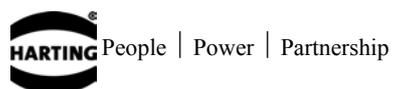
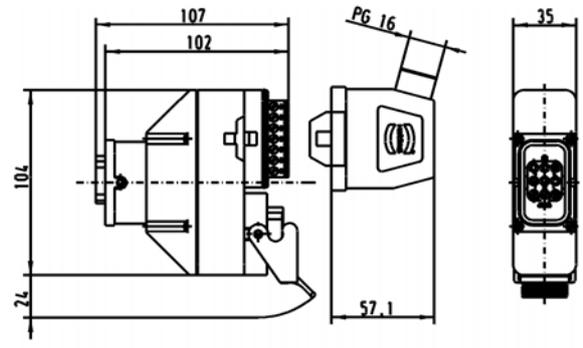


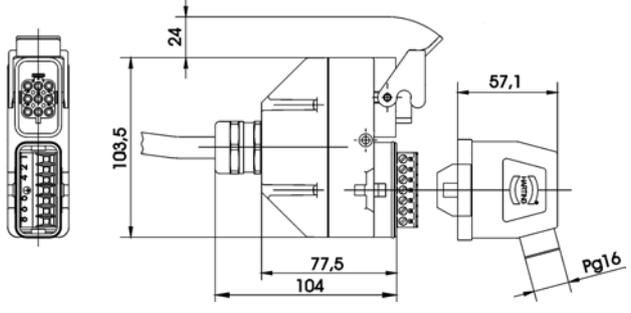
HARTING Electric



Han-Power[®] Energy Bus Components



Han-Power® T	Part-Number	Drawing	Dimensions in mm
 <p>Cable gland please order separately see page 10</p>	09 12 008 4701		

Han-Power® T with cable	Part-Number	Drawing	Dimensions in mm
	09 12 008 4707	 <p>Included in delivery: 3 m pre-assembled cable</p>	

Description

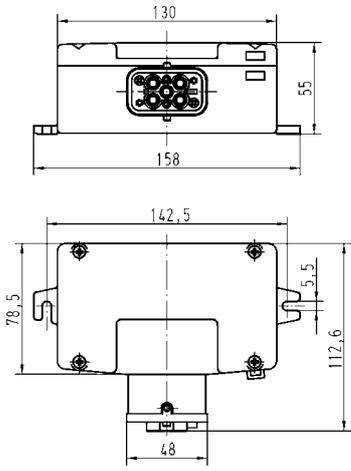
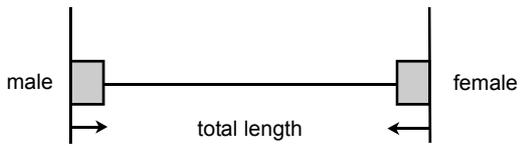
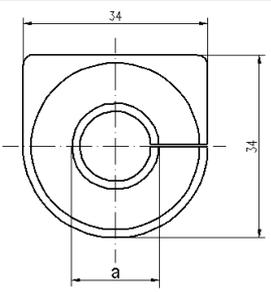
The Han-Power® T connector is applied for the assembly of serial power bus. Due to the T-functionality several users (i.e. motors, etc.) can be connected in series, as long as the total does not exceed the maximum current. The energy supply is realized by means of a terminal block with screw termination. The energy transmission as well as the device interface are realized by means of a Han® Q 8/0 connector.

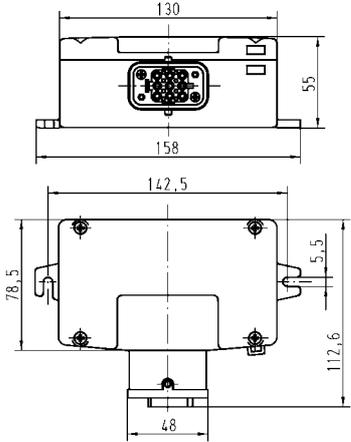
Features

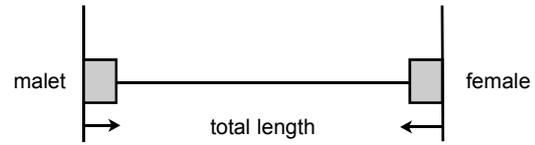
- 6 screw terminations for max. 4 mm² wire gauges
- Space-saving and compact design
- Leading protective ground in Han® Q 8/0 insert
- Assembly with standard tools
- T-functionality for max. 500 V:
 - energy bus structure: 7 x 4 mm²
 - power supply structure: 7 x 2.5 mm²
- T-piece with pre-assembled cable (valid only for 09 12 008 4707)
 - 7 x 2.5 mm² wire gauge
 - maximum cable length 3 m

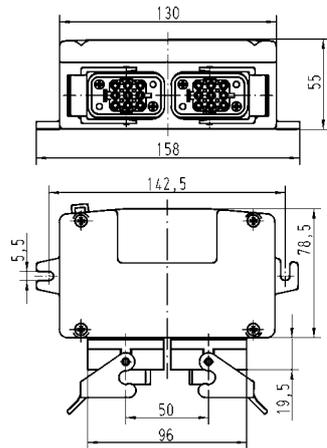
Description

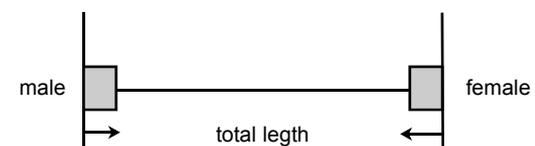
The Han-Power® S connector is suitable for the assembly of serial power bus. Having assembled the energy supply Han-Power® S can be inserted at any place of the power cable. The cable mantle has to be removed, the conductor is placed **without** interruption in the IDC. Han-Power® S is suitable for cables with single strands manufactured acc. to DIN VDE 0281/ DIN VDE 0295 with wire gauges of 2.5 mm² up to 4 mm². For the distribution to the device Han-Compact® hoods or cable to cable housings are used.

Han-Power® S		Part-Number	Drawing	Dimensions in mm
Power supply with 1 Han-Compact® hood with Han® Q4/2 		09 12 008 4804		
Cabling systems in fixed lengths			Drawing	Dimensions in mm
Cable lengths in m (total length) 1.5 pre-assembled on both sides, metal hood, 3 side entry 5 side entry 10 Cable: 5 x 4 mm ² 15 30		20 88 641 1015 20 88 641 1030 20 88 641 1050 20 88 641 1100 20 88 641 1150 20 88 641 1300		
Panel Feed Through Sealings		Part-Number	Drawing	Dimensions in mm
 <p>Blind grommet</p>		09 12 000 9969 09 12 000 9970 09 12 000 9971 09 12 000 9972 09 12 000 9973 09 12 000 9974	Kabel-ø a 7 -10 10-13 13-16 16-19 19-22	

Han-Power® S	Part-Number	Drawing	Dimensions in mm
<p>Power supply with 1 Han-Compact® hood with Han® Q 8/0</p>  <p>Suitable sealings see page 3</p>	09 12 008 4801		

Cabling systems in fixed lengths	Drawing	Dimensions in mm																		
<table border="0"> <tr> <td>Cable lengths in m</td> <td>1.5</td> <td>20 88 841 0015</td> </tr> <tr> <td>(total length)</td> <td>3</td> <td>20 88 841 0030</td> </tr> <tr> <td>pre-assembled on both sides,</td> <td>5</td> <td>20 88 841 0050</td> </tr> <tr> <td>metal hood,</td> <td>10</td> <td>20 88 841 0100</td> </tr> <tr> <td>side entry</td> <td>15</td> <td>20 88 841 0150</td> </tr> <tr> <td>Cable: 7 x 2.5 mm²</td> <td>30</td> <td>20 88 841 0300</td> </tr> </table>	Cable lengths in m	1.5	20 88 841 0015	(total length)	3	20 88 841 0030	pre-assembled on both sides,	5	20 88 841 0050	metal hood,	10	20 88 841 0100	side entry	15	20 88 841 0150	Cable: 7 x 2.5 mm ²	30	20 88 841 0300		
Cable lengths in m	1.5	20 88 841 0015																		
(total length)	3	20 88 841 0030																		
pre-assembled on both sides,	5	20 88 841 0050																		
metal hood,	10	20 88 841 0100																		
side entry	15	20 88 841 0150																		
Cable: 7 x 2.5 mm ²	30	20 88 841 0300																		

Han-Power® S	Part-Number	Drawing	Dimensions in mm
<p>Power supply with 2 screwed Han-Compact® bulkhead mounted housings, with 2 x Han® Q 8/0</p>  <p>Suitable sealings see page 3</p>	09 12 008 4802		

Cabling systems in fixed lengths	Drawing	Dimensions in mm																		
<table border="0"> <tr> <td>Cable lengths in m</td> <td>1.5</td> <td>20 88 821 0015</td> </tr> <tr> <td>(total length)</td> <td>3</td> <td>20 88 821 0030</td> </tr> <tr> <td>pre-assembled on both sides,</td> <td>5</td> <td>20 88 821 0050</td> </tr> <tr> <td>metal hood,</td> <td>10</td> <td>20 88 821 0100</td> </tr> <tr> <td>side entry</td> <td>15</td> <td>20 88 821 0150</td> </tr> <tr> <td>Cable: 7 x 2.5 mm²</td> <td>30</td> <td>20 88 821 0300</td> </tr> </table>	Cable lengths in m	1.5	20 88 821 0015	(total length)	3	20 88 821 0030	pre-assembled on both sides,	5	20 88 821 0050	metal hood,	10	20 88 821 0100	side entry	15	20 88 821 0150	Cable: 7 x 2.5 mm ²	30	20 88 821 0300		
Cable lengths in m	1.5	20 88 821 0015																		
(total length)	3	20 88 821 0030																		
pre-assembled on both sides,	5	20 88 821 0050																		
metal hood,	10	20 88 821 0100																		
side entry	15	20 88 821 0150																		
Cable: 7 x 2.5 mm ²	30	20 88 821 0300																		

Technical Details

Specifications

DIN VDE 61 984
DIN VDE 0110

Inserts Han® Q 8/0

Number of contacts 6 + PE
Rated current (partly loaded) 25 A
Rated voltage 500 V
Rated impulse voltage 6 kV
Pollution degree 3
Insulation resistance $\geq 10^{10} \Omega$
Flammability acc. to UL 94 V 0
Mechanical working life ≥ 500 cycles

Han® E Contacts

Material Copper alloy
Surface: Hard silver plated 3 μ m Ag
Contact resistance ≤ 1 m Ω
Crimp terminal - mm² 2.5 - 4 mm²
- AWG 18 - 12

Inserts Han® Q 4/2

Number of contacts 4/2 + PE
Rated current 40 A
Rated voltage 400 / 690 V
Rated impulse voltage 6 kV
Pollution degree 3
Insulation resistance $\geq 10^{10} \Omega$
Temperature range - 40° C ... + 125° C
Flammability acc. to UL 94 V 0
Mechanical working life ≥ 500 cycles

Han® C Contacts

Material Copper alloy
Surface: Hard silver plated 5 μ m Ag
Contact resistance ≤ 0.3 m Ω
Crimp terminal - mm² 2.5 - 6 mm²
- AWG 14 - 10
Max. insulation diameter of single strand 5 mm

Hoods/housings

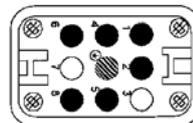
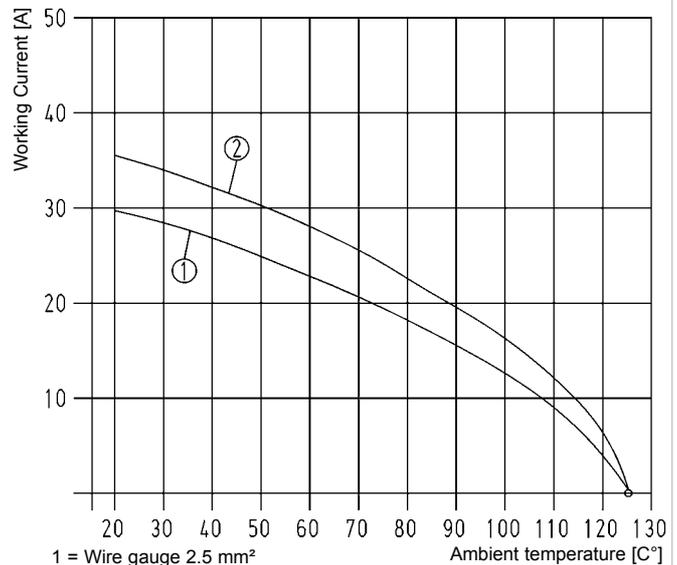
Material Polycarbonate
Colour RAL 9005
Sealing NBR
Temperature range
- Connecting temperature - 25° C ... + 40° C
- Working temperature - 25° C ... + 80° C
Flammability acc. to UL 94 V 0
Protection degree acc. to DIN 40050 in locked position IP 65

Cable

Design of conductor acc. to DIN VDE 0295 and DIN VDE 0281
Single strand
Wire gauge 2.5 mm²
Number of single strands 50 x 0.25 mm \emptyset
Outer diameter 3.6 mm \emptyset
Wire gauge 4 mm²
Number of single strands 56 x 0.30 mm \emptyset
Outer diameter 4.2 mm \emptyset

Derating-Diagram Han-Power® S

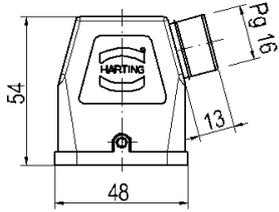
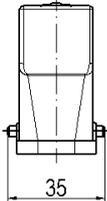
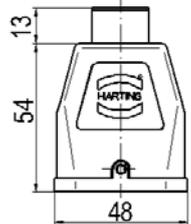
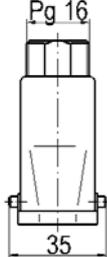
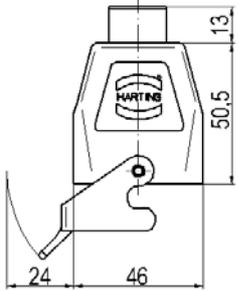
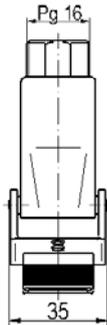
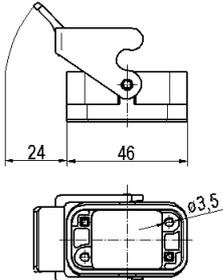
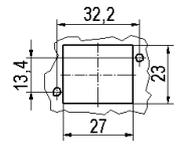
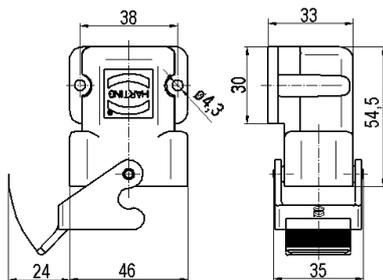
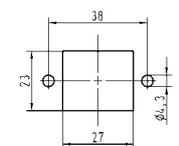
acc. to IEC 512-3

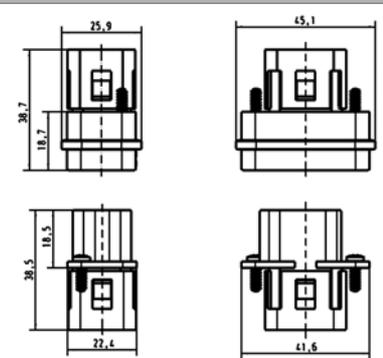


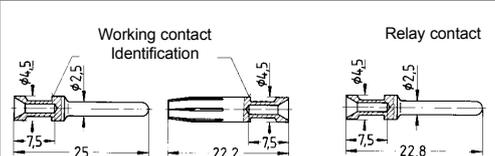
Han Q 8/0 partly loaded with wire gauge 7 x 4 mm²

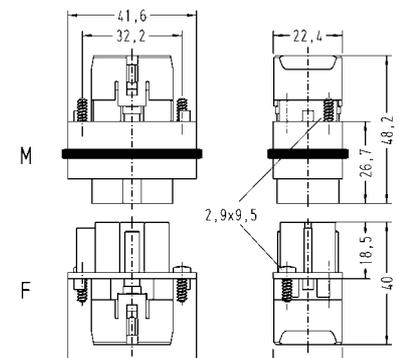
Features

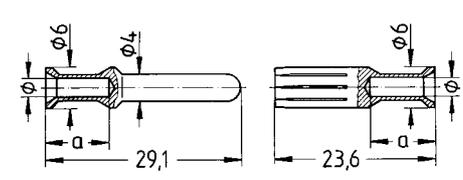
- 6 IDCs + PE for 2.5 mm² up to 4 mm² wire gauge
- No interruption of the energy supply
- Space-saving and compact design
- Leading protective ground within the insert
- Assembly with standard tools
- T-functionality for max. 500 V:
 - Energy bus structure: 7 x 4 mm²
 - Power supply structure: 7 x 4 mm²
- Marking of the terminal strip for the contact arrangement
- Power supply
 - Han-Power® S: Power supply has to be realized with 1 x Han® Q 8/0 in a Han-Compact® cable to cable hood.
 - Han-Power® S: Power supply has to be realized with 2 x Han® Q 8/0 in Han-Compact® hoods.
 - Han-Power® S: Power supply has to be realized with 1 x Han® Q 4/2 in a Han-Compact® cable to cable hood.

Identification	Part-Number	Drawing	Dimensions in mm
Hood with Pg 16 thread 	09 12 008 0527		
Hood with Pg 16 thread 	09 12 008 0427		
Cable to cable hood with Pg 16 thread 	09 12 008 0727		
Bulkhead mounted housing 	09 12 008 0327		Panel Cut Out 
Bulkhead mounted housing angled version 	09 12 008 0902		Panel Cut Out 

Inserts	Part-Number		Drawing	Dimensions in mm
	Male insert	Female insert		
Han® Q 8/0 Crimp contacts order separately 	09 12 008 3001	09 12 008 3101		

Contacts	Wire gauge mm ²	Part-Number		Drawing	Dimensions in mm																
		Male contact	Female contact																		
Han® E Contacts Power contacts silver plated 	1.5 2.5 4.0	09 33 000 6104 09 33 000 6102 09 33 000 6107	09 33 000 6204 09 33 000 6202 09 33 000 6207																		
Identification of Crimp contacts																					
<table border="1"> <thead> <tr> <th>Identification</th> <th colspan="2">Wire gauge</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>2 grooves</td> <td>1.5 mm²</td> <td>AWG 16</td> <td>7.5 mm</td> </tr> <tr> <td>3 grooves</td> <td>2.5 mm²</td> <td>AWG 14</td> <td>7.5 mm</td> </tr> <tr> <td>no grooves</td> <td>4 mm²</td> <td>AWG 12</td> <td>7.5 mm</td> </tr> </tbody> </table>						Identification	Wire gauge		Stripping length	2 grooves	1.5 mm ²	AWG 16	7.5 mm	3 grooves	2.5 mm ²	AWG 14	7.5 mm	no grooves	4 mm ²	AWG 12	7.5 mm
Identification	Wire gauge		Stripping length																		
2 grooves	1.5 mm ²	AWG 16	7.5 mm																		
3 grooves	2.5 mm ²	AWG 14	7.5 mm																		
no grooves	4 mm ²	AWG 12	7.5 mm																		

Inserts	Part-Number		Drawing	Dimensions in mm
	Male insert	Female insert		
Han® Q 4/2 Crimp contacts order separately 	09 12 006 3041	09 12 006 3141		

Contacts	Wire gauge mm ²	Part-Number		Drawing	Dimensions in mm																
		Male contact	Female contact																		
Han® C Contacts Power contacts silver plated 	2.5 4.0 6.0	09 32 000 6105 09 32 000 6107 09 32 000 6108	09 32 000 6205 09 32 000 6207 09 32 000 6208																		
<table border="1"> <thead> <tr> <th>Ø</th> <th colspan="2">Wire gauge</th> <th>Stripping length a</th> </tr> </thead> <tbody> <tr> <td>2.25</td> <td>2.5 mm²</td> <td>AWG 14</td> <td>9</td> </tr> <tr> <td>2.85</td> <td>4.0 mm²</td> <td>AWG 12</td> <td>9.6</td> </tr> <tr> <td>3.5</td> <td>6.0 mm²</td> <td>AWG 10</td> <td>9.6</td> </tr> </tbody> </table>						Ø	Wire gauge		Stripping length a	2.25	2.5 mm ²	AWG 14	9	2.85	4.0 mm ²	AWG 12	9.6	3.5	6.0 mm ²	AWG 10	9.6
Ø	Wire gauge		Stripping length a																		
2.25	2.5 mm ²	AWG 14	9																		
2.85	4.0 mm ²	AWG 12	9.6																		
3.5	6.0 mm ²	AWG 10	9.6																		

Han-InduNet[®] Cabling System



Cabling System Han[®] Q 8/0
Energy bus transmission

Connector:

DESINA[®] conforming product
More informationen conc. DESINA: www.desina.de



Identification

Components

Hoods

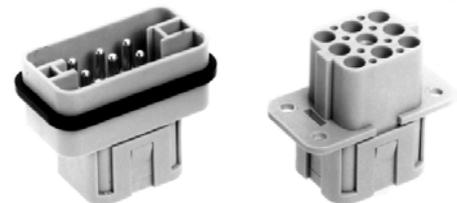
Han-Compact[®] hoods
cable glands order separately
Plastic version polycarbonate
Metal version zinc die cast



Insert*

Han[®] Q 8/0 male and female are available with standard crimp contacts Han[®] E, silver (optional gold) plated

* For further information see catalogue 'Industrial Division Han[®] Fiber Optic Components and Systems' or 'www.HARTING.com'



Cable

Outer diameter D < 14 mm
Material outside jacket PVC
Construction: electrical (power supply) 7 x 2.5 mm²



Technical Details

Features

Temperature range
- little movements -40° C ... +90° C
- permanent movements -20° C ... +70° C
Degree of protection IP 65 / IP 67
Operating rated voltage [DC] 500 V
Operating rated current 25 A

- Chemical application conditions:
very resistant to oil and chemicals

Contact Arrangement		1	2	3	4	5	6	7	8	PE
	male	Optional reserved for N	L2	–	Reserved for (+24V)	Reserved for (0V)	L3	–	L1	PE
	female									

Han-InduNet[®] Cabling System



Cabling System Han[®] Q 4/2
Energy bus transmission

Connector:

DESINA[®] conforming product 
More informationen conc. DESINA: www.desina.de



Identification

Components

Hoods

Han-Compact[®] hoods
cable glands order separately
Plastic version polycarbonate



Insert*

Han[®] Q 4/2 male and female are available with standard crimp contacts Han[®] E, silver (optional gold) plated

* For further information see catalogue 'Industrial Division Han[®] Fiber Optic Components and Systems' or 'www.HARTING.com'



Cable

Outer diameter D < 14 mm
Material outside jacket PVC
Construction: electrical (power supply) 5 x 4.0 mm²

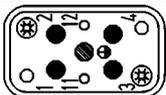


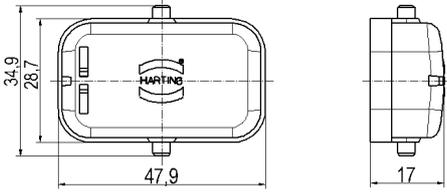
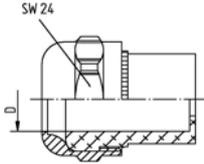
Technical Details

Features

Temperature range
- little movements -40° C ... +90° C
- permanent movements -20° C ... +70° C
Degree of protection IP 65 / IP 67
Operating rated voltage [DC] 400/690 V
Operating rated current 25 A

- Chemical application conditions:
very resistant to oil and chemicals

Contact arrangement		1	2	3	4	11	12	PE
	male	L1	L2	L3	N	Reserved for (0 V)	Reserved for (24 V)	PE
	female							

Accessories	Part-Number	Drawing	Dimensions in mm									
<p>Cover</p> 	<p>for male insert Cover without sealing 09 12 008 5407</p> <p>for male insert Cover with sealing 09 12 008 5408</p>											
<p>Cable gland Pg 16 order separately</p> 	<p>09 00 000 5059</p>	 <table border="1" data-bbox="1142 913 1358 1010"> <thead> <tr> <th>SW</th> <th colspan="2">Cable</th> </tr> </thead> <tbody> <tr> <td>24</td> <td>min.</td> <td>max.</td> </tr> <tr> <td></td> <td>11,5</td> <td>15,5</td> </tr> </tbody> </table>	SW	Cable		24	min.	max.		11,5	15,5	
SW	Cable											
24	min.	max.										
	11,5	15,5										
<p>Crimping Tool</p> <p>Use of crimping tool 09 99 000 0110 is also possible</p>	<p>09 99 000 0021</p>											
<p>Cable 7 x 2.5 mm²</p> <p>50 meters 100 meters 250 meters 500 meters</p>	<p>upon request</p>											