

The Technical Specifications of the AWSs' Spare Parts

The spare parts for AWSs are very important to ensure continuous data collection, protect against extreme environmental damage, and prevent costly station downtime. The requested spare parts are for the following sensors and should be compatible with the AWSs' Data logger:-

Rain Gauges:

Technical Specifications

Measurement principle	Tilting trough (double) with REED relay
Measurement range	0 to 700 mm/h
Resolution	0.2 mm per pulse
Other available resolutions	
Item : 003142	0.1 mm per pulse
Item : 003211	0.2 mm per pulse
Accuracy (0 to 700 mm/h)	± 3%

Requested Qty: 18.

Temperature Sensor PT100:

Technical Specifications

Resolution	< 0.01°C (CAN-18 bit)
Accuracy	±0.1°C
Range of measurements	-40°C to +70°C
Sensitive element	Platinum wire
Platinum characteristics	$80.31 \pm 0.05 \Omega (\pm 0.05^\circ\text{C}) @ -50^\circ\text{C}$ $84.27 \pm 0.04 \Omega (\pm 0.05^\circ\text{C}) @ -40^\circ\text{C}$ $92.16 \pm 0.04 \Omega (\pm 0.04^\circ\text{C}) @ -20^\circ\text{C}$ $100.00 \pm 0.03 \Omega (\pm 0.03^\circ\text{C}) @ 0^\circ\text{C}$ $107.79 \pm 0.04 \Omega (\pm 0.04^\circ\text{C}) @ +20^\circ\text{C}$ $115.54 \pm 0.04 \Omega (\pm 0.05^\circ\text{C}) @ +40^\circ\text{C}$ $123 \pm 0.06 \Omega (\pm 0.06^\circ\text{C}) @ +50^\circ\text{C}$ $153.58 \pm 0.08 \Omega (\pm 0.1^\circ\text{C}) @ +140^\circ\text{C}$
Measurement principle	Platinum resistor, 4 wires
Control unit interface	Binder MS
Protection class	IP67

Requested Qty: 10.

Humidity Sensor TH-156

Technical Specifications

Measuring range	0 to 100%
Resolution	1%
Accuracy (0-90%)	±2%
(0-100%)	±3%
Stability	±1%
Long-term stability (5 years at 50% humidity)	±0.05%
Response time (wind 20L/min)	8s

Requested Qty: 10.

Temperature & Humidity Sensors Cable

Technical Specifications

<u>Main feature:</u>		
• Waterproof and robust connector		
Format	MS (molded)	
IP Class	IP 67	

Requested Qty: 18.

The proposal should include the following:

- The grand total of the proposal has to be in LYD and the equivalent in EUR.
- The Terms of Payment are as follows:

The payment will be made via opening a Letter of Credit:

- 90% against the receipt of the shipping documents by the bank.
- 10% after receiving the spare parts and ensuring their compliance with the specifications and requirements.

The Technical Specifications of TRANSMET

TRANSMET

An advanced Automatic Message Switching System designed for hydrometeorological services and aviation networks. It acts as an integration hub for data collection, formatting, and routing in full compliance with WMO (World Meteorological Organization) and ICAO (International Civil Aviation Organization).

Key Features and Capabilities:

- Integration hub for NMHSs global information system.
- Interface to any standard communication device.
- Syntax checking of all messages.
- High availability and outstanding routing performance.
- Efficient diagnostic features and automatic resolution capacities for network.
- The TRANSMET System should be compatible with our technical systems.

System Components:

Item	Description	QTY
1	TRANSMET Hardware	1
1.1	Server for NMC HQ	2
1.2	Server HP Prollant DL360 G12 or DL380	
1.3	Client Workstations	
1.4	Workstations for NMC HQ	2
1.5	HP Z2 workstation	
1.6	Additional Hardware	
1.7	Cabinet, cables & spare parts	1 set

Item	Description	QTY
2. TRANSMET Software (Application Software Licence)		
2.1	System licence for servers (TRANSMET server licence)	1 set
2.2	System software for clients (TRANSMET client licence)	2
3. Technical Documentation		
3.1	Administrator documentation for TRANSMET	1
3.2	User documentation for TRANSMET	1
4. Associated Services		
4.1	FATs	2 officers for 2 working days + weekend
4.2	Factory Training (Administration - Installation - Operation)	3 trainees for each session for 5 working days + weekend

The proposal should include the following:

- The DSAs (EUR 500) and air tickets for the officers and trainees to Tunisia to apply for the visa.
- The DSAs (EUR 300) and air tickets for the FATs' participants and trainees.
- The grand total of the proposal has to be in LYD and the equivalent in EUR.
- The Terms of Payment are as follows:

The payment will be made via opening a Letter of Credit:

- 90% against the receipt of the shipping documents by the bank.
- 10% after the on-site installation by NMC with MFI's remote assistance from Toulouse for installation and operation of the system.

The Technical Specifications of the SADIS

SADIS:

A Secure Aviation Data Information Service, which provides meteorological data for international air navigation as specified in ICAO Annex 3 and regional plans. It is a data library for extraction, processing and visualization by end-user systems.

Available Data via SADIS:

SADIS delivers World Area Forecast System (WAFS) products and other character-oriented OPMET information for pre-flight planning and flight documentation:-

Data Type	Data Products
WAFS Products	• WAFS gridded upper air forecasts • WAFS significant weather (SIGWX)
OPMET Data available in TAC (traditional alphanumeric format)	• METAR • SPECI • TAF • SIGMET • AIRMET (where specified as required in regional Air Navigation Plans) • GAMET (where specified as required in regional Air Navigation Plans) • Volcanic Ash Advisories (VAA) • Tropical Cyclone Advisories (TCA) • Space Weather forecasts

Data Type	Data Products
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OPMET Data available (PNG format)

- VAG
- TCG (where available)

OPMET Data available in IWXXM (xml format)

- METAR
- SPECI
- TAF
- SIGMET
- AIRMET (where specified as required in regional Air Navigation Plans)
- Volcanic Ash Advisories (VAA)
- VA SIGMET
- Tropical Cyclone Advisories (TCA)
- TC SIGMET
- Space Weather forecasts

SADIS Components:

Software & license (QTY: 1).

Aero Weather System

Includes the following modules:

- *Communication module for Secure SADIS FTP download (SADIS 2G replacement)*
- *Communication module for WIFS download (ISCS replacement)*
- *Internal operational meteorological database system*
- *Bulletin database browsing and access*
- *OPMET report database browsing and access*
- *Filter-based warning browsing and access*
- *Warning pop-up notification*
- *SIGWX BUFR decoding*
- *GRIB and GRIB2 decoding*
- *Standard aviation charts*
- *Automated flight route cross-sections*

- *Flight database for instant access to flight folders*
- *Printing module*
- *Automatic printing for T4/PNG charts and flight folders*
- *Automatic generation of SIGWX, wind & temperature charts*
- *Creation of thermodiagrams*
- *Image player*
- *Super Cache_ - on disk cache for decoded products up to 50GB*
- *SIGMET and TC/NA Advisories decoding and visualisation*
- *Basic Product Delivery Service to local file system, printing and database ingestion*

Provides compliance with:

- *ICAO Annex 3, including Amendment 78*
- *WAFS ICAO standard 29 May 2014 (SADISOPSG/19)*
- *WMO Manual on Global Telecommunication System (No. 386)*
- *WMO Manual on Codes (No. 306)*
- *WMO Manual on Global Data Processing System (No. 485)*

User guide in an electronic form (CD)

Administrator guide in an electronic form (CD)

Hardware (QTY: 1).

Aero Weather Client Workstation

HP Z2 TWR G4 Workstation, Intel Core i7 8700k 6C 95W CPU, 32GB RAM, 512GB TLC SSD, 2x 1TB SATA HDD, 2x 24" LCD, 3-year NBD warranty, Windows 10 Pro

Shipping, CIP Tripoli International Airport, Libya

Associated Services:

- **FATs (Two officers for two working days + weekend).**
- **Factory Training in Administration - Installation - Operation (Two trainees for four working days + weekend).**
- **The DSAs (EUR 500) and air tickets for the officers and trainees to Tunisia to apply for the visa.**
- **The DSAs (EUR 300) and air tickets for the FATs' participants and trainees.**

The proposal should include the following:

- **The grand total of the proposal has to be in LYD and the equivalent in EUR.**
- **The Terms of Payment are as follows:**
The payment will be made via opening a Letter of Credit:
 - **90% against the receipt of the shipping documents by the bank.**
 - **10% after receiving the equipment, installing and operating the system.**