3.   Transfer protocol

All characters and/or digits are based on the ASCII standard, i.e. every reading processed internally as an integer or float value will always be broken down into and transferred in its individual ASCII format characters. They must then be reassembled in the reverse process by the receiver.

Transfer rate: 19200 Baud
Data bits: 8
Stop bit: 1
Parity: none

The checksum is calculated along by the receiver by adding all received bytes up until byte 56 and then compared with the checksum transferred from the P03.

Units:
Temperatures in degrees Celsius
Sun intensity in kilolux
Daylight in Lux
Wind in metres per second

Byte No	char	Description	
1	W	Start of Weather Data	
2	AT: sign	Outdoor temperature sign - / +	in °C
3	AT: 1st digit	Outdoor temperature 1st digit (tens)	
4	AT: 2nd digit	Outdoor temperature 2nd digit (units)	
5	AT: decimal point	Outdoor temperature decimal point	
6	AT: 3rd digit	Outdoor temperature 3rd digit (tenths)	
7	SoS: 1st digit	Sun south 1st digit (tens)	1-99 klx
8	SoS: 2nd digit	Sun south 2nd digit (units)	
9	SoW: 1st digit	Sun west 1st digit (tens)	
10	SoW: 2nd digit	Sun west 2nd digit (units)	
11	SoO: 1st digit	Sun east 1st digit (tens)	
12	SoO: 2nd digit	Sun east 2nd digit (units)	
13	Twilight	Twilight: J = Yes; N = No	< 10 lx
14	Daylight 0-999Lx	Daylight 1st digit (hundreds)	0-99 lx
15	Daylight 0-999Lx	Daylight 2nd digit (tens)	
16	Daylight 0-999Lx	Daylight 3rd digit (units)	
17	Wind: 1st digit	Wind 1st digit (tens)	in m/s
18	Wind: 2nd digit	Wind 2nd digit (units)	
19	Wind: decimal point	Wind decimal point	
20	Wind: 3rd digit	Wind 3rd digit (tenths)	
21	Rain	Rain: J = Yes; N = No	

Byte No	char	Description	
22	Week day: 1-7	Week day:1 = Mon, 7 = Sun	
23	Date: Day 1st digit	Date: Day 1st digit (tens)	
24	Date: Day 2nd digit	Date: Day 2nd digit (units)	
25	Date: Month 1st digit	Date: Month 1st digit (tens)	
26	Date: Month 2nd digit	Date: Month 2nd digit (units)	
27	Date: Year 1st digit	Date: Year 1st digit (tens)	
28	Date: Year 2nd digit	Date: Year 2nd digit (units)	
29	Time: Hour 1st digit	Time: Hour 1st digit (tens)	
30	Time: Hour 2nd digit	Time: Hour 2nd digit (units)	
31	Time: Min. 1st digit	Time: Min. 1st digit (tens)	
32	Time: Min. 2nd digit	Time: Min. 2nd digit (units)	
33	Time: Sec. 1st digit	Time: Sec. 1st digit (tens)	
34	Time: Sec. 2nd digit	Time: Sec. 2nd digit (units)	
35	Summer time	J = Summer time N = Winter time ? = not defined	
36	Checksum: 1st digit	Checksum 1st digit (thousands)	
37	Checksum: 2nd digit	Checksum 2nd digit (hundreds)	
38	Checksum: 3rd digit	Checksum 3rd digit (tens)	
39	Checksum: 4th digit	Checksum 4th digit (units)	
40	End identifier	end identifier 0x03	