1.8	12.4	210	20230053		
7 x 1.5 RM	0.8	1.8	13.4	270	20230000		
10 x 1.5 RM	0.8	1.8	16.6	360	20230009		
12 x 1.5 RM	0.8	1.8	17.1	380	20230054		
19 x 1.5 RM	0.8	1.8	19.9	540	20230055		
27 x 1.5 RM	0.8	1.8	23.6	740	20230056		
37 x 1.5 RM	0.8	1.8	26.3	970	20230057		
48 x 1.5 RM	0.8	1.9	30.1	1230	20230058		
5 x 2.5 RE	0.8	1.8	13.0	260	20230059		
7 x 2.5 RE	0.8	1.8	14.0	320	20230060		
10 x 2.5 RE	0.8	1.8	17.2	420	20230061		
12 x 2.5 RE	0.8	1.8	17.8	490	20230062		
19 x 2.5 RE	0.8	1.8	20.8	710	20230063		
27 x 2.5 RE	0.8	1.8	24.6	970	20230064		
37 x 2.5 RE	0.8	1.9	27.4	1270	20230065		
48 x 2.5 RE	0.8	2.0	31.7	1650	20230066		
5 x 2.5 RM	0.8	1.8	13.6	270	20230067		
7 x 2.5 RM	0.8	1.8	14.7	330	20230068		
10 x 2.5 RM	0.8	1.8	18.2	440	20230069		
12 x 2.5 RM	0.8	1.8	18.8	520	20230070		
19 x 2.5 RM	0.8	1.8	22.0	810	20230031		
27 x 2.5 RM	0.8	1.8	26.1	1030	20230071		
37 x 2.5 RM	0.8	1.9	29.5	1370	20230072		
48 x 2.5 RM	0.8	2.0	33.8	1750	20230073		

RE: circular solid • RM: circular stranded • SM: sector shaped stranded