**Terminal verification results** (TVR) or **Tag '95'**[[1]](https://en.wikipedia.org/wiki/Terminal_verification_results#cite_note-1) is an [EMV](https://en.wikipedia.org/wiki/EMV) data object . The TVR is a series of bits set by the terminal reading an EMV card, based on logical tests (for example has the card expired). This data object is used in the terminal's decision whether to accept, decline or go on-line for a payment transaction. The format of the TVR is as follows:[[2]](https://en.wikipedia.org/wiki/Terminal_verification_results#cite_note-2)[[3]](https://en.wikipedia.org/wiki/Terminal_verification_results#cite_note-3)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Byte 1** | | | | | | | | |
| **b8** | **b7** | **b6** | **b5** | **b4** | **b3** | **b2** | **b1** | **Meaning** |
| 1 |  |  |  |  |  |  |  | Offline data authentication was not performed |
|  | 1 |  |  |  |  |  |  | SDA failed |
|  |  | 1 |  |  |  |  |  | ICC data missing |
|  |  |  | 1 |  |  |  |  | Card number appears on hotlist |
|  |  |  |  | 1 |  |  |  | DDA failed |
|  |  |  |  |  | 1 |  |  | CDA failed |
|  |  |  |  |  |  | 1 |  | RFU (Now SDA was selected) |
|  |  |  |  |  |  |  | 0 | RFU |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Byte 2** | | | | | | | | |
| **b8** | **b7** | **b6** | **b5** | **b4** | **b3** | **b2** | **b1** | **Meaning** |
| 1 |  |  |  |  |  |  |  | Card and terminal have different application versions |
|  | 1 |  |  |  |  |  |  | Expired application |
|  |  | 1 |  |  |  |  |  | Application not yet effective |
|  |  |  | 1 |  |  |  |  | Requested service not allowed for card product |
|  |  |  |  | 1 |  |  |  | New card |
|  |  |  |  |  | 0 |  |  | RFU |
|  |  |  |  |  |  | 0 |  | RFU |
|  |  |  |  |  |  |  | 0 | RFU |

|  |  |  |  |  |  |  |  |  |
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| **Byte 3** | | | | | | | | |
| **b8** | **b7** | **b6** | **b5** | **b4** | **b3** | **b2** | **b1** | **Meaning** |
| 1 |  |  |  |  |  |  |  | Cardholder verification was not successful |
|  | 1 |  |  |  |  |  |  | Unrecognised CVM |
|  |  | 1 |  |  |  |  |  | [PIN](https://en.wikipedia.org/wiki/Personal_identification_number) try limit exceeded |
|  |  |  | 1 |  |  |  |  | [PIN](https://en.wikipedia.org/wiki/Personal_identification_number) entry required, but no PIN pad present or not working |
|  |  |  |  | 1 |  |  |  | [PIN](https://en.wikipedia.org/wiki/Personal_identification_number) entry required, PIN pad present, but PIN was not entered |
|  |  |  |  |  | 1 |  |  | On-line [PIN](https://en.wikipedia.org/wiki/Personal_identification_number) entered |
|  |  |  |  |  |  | 0 |  | RFU |
|  |  |  |  |  |  |  | 0 | RFU |

|  |  |  |  |  |  |  |  |  |
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| **Byte 4** | | | | | | | | |
| **b8** | **b7** | **b6** | **b5** | **b4** | **b3** | **b2** | **b1** | **Meaning** |
| 1 |  |  |  |  |  |  |  | Transaction exceeds floor limit |
|  | 1 |  |  |  |  |  |  | Lower consecutive offline limit exceeded |
|  |  | 1 |  |  |  |  |  | Upper consecutive offline limit exceeded |
|  |  |  | 1 |  |  |  |  | Transaction selected randomly of on-line processing |
|  |  |  |  | 1 |  |  |  | Merchant forced transaction on-line |
|  |  |  |  |  | 0 |  |  | RFU |
|  |  |  |  |  |  | 0 |  | RFU |
|  |  |  |  |  |  |  | 0 | RFU |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Byte 5** | | | | | | | | |
| **b8** | **b7** | **b6** | **b5** | **b4** | **b3** | **b2** | **b1** | **Meaning** |
| 1 |  |  |  |  |  |  |  | Default TDOL Used |
|  | 1 |  |  |  |  |  |  | Issuer authentication failed |
|  |  | 1 |  |  |  |  |  | Script processing failed before final Generate AC |
|  |  |  | 1 |  |  |  |  | Script processing failed after final Generate AC |
|  |  |  |  | 1 |  |  |  | Relay resistance threshold exceeded (Contactless Kernel 2) |
|  |  |  |  |  | 1 |  |  | Relay resistance time limits exceeded (Contactless Kernel 2) |
|  |  |  |  |  |  | 0 | 0 | Relay resistance protocol not supported (Contactless Kernel 2) |
|  |  |  |  |  |  | 0 | 1 | Relay resistance protocol not performed (Contactless Kernel 2) |
|  |  |  |  |  |  | 1 | 0 | Relay resistance protocol performed (Contactless Kernel 2) |
|  |  |  |  |  |  | 1 | 1 | RFU |