

S3 & S4 Communication Protocol Format Specification V101

1. DH-1 (continous sending)

XXXXX 2020 XXXXX 2020 XXXXXX 0A0D

(0A0D is the protocol end of the data stream, 2020 is the interval resolution bit)

Net weight: 5 digits, unit price: 5 digits, total price: 6 digits;

E.g: The net weight is 1.754, the unit price is 2.50, and the total price is 4.39. Then the data sent is as follows:

2031373534202020203235302020202020343339 0A0D....

Note: The box is a valid data bit:

For example: 1.754 format is 2031373534 - originally valid for 5 bits, but 1.754 valid bits are 4 bits, so the default is format 01.754. If the first bit is zero, the format is represented by 20, and the second "1" format is 31, the third "7" format is 37, the fourth "5" format is 35, and the fifth "4" format is 34 (the valid bit is 3, the zero is 20). Therefore, the 1.754 format is 2031373534, and the rest; analogy is fine.

***Currently, this protocol only contains net weight data. The unit price and total price data are invalid.

2. DH-2 (stable sending)

Send the following data when the weight is stable

0A0D XXXXX

0A0D is the data header

XXXXX is weight data ASCII code, no decimal point

3. DH-3 (command sending)

When the scale receives 'P', the following data is sent.

02 20 XXXXXX 20 K G

XXXXXX is the weight data ASCII code, including the decimal point

4. Yaohua (continuously sent)

The format is: = 7-bit weight data (including decimal point) symbol, where the weight data is low and the high is after;

E.g:

The current weight data is 200.0kg, and the data format sent is: =0.002000

The current weight data is -200.0kg, and the data format sent is: =0.00200-

If the current weight data is 2000kg, the data format sent is: =00020000

The current weight data is -2000kg, and the data format sent is: =0002000-

5. Tscale (continous sending)



HEADER1: ST=STABLE, US=UNSTABLE

HEADER2: NT=NET, GS=GROSS

6. G-310 (Command Sending)

When the scale receives 0x24, send the following data

WWW.WWW CR

7. CAS-1 (CAS active, continuous sending)

1.2 Command Description

Command	Notes
STX(02h)	Start character
SOH(01h)	Start symbol
STA	1 byte, sta status value: "F" (46h): weight overflow, or no power on reset; "s" (53h); weight stable; "U" (55h): weight unstable.
Sign	1 byte, symbol bit: '-' (2dh): weight is negative; '(20h): when weight is positive or weight is 0.
Weight	6 bytes, weight "w4w3. W2w1w0": ASCII number of 6 bytes
Weight Unit	2 bytes, weight unit "u1u0": ASCII character of 2 bytes, like: "kg"
BCC	Using BCC algorithm, all characters except Sot, STX, ETX, EDT and this byte
ETX(03h)	End character
EOT(04h)	End symbol
STA2	1 byte, status Bit0 ~ bit3: value is 0 Bit4: when the value is 1: the current weight is zero Bit5: when the value is 1: currently in peeling mode Bit6: when the value is 1: the weight overflows, or the machine does not start to return to zero; when the value is 0: the weight is normal and the machine has been started

Content format of sending (scale response weighing result):

Shead1	Shead2	Status	Sign	Weight	Weight Units	Check Sum	Tail1	Tail2	Status2
SOH	STX	STA	Sign	W4W3.W2W1W0	U1U0	BCC	ETX	EOT	STA2

8. CAS-2(CAS Passive, command sent)

2.2 Command description

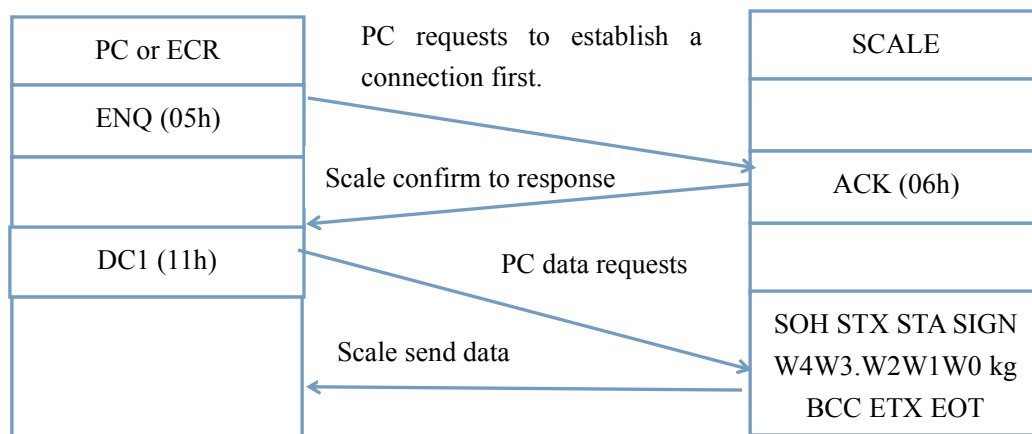
Command	Notes
ENQ(05h)	Start communication request
ACK(06h)	Confirm
NAK(15h)	Not confirm
DC1(11h)	Data request
STX(02h)	Start character
SOH(01h)	Start symbol
STA	1 byte, STA status value: 'F' (46h): The weight overflows and does not return to zero when the machine is started. 'S' (53h): Weight stability. 'U' (55h): Weight instability
Sign	1 byte, symbol bit: '-' (2dh): Weight is negative. '.' (20h): The weight is positive or zero
Weight	6 byte, weight "W4W3.W2W1W0": 6 bytes ASCII number
Weight Units	2 bytes, weight units "U1U0": 2 bytes ASCII character, for example: "kg"
BCC	Using BCC algorithm, BBC check of all characters except SOT,STX,ETX,EOT and this byte
ETX(03h)	End character
EOT(04h)	Terminator

Send content format:

Weigh the result of response. The format of response data is basically the same as that of active transmission, except for the lack of Flag2.

<u>SHead1</u>	<u>SHead2</u>	<u>Status</u>	<u>Sign</u>	<u>Weight</u>	<u>Weight Units</u>	<u>Check Sum</u>	<u>Tail1</u>	<u>Tail2</u>
<u>SOH</u>	<u>STX</u>	<u>STA</u>	<u>Sign</u>	<u>W4W3.W2W1W0</u>	<u>U1U0</u>	<u>BCC</u>	<u>ETX</u>	<u>ETO</u>

2.3 Communication flow level



9. CAS active or passive peeling and Zeroing

Command Description

COMMAND	annotation
<(3Ch)	Command starter
>(3Eh)	Command End
CMD	2 bytes, Command C1C0: Peeling Command: “TK” (54h, 4Bh) Zeroing Command: “ZK” (5Ah, 4Bh)
HT(09h)	End Sign

Sending Format

SHead1	CMD	ETail1	ETail2
<	C1C0	>	HT

10. DH-4

The format is the same as DH-1, the only difference is that when the weight is 0, the data sent is the same as the normal weight data format.

11. DH-5

The format is the same as DH-2. The only difference is that when the weight is 0, the data sent is the same as the normal weight data format.

12. DH-6

The format is the same as DH-3, the only difference is that when the weight is 0, the data sent is the same as the normal weight data format.