GEORGE MUNICIPALITY / GEORGE MUNISIPALITEIT
TENDER NUMBER ENG 019/2020 / NOMMER: ENG 019/2020

Tenders are hereby invited for the:

SUPPLY AND DELIVERY OF RIPPLE CONTROL RECEIVERS, FOR A PERIOD OF THREE YEARS, FROM DATE OF APPOINTMENT

Completed tenders in a sealed envelope, clearly marked:

Tender No.ENG019/2020 must be placed in the tender box at the George Municipality on the First Floor, Directorate: Financial Services, Supply Chain Management, York Street, George by no later than **12:00** on **Friday, 22 January 2021**. Tenders will be opened on the same day in the Committee Room at 12:05. Late or unmarked tenders will not be considered. No posted tenders or tenders per fax or e-mail will be accepted.

Tender documents are available at a non-refundable deposit of R231-00 each from the Supply Chain Management Unit, First Floor, Civic Centre, York Street, George.

Tenders will be evaluated and adjudication in terms of the Preferential Procurement Policy Framework Act (Act 5 of 2000) Regulations 2017 and the George Municipality's Supply Chain Management Policy, where 80 points will be scored for price and 20 points for B-BBEE status.

For more information, contact Mr Kobus Wilken at (044) 874 3917.

The Municipality reserves the right to withdraw any invitation to tender and/or to readvertise or to reject any tender or to accept a part of it. The Municipality is not bound to accept the lowest or any tender.

A TCS PIN for bidders' tax compliance information must be submitted with the tender document.

It will be required from the successful bidder to register on the Central Supplier Database (CSD).

T BOTHA
MUNICIPAL MANAGER
GEORGE MUNICIPALITY
GEORGE
6530

Tenders word hiermee ingewag vir die:

VERSKAFFING EN AFLEWERING VAN RIMPELEFFEK BEHEER ONTVANGERS,VIR N TYDPERK VAN DRIE (3) JAAR VANAF AANSTELLING

Voltooide tenders in 'n verseëlde koevert, duidelik gemerk:

Tender Nr. ENG019/2020 moet voor **Vrydag, 22 Januarie 2021** om **12:00** in die tender bus by die George Munisipaliteit op die Eerste Vloer, Direktoraat: Finansiële Dienste, Voorsieningskanaal Bestuurseenheid, Burgersentrum, Yorkstraat, George geplaas word. Tenders sal om 12:05 dieselfde dag in die Komiteekamer oopgemaak word. Laat of ongemerkte tenders sal nie oorweeg word nie. Geen tenders per pos, faks of e-pos sal aanvaar word nie.

Tender dokumente is verkrygbaar teen 'n R231-00 nie-terugbetaalbare deposito elk by die Voorsieningskanaalbestuur Eenheid op die Eerste Vloer, Burgersentrum, Yorkstraat, George.

Tenders sal ge-evalueer en toegeken word in terme van die Wet op die Raamwerk vir Voorkeurverkrygingsbeleid (Wet 5 van 2000) Regulasies 2017, asook George Munisipaliteit se Voorsieningskanaalbestuursbeleid, waar 80 punte ten opsigte van die prys en 20 punte ten opsigte van B-BBEE status toegeken sal word.

Vir verdere inligting, kontak Mnr Kobus Wilken, by (044) 874 3917.

Die Munisipaliteit behou hom die reg voor om enige versoek vir 'n tender terug te trek en/of te her-adverteer of enige tender te verwerp of gedeeltelik te aanvaar. Die Munisipaliteit is nie daartoe gebind om die laagste of enige tender te aanvaar nie.

'**n "TCS PIN" vir tenderaars se belasting nakoming inligting moet ingesluit wees by die tender dokument.**

Dit sal van die suksesvolle tenderaar verwag word om op die Sentrale Verskaffersdatabasis (SVD) te registreer.

T BOTHA
MUNISIPALE BESTUURDER
GEORGE MUNISIPALITEIT
GEORGE
6530

TENDER SPECIFICATIONS

SPECIFICATIONS

SUPPLY AND DELIVERY OF RIPPLE CONTROL RECEIVERS

RECEIVER SPECIFICATION

GENERAL

The Receivers to be supplied shall be designed for installation at the consumers premises, at the street lighting centres or in the street light poles and for response to signals from the injection equipment to directly open and close the supply to the consumers apparatus, or to the street lighting control contactors, the latter being fitted with 230 volt operating coils.

The Receivers shall be of the front connected type for board or panel mounting and must be capable of being set to respond to a definite ON and a definite OFF command. The load contact must be bi-stable.
Provision shall be made for manual operation of the load contact, without any danger of touching any live parts. Some of the Receivers will be installed outdoors, generally on verandas, or protected otherwise against exposure to direct sunshine and rain.

The ambient temperature in locations where the Receivers will be installed will be as high as 40^0 C in summer and as low as -5^0 C in winter. The summer average would be 28^0 C and the winter average 10^0 C.

Full provision must be made in the design of the Receivers to facilitate testing, installation and repair.

The Receivers shall be capable of operating on supply voltages as specified in the schedule.

A sample Receiver with 1 and 2 relays shall be submitted on request.

CASE

The Receiver shall be completely enclosed in a substantially dust-tight, moisture and insect-proof case of moulded synthetic material or other approved insulating material, with a transparent cover or a transparent window in the cover through which the position of all the load switches and the chosen command numbers are visible. The transparent cover or window shall not become milky when exposed to ultraviolet light, i.e. the material shall be resistant to UV light. The case shall be inflammable according to UL standard 94VI, i.e. when subjected to the flame test, dripping of burning material must not occur.

The cover shall be provided with suitable lugs for sealing and shall inhibit unauthorised switching of contacts.

The load switch position must be clearly marked for any consumer to read. The chosen command number must be printed on or adjacent to the relevant output relay in a way that a consumer could easily read it.

The case must be permanently marked: **Property of George Municipality**, and must contain a unique **GM number** as well as a serial number.

The Receiver will be mounted by screws, the holes for which will be located; on top of the Receiver and at each side of the terminal base, the latter screws being concealed by the terminal cover.

Any exposed metal parts of the Receiver, such as cover screws or nameplates shall be protected against deterioration from exposure to moisture.

The terminal of the Receiver shall be suitable for conductor sizes of 1,5 mm to 2 x 4,5 mm. The terminal screw must be captive and shall not directly screw into the strands of the connecting wires.

The terminals shall be constructed from a solid piece of metal, suitably drilled and tapped for the terminal screw. Sheet metal terminals constructed by folding over the two sides and then drilling and tapping through the top shall not be acceptable.

A separate cover of moulded synthetic material shall be provided for the protection of the terminals. All cover screws shall be of the captive type.

The terminal cover shall be of sufficient length to effectively cover all external conductors of the Receiver.

INSULATION

Insulation of the Receiver shall comply with the following requirements:

(1) The insulation resistance between all current carrying parts coupled together and any exposed metal parts which are accessible with the cover on or off, other than current carrying parts and any parts electrically connected thereto, shall not be less than 5 mega ohms when tested at 500V DC.

(2) The insulation resistance between the load carrying circuit and the supply voltage circuit measured across the load contacts in the open position shall be at least 5 mega ohms when tested at 500 V DC.

(3) The insulating material between any and every electrical circuit and also between all the electrical circuits taken together, any metal parts of the units which are accessible with cover on or off other than the current carrying parts and any parts electrically connected thereto, shall be capable of withstanding the prescribed voltage test of 4000V AC for a period of 1 (one) minute.

(4) The insulation between the lad contacts in the open position shall be capable of withstanding a high voltage test of 4000V AC 50 Hz for 1 (one) minute.

(5) The Receiver shall withstand a full impulse test of 10 kV peak value to the input terminals.

ADDITIONAL RECEIVER FUNCTIONS

Additional receiver functions for Maximum demand control

The Receiver relay must be capable of responding to any individual ON-OFF pair as well as a master command which would operate several load groups simultaneously. Tenderers must state how many commands can be controlled by one master command and how long it would take to transmit a master command.

Each relay must be capable of being switched ON or OFF with a freely programmable time delay. Each relay must be switched to the OFF position upon loss of power. Every relay must be switched ON following a power failure with a freely programmable time delay but with a minimum duration of 15 minutes.

Additional receiver functions for Tariff control

In order to provide 100% backup in the event of signal or mains failure the receivers must have back-up functions as described below:
The receivers shall be capable of storing the commands received in the last 24 hours and in the event of signal loss this stored program must continue to run automatically. (Learning function)
The receivers shall be programmable for time based switching operations which can run with or without the reception of control commands (time clock). It shall be possible to synchronise the time clock at least twice per day and twice per week with 4 specific commands.
An optional clock with back-up facilities for up to 36 hours (IEC 1038) of power interruptions shall be offered. No batteries will be considered as a power back-up device.

Additional general receiver functions

The last received commands must be saved in the receiver for analysis. These stored commands must be saved with time and bit pattern or command number.
It shall be possible to connect a device such as a Notebook computer to any receiver for logging with time and bit pattern of all received commands.

Each relay must revert to its original position within 1 minute in the event that the contact was manually moved (eg, if a consumer has broken the cover seal and switches his Receiver ON when he sees that it is OFF, then the Receiver must automatically revert to the OFF position within 1 minute). (Relay tampering protection)

The following monitoring functions shall be provided by the Receiver and displayed by a built-in indicator:

* Receiver operational (ready state).
* Signal decoding in progress (busy state).
* Transmission monitor alarm shall respond if no valid telegram has been received during a programmable fail safe time.
* Watchdog shall continuously monitor the Receiver function and signal any malfunction

PROGRAMMING

Whilst the Receivers will have to be factory programmed as specified by the engineer, re-programming by the department's staff may be necessary. This includes adding, replacing or deleting additional relay functions and/or changing the parameters of the functions.

Programming of Receivers shall be software based and no code-cards, PROMS or other plug-in devices shall be accepted. The PC programming software shall be Windows based. The filter frequency and minimum operating level must be freely programmable.

A hand held programming unit for re-programming on site must also be offered. The price for such programming equipment shall be stated in the price schedule.

Reprogramming and diagnostics of the receiver shall be possible without removing any main covers, terminal covers or seals via an optical port

Receivers which are factory programmed and which cannot subsequently be freely re-programmed by the field technicians at the consumers premises, shall not be acceptable.

TESTING OF THE RECEIVER

Testing and programming of units or software and any specialised cables for testing and programming the Receiver including all additional Receiver functions at the consumers' premises shall be offered.

COMPONENTS AND MATERIALS

The rating of the output relay shall be for 40A (pf = 1) at 250V and the contact material must be silver tin oxide, or silver cadmium oxide.

Only high pressure plug-in relays shall be accepted. All plug-in contacts shall provide positive connections and reversal of connections shall not be possible.

MARKINGS

The following markings on the Receiver must be clearly visible from the outside:

On the Receiver:
Manufacturer's name
Type
Mains voltage and frequency
Audio frequency
Guaranteed voltage for operation
Serial number
Property owner (***George Municipality***, or as may be communicated then) **GM** number.

For each relay (if Receiver is factory programmed)

- Code number
- Code for additional relay function

On each relay: Current rating of contact and the rated voltage of each contact.

COMPATIBILTY

The supplier shall be responsible to ensure 100% compatibility with the existing Enermet Equipment installed at George Municipality and shall be factory programmed according to George Municipality load control system.

INFORMATION TO BE SUPPLIED BY TENDERER

RECEIVERS	REQUIREMENTS	MANUFACTURERS GUARANTEE
GENERAL:		
1. Type and Manufacturers name		
2. Supply Voltage	230V + 15% - 20%	
3. Supply frequency	50Hz (-2%..+2%)	
4. Ambient temperature	-25°C...+70°C	
5. Test Voltage 50 Hz, 1 min Impulse Test: …ms	4 kV 10 kV	
6. Control Frequency	425Hz	
7. Does the Receiver comply with IEC 1037 (1990 - 10)	Yes	
8. Is the Receiver manufactured in accordance with ISO 9001	Yes	
9. Does the Receiver respond to a definite ON and a definite OFF signal?	Yes	
10. Coding track required	Decabit	

DESCRIPTION	REQUIREMENTS	MANUFACTURERS GUARANTEE
RELAY		
11. Manufacturers name and type designation	Yes	
12. Continuous current rating of relay contact at 250V AC, pf = 1	40 A	
13. Short circuit rating of output for 5 sec.	400 A	
14. Material of load contacts	Silver Tin Oxide	
15. Mechanical construction of relay	Bi-stable	
16. Additional Relay function	Give in covering letter	
17. Maximum number of relays per receiver.	Min 3	
18. Is the position of **all** relays visible from the outside.	Yes	
TARIFF CONTROL FUNCTIONS		
19. Is a Learning function available as described above?	Yes	
20. Is the receiver fitted with a time clock as described above.	Yes	
21. Does the relay change state after a mains failure	No	
22. Is the relay tamper protected?	Yes	
PROGRAMMING OF RECEIVER		
23. Does reprogramming require the change of components, or even the removal of components?	No	
24. Optical port for programming	Yes	
25. Does reprogramming require removing of any seals or covers?	No	
26. Type and manufacturer of hand held programming unit.	--	
TESTING OF THE RECEIVER		
27. Is on-site test possible?	Yes	
COMPONENTS AND MATERIAL		
28. Is the Receiver case inflammable according to UL standard 94V1?	Yes	
29. Is the window or transparent cover UV resistant?	Yes	

SUPPLY AND DELIVERY OF RIPPLE CONTROL RECEIVERS

PRICE SCHEDULE

Prices contained in the pricing schedule shall be valid for the duration of the contract.
Rates must be inclusive of 15% VAT

Item	Description	Qty	Price (inc VAT)
1.	Pre-programmed Receiver	Per Unit	R