

## MASTERLINE Extreme Hybrid

### Features

- Hybrid cabling system for up to 9 RRHs
- Flexible hybrid cable with low bending radius and excellent cable routing properties
- Overlength management - cable jacket with ripcords for easy and quick stripping
- Ruggedised plastic enclosure with robust break-out cables
- No special installation tools required
- Hoisting grip for cable lifting
- Supplied on double-flange reels for straight forward unspooling
- Fiber optic breakout cables terminated with Q-ODC extensions to connect with Q-ODC RRH jumpers
- Power cable connectorised or blunt cut
- Integral earth point which can be connected to an earth lead with M8 ring terminal



### MASTERLINE Extreme Hybrid, 12 copper wires, 24 fibers, blunt cut, 12x Q-ODC extension/ LC uniboot, 10mm<sup>2</sup>, shielded, LSFH, Ø28mm, SM A1



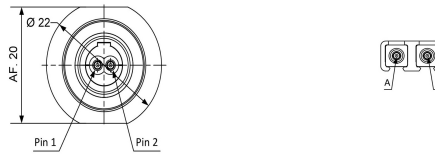
## Technical data

### Specifications

Description	Side A/ FTTA	Side B/ BTS
Number of fibers	24	24
Number of FO connectors	12	12
FO connector type	Q-ODC 2 extension	LC uniboot
Number of power wire	12	12
PO connector type	blunt cut	blunt cut
Dimension	height 315mm, Ø 69mm	
Divider		classic small
FO Break-out type	staggered	staggered
FO Break-out cable diameter	5.3 mm	2.1 mm
PO Break-out cable diameter	12.1 mm	

## MASTERLINE Extreme Hybrid

FO Connector Front view



### FO Channel Allocation

Fiber Optic					
Side A			Side B		
RRH	length	Pin	Pin	marking sleeve no.	break out length
1	500±45	1	B	1	1100±25
		2	A		
2	500±45	1	B	2	1050±25
		2	A		
3	500±45	1	B	3	1000±25
		2	A		
4	620±45	1	B	4	950±25
		2	A		
5	620±45	1	B	5	900±25
		2	A		
6	620±45	1	B	6	850±25
		2	A		
7	740±45	1	B	7	800±25
		2	A		
8	740±45	1	B	8	750±25
		2	A		
9	740±45	1	B	9	700±25
		2	A		
10	860±45	1	B	10	650±25
		2	A		
11	860±45	1	B	11	600±25
		2	A		
12	860±45	1	B	12	550±25
		2	A		

## MASTERLINE Extreme Hybrid

### PO Channel Allocation

Power						
RRH		Side A			Side B	
#	Pin	Label	Wire color		Wire no. (global version)	Wire color ( UL version)
			H+S	E///		
1	1	1	brown	black	1	Black
	2		blue	grey	2	White
	⊥		drain	drain	drain	drain
2	1	2	brown	black	3	Red
	2		blue	grey	4	Green
	⊥		drain	drain	drain	drain
3	1	3	brown	black	5	Orange
	2		blue	grey	6	Blue
	⊥		drain	drain	drain	drain
4	1	4	brown	black	7	White/ black
	2		blue	grey	8	Red/ black
	⊥		drain	drain	drain	drain
5	1	5	brown	black	9	Green/ Black
	2		blue	grey	10	Orange/ Black
	⊥		drain	drain	drain	drain
6	1	6	brown	black	11	Blue/ Black
	2		blue	grey	12	Black/ White
	⊥		drain	drain	drain	drain



## MASTERLINE Extreme Hybrid

### Environmental data

Description	Tested acc. to	Values
Temperatur range during installation	IEC 61300-2-22	-10°C up to 50°C
Temperatur range in service	IEC 61300-2-22	-40°C up to 75°C
Temperatur range in storage	IEC 61300-2-22	-40°C up to 75°C
Ingress protection radio end		IP67
Ingress protection base station		IP65
Impact resistance		IK10
UV resistant	ISO 4892-2	passed
Flammability rating	UL94-V0	passed
Salt mist	IEC 61300-2-26	96 h
Vibration	IEC 61300-2-1	10 to 500 Hz/ 10 g
Shock	IEC 61300-2-9	100 g

### Technical data for connector

#### Construction

Description	Connector left	Connector right
Type	Q-ODC 2 extension 	LC uniboot 
Insertion Loss	typ. $\leq 0.2$ dB	typ. $\leq 0.3$ dB
Insertion Loss	$97\% \leq 0.45$ dB	
Return Loss	$\geq 50$ dB	$\geq 50$ dB

## MASTERLINE Extreme Hybrid

### Technical data for FO cable

#### Construction

Description	Description
Cable type	Non-armoured multi-fiber loose tube jelly-free
Fiber type	SM E9/125 A1 acc. G.657.A1
Jacket Material	LSFH
Number of fiber optic cables	1
Diameter cable 1	5.0 mm
Number of fibers per fiber optic cable 1	24

### Technical data for Hybrid cable

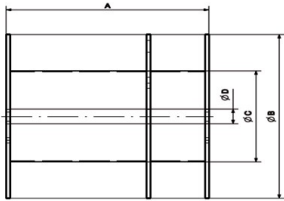
#### Construction

Description	Values	
Conductor cross section	10 mm <sup>2</sup>	
Conductor class	class 2, IEC 60228	
Current per conductor	31 A	
Rated voltage	0.6k V AC, 1.0 kV DC	
Resistance	1.83 Ohm/km	
Drain wire	Copper 6 mm <sup>2</sup> , class 2 IEC 60228	
Outer sheath material	LSFH TM thermoplastic TPE-HF	
Screen material	Copper foil 52 µm, overlapping	
Cable diameter	28 mm	
Min. bending radius	during installation	10x cable-Ø
	in service	8x cable-Ø
Temperature range	in service	-40°C to +85°C
UV resistant		passed according to IEC 68-2-5
Flame retardant		passed according to IEC 60332-1-2:2004.
Standards		IEC 60502-1:2004-04
Weight		1'723 kg/km

## MASTERLINE Extreme Hybrid

### Packaging information

Description	Values
Wound up on the spool	standard
Width(A)	511 mm
Flange Diameter(B)	800 mm
Core diameter(C)	420 mm
Central hole (D)	80 mm



### Ordering information

Length	Item no.	Masterline hybrid code
60m	85019962	MLEH6C-10M-0-00QG-008U-060 NN
80m	85019964	MLEH6C-10M-0-00QG-008U-080 NN