We present data from a production study where 24 native signers of DGS responded to positive and negative assertions. We discuss which manual and non-manual markers signers use simultaneously and consecutively, and show that there is a tendency to avoid ambiguity in responses to negative assertions, where response elements like 'yes' and 'no' are ambiguous (they may signal (i) agreement with or rejection of the previous utterance, (ii) whether the polarity of the response is positive or negative). In responses to negative assertions signers use non-ambiguous response elements like 'correct' or 'not-correct' more often than ambiguous elements. Furthermore, they add disambiguating second response elements to ambiguous first response element. Still, there is no total disambiguation except through an explicit response clause. In general, there is a preference for response elements to mark agreement/rejection rather than the polarity of the response clause. This pattern has also been observed for Spoken German. Overall, there are more non-manual markers used in addition to manual markers in responses to negative assertions, which indicates that speakers mark the difference between negative and positive antecedents.