DEVILENE R
ROUND CABLE

205 °F

Temperature range

> **The maximum permissible temperature is 205 °F (96 °C).**

Cable construction

> **Conductors**
Solid or stranded tinned copper conductors.
A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

> **Insulation**
A high dielectric quality Polypropylene (PP) provides the ideal balance of physical and electrical properties.

> **Jacket**
A proprietary Nitrile rubber (NBR) formulation is specially compounded to provide excellent heat, oil resistance and low swell, is extruded over the cabled insulated conductors.

> **Armour**
An interlocking, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and enhanced crush resistance, available in 0.025" and 0.034" thicknesses.
Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.
A selection of various armour profiles is available to suit various down hole applications.
The armour of Pirelli Devilene R cable is stamped with the letter "P" at regular intervals for ease of manufacturer identification.

Refering standard

> **IEEE 1019**

7 times
overall
diameter

galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

50 N/mm²

+23 °F
(-5 °C)

+205 °F
(+96 °C)

PRYSMIAN CABLES & SYSTEMS

DEVILENE R
ROUND CABLE

DEVILENE R

3 Conductors PP/NBR/GSTA 3 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diameter under armour		overall diameter		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.331	8.41	0.075	1.91	0.49	12.4	1.18	30.0	1.38	35.1	1730	2575	0.171	0.033
1	42.4	1	0.289	7.34	0.075	1.91	0.44	11.2	1.09	27.7	1.29	32.8	1620	2410	0.166	0.032
2	33.6	7	0.292	7.42	0.075	1.91	0.45	11.4	1.10	27.9	1.30	33.0	1485	2215	0.222	0.034
2	33.6	1	0.258	6.55	0.075	1.91	0.41	10.4	1.02	25.9	1.22	31.0	1400	2085	0.215	0.033
4	21.2	1	0.204	5.18	0.075	1.91	0.36	9.1	0.90	22.9	1.10	27.9	1060	1580	0.332	0.035
6	13.3	1	0.162	4.11	0.075	1.91	0.32	8.1	0.81	20.6	1.01	25.7	835	1245	0.527	0.038

DEVILENE R

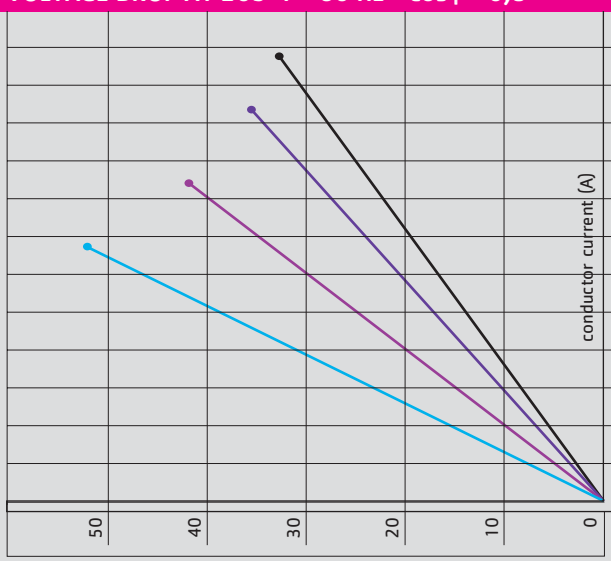
3 Conductors PP/NBR/GSTA 5 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diameter under armour		overall diameter		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.331	8.41	0.090	2.29	0.52	13.2	1.25	31.8	1.45	36.8	1820	2705	0.171	0.034
1	42.4	1	0.289	7.34	0.090	2.29	0.47	11.9	1.15	29.2	1.35	34.3	1700	2530	0.166	0.034
2	33.6	7	0.292	7.42	0.090	2.29	0.48	12.2	1.16	29.5	1.36	34.5	1570	2335	0.222	0.035
2	33.6	1	0.258	6.55	0.090	2.29	0.44	11.2	1.09	27.7	1.29	32.8	1480	2200	0.215	0.035
4	21.2	1	0.204	5.18	0.090	2.29	0.39	9.9	0.97	24.6	1.17	29.7	1135	1685	0.332	0.037
6	13.3	1	0.162	4.11	0.090	2.29	0.35	8.9	0.88	22.4	1.08	27.4	905	1350	0.527	0.040

r= conductor electrical resistance at 205 °F
x= inductive reactance at 60 Hz

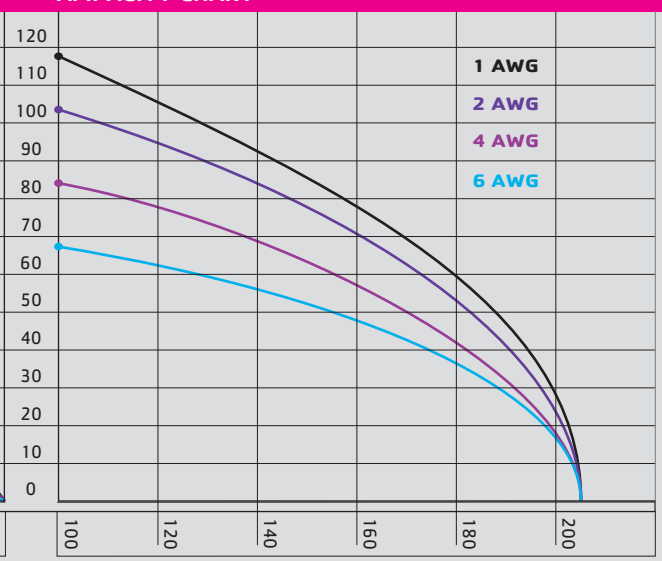
Note: overall dimensions and weights are based on 0,025" armour tape thickness

VOLTAGE DROP AT 205 °F – 60 Hz – cosφ = 0,8



volt/1000 ft

AMPACITY CHART



maximum well temperature (°F)

dega design group

FULL SYSTEM INTEGRITY FROM SAHARA TO SIBERIA

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PRYSMIAN CABLES & SYSTEMS

DEVILINE R
285 ROUND CABLE

285 °F

Temperature range

> **The maximum permissible temperature is 285 °F (140 °C).**

Cable construction

> **Conductors**
Solid or stranded tinned copper conductors.
A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

> **Insulation**
A proprietary high quality EPDM compound is chemically bonded to the conductor. It is specially formulated to provide high dielectric and low swell characteristics in presence of oil.

> **Tape**
A fluoropolymer tape is helically applied over the insulation to provide added protection against oil and insulation decompression.

> **Braid**
A synthetic braid, applied with full coverage over the fluoropolymer tape, provides additional mechanical reinforcement and hoop strength.

> **Jacket**
A proprietary Nitrile Rubber (NBR) formulation, specially compounded to provide excellent heat, oil resistance and low swell, is extruded over the cabled insulated conductors.

> **Armour**
An interlocking, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and enhanced crush resistance, available in thickness of 0.025" or 0.034".
Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.
A selection of various armour profiles is available to suit various down hole applications.
The armour of Pirelli Deviline R 285 cable is stamped with the letter "P" at regular intervals for ease of manufacturer identification.

Refering standard

> **IEEE 1018**

7 times overall diameter

galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

50 N/mm²

-22 °F
(-30 °C)

+284 °F
(+140 °C)

PRYSMIAN CABLES & SYSTEMS

DEVILINE R
285 ROUND CABLE

DEVILINE R 285

3 Conductors EPDM/NBR/GSTA 5 kV Round Pump Cable – Insulation thickness 0,075'' (1,91 mm)

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diameter under armour		overall diameter		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.331	8.41	0.075	1.91	0.49	12.4	1.24	31.5	1.44	36.6	1850	2750	0.193	0.034
1	42.4	1	0.289	7.34	0.075	1.91	0.44	11.2	1.15	29.2	1.35	34.3	1725	2565	0.188	0.033
2	33.6	7	0.292	7.42	0.075	1.91	0.45	11.4	1.15	29.2	1.35	34.3	1595	2375	0.251	0.035
2	33.6	1	0.258	6.55	0.075	1.91	0.41	10.4	1.08	27.4	1.28	32.5	1500	2230	0.244	0.035
4	21.2	1	0.204	5.18	0.075	1.91	0.36	9.1	0.96	24.4	1.16	29.5	1150	1710	0.377	0.037
6	13.3	1	0.162	4.11	0.075	1.91	0.32	8.1	0.87	22.1	1.07	27.2	920	1370	0.597	0.040

DEVILINE R 285

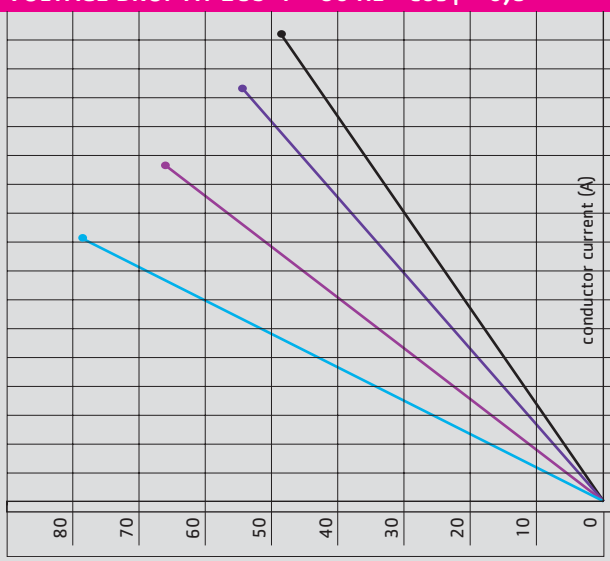
3 Conductors EPDM/NBR/GSTA 5 kV Round Pump Cable – Insulation thickness 0,090'' (2,29 mm)

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diameter under armour		overall diameter		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.331	8.41	0.090	2.29	0.52	13.2	1.30	33.0	1.50	38.1	1945	2895	0.193	0.035
1	42.4	1	0.289	7.34	0.090	2.29	0.47	11.9	1.21	30.7	1.41	35.8	1815	2700	0.188	0.035
2	33.6	7	0.292	7.42	0.090	2.29	0.48	12.2	1.22	31.0	1.42	36.1	1685	2510	0.251	0.036
2	33.6	1	0.258	6.55	0.090	2.29	0.44	11.2	1.14	29.0	1.34	34.0	1585	2360	0.244	0.036
4	21.2	1	0.204	5.18	0.090	2.29	0.39	9.9	1.03	26.2	1.23	31.2	1230	1830	0.377	0.039
6	13.3	1	0.162	4.11	0.090	2.29	0.35	8.9	0.94	23.9	1.14	29.0	1000	1485	0.597	0.042

r= conductor electrical resistance at 285 °F
x= inductive reactance at 60 Hz

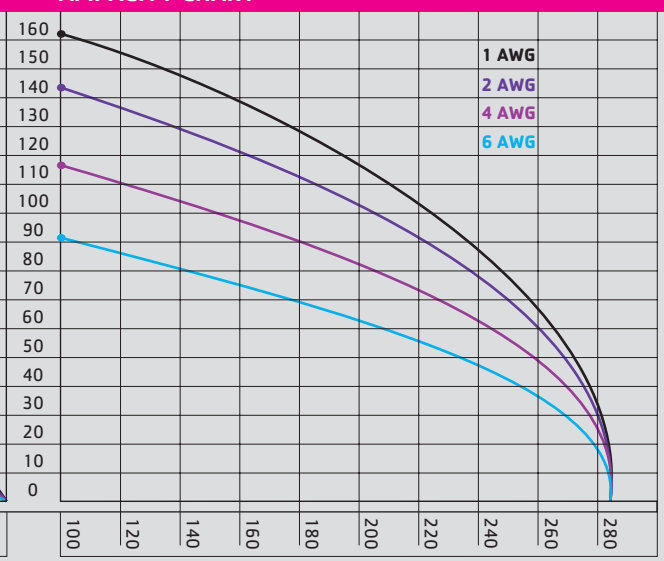
Note: overall dimensions and weights are based on 0,025" armour tape thickness

VOLTAGE DROP AT 285 °F – 60 Hz – cosφ = 0,8



volt/1000 ft

AMPACITY CHART



maximum well temperature (°F)

dega design group

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PRYSMIAN CABLES & SYSTEMS

DEVILINE R
400 ROUND CABLE

400 °F

Temperature range

> **The maximum permissible temperature is 400 °F (204 °C).**

Cable construction

> **Conductors**
Solid or stranded tinned copper conductors.
A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

> **Insulation**
A proprietary quality EPDM compound is chemically bonded to the conductor. It is specially formulated to provide high dielectric and low swell characteristics in presence of oil.

> **Tape**
A fluoropolymer tape is helically applied over the insulation to provide added protection against oil and insulation decompression.

> **Braid**
A synthetic braid, applied with full coverage over the fluoropolymer tape, provides additional mechanical reinforcement and hoop strength.

> **Jacket**
A proprietary Nitrile Rubber (NBR) formulation, specially compounded to provide excellent heat, oil resistance and low swell, is extruded over the cabled insulated conductors.

> **Armour**
An interlocking, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and enhanced crush resistance, available in thickness of 0.025" or 0.034".
Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.
A selection of various armour profiles is available to suit various down hole applications.
The armour of Pirelli Deviline R 285 cable is stamped with the letter "P" at regular intervals for ease of manufacturer identification.

Refering standard

> **IEEE 1018**

7 times overall diameter

galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

50 N/mm²

-40 °F
(-40 °C)

+400 °F
(+204 °C)

PRYSMIAN CABLES & SYSTEMS

DEVILINE R
400 ROUND CABLE

DEVILINE R 400

3 Conductors EPDM/EPDM/GSTA 5 kV Round Pump Cable – Insulation thickness 0,075'' (1,91 mm)

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diameter under armour		overall diameter		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.331	8.41	0.075	1.91	0.49	12.4	1.24	31.5	1.44	36.6	1825	2715	0.226	0.034
1	42.4	1	0.289	7.34	0.075	1.91	0.44	11.2	1.15	29.2	1.35	34.3	1700	2535	0.220	0.033
2	33.6	7	0.292	7.42	0.075	1.91	0.45	11.4	1.15	29.2	1.35	34.3	1575	2345	0.294	0.035
2	33.6	1	0.258	6.55	0.075	1.91	0.41	10.4	1.08	27.4	1.28	32.5	1480	2200	0.286	0.035
4	21.2	1	0.204	5.18	0.075	1.91	0.36	9.1	0.96	24.4	1.16	29.5	1135	1690	0.441	0.037
6	13.3	1	0.162	4.11	0.075	1.91	0.32	8.1	0.87	22.1	1.07	27.2	910	1355	0.700	0.040

DEVILINE R 400

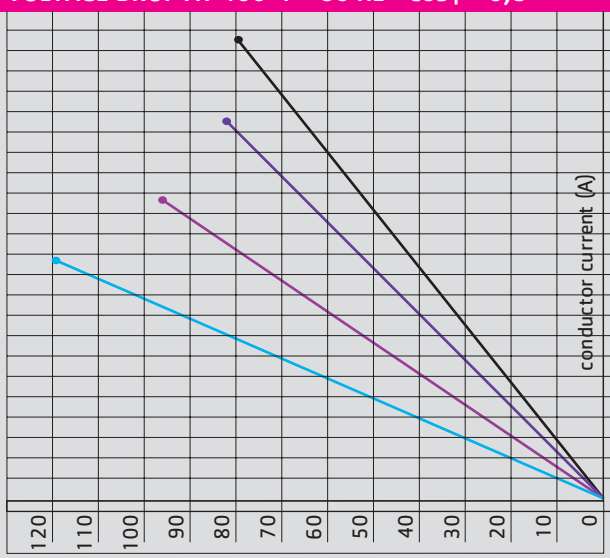
3 Conductors EPDM/EPDM/GSTA 5 kV Round Pump Cable – Insulation thickness 0,090'' (2,29 mm)

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diameter under armour		overall diameter		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.331	8.41	0.090	2.29	0.52	13.2	1.30	33.0	1.50	38.1	1920	2860	0.226	0.035
1	42.4	1	0.289	7.34	0.090	2.29	0.47	11.9	1.21	30.7	1.41	35.8	1790	2665	0.220	0.035
2	33.6	7	0.292	7.42	0.090	2.29	0.48	12.2	1.22	31.0	1.42	36.1	1665	2475	0.294	0.036
2	33.6	1	0.258	6.55	0.090	2.29	0.44	11.2	1.14	29.0	1.34	34.0	1565	2330	0.286	0.036
4	21.2	1	0.204	5.18	0.090	2.29	0.39	9.9	1.03	26.2	1.23	31.2	1215	1805	0.441	0.039
6	13.3	1	0.162	4.11	0.090	2.29	0.35	8.9	0.94	23.9	1.14	29.0	985	1465	0.700	0.042

r= conductor electrical resistance at 400 °F
x= inductive reactance at 60 Hz

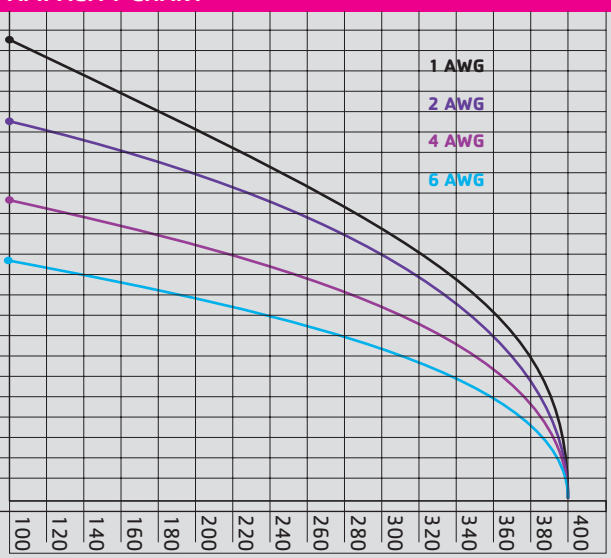
Note: overall dimensions and weights are based on 0,025" armour tape thickness

VOLTAGE DROP AT 400 °F – 60 Hz – cosφ = 0,8



volt/1000 ft

AMPACITY CHART



maximum well temperature (°F)

dega design group

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PRYSMIAN CABLES & SYSTEMS

DEVILENE F
FLAT CABLE

205 °F

Temperature range

> **The maximum permissible temperature is 205 °F (96 °C).**

Cable construction

> **Conductors**
Solid or stranded tinned copper conductors.
A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

> **Insulation**
A high dielectric quality Polypropylene (PP) provides the ideal balance of physical and electrical properties.

> **Jacket**
A proprietary Nitrile Rubber (NBR) formulation, specially compounded to provide excellent heat, oil resistance and low swell characteristics is extruded over the insulation.

> **Tape**
A fluoropolymer tape is helically applied with an overlap over the jacket to provide added protection against oil and chemicals and core decompression.

> **Braid**
A synthetic braid, applied with full coverage over the fluoropolymer tape, provides additional mechanical reinforcement and hoop strength.

> **Armour**
A 50% lapped, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and is available in thickness of 0.020" or 0.025".
Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.
The armour of Pirelli Devilene F cable is stamped with the letter "P" at regular intervals for ease of manufacturer identification.

Refering standard

> **IEEE 1019**

7 times major axis dimension

galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

50 N/mm²

+23 °F
(-5 °C)

+205 °F
(+96 °C)

PRYSMIAN CABLES & SYSTEMS

DEVILENE F
FLAT CABLE

DEVILENE F

3 Conductors PP/NBR/GSTA 3 kV Flat Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		dimensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm²)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.331	8.41	0.075	1.91	0.49	12.4	0.62x1.86	15.7x47.2	0.73x1.94	18.5x49.3	1630	2425	0.171	0.043
1	42.4	1	0.289	7.34	0.075	1.91	0.44	11.2	0.58x1.74	14.7x44.2	0.69x1.82	17.5x46.2	1545	2300	0.166	0.043
2	33.6	7	0.292	7.42	0.075	1.91	0.45	11.4	0.58x1.75	14.7x44.5	0.69x1.83	17.5x46.5	1415	2100	0.222	0.044
2	33.6	1	0.258	6.55	0.075	1.91	0.41	10.4	0.55x1.64	14.0x41.7	0.66x1.72	16.8x43.7	1350	2005	0.215	0.044
4	21.2	1	0.204	5.18	0.075	1.91	0.36	9.1	0.49x1.48	12.4x37.6	0.60x1.59	15.2x40.4	1050	1560	0.332	0.047
6	13.3	1	0.162	4.11	0.075	1.91	0.32	8.1	0.45x1.35	11.4x34.3	0.56x1.46	14.2x37.1	850	1260	0.527	0.051

DEVILENE F

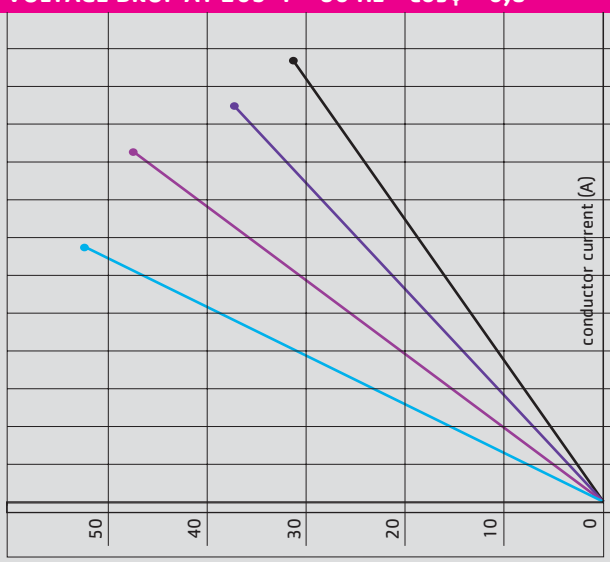
3 Conductors PP/NBR/GSTA 5 kV Flat Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		dimensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm²)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.331	8.41	0.090	2.29	0.52	13.2	0.65x1.96	16.5x49.8	0.76x2.04	19.3x51.8	1695	2520	0.171	0.044
1	42.4	1	0.289	7.34	0.090	2.29	0.47	11.9	0.61x1.83	15.5x46.5	0.72x1.91	18.3x48.5	1610	2390	0.166	0.044
2	33.6	7	0.292	7.42	0.090	2.29	0.48	12.2	0.61x1.84	15.5x46.7	0.72x1.92	18.3x48.8	1475	2195	0.222	0.046
2	33.6	1	0.258	6.55	0.090	2.29	0.44	11.2	0.58x1.73	14.7x43.9	0.69x1.81	17.5x46.0	1405	2090	0.215	0.046
4	21.2	1	0.204	5.18	0.090	2.29	0.39	9.9	0.52x1.57	13.2x39.9	0.63x1.68	16.0x42.7	1105	1645	0.332	0.049
6	13.3	1	0.162	4.11	0.090	2.29	0.35	8.9	0.48x1.44	12.2x36.6	0.59x1.55	15.0x39.4	900	1340	0.527	0.052

r= conductor electrical resistance at 205 °F
x= inductive reactance at 60 Hz

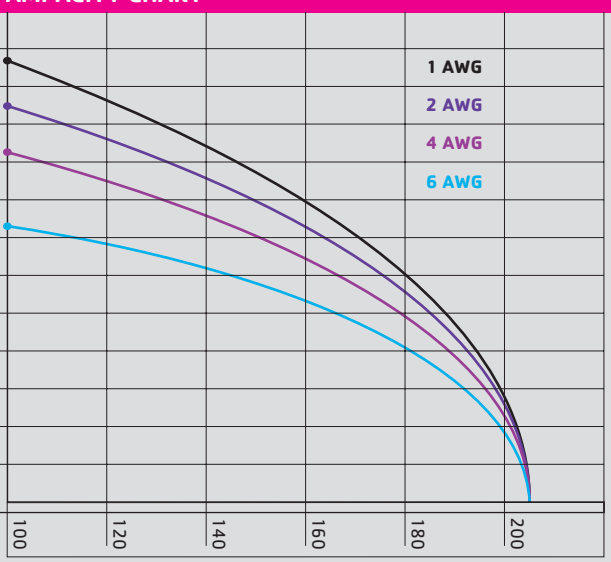
Note: overall dimensions and weights are based on 0,020" armour tape thickness

VOLTAGE DROP AT 205 °F – 60 Hz – cosφ = 0,8



volt/1000 ft

AMPACITY CHART



maximum well temperature (°F)

dega design group

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PRYSMIAN CABLES & SYSTEMS

DEVILEAD F
FLAT PUMP CABLE

450 °F

Temperature range

> **The maximum permissible temperature is 450 °F (232 °C).**

Cable construction

> **Conductors**
Solid or stranded tinned copper conductors.
A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

> **Insulation**
A proprietary quality EPDM compound is chemically bonded to the conductor. It is specially formulated to provide high dielectric and low swell characteristics in presence of oil.

> **Lead sheath**
A continuous, impervious, fatigue and corrosion resistant lead sheath is extruded over the insulation to provide excellent protection against oil, chemicals and gases and insulation decompression.

> **Braid**
A synthetic braid, applied with full coverage over the lead sheath, provides additional mechanical reinforcement, hoop strength and armour bedding.
A suitable overlapped tape can be used as an alternative.

> **Armour**
An 50% lapped, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and is available in thickness of 0.020" or 0.025".
Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.
The armour of Pirelli Devilead F cable is stamped with the letter "P" at regular intervals for ease of manufacturer identification.

Refering standard

> **IEEE 1018**

7 times major axis dimension

galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

50 N/mm²

-40 °F
(-40 °C)

+450 °F
(+232 °C)

FULL SYSTEM INTEGRITY FROM SAHARA TO SIBERIA

PRYSMIAN CABLES & SYSTEMS

DEVILEAD F
FLAT PUMP CABLE

DEVILEAD F

3 Conductors EPDM/LEAD/GSTA 5 kV Flat Pump Cable – Insulation thickness 0,075" (1,91 mm)

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		dimensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm²)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.331	8.41	0.075	1.91	0.49	12.4	0.59x1.78	15.0x45.2	0.70x1.87	17.8x47.5	2515	3745	0.241	0.042
1	42.4	1	0.289	7.34	0.075	1.91	0.44	11.2	0.55x1.66	14.0x42.2	0.66x1.75	16.8x44.5	2355	3500	0.234	0.042
2	33.6	7	0.292	7.42	0.075	1.91	0.45	11.4	0.56x1.67	14.2x42.4	0.66x1.76	16.8x44.7	2230	3320	0.313	0.043
2	33.6	1	0.258	6.55	0.075	1.91	0.41	10.4	0.52x1.56	13.2x39.6	0.63x1.65	16.0x41.9	2100	3125	0.304	0.043
4	21.2	1	0.204	5.18	0.075	1.91	0.36	9.1	0.47x1.40	11.9x35.6	0.58x1.51	14.7x38.4	1705	2535	0.469	0.046

DEVILEAD F

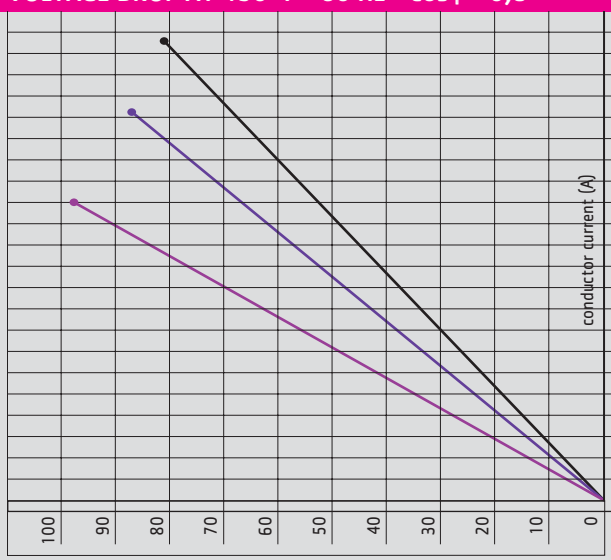
3 Conductors EPDM/LEAD/GSTA 5 kV Flat Pump Cable – Insulation thickness 0,090" (2,29 mm)

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		dimensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm²)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.331	8.41	0.090	2.29	0.52	13.2	0.63x1.88	16.0x47.8	0.73x1.97	18.5x50.0	2640	3930	0.241	0.043
1	42.4	1	0.289	7.34	0.090	2.29	0.47	11.9	0.58x1.75	14.7x44.5	0.69x1.84	17.5x46.7	2470	3680	0.234	0.043
2	33.6	7	0.292	7.42	0.090	2.29	0.48	12.2	0.59x1.76	15.0x44.7	0.69x1.85	17.5x47.0	2350	3495	0.313	0.045
2	33.6	1	0.258	6.55	0.090	2.29	0.44	11.2	0.55x1.65	14.0x41.9	0.66x1.74	16.8x44.2	2215	3295	0.304	0.044
4	21.2	1	0.204	5.18	0.090	2.29	0.39	9.9	0.50x1.49	12.7x37.8	0.61x1.60	15.5x40.6	1815	2705	0.469	0.047

r= conductor electrical resistance at 450 °F
x= inductive reactance at 60 Hz

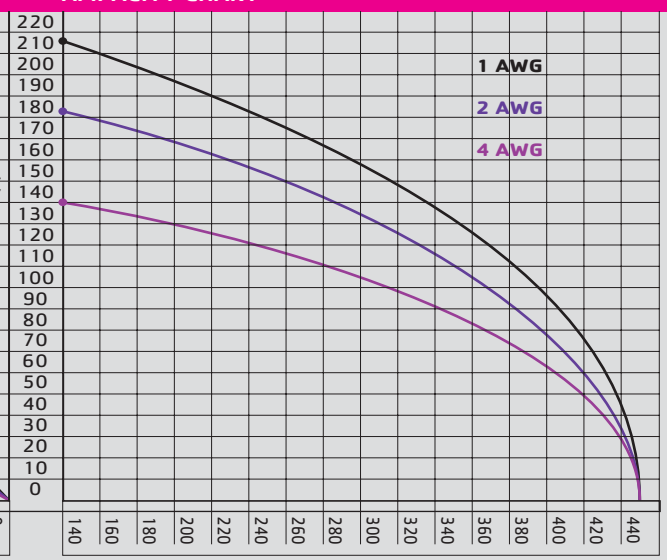
Note: overall dimensions and weights are based on 0,020" armour tape thickness

VOLTAGE DROP AT 450 °F – 60 Hz – cosφ = 0,8



volt/1000 ft

AMPACITY CHART



maximum well temperature (°F)

dega design group

FULL SYSTEM INTEGRITY FROM SAHARA TO SIBERIA

Prysmian Cables and Systems
Viale Sarca 222, 20126 Milano, Italy - tel. +39 02 6449 1, fax +39 02 6449 2931 - www.prysmian.com

PRYSMIAN CABLES & SYSTEMS

DW 205 R
ROUND CABLE

205 °F

Temperature range

> **The maximum permissible temperature is 205 °F (96 °C).**

Cable construction

> **Conductors**
Solid or stranded tinned copper conductors.
A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

> **Insulation**
A high dielectric quality Polypropylene (PP) provides the ideal balance of physical and electrical properties.

> **Jacket**
A proprietary Nitrile rubber (NBR) formulation, specially compounded to provide excellent heat, oil resistance and low swell, is extruded over the insulation.

> **Armour**
An interlocking, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and enhanced crush resistance, available in 0.025" and 0.034" thicknesses.
Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.
A selection of various armour profiles is available to suit various down hole applications.

Refering standard

> **IEEE 1019**

7 times overall dimension

galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

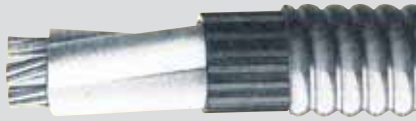
50 N/mm²

+23 °F
(-5 °C)

+205 °F
(+96 °C)

PRYSMIAN CABLES & SYSTEMS

DW 205 R
ROUND CABLE



DW 205 R3

3 Conductors PP/NBR/GSTA 3 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diamensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.074	1.90	0.45	11.5	1.13	28.7	1.27	32.2	1612	2398	0.178	0.033
2	33.6	7	0.27	6.78	0.074	1.90	0.42	10.6	1.06	26.9	1.20	30.4	1394	2074	0.224	0.034
4	21.2	1	0.21	5.20	0.074	1.90	0.35	9.0	0.93	23.6	1.06	27.0	1067	1588	0.346	0.037
6	13.3	1	0.16	4.10	0.074	1.90	0.31	7.9	0.83	21.1	0.97	24.6	839	1248	0.550	0.039

DW 205 R4

3 Conductors PP/NBR/GSTA 4 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diamensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.082	2.10	0.47	11.9	1.17	29.6	1.30	33.1	1653	2460	0.178	0.034
2	33.6	7	0.27	6.78	0.082	2.10	0.43	11.0	1.09	27.8	1.23	31.3	1433	2132	0.224	0.035
4	21.2	1	0.21	5.20	0.082	2.10	0.37	9.4	0.96	24.4	1.10	27.9	1103	1641	0.346	0.038
6	13.3	1	0.16	4.10	0.082	2.10	0.33	8.3	0.87	22.0	1.00	25.5	873	1299	0.550	0.040

DW 205 R5

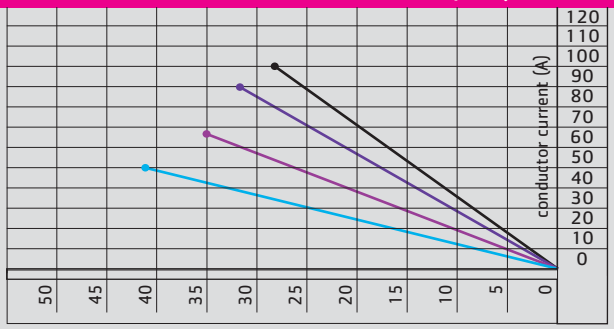
3 Conductors PP/NBR/GSTA 5 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diamensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.092	2.33	0.48	12.3	1.19	30.2	1.34	33.9	1684	2506	0.178	0.034
2	33.6	7	0.27	6.78	0.092	2.33	0.45	11.4	1.12	28.5	1.26	32.1	1465	2180	0.224	0.036
4	21.2	1	0.21	5.20	0.092	2.33	0.40	9.9	0.99	25.2	1.13	28.7	1138	1693	0.346	0.039
6	13.3	1	0.16	4.10	0.092	2.33	0.35	8.8	0.90	22.9	1.04	26.4	909	1353	0.550	0.042

r= conductor electrical resistance at 205 °F
x= inductive reactance at 60 Hz

Note: overall dimensions and weights are based on 0,025" armour tape thickness

VOLTAGE DROP AT 205 °F – 60 Hz – cosφ = 0,8



volt/1000 ft

1 AWG – 100 A

2 AWG – 90 A

4 AWG – 67 A

6 AWG – 50 A

Maximum current recommended to BHT (Bottom Hole Temperature) 170 °F (76 °C)

dega design group

FULL SYSTEM INTEGRITY FROM SAHARA TO SIBERIA

Prysmian Cables and Systems
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PRYSMIAN CABLES & SYSTEMS

DW 205 F
FLAT CABLE

205 °F

Temperature range

> **The maximum permissible temperature is 205 °F (96 °C).**

Cable construction

> **Conductors**
Solid or stranded tinned copper conductors.
A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

> **Insulation**
A high dielectric quality Polypropylene (PP) provides the ideal balance of physical and electrical properties.

> **Jacket**
A proprietary Nitrile Rubber (NBR) formulation, specially compounded to provide excellent heat, oil resistance and low swell, is extruded over the insulation.

> **Tape**
A fluoropolymer tape is helically applied with an overlap over the jacket to provide added protection against oil and chemicals and core decompression.

> **Braid**
A synthetic braid, applied with full coverage over the fluoropolymer tape, provides additional mechanical reinforcement and hoop strength.

> **Armour**
A 50% lapped, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and is available in thickness of 0.020" or 0.025".
Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.

Refering standard

> **IEEE 1019**

7 times major axis dimension

galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

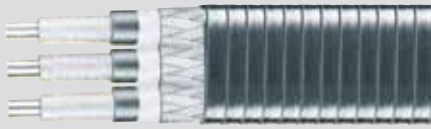
50 N/mm²

+23 °F
(-5 °C)

+205 °F
(+96 °C)

PRYSMIAN CABLES & SYSTEMS

DW 205 F
FLAT CABLE



DW 205 F3

3 Conductors PP/NBR/GSTA 3 kV Flat Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		dimensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm²)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.074	1.90	0.45	11.5	0.69x1.89	17.6x48.2	0.73x1.93	18.6x49.2	1554	2313	0.178	0.041
2	33.6	7	0.27	6.78	0.074	1.90	0.42	10.6	0.70x1.79	17.8x45.7	0.70x1.83	17.8x46.7	1356	2018	0.224	0.042
4	21.2	1	0.21	5.20	0.074	1.90	0.35	9.0	0.59x1.61	15.2x41.0	0.63x1.65	16.2x42.0	1055	1570	0.346	0.045
6	13.3	1	0.16	4.10	0.074	1.90	0.31	7.9	0.55x1.48	14.1x37.7	0.59x1.52	15.1x38.7	853	1269	0.550	0.048

DW 205 F4

3 Conductors PP/NBR/GSTA 4 kV Flat Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		dimensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm²)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.082	2.10	0.47	11.9	0.70x1.94	18.0x49.4	0.74x1.98	19.0x50.4	1583	2356	0.178	0.042
2	33.6	7	0.27	6.78	0.082	2.10	0.43	11.0	0.67x1.84	17.2x46.9	0.71x1.88	18.2x47.9	1385	2061	0.224	0.043
4	21.2	1	0.21	5.20	0.082	2.10	0.37	9.4	0.61x1.66	15.6x42.2	0.65x1.70	16.6x43.2	1087	1618	0.346	0.046
6	13.3	1	0.16	4.10	0.082	2.10	0.33	8.3	0.57x1.53	14.5x38.9	0.61x1.57	15.5x39.9	881	1311	0.550	0.049

DW 205 F5

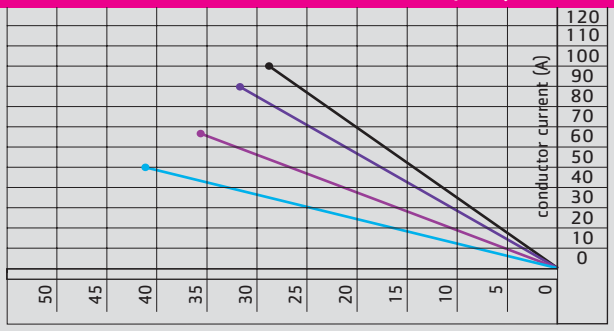
3 Conductors PP/NBR/GSTA 5 kV FLAT Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		dimensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm²)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.092	2.33	0.48	12.3	0.72x1.99	18.4x50.6	0.76x2.03	19.4x51.6	1611	2397	0.178	0.042
2	33.6	7	0.27	6.78	0.092	2.33	0.45	11.4	0.69x1.89	17.6x48.1	0.73x1.93	18.6x49.1	1410	2099	0.224	0.044
4	21.2	1	0.21	5.20	0.092	2.33	0.40	9.9	0.63x1.71	16.0x43.4	0.66x1.74	17.0x44.4	1111	1653	0.346	0.047
6	13.3	1	0.16	4.10	0.092	2.33	0.35	8.8	0.59x1.58	14.9x40.1	0.62x1.61	15.9x41.1	909	1353	0.550	0.050

r= conductor electrical resistance at 205 °F
x= inductive reactance at 60 Hz

Note: overall dimensions and weights are based on 0,020" armour tape thickness

VOLTAGE DROP AT 205 °F – 60 Hz – cosφ = 0,8



volt/1000 ft

1 AWG – 100 A

2 AWG – 90 A

4 AWG – 67 A

6 AWG – 50 A

Maximum current recommended to BHT (Bottom Hole Temperature) 170 °F (76 °C)

dega design group

FULL SYSTEM INTEGRITY FROM SAHARA TO SIBERIA

Prysmian Cables and Systems
Viale Sarca 222, 20126 Milano, Italy - tel. +39 02 6449 1, fax +39 02 6449 2931 - www.prysmian.com

PRYSMIAN CABLES & SYSTEMS

DW 300 R
ROUND CABLE

300 °F

Temperature range

> **The maximum permissible temperature is 300 °F (149 °C).**

Cable construction

> **Conductors**
Solid or stranded tinned copper conductors.
A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

> **Insulation**
A proprietary high quality EPDM compound is chemically bonded to the conductor. It is specially formulated to provide high dielectric and low swell characteristics in presence of oil.

> **Tape**
A fluoropolymer tape is helically applied over the insulation to provide added protection against oil and insulation decompression.

> **Braid**
A synthetic braid, applied with full coverage over the fluoropolymer tape, provides additional mechanical reinforcement and hoop strength.

> **Jacket**
A proprietary Nitrile Rubber (NBR) formulation, specially compounded to provide excellent heat, oil resistance and low swell, is extruded over the cabled insulated conductors.

> **Armour**
An interlocking, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and enhanced crush resistance, available in thickness of 0.025" or 0.034".
Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.
A selection of various armour profiles is available to suit various down hole applications.

Refering standard

> **IEEE 1018**

7 times overall dimension

galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

50 N/mm²

-40 °F
(-40 °C)

+300 °F
(+149 °C)

DW 300 R
ROUND CABLE

DW 300 R3

3 Conductors EPDM/NBR/GSTA 3 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diamensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.074	1.90	0.45	11.5	1.33	33.7	1.38	35.0	1734	2581	0.206	0.033
2	33.6	7	0.27	6.78	0.074	1.90	0.42	10.6	1.26	32.0	1.31	33.2	1509	2246	0.260	0.034
4	21.2	1	0.21	5.20	0.074	1.90	0.35	9.0	1.12	28.5	1.17	29.8	1166	1735	0.401	0.037
6	13.3	1	0.16	4.10	0.074	1.90	0.31	7.9	1.03	26.2	1.08	27.5	930	1384	0.638	0.039

DW 300 R4

3 Conductors EPDM/NBR/GSTA 4 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diamensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.082	2.10	0.47	11.9	1.30	33.0	1.35	34.3	1783	2653	0.206	0.034
2	33.6	7	0.27	6.78	0.082	2.10	0.43	11.0	1.23	31.3	1.28	32.6	1555	2314	0.260	0.035
4	21.2	1	0.21	5.20	0.082	2.10	0.37	9.4	1.10	27.9	1.15	29.1	1206	1794	0.401	0.038
6	13.3	1	0.16	4.10	0.082	2.10	0.33	8.3	1.00	25.5	1.06	26.8	969	1442	0.638	0.040

DW 300 R5

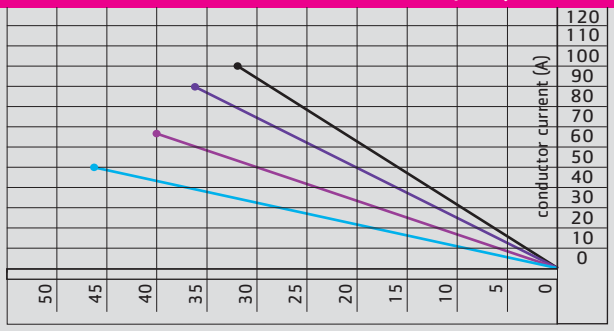
3 Conductors EPDM/NBR/GSTA 5 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diamensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0,30	7.65	0.092	2.33	0.48	12.3	1.33	33.9	1.39	35.2	1831	2725	0.206	0.034
2	33.6	7	0,27	6.78	0.092	2.33	0.45	11.4	1.26	32.1	1.31	33.4	1603	2386	0.260	0.036
4	21.2	1	0,21	5.20	0.092	2.33	0.40	9.9	1.13	28.7	1.18	30.0	1249	1858	0.401	0.039
6	13.3	1	0.16	4.10	0.092	2.33	0.35	8.8	1.04	26.4	1.09	27.6	1009	1502	0.638	0.042

r= conductor electrical resistance at 300 °F
x= inductive reactance at 60 Hz

Note: overall dimensions and weights are based on 0,025" armour tape thickness

VOLTAGE DROP AT 300 °F – 60 Hz – cosφ = 0,8



volt/1000 ft

1 AWG – 100 A

2 AWG – 90 A

4 AWG – 67 A

6 AWG – 50 A

Maximum current recommended to BHT (Bottom Hole Temperature) 268 °F (130 °C)

dega design group

FULL SYSTEM INTEGRITY FROM SAHARA TO SIBERIA

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PRYSMIAN CABLES & SYSTEMS

DW 300 RE
ROUND CABLE

300 °F

Temperature range

> **The maximum permissible temperature is 300 °F (149 °C).**

Cable construction

> **Conductors**
Solid or stranded tinned copper conductors.
A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

> **Insulation**
A proprietary quality EPDM compound is chemically bonded to the conductor. It is specially formulated to provide high dielectric and low swell characteristics in presence of oil.

> **Tape**
A fluoropolymer tape is helically applied over the insulation to provide added protection against oil and insulation decompression.

> **Braid**
A synthetic braid, applied with full coverage over the fluoropolymer tape, provides additional mechanical reinforcement and hoop strength.

> **Jacket**
A proprietary EPDM formulation, specially compounded to provide excellent heat, oil resistance and very low swell, is extruded over the cabled insulated conductors.

> **Armour**
An interlocking, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and enhanced crush resistance, available in thickness of 0.025" or 0.034".
Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.
A selection of various armour profiles is available to suit various down hole applications.

Refering standard

> **IEEE 1018**

7 times overall dimension

galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

50 N/mm²

-40 °F
(-40 °C)

+300 °F
(+149 °C)

DW 300 RE
ROUND CABLE

DW 300 RE3

3 Conductors EPDM/EPDM/GSTA 3 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diamensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.074	1.90	0.45	11,5	1.33	33.7	1.38	35.0	1712	2547	0.206	0.033
2	33.6	7	0.27	6.78	0.074	1.90	0.42	10.6	1.26	32.0	1.31	33.2	1490	2217	0.260	0.034
4	21.2	1	0.21	5.20	0.074	1.90	0.35	9.0	1.12	28.5	1.17	29.8	1149	1710	0.401	0.037
6	13.3	1	0.16	4.10	0.074	1.90	0.31	7.9	1.03	26.2	1.08	27.5	919	1367	0.638	0.039

DW 300 RE4

3 Conductors EPDM/EPDM/GSTA 4 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diamensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.082	2.10	0.47	11.9	1.30	33.0	1.35	34.3	1758	2616	0.206	0.034
2	33.6	7	0.27	6.78	0.082	2.10	0.43	11.0	1.23	31.3	1.28	32.6	1534	2283	0.260	0.035
4	21.2	1	0.21	5.20	0.082	2.10	0.37	9.4	1.10	27.9	1.15	29.1	1190	1771	0.401	0.038
6	13.3	1	0.16	4.10	0.082	2.10	0.33	8.3	1.00	25.5	1.06	26.8	957	1424	0.638	0.040

DW 300 RE5

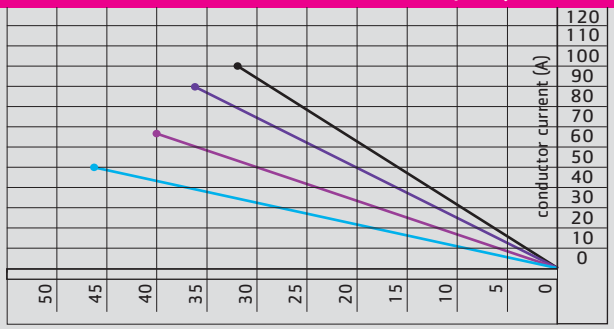
3 Conductors EPDM/EPDM/GSTA 5 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diamensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.092	2.33	0.48	12.3	1.33	33.9	1.39	35.2	1796	2672	0.206	0.034
2	33.6	7	0.27	6.78	0.092	2.33	0.45	11.4	1.26	32.1	1.31	33.4	1580	2351	0.260	0.036
4	21.2	1	0.21	5.20	0.092	2.33	0.40	9.9	1.13	28.7	1.18	30.0	1232	1833	0.401	0.039
6	13.3	1	0.16	4.10	0.092	2.33	0.35	8.8	1.04	26.4	1.09	27.6	997	1483	0.638	0.042

r= conductor electrical resistance at 300 °F
x= inductive reactance at 60 Hz

Note: overall dimensions and weights are based on 0,025" armour tape thickness

VOLTAGE DROP AT 300 °F – 60 Hz – cosφ = 0,8



volt/1000 ft

1 AWG – 100 A

2 AWG – 90 A

4 AWG – 67 A

6 AWG – 50 A

Maximum current recommended to BHT (Bottom Hole Temperature) 268 °F (130 °C)

dega design group

FULL SYSTEM INTEGRITY FROM SAHARA TO SIBERIA

Prysmian Cables and Systems
Viale Sarca 222, 20126 Milano, Italy - tel. +39 02 6449 1, fax +39 02 6449 2931 - www.prysmian.com

PRYSMIAN CABLES & SYSTEMS

DW 400 R
ROUND CABLE

400 °F

Temperature range

> **The maximum permissible temperature is 400 °F (204 °C).**

Cable construction

> **Conductors**
Solid or stranded tinned copper conductors.
A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

> **Insulation**
A proprietary quality EPDM compound is chemically bonded to the conductor. It is specially formulated to provide high dielectric and low swell characteristics in presence of oil.

> **Tape**
A fluoropolymer tape is helically applied over the insulation to provide added protection against oil and insulation decompression.

> **Braid**
A synthetic braid, applied with full coverage over the fluoropolymer tape, provides additional mechanical reinforcement and hoop strength.

> **Jacket**
A proprietary EPDM high temperature formulation, specially compounded to provide excellent heat, oil resistance and very low swell, is extruded over the cabled insulated conductors.

> **Armour**
An interlocking, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and enhanced crush resistance, available in thickness of 0.025" or 0.034".
Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.
A selection of various armour profiles is available to suit various down hole applications.

Refering standard

> **IEEE 1018**

7 times overall dimension

galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

50 N/mm²

-40 °F
(-40 °C)

+400 °F
(+204 °C)

DW 400 R
ROUND CABLE

DW 400 R3

3 Conductors EPDM/EPDM/GSTA 3 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diamensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.074	1.90	0.45	11.5	1.33	33.7	1.38	35.0	1674	2491	0.236	0.031
2	33.6	7	0.27	6.78	0.074	1.90	0.42	10.6	1.26	32.0	1.31	33.2	1452	2161	0.298	0.032
4	21.2	1	0.21	5.20	0.074	1.90	0.35	9.0	1.12	28.5	1.17	29.8	1115	1660	0.459	0.035
6	13.3	1	0.16	4.10	0.074	1.90	0.31	7.9	1.03	26.2	1.08	27.5	885	1317	0.731	0.037

DW 400 R4

3 Conductors EPDM/EPDM/GSTA 4 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diamensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.082	2.10	0.47	11.9	1.30	33.0	1.35	34.3	1720	2559	0.236	0.032
2	33.6	7	0.27	6.78	0.082	2.10	0.43	11.0	1.23	31.3	1.28	32.6	1497	2228	0.298	0.033
4	21.2	1	0.21	5.20	0.082	2.10	0.37	9.4	1.10	27.9	1.15	29.1	1154	1718	0.459	0.036
6	13.3	1	0.16	4.10	0.082	2.10	0.33	8.3	1.00	25.5	1.06	26.8	924	1375	0.731	0.038

DW 400 R5

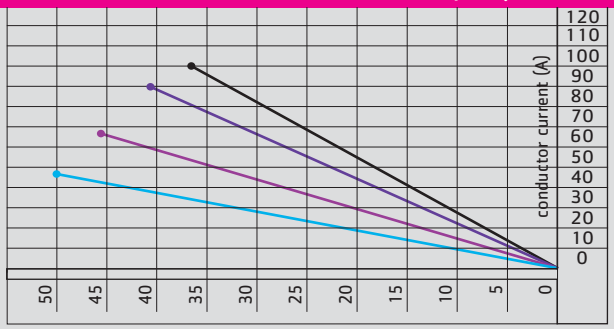
3 Conductors EPDM/EPDM/GSTA 5 kV Round Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		diamensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.092	2.33	0.48	12.3	1.33	33.9	1.39	35.2	1765	2626	0.236	0.033
2	33.6	7	0.27	6.78	0.092	2.33	0.45	11.4	1.26	32.1	1.31	33.4	1541	2294	0.298	0.034
4	21.2	1	0.21	5.20	0.092	2.33	0.40	9.9	1.13	28.7	1.18	30.0	1195	1779	0.459	0.037
6	13.3	1	0.16	4.10	0.092	2.33	0.35	8.8	1.04	26.4	1.09	27.6	961	1430	0.731	0.040

r= conductor electrical resistance at 400 °F
x= inductive reactance at 60 Hz

Note: overall dimensions and weights are based on 0,025" armour tape thickness

VOLTAGE DROP AT 400 °F – 60 Hz – cosφ = 0,8



volt/1000 ft

1 AWG – 100 A

2 AWG – 90 A

4 AWG – 67 A

6 AWG – 50 A

Maximum current recommended to BHT (Bottom Hole Temperature) 360 °F (182 °C)

dega design group

FULL SYSTEM INTEGRITY FROM SAHARA TO SIBERIA

Prysmian Cables and Systems
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PRYSMIAN CABLES & SYSTEMS

DW 450 FL
FLAT CABLE

450 °F

Temperature range

> **The maximum permissible temperature is 450 °F (232 °C).**

Cable construction

> **Conductors**
Solid or stranded tinned copper conductors.
A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

> **Insulation**
A proprietary quality EPDM compound is chemically bonded to the conductor. It is specially formulated to provide high dielectric and low swell characteristics in presence of oil.

> **Lead sheath**
A continuous, impervious, fatigue and corrosion resistant lead sheath is extruded over the insulation to provide excellent protection against oil, chemicals and gases and insulation decompression.

> **Braid**
An overlapped tape applied over the lead sheath, provides additional mechanical reinforcement, hoop strength and armour bedding. A suitable synthetic braid with full coverage can be used as an alternative.

> **Armour**
An 50% lapped, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and is available in thickness of 0.020" or 0.025".
Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.

Refering standard

> **IEEE 1018**

7 times major axis dimension

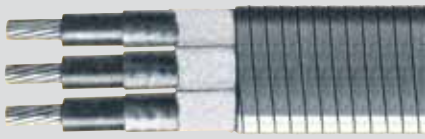
galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

50 N/mm²

-40 °F
(-40 °C)

+450 °F
(+232 °C)

DW 450 FL
FLAT CABLE



DW 450 FL4

3 Conductors EPDM/LEAD/GSTA 4 kV Flat Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		dimensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm²)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.068	1.73	0.44	11.1	0.62x1.68	15.8x42.7	0.66x1.72	16.8x43.7	2351	3498	0.251	0.041
2	33.6	7	0.27	6.78	0.068	1.73	0.40	10.2	0.59x1.58	15.0x40.2	0.62x1.62	16.0x41.2	2094	3116	0.316	0.042
4	21.2	1	0.21	5.20	0.057	1.47	0.32	8.1	0.51x1.33	12.9x33.9	0.54x1.37	13.9x34.9	1611	2398	0.488	0.044
6	13.3	1	0.16	4.10	0.057	1.47	0.28	7.0	0.46x1.20	11.8x30.6	0.50x1.24	12.8x31.6	1334	1985	0.777	0.047

DW 450 FL5

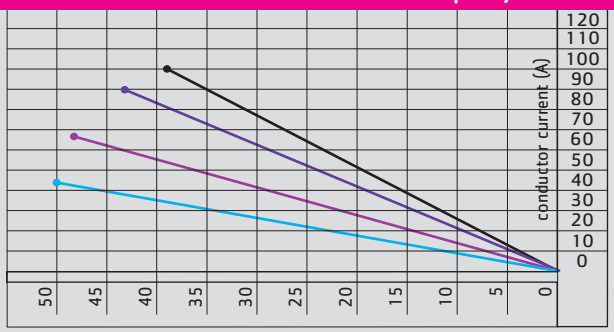
3 Conductors EPDM/LEAD/GSTA 5 kV Flat Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		dimensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm²)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
1	42.4	7	0.30	7.65	0.074	1.90	0.45	11.5	0.67x1.72	16.9x43.7	0.67x1.75	17.1x44.7	2404	3578	0.251	0.041
2	33.6	7	0.27	6.78	0.074	1.90	0.42	10.6	0.63x1.62	16.1x41.3	0.64x1.66	16.3x42.3	2147	3195	0.316	0.042
4	21.2	1	0.21	5.20	0.074	1.90	0.35	9.0	0.57x1.43	14.5x36.5	0.57x1.47	14.7x37.5	1734	2580	0.488	0.046
6	13.3	1	0.16	4.10	0.074	1.90	0.31	7.9	0.53x1.30	13.4x33.2	0.53x1.34	13.6x34.2	1458	2169	0.777	0.049

r= conductor electrical resistance at 450 °F
x= inductive reactance at 60 Hz

Note: overall dimensions and weights are based on 0,020" armour tape thickness

VOLTAGE DROP AT 450 °F – 60 Hz – cosφ = 0,8



volt/1000 ft

1 AWG – 100 A

2 AWG – 90 A

4 AWG – 67 A

6 AWG – 50 A

Maximum current recommended to BHT (Bottom Hole Temperature) 400 °F (204 °C)

dega design group

FULL SYSTEM INTEGRITY FROM SAHARA TO SIBERIA

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PRYSMIAN CABLES & SYSTEMS

DW 400 FKL
MOTOR LEAD FLAT CABLE

400 °F

Temperature range

> **The maximum permissible temperature is 400 °F (204 °C).**

Cable construction

> **Conductors**
Solid plain copper conductors.

> **Tape**
Two layers of Kapton tape are applied on the conductors to allow high thermal and electrical performaces.

> **Insulation**
A proprietary quality EPDM compound is chemically bonded to the conductor. It is specially formulated to provide high dielectric and low swell characteristics in presence of oil.

> **Lead sheath**
A continuous, impervious, fatigue and corrosion resistant lead sheath is extruded over the insulation to provide excellent protection against oil, chemicals and gases and insulation decompression.

> **Braid**
A synthetic braid, applied with full coverage over the lead sheath, provides additional mechanical reinforcement, hoop strength and armour bedding.
A suitable overlapped tape can be used as an alternative.

> **Armour**
An 50% lapped, Monel 400 tape armour provides excellent mechanical protection with a high degree of flexibility and is available in thickness of 0.015".
Stainless steel or fully galvanized (4 sides) steel tape armour (thickness 0.020") is available for use in less corrosive well environments.

Refering standard

> **IEEE 1018 as far as applicable**

7 times
major axis
dimension

galvanised steel tape: good
stainless steel tape: very good
monel tape: excellent

50 N/mm²

-40 °F
(-40 °C)

+400 °F
(+204 °C)

PRYSMIAN CABLES & SYSTEMS

DW 400 FKL
MOTOR LEAD FLAT CABLE

DW 400 FKL4

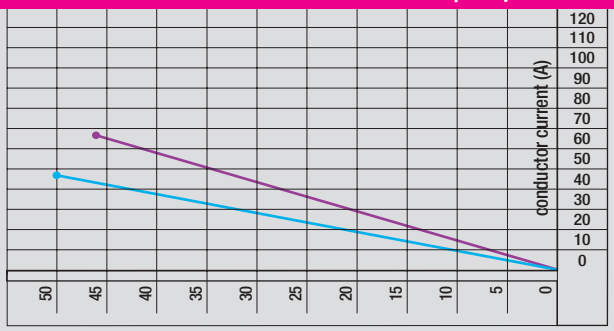
3 Conductors KAPTON/EPDM/LEAD/MONEL 4 kV Flat Pump Cable – MOTOR LEAD EXTENSION

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		dimensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
4	23.76	1	0.22	5.50	0.050	1.27	0.32	8.1	0.40x1.20	10.2x30.6	0.47x1.26	11.7x32.1	1478	2200	0.459	0.042
6	15.34	1	0.18	4.42	0.050	1.27	0.28	7.0	0.36x1.07	9.1x27.3	0.45x1.17	11.5x29.7	1155	1719	0.730	0.045

r= conductor electrical resistance at 400 °F
x= inductive reactance at 60 Hz

Note: overall dimensions and weights are based on 0,015" armour tape thickness

VOLTAGE DROP AT 400 °F – 60 Hz – cosφ = 0,8



volt/1000 ft

4 AWG – 67 A

6 AWG – 50 A

Maximum current recommended to BHT (Bottom Hole Temperature) 360 °F (182 °C)

dega design group

FULL SYSTEM INTEGRITY FROM SAHARA TO SIBERIA

Prysmian Cables and Systems
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PRYSMIAN CABLES & SYSTEMS

DW 205 COLD F 205 °F
FLAT CABLE

Temperature range

> **The maximum permissible temperature is 205 °F (96 °C)**

Cable construction

> **Conductors**
Solid tinned copper conductors.

> **Insulation**
A high quality electrical grade High Density Polyethylene (HDPE) provides the ideal balance of physical, electrical properties and low temperature behaviour.

> **Jacket**
A tough High Density Polyethylene (HDPE) black jacket guarantees high oil , heat and low temperature resistance.

> **Tape**
A suitable tape elically applied on the jacket layer, ensures an added protection to oil attack and core decompression.

> **Braid**
If required a synthetic braid provides an additional reinforcement and hoop strength.

> **Armour**
A 50% lapped, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and is available in thickness of 0.020" or 0.025".
Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.
The armour of Pirelli DW 205 Cold F cable is stamped with the letter "P" at regular intervals for ease of manufacturer identification.

7 times major axis dimension	galvanised steel tape: good stainless steel tape: very good monel tape: excellent	50 N/mm²	-49 °F (-45 °C)	+205 °F (+96 °C)

PRYSMIAN CABLES & SYSTEMS

DW 205 COLD F
FLAT CABLE

DW 205 F3 COLD

3 Conductors HDPE/HDPE/GSTA 3 kV Flat Pump Cable

size		conductor strands	conductor diameter		insulation thickness		insulation diameter		dimensions under armour		overall diamensions		weight		electrical parameters	
(awg)	(mm^2)		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r (Ω/kft)	x (Ω/kft)
4	21.2	1	0.21	5.20	0.063	1.60	0.35	8.4	0.47x1.42	12.0x36.0	0.65x1.61	16.5x41.0	970	1450	0.332	0.048
6	13.3	1	0.16	4.10	0.063	1.60	0.31	7.3	0.43x1.29	10.9x32.7	0.61x1.50	15.5x38.0	770	1150	0.527	0.050

r= conductor electrical resistance at 205 °F
x= inductive reactance at 60 Hz

Note: overall dimensions and weights are based on 0,020" armour tape thickness

dega design group

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PRYSMIAN CABLES & SYSTEMS