FlowCapt
snowdrift & wind monitoring sensor

FC4
Catalogue

$C\,E$

Document version: v4.00

The ISAW sensors are robust, high performance, zero-maintenance sensors ideal for a wide range of applications.

This catalogue lists all FlowCapt sensor equipment. For more information about the specifications and operation of the sensors, please refer to the User Guide available at www.isaw-products.com.

The articles and dimensions described in this catalogue may be subject to change.

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FLOWCAPT SENSOR

FC4	FlowCapt

Note: *Factory cable length: 5 m*

The FlowCapt FC4 sensor is an ultra-robust instrument measuring solid particle flux intensity and wind speed.

- ■ Low-power omni-directional instrument with no mobile parts (totally sealed acoustic instrument)
- ■ Corrosion free and resistant to the most extreme conditions and environments
- ■ Plug-and-Play, user-configurable intelligent sensor
- ■ Analog outputs and digital communication
- ■ Can be connected to almost any external central unit or peripheral
- ■ Supports SDI-12, Modbus RTU RS485, and IoT compatible (internal processing and memory)
- ■ Swiss made

Typical applications

- ■ Meteorology (blowing snow, snowdrift and wind)
- ■ Roadside, railway and cable transport protection
- ■ Power and communication lines
- ■ Cold regions land management
- ■ Applied scientific research
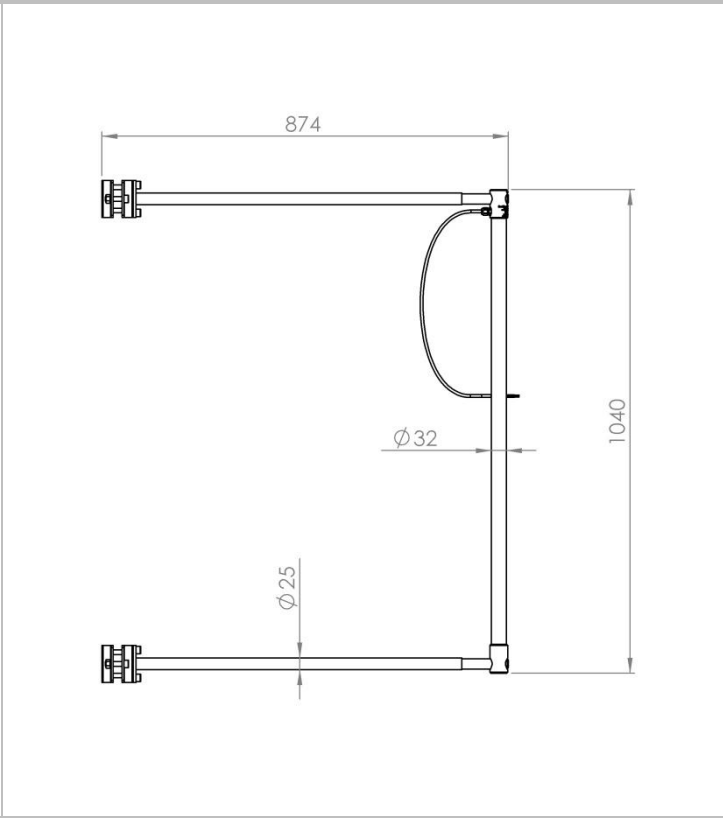- ■ Industrial surveillance

For more information about the sensors and their configuration, please refer to the **User Guide** available on www.isaw-products.com.

FLOWCAPT SETS

The FlowCapt FC4 sensor is available in the following configurations:

ORDER REF.	Description	Set content			
		Sensor FC4	Mounting kit	Tripod mast	USB dongle
FCBRA	FlowCapt sensor with mounting kit	1	1		1
FC2MA	Pair of FlowCapt sensors fastened on a tripod mast	2	2	1	1

FCBRA – FlowCapt sensor with mounting kit

All dimensions are in mm

## FC2MA – Pair of FlowCapt sensors fastened on a tripod mast
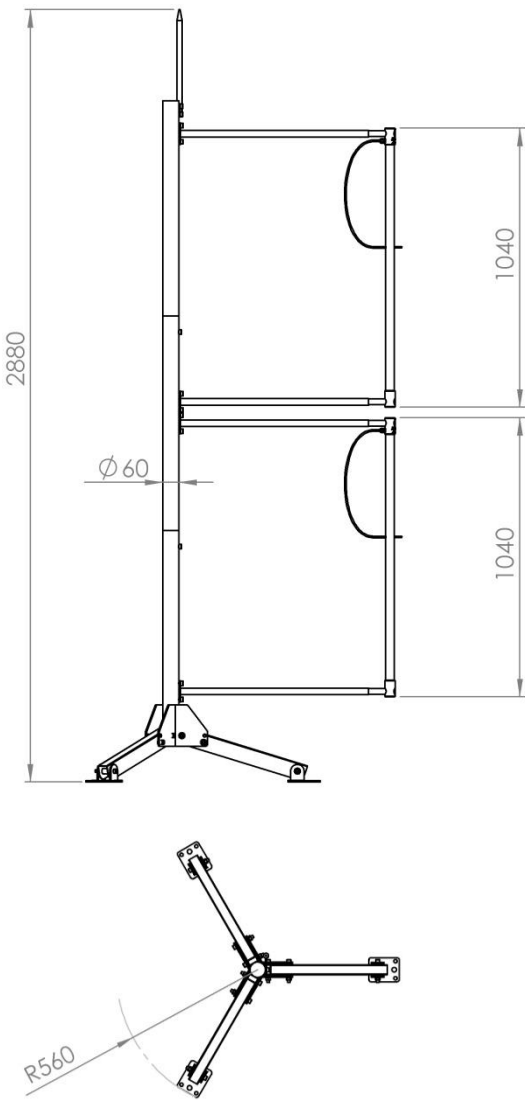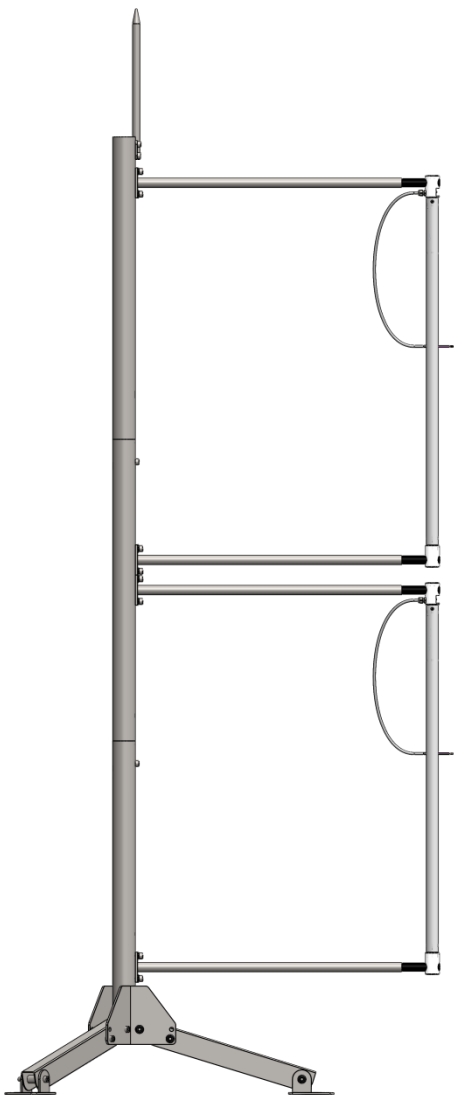
**Note:** Factory cable length: 5 m

All dimensions are in mm

FLOWCAPT ACCESSORIES

| REF.	Description	Can be ordered separately
C2BRA	Mounting kit (included in **FCBRA**)	
TMAST	Tripod mast (included in **FC2MA**)	●
UDONG	USB link accessory (provided with each **FC4** sensor)	
MOBUS	Modbus adapter	●
EXT10	Extension cable, 10 meters	●

C2BRA – Mounting kit
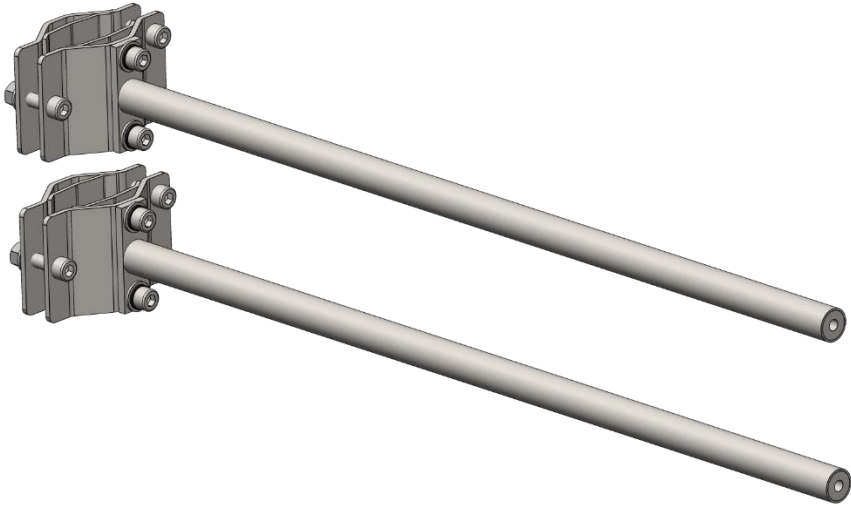
The FC4 mounting kit is composed of 2 cylindrical arms fastened to V brackets adaptable to a mast of outer diameter between 16 and 86 mm.
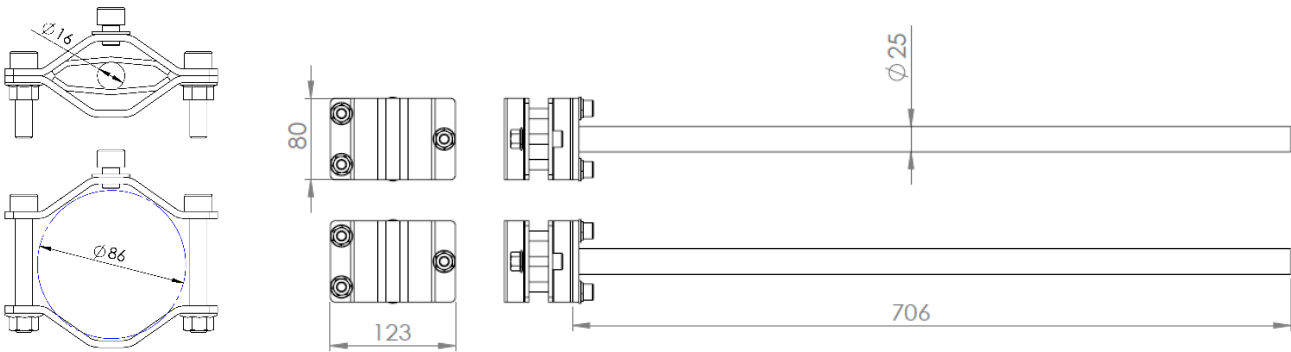
Note: All screw threads are M10.

*All dimensions are in mm*

TMAST – Tripod mast
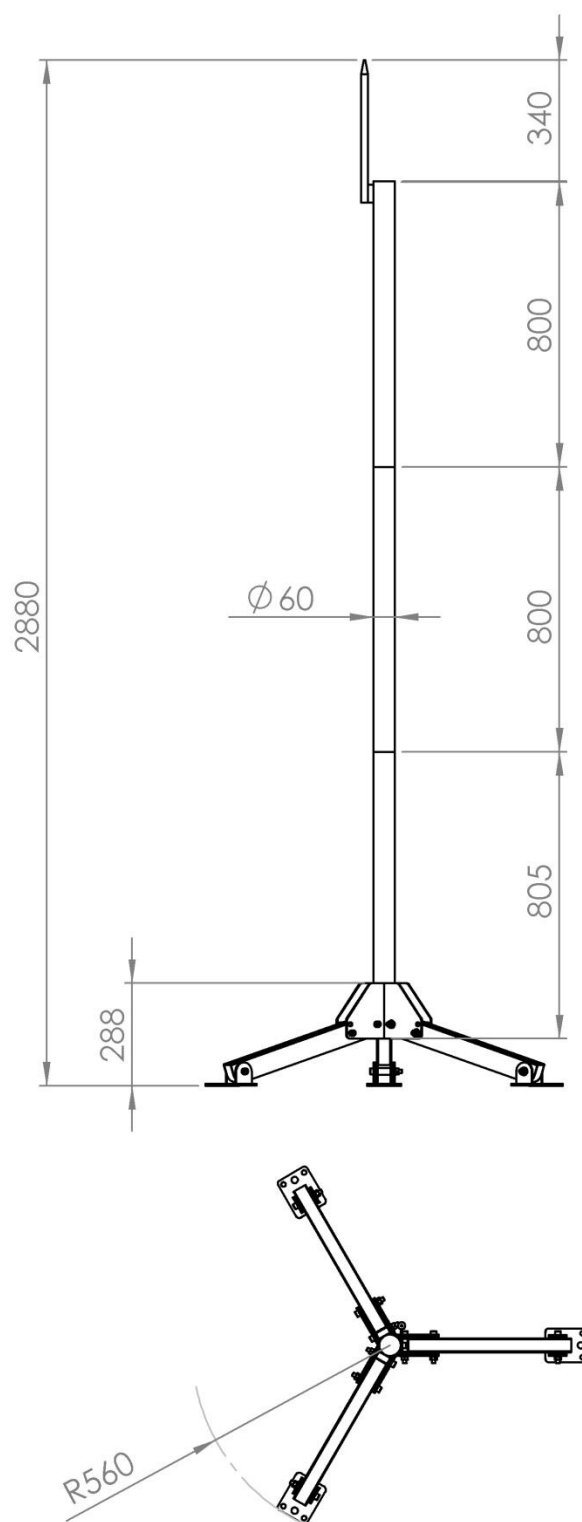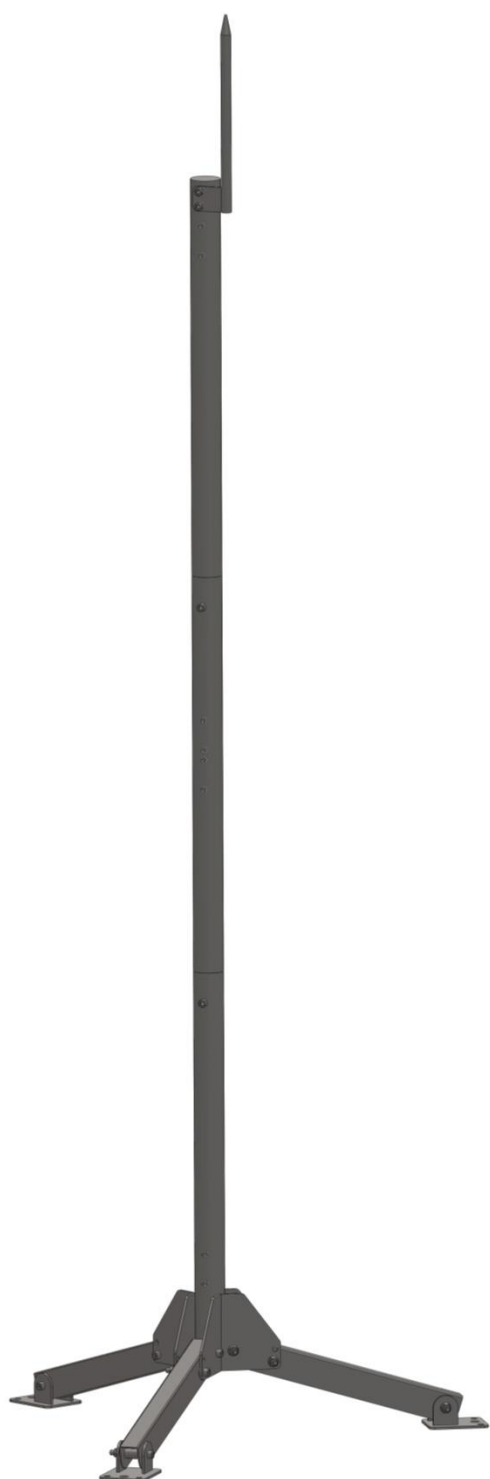
TMAST is a lightweight, robust, cost-effective and universal stainless steel tripod mast that is easily transportable. It allows all the usual ISAW sensor mountings, as well as supporting additional sensors or all other accessories or auxiliary equipment.

The mast is dismountable (3 parts) and equipped with 3 tiltable legs and a lightning rod.

All dimensions are in mm

UDONG – USB Link accessory
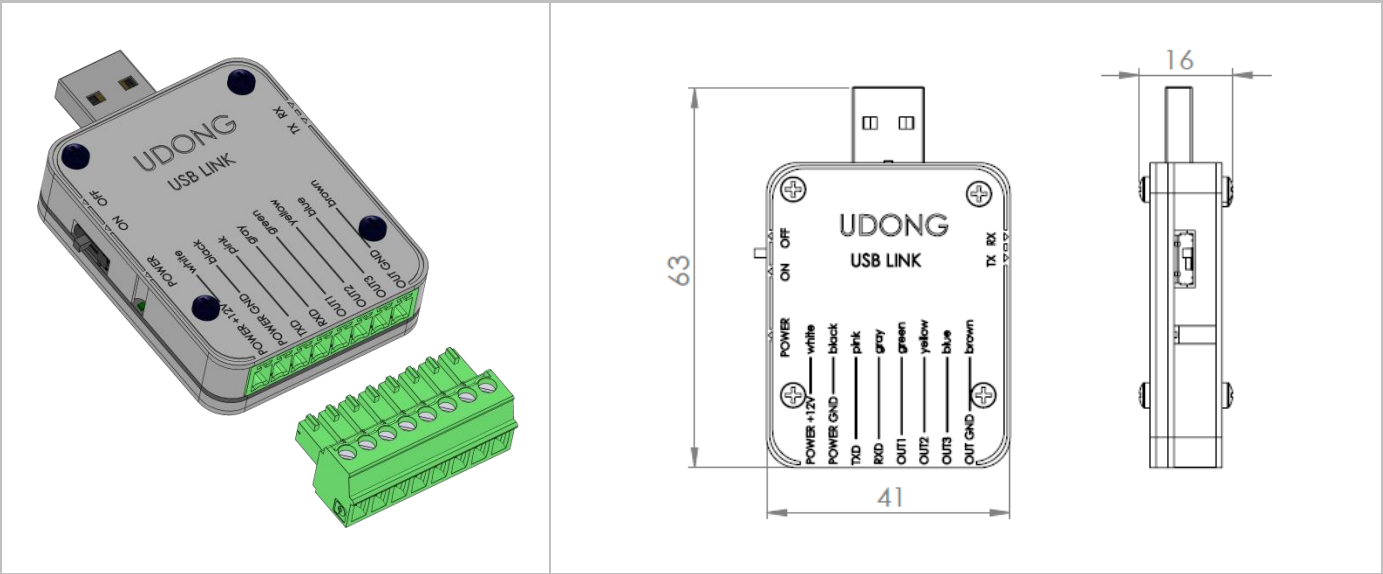
The USB link dongle (UDONG), provided with the sensors, is a direct physical connection accessory from the sensor to a USB port. It enables the sensor's power supply and the immediate use of all the software features of the ISAW-TOOLBOX freeware. The USB dongle is generic and can thus be used or interchanged with all ISAW sensors.

All dimensions are in mm

MOBUS – Modbus Adapter
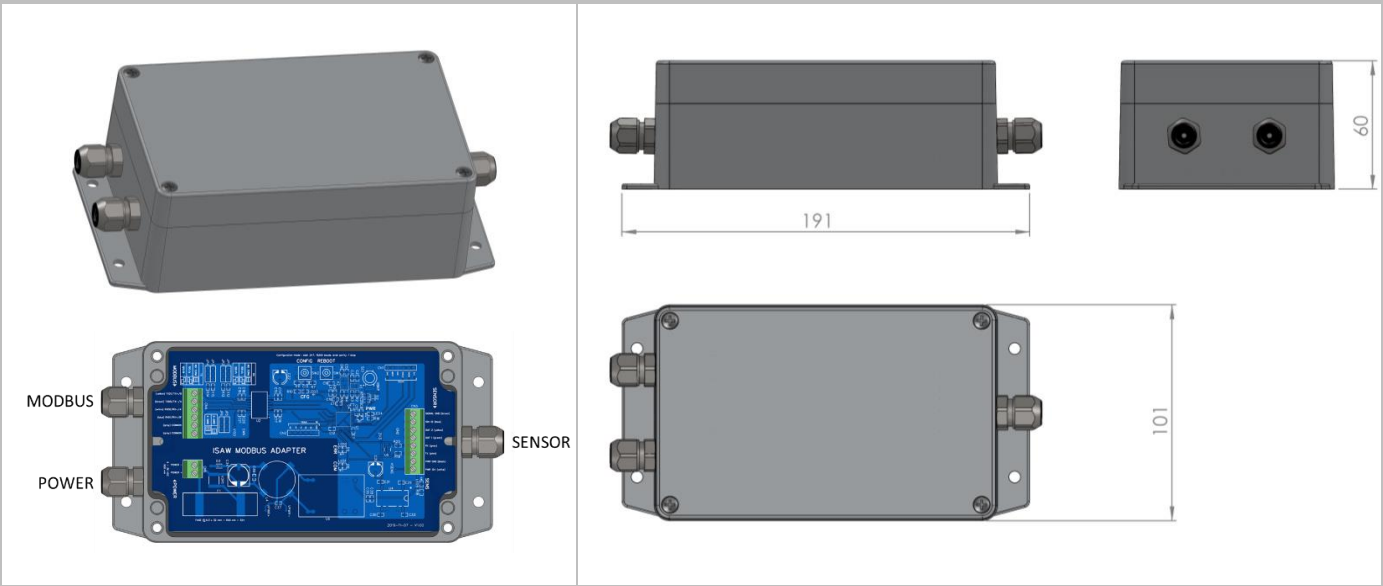
The ISAW Modbus RTU RS485 Adapter (MOBUS) enables the power supply and connection of any ISAW sensor to a Modbus network. MOBUS is the recommended accessory to interconnect the sensor through the open serial Modbus RTU (RS-485) protocol based on a master/slave or client/server architecture. The fieldbus environment is the base level group of digital networks in the hierarchy of plant networks.

All dimensions are in mm

EXT10 – Cable extension, 10 meters
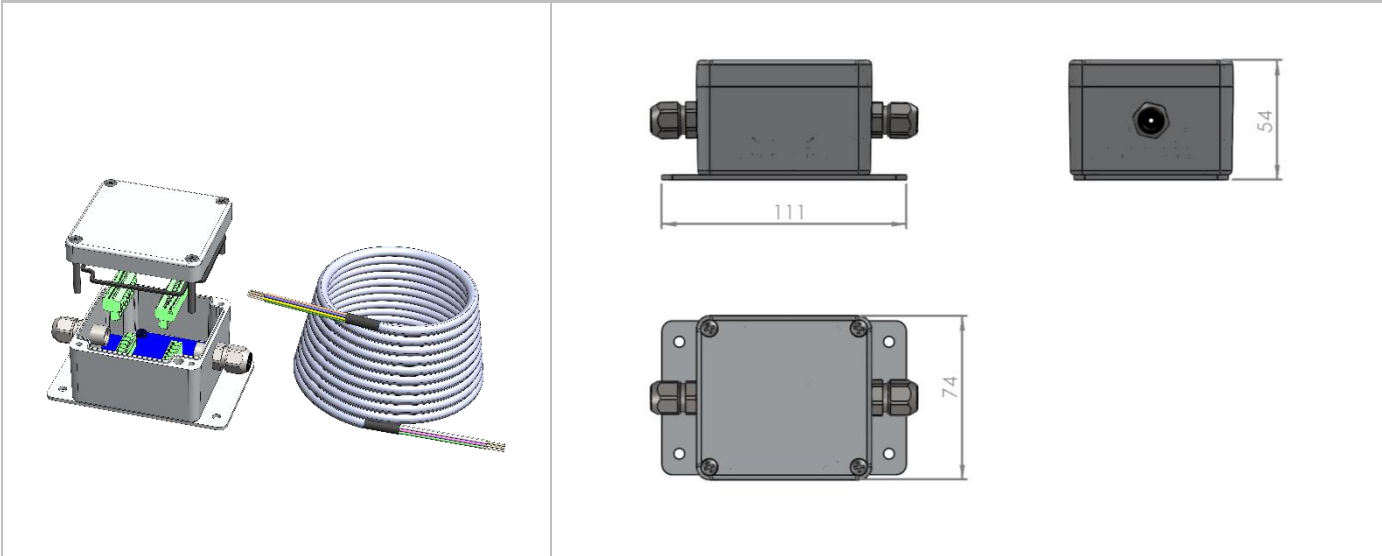
Each sensor is delivered with a 5 m cable (see specifications on page 11). Use one or several EXT10 cable extensions to extend this default length up to typically 200 m.

EXT10 is a 10 meters extension of the sensor cable. It is equipped at one end with an IP68 aluminum enclosure junction box, which contains an 8-pin screw connector to connect any ISAW sensor or chaining several EXT10 extension cables.

All dimensions are in mm

FLOWCAPT MOUNTING INSTRUCTIONS

■ **FlowCapt FC4 cable**

■ **FlowCapt Sets package content**

■ **FCBRA Mounting instructions**

■ **FC2MA Mounting instructions**

■ **TMAST Package content (for FC2MA only)**

■ **TMAST Mounting instructions (for FC2MA only)**

FlowCapt FC4 cable
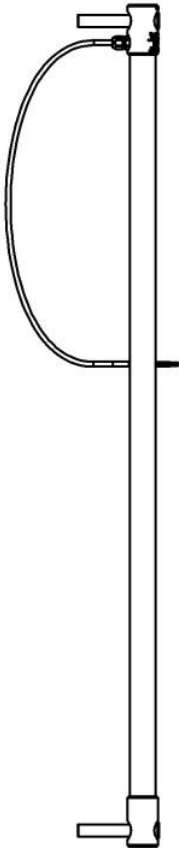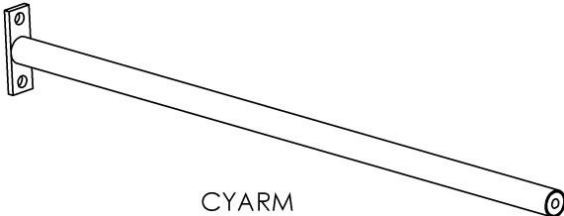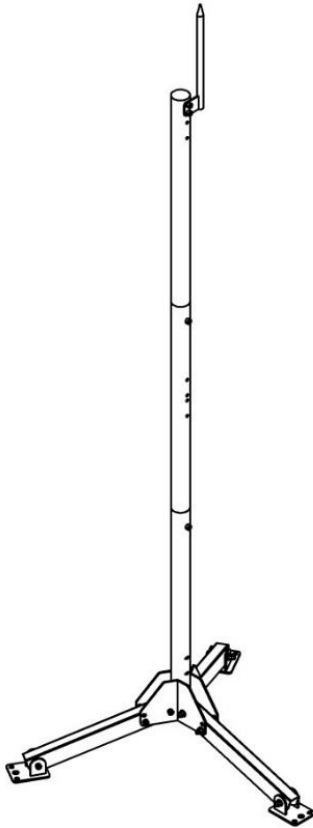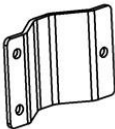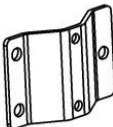
Each sensor is delivered with a **5 m cable** prepared with bootlace ferrules at each of its 8 conducting wires, ready to be plugged into the 8-pin screw terminals of the ISAW accessories or any other terminal of your choice.

The cable is a **LÜTZE SUPERFLEX ® TRONIC (C) PUR 7×0.25**, ref. 117103, with 7 conductors AWS 24 / 0.25 mm^2). The 8th conductor (color: BLACK) is a 10 cm length termination welded on the shield.
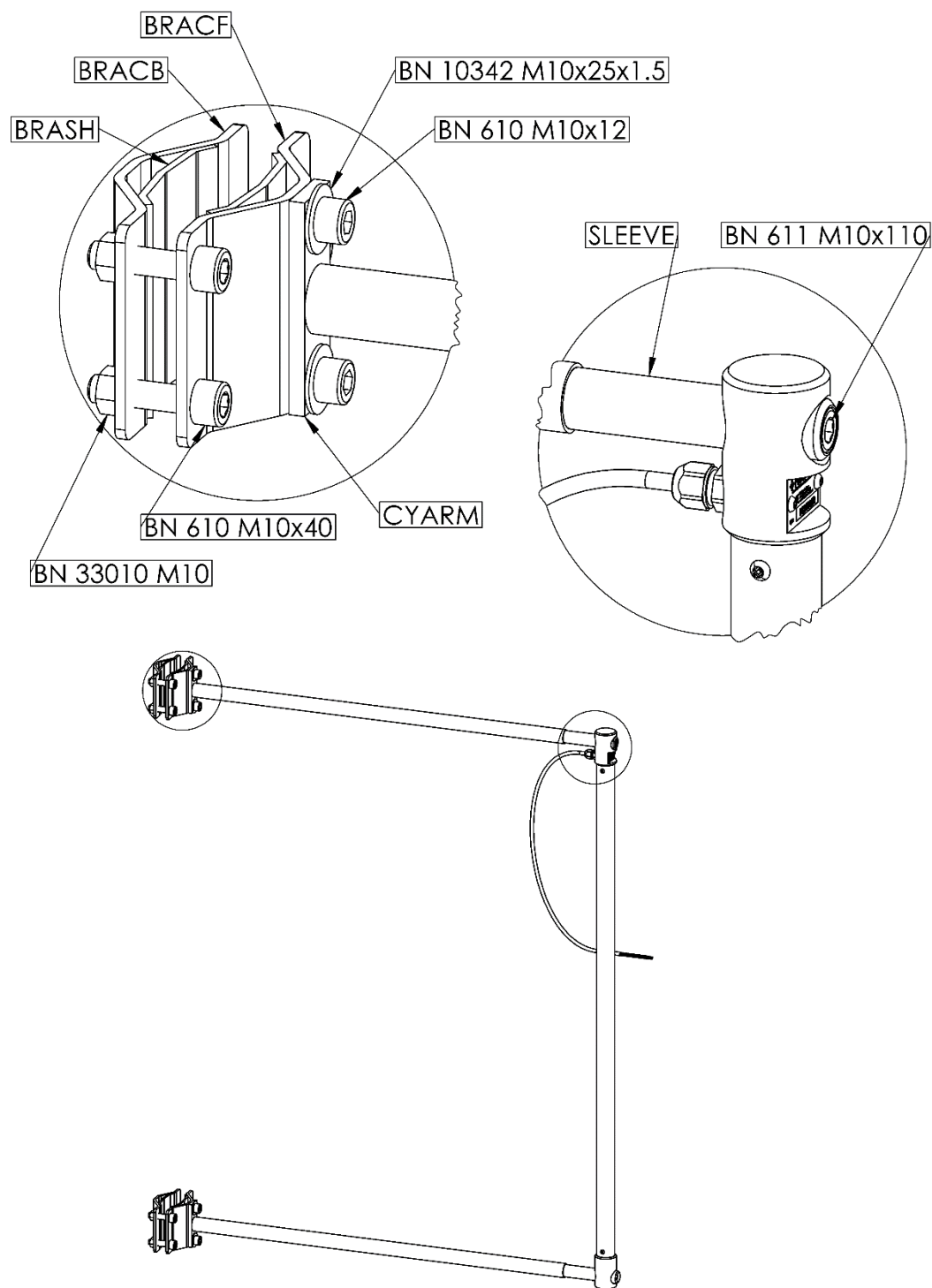
WARNING: It is strongly advised **not to shorten the factory cable**. Should you be obliged to, you must absolutely treat the shield as the BLACK (POWER GND) conductor, that is, protect the nude shield with a black thermo sleeve, crimp a terminal, and make sure to connect it to the GND of your connected device.

FlowCapt Sets package content

| Item ref.	Description	Quantity FCBRA	FC2MA
FC4	FC4 FlowCapt sensor	1	2
UDONG	USB dongle	1	1
CYARM	Cylindrical arm	2	4
BRACF	Front bracket	2	
BRACB	Back bracket	2	
BRASH	Reduction shim	4	
SLEEVE	Plastic sleeve	2	4
BN 611 M10x110	M10 × 110 mm screw	2	4
BN 611 M10X70	M10 × 70 mm screw	6	
BN 610 M10X40	M10 × 40 mm screw	6	
BN 610 M10x12	M10 × 12 mm screw	4	8
BN 10342 M10x25x1.5	M10 washer 1.5 mm thick	4	8
BN 33010 M10	M10 securing nut	6	
TMAST	Tripod mast (see TMAST Package content)		1

Sensor — FC4

Mounting kit — CYARM

Bracket kit — BRACF, BRACB, BRASH

USB dongle — UDONG

Screw kit — BN 611 M10x110 (x4), BN 611 M10x70 (x6), BN 610 M10x40 (x6), BN 610 M10x12 (x4), SLEEVE (x4), BN 33010 M10 (x6), BN 10342 M10x25x1.5 (x4)

Tripod mast — TMAST

FCBRA Mounting instructions

- Always mount the **SENSOR HEAD** (end with cable) **ON TOP**.
- For a **MAST OF OUTER DIAMETER ≥ 60 mm**, replace the screws BN 610 M10X40 with BN 611 M10X70.
- For a **MAST OF OUTER DIAMETER ≥ 65 mm**, remove the reduction shims (BRASH).
- To fasten the sensor on a **FLAT SURFACE**, screw the front brackets (BRACF) directly onto the surface.
- The sensor's cable must be **tightly secured** to the arm and mast using tie wraps.
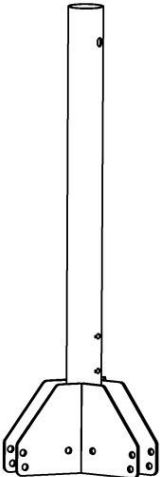
FC2MA Mounting instructions
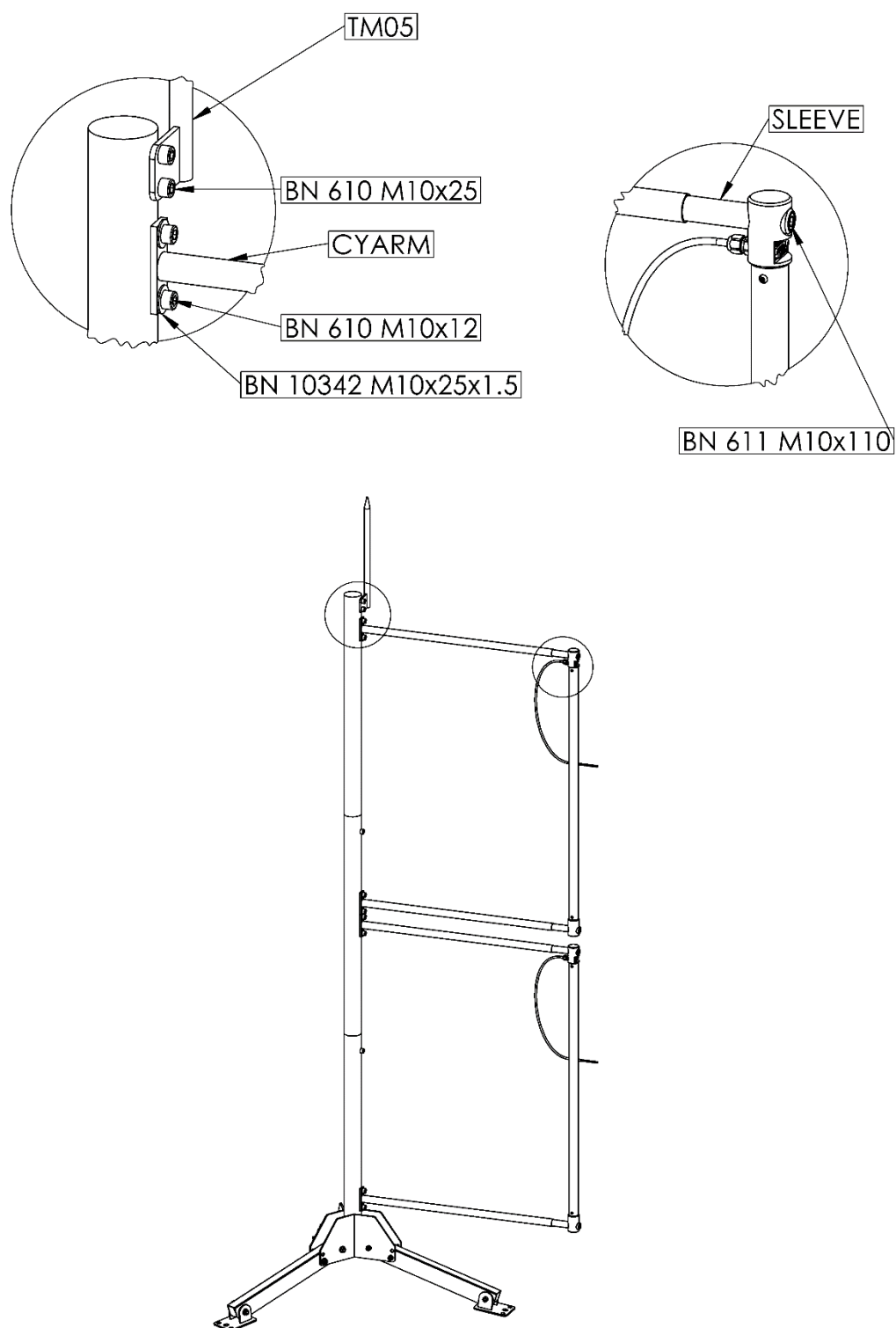
- See **TMAST Mounting Instructions** to assemble the tripod mast (TMAST).
- Always mount the **SENSOR HEAD** (end with cable) **ON TOP**.
- The sensor's cable must be **tightly secured** to the arm and mast using tie wraps.

TMAST Package content

Ref.	Description	Quantity
TM01	Leg with inclinable foot	3
TM02	Base tube	1
TM03	Mid tube	1
TM04	Top tube	1
TM05	Lightning rod	1
BN 610 M10x25	M10 $\times$ 25 mm screw	4
BN 611 M10x70	M10 $\times$ 70 mm screw	9
BN 13289 M10x25x4	M10 washer 4 mm thick	9
BN 33010 M10	M10 securing nut	9

Mast kit

TM01
x 3

TM01
x 1

TM03
x 1

TM04
x 1

TM05
x 1

Screw kit

BN 611 M10X70   BN 610 M10x25   BN 13289 M10x25x4   BN 33010 M10
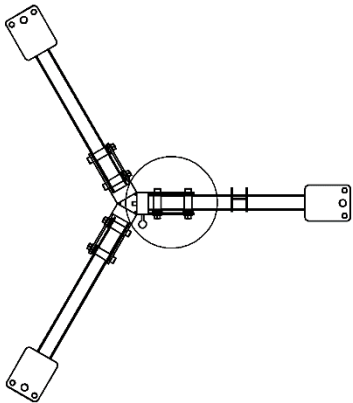
x 9

x 4

x 9

x 9

TMAST Mounting instructions

BN 610 M10x25

BN 610 M10x25

BN 33010 M10   BN 611 M10x70

BN 13289 M10x25x4
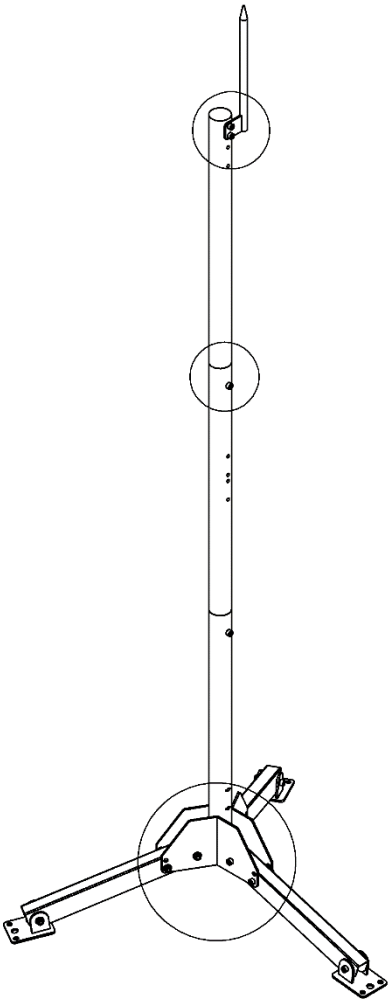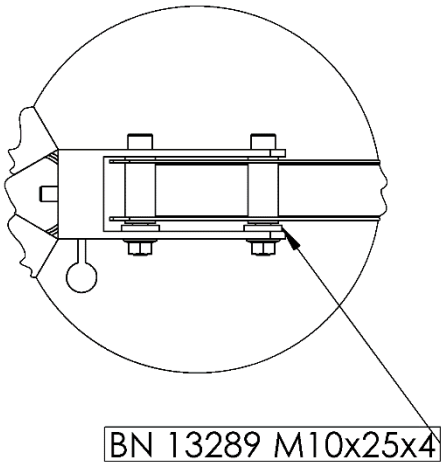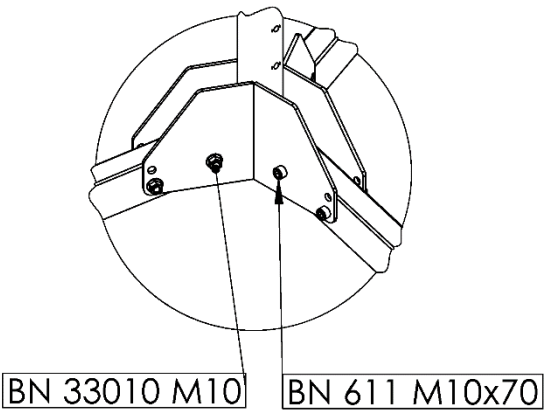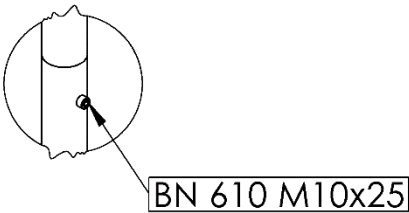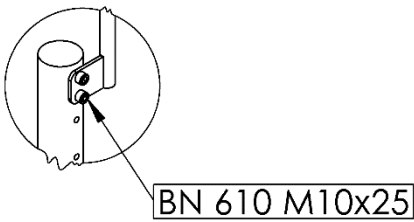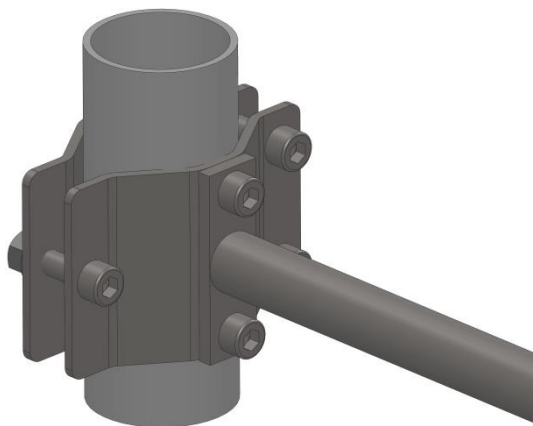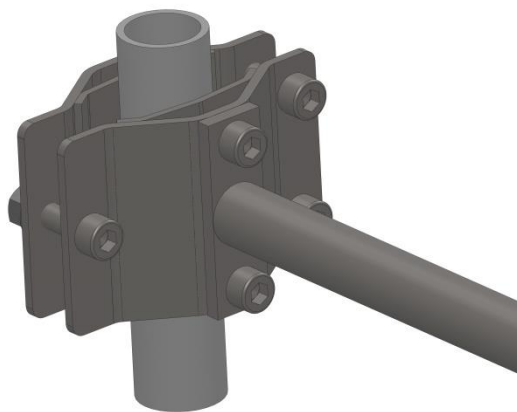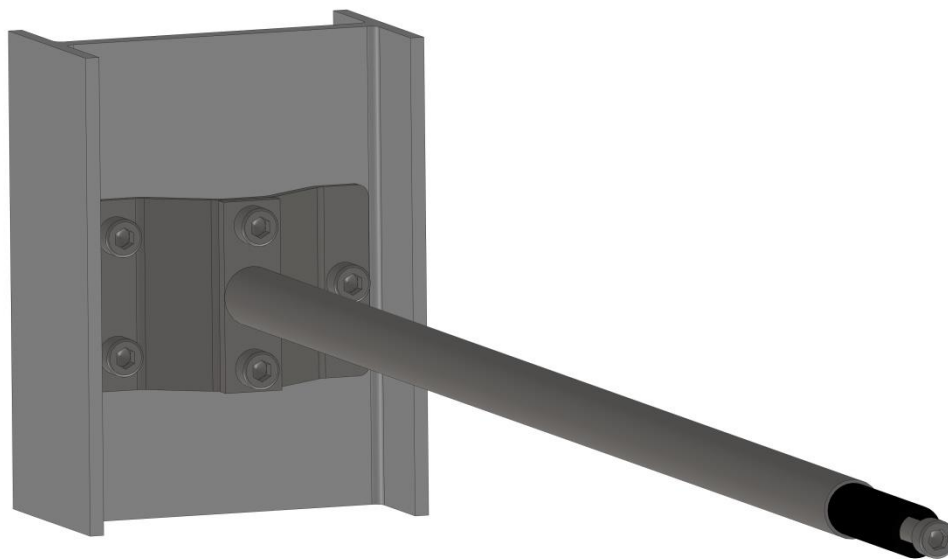
MOUNTING EXAMPLES

On a vertical, horizontal (or oblique) **cylindrical mast** with an outer diameter of **40 mm**, use the provided V brackets.
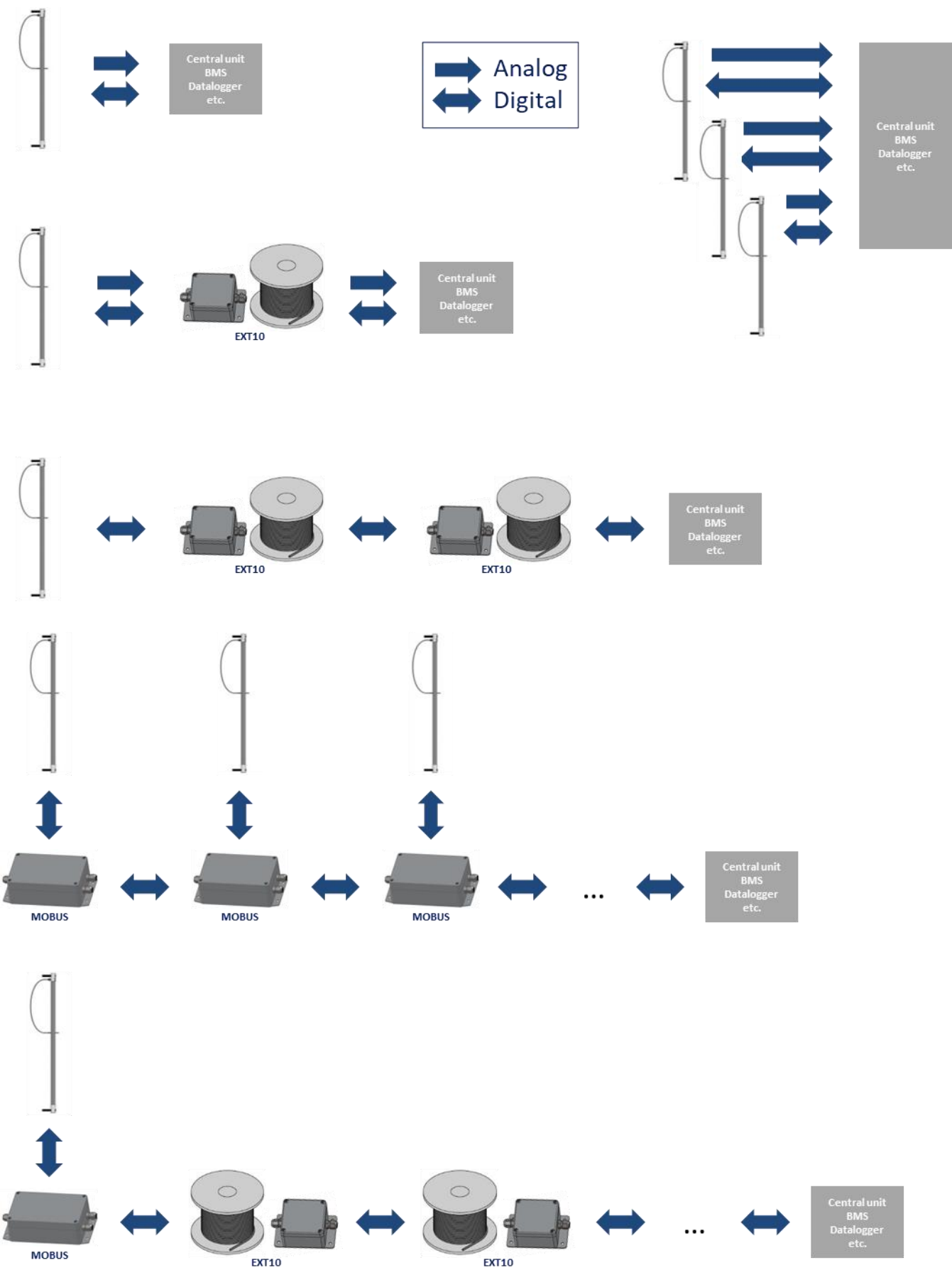
On a vertical, horizontal (or oblique) **cylindrical mast** with an outer diameter of **25 mm**, use the provided V brackets and reduction shims.

On a **flat surface**, screw the V brackets (or the arms directly) onto the surface.

INTERFACING EXAMPLES

SPARE PARTS

	Item ref.	Short name		Full description	HFBRA	FC2MA	UDONG	MOBUS	EXT10	TMAST
					Quantity					
Sensor	**FC4**	FlowCapt sensor		FlowCapt FC4 sensor	1	2				
Mounting parts	**CYARM**	Cylindrical arm		ISAW - Cylindrical arm	2	4				
	SLEEVE	Cylinder sleeve		ISAW - Plastic sleeve for sensor	2	4				
	BRACF	Front bracket		ISAW - Front bracket for cylindrical arm	1					
	BRACB	Back bracket		ISAW - Back bracket for cylindrical arm	1					
	BRASH	Reduction shim		ISAW - Reduction shim	2					
Mast	**TM01**	Leg with inclinable foot		Leg with inclinable foot for supporting structure TMAST		3				3
	TM02	Base		Base for supporting structure TMAST		1				1
	TM03	Mid tube		Mid tube for supporting structure TMAST		1				1
	TM04	Top tube		Top tube for supporting structure TMAST		1				1
	TM05	Lightning rod		Lightning rod for supporting structure TMAST		1				1
Acc.	**JUBOX**	Junction box		Junction box for cable extension EXT10					1	

Item ref.	Short name		Full description	Quantity					
				HFBRA	FC2MA	UDONG	MOBUS	EXT10	TMAST
BN 610 M10x12	M10 × 12 mm screw		Hex socket head cap screws fully threaded (DIN 912, ISO 4762), stainless steel A2, M10x12 (e.g., Bossard BN 610 Art. No. 3210794)		8				
BN 610 M10x25	M10 × 25 mm screw		Hex socket head cap screws fully threaded (DIN 912, ISO 4762), stainless steel A2, M10x25 (e.g., Bossard BN 610 Art. No. 1233505)		4				4
BN 610 M10X40	M10 × 40 mm screw		Hex socket head cap screws fully threaded (DIN 912, ISO 4762), stainless steel A2, M10x40 (e.g., Bossard BN 610 Art. No. 1032860)	2					
BN 611 M10X70	M10 × 70 mm screw		Hex socket head cap screws partially threaded (DIN 912, ISO 4762), stainless steel A2, M10x70 (e.g., Bossard BN 611 Art. No. 1113356)	2	9				9
BN 611 M10x110	M10 × 110 mm screw		Hex socket head cap screws partially threaded (DIN 912, ISO 4762), stainless steel A2, M10x110 (e.g., Bossard BN 611 Art. No. 1488759)		4				
BN 10342 M10x25x1.5	M10 washer 1.5 mm thick		Flat washers without chamfer, large outside diameter, stainless steel A2, M10/10.5/25/1.54 (e.g., Bossard BN 10342 Art. No. 3061838)		8				
BN 13289 M10x25x4	M10 washer 4 mm thick		Flat washers without chamfer, for bolts with heavy duty type spring pins (DIN 7349), A2, M10/10.5/25/4 (e.g., Bossard BN 13289 Art. No. 3062099)	7	9				9
BN 33010 M10	M10 securing nut		Hex flange nuts (DIN 6923; EN 1661), stainless steel A2, M10 (e.g., Bossard BN 14476 Art. No. 1329359)	7	9				9
TERM BLOCK PLUG 8POS STR 5.08MM	Terminal block plug		8 Position Terminal Block Plug, Male Pins 0.200" (5.08mm) 180° Free Hanging (In-Line) (e.g., On Shore Technology Inc. Art. No. OSTV8085150)					2	

(Standard)