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40EWR-L digimatic schnittstelle Analyse



1. Messaufbau:

1.1. 40EWR-L, 25-50mm (art.: 4157021, sn.: 22100002)

1.2. Digimatic Kabel: DK-D1

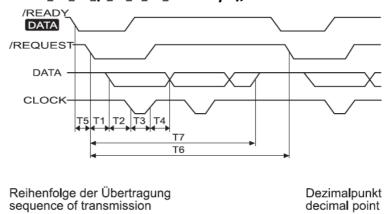
1.3. Messung/Empfänger: Saleae logic Pro 8

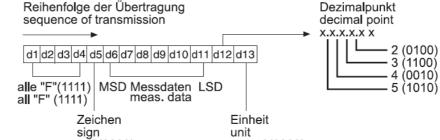
1.4. Signalkonditionierung: 3VDC an DATA, CLOCK und REQUEST



2. Interface Beschreibung

(Datenblatt: Ba_3723295_DK-U-D_de_en_fr_es_it_zh_0322-1.pdf):





 $2 \text{ ms} \le T1 \le 40 \text{ ms}$ sign unit $T2 = 21 \mu \text{s (typ.)} +: 0(0000)$ mm : 0(0000) $T3 = 100 \mu \text{s (typ.)}$ -: 8(0001) inch: 1(1000)

T4 = $100 \mu s (typ.)$

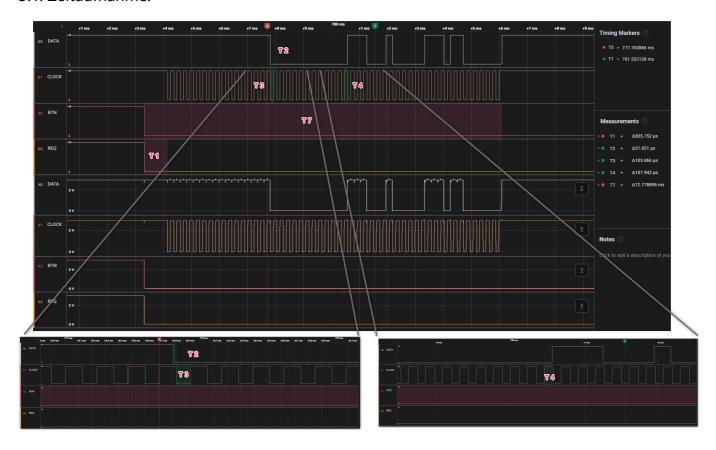
T5 = abhängig von der Leistung des angeschlossenen Datenverarbeitungsgerätes

T5 = depends on the performance of the data processing unit

 $T6 \le 77 \text{ ms}$ $19 \text{ ms} \le T7 \le 57 \text{ ms}$

3. Messungen:

3.1. Zeitaufnahme:

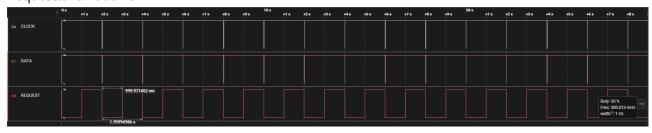


3.2. Zeitaufnahme mit Zycklische-Anforderung:

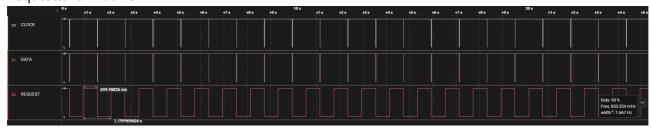
Digital und Analog:



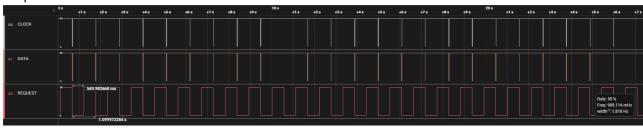
• Requesttakt: 2000ms



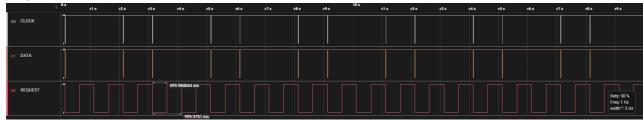
Requesttakt: 1200ms



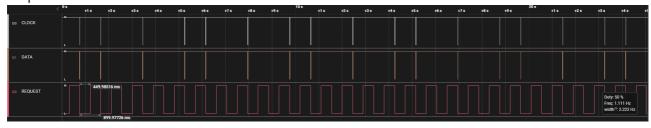
Requesttakt: 1100ms



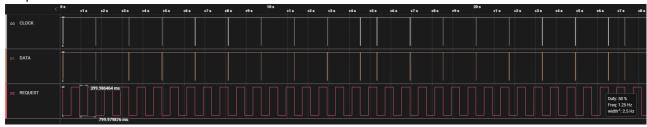
• Requesttakt: 1000ms



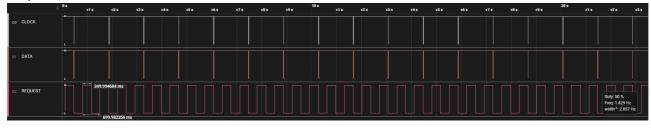
Requesttakt: 900ms



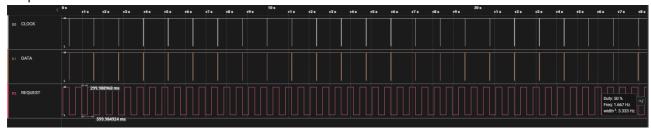
• Requesttakt: 800ms



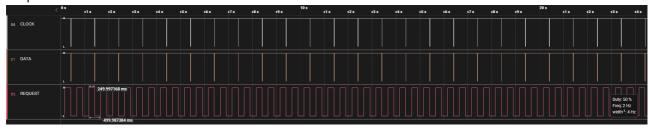
• Requesttakt: 700ms



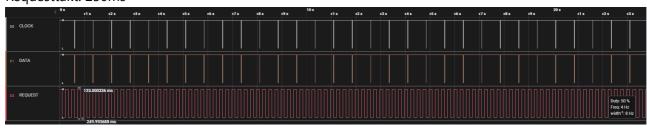
• Requesttakt: 600ms



Requesttakt: 500ms



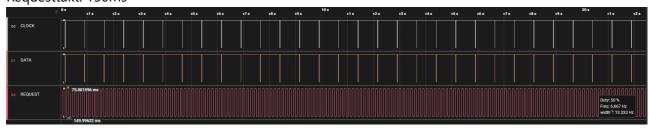
Requesttakt: 250ms



• Requesttakt: 250ms Zoom



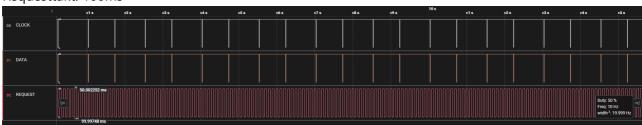
Requesttakt: 150ms



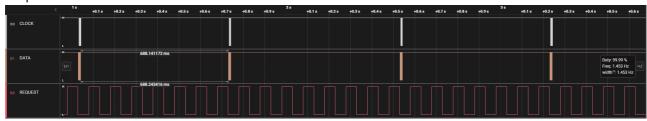
• Requesttakt: 150ms Zoom



• Requesttakt: 100ms



• Requesttakt: 100ms Zoom



4. Ergebnis:

Zeiten T1, T6 und T7 sind auser Toleranz

Zeit	Тур	Min	Max	lst
T1	-	2 ms	40 ms	0,8 ms
T2	21 µs	-	-	21,0 µs
T3	100 µs	-	-	103,9 µs
T4	100 µs	-	-	107,9 μs
Т6	-	-	77 ms	1200 ms
T7	-	19 ms	57 ms	12,8 ms

- 40EWR-L erst bei 1200ms stabil
- 40EWR-L, wenn Anforderungsrate ist schneller (<250ms) antwort stabilisiert sich ca 700ms jede Antwort
- Sonst datei sind plausiebel.
- Antwortzeit für Tastendruck ist auch ohne Verzögerung.