

RS-232C Interface

COMMUNICATION SPECS (141)

SP3 = 1011

SP4 = 0110

SP5 = 0001

Baud Rate : 9600

Stop Bit : 1 Bit

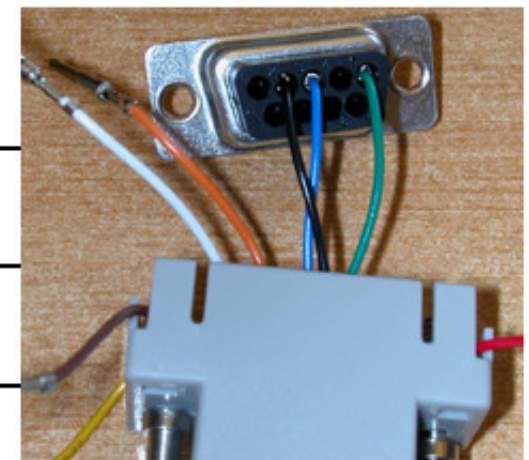
Date Bit : 8 Bits

Parity Bit : Even

NO HANDSHAKE

STREAM MODE

	DS-700E			PC SIDE	
	TCP/IP PATCH CORD			DIN 9PIN FEMALE	
ΛΕΥΚΟ ΠΟΡΤΟΚΑΛΙ ----	1	RXD	----	3	TXD
ΛΕΥΚΟ ΠΡΑΣΙΝΟ ----	3	TXD	----	2	RXD
ΛΕΥΚΟ ΜΠΛΕ ----	5	GND	----	5	GND



Specification Enter (141)

1 - ZERO 2 - NET 3 - MEMORY 4 - BATTERY

OPERATION	WEIGHT	U.PRICE	T.PRICE	1	2	3	4	REMARKS
[RE-ZERO]	8 8 8 8 8	8 8 8 8 8	888888					Enter 1 4 1 while depressing
[RE-ZERO] + [1] [4] [1]	S P C 0 0	0 0 0 0	0 0 0 0					RE-ZERO.
[+]	S P C 0 1	0 0 0 0	0 0 0 0					+ Key only increases Specification.
[#]	S P C 0 0	0 0 0 0	0 0 0 0					# key only decrease Specification.
[0] [1] [0] [1]	S P C 0 0	0 0 0 0	0 1 0 1					Only 1 & 0 are enable.
[RE-ZERO]	S P C 0 1	0 0 0 0	0 0 0 0					'RE-ZERO' to store Specification.
[#]	S P C 0 0	0 1 0 1	0 0 0 0					
[#]	S P C 0 3	0 0 0 0	0 0 0 0					
[T]	0.0 0 0	0.0 0	0.0 0	▼				Store SPECS to EEPROM & escape to Weighing mode.

For the Customer - (1 4 1)

Spec#	BIT 3	BIT 2	BIT 1	BIT 0
0	Auto Power-Off (No key & weigh operation) 0000: Auto power-off disabled 0001: 3 minute 0010: 10 minutes 0011: 30 minutes 0100: 1 hour 0101: 3 hours 0110 ~ 1111: Not used			
1	Buzzer 0: On 1: Off	Error Alarm 0: On 1: Off	Currency Conversion Operation Method 00: Inhibit 01: Method 1 10: Method 2 11: Not used	
2	Decimal Point Position on Currency Conversion Rate 000: 7th digit (0.000000) 100: 3rd digit (0000.00) 001: 6th digit (0.00000) 101: 2nd digit (00000.0) 010: 5th digit (00.0000) 110: No decimal point (000000) 011: 4th digit (000.000) 111: Not used			Not Used
3	RS-232C RTS/CTS Handshaking 0: On 1: Off	Baud rate of RS-232C 000: 1200 bps 001: 2400 bps 010: 4800 bps 011: 9600 bps 100: 19200 bps 101: Not used 110: Not used 111: Not used		
4	Stop Bit of RS-232C 0: 1 bit 1: 2 bit	Data Length 0: 7 bit 1: 8 bit	Parity of RS-232C 00: None 01: Odd 10: Even 11: Not used	

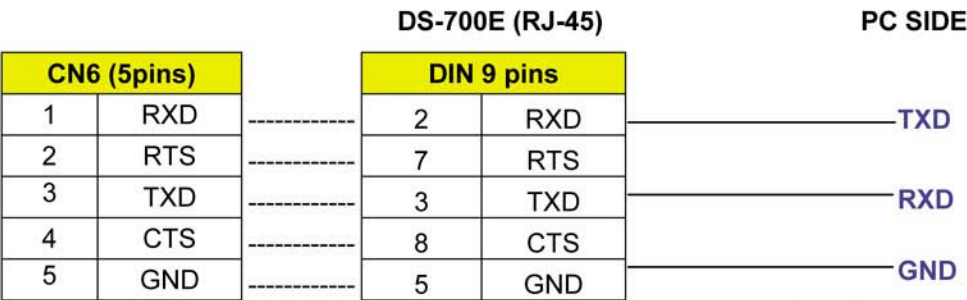
Spec#	BIT 3	BIT 2	BIT 1	BIT 0
5	Data transfer mode of RS-232C *Note: 0000~0011: V1.03, 0100~1101: V1.30 0000: Inhibit data transfer 0001: Stream Output mode 0010: Manual mode 0011: Standard Command Mode 0100: QUQA Trading 0101: IBM, HUGIN interface 0110: ICL (OLD, OLD OMRON) I/F 0111: ICL (PORTUAGAL) interface 1000: ICL (ACTUAL, ACTUAL OMRON) interface 1001: CAS 1010: NIXDORF interface 1011: NCR Interface 1100: MONS Interface 1101: WTN (Sending Key P4) 1110: CAS (Portuagal) *V1.39 1111: Others *V1.33			
6	Interval of time out error of RS-232C 00: 1 second 01: 3 second 10: 5 second 11: 10 second		Transmission Condition 0: Weight stable 1: Unconditional	Additional Parity Code in Text 0: No 1: Yes
7	Tare Weight in Text 0: No 1: Yes	Unit Price in Text 0: No 1: Yes	Total Price Weight in Text 0: No 1: Yes	Min. Weight (≥20e) Limitation for RS-232 Data Output 0: No 1: Yes *V1.37
8	Data Transfer Mode of RS-232C (*Valid only when SPEC 5 = 1111) 0000: GAOTENG Type (Sending Key P4) *V1.33 0001: SHARP TK300/ UP700 Type *V1.41 0010: NCI4000 Type *V1.39 0011: DATECS MP50/500 *V1.35 0100 ~ 1111 - Not used			
9 - 11	Not Used	Not Used	Not Used	Not Used

6. RS-232C Interface (Normal)

6.1. Specification

Baud Rate : 1200 / 2400 / 4800 / 9600 / 19200 bps.
Start Bit : 1 Bit.
Stop Bit : 1 / 2 Bit.
Date Bit : 7 / 8 Bits.
Parity Bit : Even / Odd / None.

6.2. Pin Connection



Note: RTS/CTS handshaking function is effective only when SPEC3.3 = 0.

6.3. Control Code and Characters

Data Type	Contents	Function	HEX Code
Termination Code	CR	The end of data	0x0d
	LF	The end of Text	0x0a
Data	0 – 9	Numeric date	0x30 – 0x39
	- (Minus)	Minus sign	0x2d
	. (Decimal)	Decimal	0x2e
	Space	Data error or empty	0x20
	OF	Overflow	0x4f 0x46
	UF	Underflow	0x55 0x46
Header Code	0	Net Weight	0x30
	4	Tare Weight	0x34
	U	Unit Price	0x55
	T	Total Price	0x54
Command	ENQ	Enquiry	0x05
	ACK	Acknowledged	0x06
	NAK	Unacknowledged	0x15

6.4. Data Format

A) Without additional parity (Total 37 Bytes)

Status Flag	Weight Condition Flag	CR	Header Code	Net Weight	CR	Header Code	Tare Weight
1 Byte	1 Byte	1 Byte	1 Byte	6 Bytes	1 Byte	1 Byte	6 Bytes

CR	Header Code	Unit Price	CR	Header Code	Total Price	CR	LF
1 Byte	1 Byte	6 Bytes	1 Byte	1 Byte	7 Bytes	1 Byte	1 Byte

B) With additional parity (Total 38 Bytes)

Status Flag	Weight Condition Flag	CR	Header Code	Net Weight	CR	Header Code	Tare Weight
1 Byte	1 Byte	1 Byte	1 Byte	6 Bytes	1 Byte	1 Byte	6 Bytes

CR	Header Code	Unit Price	CR	Header Code	Total Price	CR	Additional Parity	LF
1 Byte	1 Byte	6 Bytes	1 Byte	1 Byte	7 Bytes	1 Byte	1 Byte	1 Byte

*Note: If the additional parity is 0DH, 0AH or 00H, it will be changed to 1DH, 1AH or 10H respectively.

● Status Flag:

Not Used	Fixed to 1	Not used	Price Base	Price Base	Total Price Overflow	Net	Additional Parity
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- Bit 7 : Not used. Always 0;
- Bit 6 : Fixed to 1.
- Bit 5 : Not used.
- Bit 4 and Bit 3: Price Base. 00 - \$/kg, 01 - \$/100g, 10 - \$/1b, 11 - \$/1/41b.
- Bit 2 : Total Price Overflow. Set to 1 when total price overflow, 0 when not.
- Bit 1 : Net. Set to 1 When tare subtraction is performed, 0 when not.
- Bit 0 : Additional parity flag. Set to 1 when additional parity code is added in text, 0 when not.

● Weight Condition Flag:

Not used	Fixed to 1	Not used	Weight UF	Weight OF	Negative Net Weight	Weight Stable	Zero Sign
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- Bit 7: Not used. --- Always set 0.
- Bit 6: Fixed to 1.
- Bit 5: Not used.
- Bit 4: Weight UF. Set to 1 when weight underflow, 0 when not.
- Bit 3: Weight OF. Set to 1 when weight overflow, 0 when not.
- Bit 2: Negative Net Weight. Set to 1 when net weight is negative, 0 when not.
- Bit 1: Weight Stable. Set to 1 when weight is stable. 0 when not.
- Bit 0: Zero Sign. Set to 1 when weight zero sign is set. 0 when not.

- Example1: Transmit all data.
 Net weight = 3.456 Tare weight = 1.200 Unit Price = 1.500 (\$/kg)
 Total Price = 5.184 Weight status: stable

Status Flag: 42H										
0	1	0	0	0	0	1	0			
Weight Condition Flag: 42H										
0	1	0	0	0	0	1	0			
By ASCII Code:										
42H	42H	0DH	30H	30H	33H	2EH	34H	35H	36H	0DH
34H	30H	31H	2EH	32H	30H	30H	0DH			
55H	30H	31H	2EH	35H	30H	30H	0DH			
54H	30H	30H	35H	2EH	31H	38H	34H	0DH	0AH	

- Example2: Only transmit Net weight and Total Price.

42H	42H	0DH	30H	30H	33H	2EH	34H	35H	36H	0DH
										
54H	30H	30H	35H	2EH	31H	38H	34H	0DH	0AH	

- Example3: When weight is overflow, the following data is output.

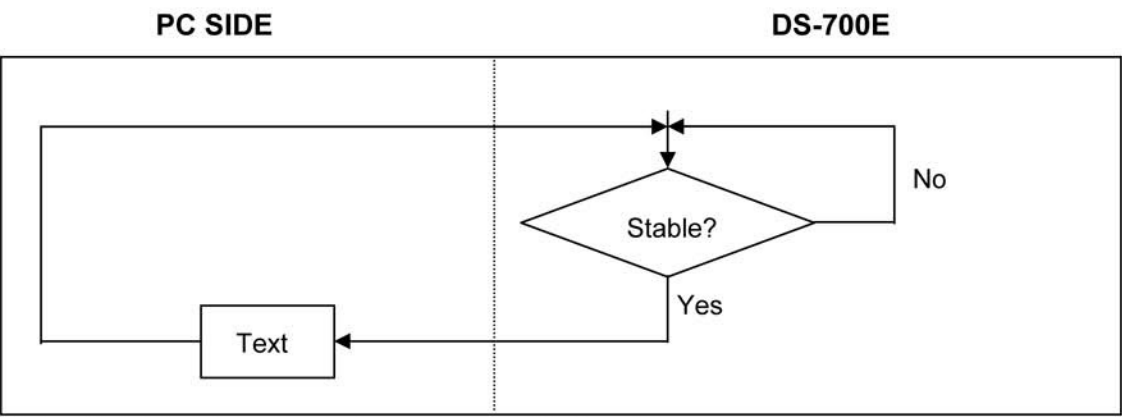
42H	48H	0DH	30H	20H	20H	20H	20H	4FH	46H	0DH
										
34H	30H	31H	2EH	32H	30H	30H	30H	0DH		
										
55H	30H	31H	2EH	35H	30H	30H	30H	0DH		
										
54H	20H	20H	20H	20H	20H	20H	20H	20H	0DH	0AH

6.5. Communication Method

The data communication method can be selected as Stream (continuous), Manual, and Command by specification settings.

6.5.1. Stream (Continuously Output)

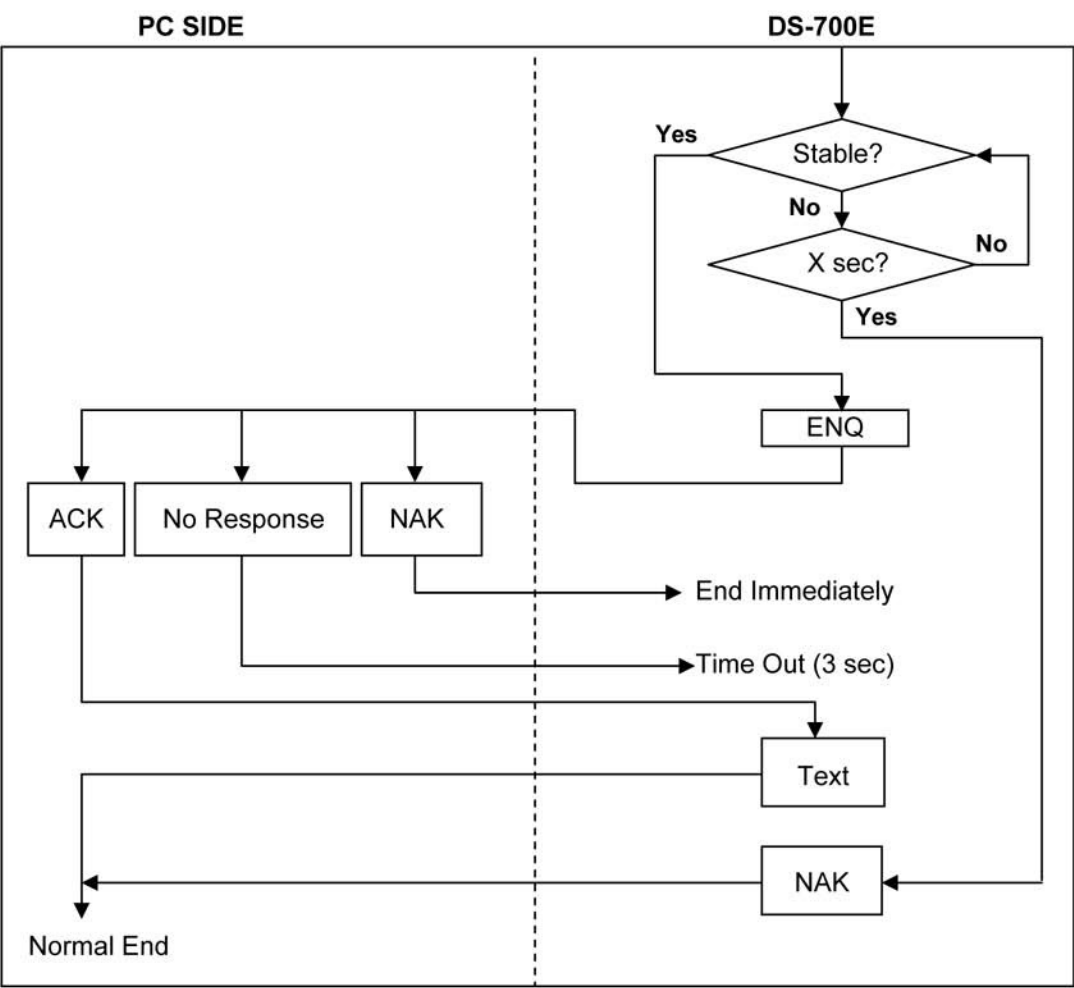
Data is transmitted to PC side continuously.



Note: Weight stable check depends on SPEC setting.

6.5.2. Manual

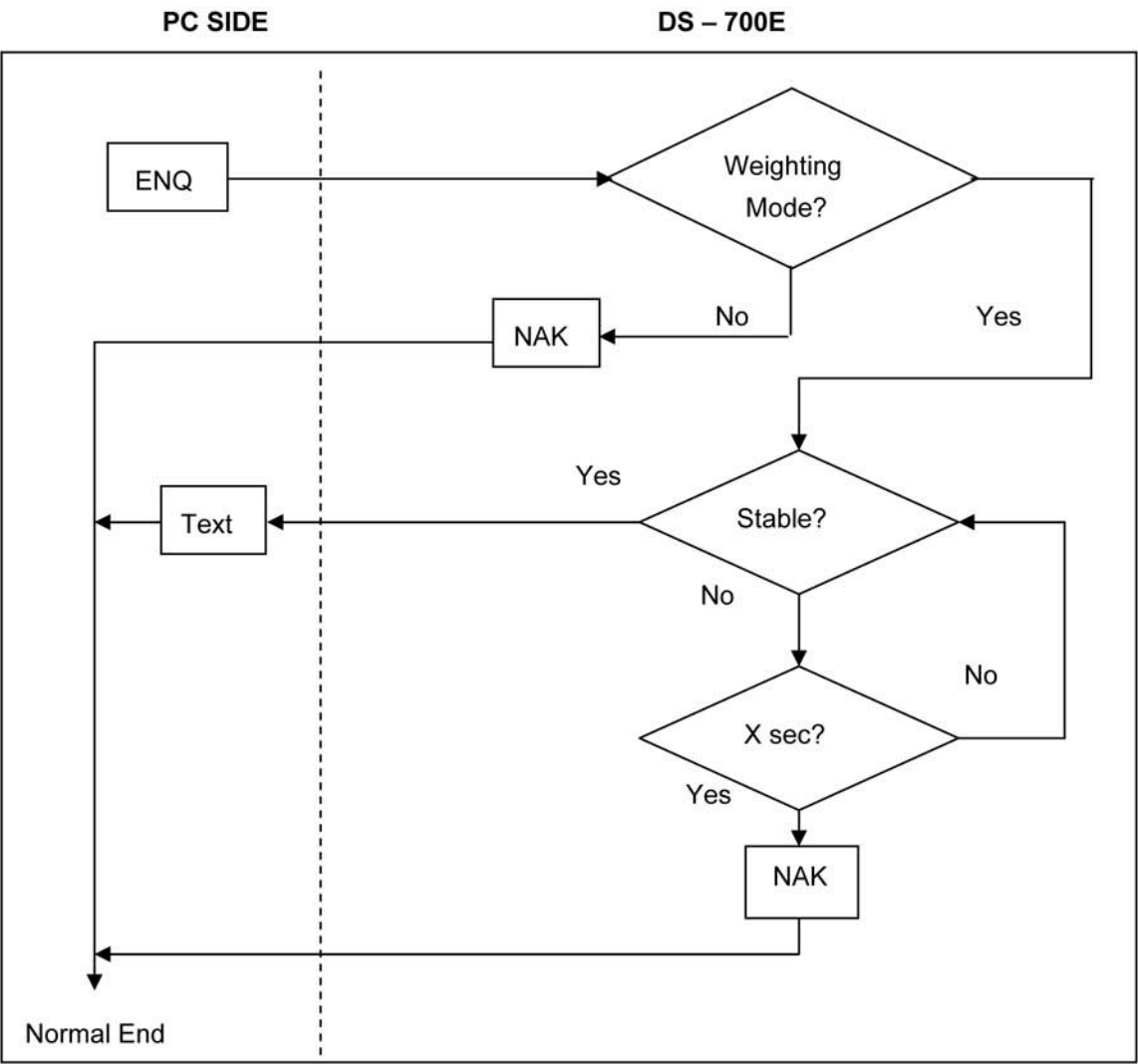
Data is output once Manual key (+ key) pressed. User may select to transmit the data right away or hold the command until weight become stable by specification setting.



Note: Weight stable check depends on SPEC setting.

6.5.3. Command

The data transmission starts by receiving the command from external (Ex. PC side).



*Note: Weight stable check depends on SPEC setting.