Westfälische Drahtindustrie GmbH
Werke Rothenburg & Berlin
www.wdi.de

conductor data sheet

material (abbreviation):	**E-AL**		
identification:	**150**		
standards:	**DIN 48201 Teil 5**	valid since:	**4 / 1981**

mechanical datas

conductor cross section:	**147,11**	mm^2	max. permissible strain:	**70**	N /mm^2
relation number of cross sections:	**-**		mean permissible strain (EDS):	**30**	N /mm^2
conductor diameter:	**15,8**	mm	continious strain:	**120**	N /mm^2
weight:	**406**	kg / km	thermal elongation coefficient:	**23**	10^-6/K
calculated breaking load:	**25,3**	kN	module of elasticity:	**57**	kN /mm^2
cross section related weight of length:	**0,0275**	N/m*mm^2			

electrical datas

DC-resistance at 20°C :	**0,196**	Ohm / km
conductivity at 20°C:	**35,38**	m / Ohm*mm^2
calculation factor of resistance:	**0,02757**	
coefficient of temperature:	**0,004**	1 / K
max. continious current load according to Webs:	**455**	A
up to 60 Hz by max. permissible conductor temperature ambient temperature 35°C; solar heating 900 W/m^2; wind velocity 0,6 m/s		

datas of construction

number of covering wires:	**37**		number of core wires:	**-**	
diameter of covering wires:	**2,25**	mm	core wires diameter:	**-**	mm
number of covering layers:	**-**		core diameter:	**-**	mm
covering cross section:	**-**	mm^2	core cross section:	**-**	mm^2

additional datas:

angle of max. oscillation: **66,62** °
according to VDE 0210;12/85 up to 200 m fieldlength ; q = 0,53 kN/m^2

max. permissible continious conductor temperature: **80** °C

note : **-**

WESTFÄLISCHE DRAHTINDUSTRIE GmbH
Werk Rothenburg
Friedensstr. 21 D - 06420 Rothenburg / Saale
Telefon (034691) 410 Telefax (034691) 41 206

conductor data sheet

material (abbreviation):	**E-AL**		
identification:	**240**		
standards:	**DIN 48201 Teil 5**	valid since:	**4 / 1981**

mechanical datas

conductor cross section:	**242,54**	mm^2	max. permissible strain:	**70**	N /mm^2
relation number of cross sections:	-		mean permissible strain (EDS):	**30**	N /mm^2
conductor diameter:	**20,3**	mm	continious strain:	**120**	N /mm^2
weight:	**670**	kg / km	thermal elongation coefficient:	**23**	10^-6/K
calculated breaking load:	**39,51**	kN	module of elasticity:	**55**	kN /mm^2
cross section related weight of length:	**0,0275**	N/m*mm^2			

electrical datas

DC-resistance at 20°C :	**0,1191**	Ohm / km
conductivity at 20°C:	**35,38**	m / Ohm*mm^2
calculation factor of resistance:	**0,01676**	
coefficient of temperature:	**0,004**	1 / K
max. continious current load according to Webs:	**625**	A
up to 60 Hz by max. permissible conductor temperature		
ambient temperature 35°C; solar heating		
900 W/m^2; wind velocity 0,6 m/s		

datas of construction

number of covering wires:	**61**		number of core wires:	-	
diameter of covering wires:	**2,25**	mm	core wires diameter:	-	mm
number of covering layers:	-		core diameter:	-	mm
covering cross section:	-	mm^2	core cross section:	-	mm^2

additional datas:

angle of max. oscillation: **58,58** °
according to VDE 0210;12/85 up to 200 m fieldlength ; q = 0,53 kN/m^2
max. permissible continious conductor temperature: **80** °C

note : -

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conductor data sheet

material (abbreviation):	**AAAC**		
identification:	**1144**		
standards:	**acc. EN 50182**	valid since:	**1 / 2015**

mechanical datas

conductor cross section:	**1143,5**	mm^2	max. permissible strain:	-	N /mm^2
relation number of cross sections:	-		mean permissible strain (EDS):	-	N /mm^2
conductor diameter:	**44**	mm	continious strain:	-	N /mm^2
weight:	**3164**	kg / km	thermal elongation coefficient:	**23**	10^-6/K
calculated breaking load:	**320**	kN	module of elasticity:	**52,5**	kN /mm^2
cross section related weight of length:	-	N/m*mm^2			

electrical datas

DC-resistance at 20°C :	**0,0292**	Ohm / km
conductivity at 20°C:	**30,74**	m / Ohm*mm^2
calculation factor of resistance:	**0,01126**	
coefficient of temperature:	**0,0036**	1 / K
max. continious current load according to Webs:	-	A
up to 60 Hz by max. permissible conductor temperature		
ambient temperature 35°C; solar heating		
900 W/m^2; wind velocity 0,6 m/s		

datas of construction

number of covering wires:	**91**		number of core wires:	-	
diameter of covering wires:	**4**	mm	core wires diameter:	-	mm
number of covering layers:	**5**		core diameter:	-	mm
covering cross section:	**1143,5**	mm^2	core cross section:	-	mm^2

additional datas:

angle of max. oscillation:	**36,92**	°
according to VDE 0210;12/85 up to 200 m fieldlength ; q = 0,53 kN/m^2		
max. permissible continious conductor temperature:	**80**	°C

note : **1144-AL3**

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conductor data sheet

material (abbreviation):	**E-AL**		
identification:	**500**		
standards:	**EN 50182 500-AL1**	valid since:	**11 / 2001**

mechanical datas

conductor cross section:	**499,8**	mm^2	max. permissible strain:	-	N /mm^2
relation number of cross sections:	-		mean permissible strain (EDS):	-	N /mm^2
conductor diameter:	**29,1**	mm	continious strain:	-	N /mm^2
weight:	**1382,9**	kg / km	thermal elongation coefficient:	**23**	10^-6/K
calculated breaking load:	**82,47**	kN	module of elasticity:	**55**	kN /mm^2
cross section related weight of length:	-	N/m*mm^2			

electrical datas

DC-resistance at 20°C :	**0,0579**	Ohm / km
conductivity at 20°C:	**35,38**	m / Ohm*mm^2
calculation factor of resistance:	**0,01676**	
coefficient of temperature:	**0,004**	1 / K
max. continious current load according to Webs:	**990**	A
up to 60 Hz by max. permissible conductor temperature		
ambient temperature 35°C; solar heating		
900 W/m^2; wind velocity 0,6 m/s		

datas of construction

number of covering wires:	**61**		number of core wires:	-	
diameter of covering wires:	**3,23**	mm	core wires diameter:	-	mm
number of covering layers:	-		core diameter:	-	mm
covering cross section:	-	mm^2	core cross section:	-	mm^2

additional datas:

angle of max. oscillation:	**48,66**	°
according to VDE 0210;12/85 up to 200 m fieldlength ; q = 0,53 kN/m^2		
max. permissible continious conductor temperature:	**80**	°C

note : -

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Seildatenblatt

Werkstoff:	**AL-1**		
Nennquerschnitt:	**1000**		
Norm:	**EN 50182**	gültig ab:	**1 / 2012**

Mechanische Werte

Sollquerschnitt:	**999,7**	mm^2	max. Zugspannung:	-	N /mm^2
Querschnittsverhältniszahl:	-		Mittelzugspannung:	-	N /mm^2
Seildurchmesser:	**41,1**	mm	Dauerzugspannung:	-	N /mm^2
Seilgewicht:	**2777,3**	kg / km	Wärmedehnzahl:	**23**	10^-6/K
Rechnerische Bruchkraft:	**159,95**	kN	prakt. Elastizitätsmodul:	**55**	kN /mm^2
QLK:	-	N/m*mm^2			

Elektrische Werte

Gleichstromwiderstandsbelag bei 20°C:	**0,0291**	Ohm / km
spezifische Leitfähigkeit des Leiters bei20°C:	**35,38**	m / Ohm*mm^2
Widerstandsberechnungsfaktor:	-	
Temperaturkoeffizient des Leiterwerkstoffes bei 20°C:	**0,004**	1 / K
Dauerstrombelastbarkeit nach Webs (bzw. DIN 48201): bis 60 Hz bei maximal zulässiger Seiltemperatur Umgebungstemperatur 35°C; Sonneneinstrahlung 900 W/m^2; Windgeschwindigkeit 0,6 m/s	**1540**	A

Seilaufbau

Leiterdrahtanzahl:	**91**		Trägerdrahtanzahl:	-	
Leiterdrahtdurchmesser:	**3,74**	mm	Trägerdrahtdurchmesser:	-	mm
Leiterdrahtlagenanzahl:	**4**		Kerndurchmesser:	-	mm
Mantelquerschnitt:	**999,7**	mm^2	Kernquerschnitt:	-	mm^2

Sonstige Daten:

maximaler Ausschwingwinkel: nach VDE 0210;12/85 bis 200 m Feldlänge; q = 0,53 kN/m^2	**38,64**	°
max. zul. Seiltemperatur:	**80**	°C

Bemerkung: -

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conductor data sheet

material (abbreviation):	**AAC**		
identification:	**910**		
standards:	**SS 4240802 SOLROS**	valid since:	**11 / 2000**

mechanical datas

conductor cross section:	**910,7**	mm^2	max. permissible strain:	-	N /mm^2
relation number of cross sections:	-		mean permissible strain (EDS):	-	N /mm^2
conductor diameter:	**39,2**	mm	continious strain:	-	N /mm^2
weight:	**2520**	kg / km	thermal elongation coefficient:	**23**	10^-6/K
calculated breaking load:	**152**	kN	module of elasticity:	**55**	kN /mm^2
cross section related weight of length:	-	N/m*mm^2			

electrical datas

DC-resistance at 20°C :	**0,0318**	Ohm / km
conductivity at 20°C:	**35,38**	m / Ohm*mm^2
calculation factor of resistance:	**0,01676**	
coefficient of temperature:	**0,004**	1 / K
max. continious current load according to Webs: up to 60 Hz by max. permissible conductor temperature ambient temperature 35°C; solar heating 900 W/m^2; wind velocity 0,6 m/s	-	A

datas of construction

number of covering wires:	**61**		number of core wires:	-	
diameter of covering wires:	**4,36**	mm	core wires diameter:	-	mm
number of covering layers:	**4**		core diameter:	-	mm
covering cross section:	**910,7**	mm^2	core cross section:	-	mm^2

additional datas:

angle of max. oscillation: **40,04** °
according to VDE 0210;12/85 up to 200 m fieldlength ; q = 0,53 kN/m^2
max. permissible continious conductor temperature: **80** °C

note : -

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conductor data sheet

material (abbreviation):	**AAC**		
identification:	**774**		
standards:	**SS4240802 STORMHATT**	valid since:	**8 / 2006**

mechanical datas

conductor cross section:	**774,2**	mm^2	max. permissible strain:	-	N /mm^2
relation number of cross sections:	-		mean permissible strain (EDS):	-	N /mm^2
conductor diameter:	**36,2**	mm	continious strain:	-	N /mm^2
weight:	**2142**	kg / km	thermal elongation coefficient:	**23**	10^-6/K
calculated breaking load:	**123,87**	kN	module of elasticity:	**55**	kN /mm^2
cross section related weight of length:	-	N/m*mm^2			

electrical datas

DC-resistance at 20°C :	**0,0373**	Ohm / km
conductivity at 20°C:	**35,38**	m / Ohm*mm^2
calculation factor of resistance:	**0,01676**	
coefficient of temperature:	**0,004**	1 / K
max. continious current load according to Webs:	**1290**	A
up to 60 Hz by max. permissible conductor temperature		
ambient temperature 35°C; solar heating		
900 W/m^2; wind velocity 0,6 m/s		

datas of construction

number of covering wires:	**61**		number of core wires:	-	
diameter of covering wires:	**4,02**	mm	core wires diameter:	-	mm
number of covering layers:	**4**		core diameter:	-	mm
covering cross section:	**774,2**	mm^2	core cross section:	-	mm^2

additional datas:

angle of max. oscillation: **42,4** °
according to VDE 0210;12/85 up to 200 m fieldlength ; q = 0,53 kN/m^2
max. permissible continious conductor temperature: **80** °C

note : -