CLAIMS

1. A sidelink data transmission method, wherein the method is performed by a terminal device, and comprises:

calculating a transport block size (TBS) based on a size of an allocated resource and a target resource overhead; wherein the target resource overhead comprises a resource overhead of a physical sidelink feedback channel (PSFCH); and

transmitting sidelink data based on the calculated TBS;

wherein the calculating a TBS based on a size of an allocated resource and a target resource overhead comprises: calculating the TBS based on the size of the allocated resource and a parameter related to the target resource overhead, wherein the parameter indicates the resource overhead of the PSFCH and is obtained in at least one of the following manners:

configured by a network device; or,

indicated by using sidelink control information (SCI).

2. The method according to claim 1, wherein the target resource overhead comprises at least one of the following:

a resource overhead of a physical sidelink control channel (PSCCH);

a resource overhead of sidelink feedback control information (SFCI);

a resource overhead of a demodulation reference signal (DMRS);

a resource overhead of a phase-tracking reference signal (PTRS);

a resource overhead of a channel state information-reference signal (CSI-RS);

a resource overhead of automatic gain control (AGC); and

a resource overhead of a guard period (GP).

3. The method according to claim 1 or 2, wherein the calculating a TBS based on a size of an allocated resource and a target resource overhead comprises at least one of the following:

subtracting a first parameter from a quantity of allocated symbols to calculate a quantity of available resource elements (REs) in a physical resource block (PRB), and calculating the TBS based on an obtained value;

subtracting a second parameter from a quantity of available REs in the allocated resource, and calculating the TBS based on an obtained value, wherein the quantity of available REs in the allocated resource is calculated based on the size of the allocated resource;

multiplying a third parameter by the quantity of available REs in the allocated resource, and calculating the TBS based on an obtained value, wherein the quantity of available REs in the allocated resource is calculated based on the size of the allocated resource;

multiplying a fourth parameter by a quantity of available PRBs in the allocated resource, and calculating the TBS based on an obtained value; and

multiplying an information median by a fifth parameter, and calculating the TBS based on an obtained value, wherein the information median is calculated based on the size of the allocated resource, wherein

the first parameter, the second parameter, the third parameter, the fourth parameter, and the fifth parameter are related to the target resource overhead, and the third parameter, the fourth parameter, and the fifth parameter are all greater than 0 and less than or equal to 1.

4. The method according to claim 1, wherein the calculating a TBS based on a size of an allocated resource and a target resource overhead comprises:

calculating a quantity $N_{RE}^{'}$ of available REs in a PRB on an allocated symbol based on the following formula, and calculating the TBS based on $N_{RE}^{'}$:

$$N_{RE}^{'} = N_{sc}^{RB} \cdot (N_{symbol}^{sh} - N_{oh_sym}) - N_{DMRS}^{PRB} - N_{oh}^{PRB}$$

wherein N_{sc}^{RB} denotes a quantity of subcarriers in a PRB, N_{symbol}^{sh} denotes a quantity of allocated symbols, N_{oh_sym} denotes a quantity of symbols related to the target resource overhead, N_{DMRS}^{PRB} denotes a resource overhead of a DMRS in a PRB on an allocated symbol, and N_{oh}^{PRB} is a parameter predefined in a protocol, (pre)configured by a network device, or configured by a terminal device.

5. The method according to claim 1, wherein the calculating a TBS based on a size of an allocated resource and a target resource overhead comprises:

calculating a quantity $N_{RE}^{'}$ of available REs in a PRB on an allocated symbol based on the following formula, and calculating the TBS based on $N_{RE}^{'}$:

$$N_{RE}^{'} = N_{sc}^{RB} \cdot N_{symbol}^{sh} - N_{DMRS}^{PRB} - N_{oh}^{PRB}$$

wherein N_{sc}^{RB} denotes a quantity of subcarriers in a PRB, N_{symbol}^{sh} denotes a quantity of allocated symbols, N_{DMRS}^{PRB} denotes a resource overhead of a DMRS in a PRB on an allocated symbol, and N_{oh}^{PRB} is a parameter related to the target resource overhead.

6. The method according to claim 1, wherein the calculating a TBS based on a size of an allocated resource and a target resource overhead comprises:

calculating a quantity $N_{RE}^{'}$ of available REs in a PRB on an allocated symbol based on the following formula, and calculating the TBS based on $N_{RE}^{'}$:

$$N_{RE}^{'} = N_{sc}^{RB} \cdot N_{symbol}^{sh} - N_{DMRS}^{PRB} - N_{oh}^{PRB} - N$$

wherein N_{sc}^{RB} denotes a quantity of subcarriers in a PRB, N_{symbol}^{sh} denotes a quantity of allocated symbols, N_{DMRS}^{PRB} denotes a resource overhead of a DMRS in a PRB on an allocated symbol, N_{oh}^{PRB} is a parameter predefined in a protocol, (pre)configured by a network device, or configured by a terminal device, and N is a parameter related to the target resource overhead.

7. The method according to claim 1, wherein the calculating a TBS based on a size of an allocated resource and a target resource overhead comprises:

calculating a quantity $N_{RE}^{'}$ of available REs in a PRB on an allocated symbol based on the size of the allocated resource, calculating a quantity N_{RE} of available REs in the allocated resource based on the following formula, and calculating the TBS based on N_{RE}:

$$N_{RE} = \min\left(156, N_{RE}^{'}\right) \cdot n_{PRB} - M$$

wherein n_{PRB} denotes a quantity of available PRBs in the allocated resource, and M is a parameter related to the target resource overhead.

8. The method according to claim 1, wherein the calculating a TBS based on a size of an allocated resource and a target resource overhead comprises:

calculating a quantity $N_{RE}^{'}$ of available REs in a PRB on an allocated symbol based on the following formula, and calculating the TBS based on $N_{RE}^{'}$:

$$N_{RE}^{'} = \left(N_{sc}^{RB} \cdot N_{symbol}^{sh} - N_{DMRS}^{PRB} - N_{oh}^{PRB}\right) * alpha_1$$

wherein N_{sc}^{RB} denotes a quantity of subcarriers in a PRB, N_{symbol}^{sh} denotes a quantity of allocated symbols, N_{DMRS}^{PRB} denotes a resource overhead of a DMRS in a PRB on an allocated symbol, N_{oh}^{PRB} is a parameter predefined in a protocol, (pre)configured by a network device, or configured by a terminal device, $alpha_1$ is a parameter related to the target resource overhead, and $0 < alpha_1 \leq 1$.

9. The method according to claim 1, wherein the calculating a TBS based on a size of an allocated resource and a target resource overhead comprises:

calculating a quantity $N_{RE}^{'}$ of available REs in a PRB on an allocated symbol based on the size of the allocated resource, calculating a quantity N_{RE} of available REs in the allocated resource based on the following formula, and calculating the TBS based on N_{RE}:

$$N_{RE} = \min\left(156, N_{RE}^{'}\right) \cdot n_{PRB} \cdot alpha_2$$

wherein n_{PRB} denotes a quantity of allocated PRBs and is a parameter related to the target resource overhead, and $0 < alpha_2 \leq 1$.

10. The method according to claim 1, wherein the calculating a TBS based on a size of an allocated resource and a target resource overhead comprises:

calculating a quantity N_{RE} of available REs based on the size of the allocated resource, calculating an information median $N_{\inf o}$ based on the following formula, and calculating the TBS based on $N_{\inf o}$:

$$N_{info} = N_{RE} \cdot R \cdot Q_m \cdot v \cdot alpha_3$$

wherein N_{RE} denotes a quantity of available REs in the allocated resource, R denotes a bit rate, Q_m denotes a modulation order, υ denotes a quantity of layers, $alpha_3$ is a parameter related to the target resource overhead, and $0 < alpha_3 \leq 1$.

11. The method according to claim 2, wherein the target resource overhead comprises the resource overhead of the PSCCH and is calculated based on configuration of the PSCCH.

12. The method according to claim 11, wherein before the calculating a TBS based on a size of an allocated resource and a target resource overhead, the method further comprises:

calculating the resource overhead of the PSCCH based on a resource occupied by the PSCCH during blind detection; or

calculating the resource overhead of the PSCCH based on a first resource overhead of a first PSCCH and a second resource overhead of a second PSCCH, wherein the first PSCCH is predefined or is configured or preconfigured by a network device, and the second PSCCH is indicated by using the first PSCCH.

13. The method according to claim 11, wherein a parameter related to at least one of the resource overhead of the PSCCH or the resource overhead of the SFCI is obtained in at least one of the following manners:

predefined in a protocol;

preconfigured by a network device;

configured by a network device;

configured based on a transmission type;

indicated by using sidelink control information (SCI) or downlink control information (DCI);

negotiated through radio resource control (RRC) configuration between terminal devices; and

obtained based on feedback information.

14. The method according to claim 1, wherein when the sidelink data is retransmission sidelink data, the method further comprises:

using a TBS for initial transmission of the sidelink data as a TBS of the retransmission sidelink data.

15. A terminal device, comprising a memory, a processor, and a computer program stored in the memory and capable of running on the processor, wherein the computer program is executed by the processor to implement:

calculating a TBS based on a size of an allocated resource and a target resource overhead; wherein the target resource overhead comprises a resource overhead of a physical sidelink feedback channel (PSFCH); and transmitting sidelink data based on the calculated TBS;

wherein the calculating a TBS based on a size of an allocated resource and a target resource overhead comprises: calculating the TBS based on the size of the allocated resource and a parameter related to the target resource overhead, wherein the parameter indicates the resource overhead of the PSFCH and is obtained in at least one of the following manners:

configured by a network device; or,

indicated by using sidelink control information (SCI).

16. The terminal device according to claim 15, wherein the target resource overhead comprises at least one of the following:

a resource overhead of a PSCCH;

a resource overhead of SFCI;

a resource overhead of a DMRS;

a resource overhead of a PTRS;

a resource overhead of a CSI-RS;

a resource overhead of AGC; and

a resource overhead of a GP.

17. The terminal device according to claim 15 or 16, wherein the computer program is executed by the processor to further implement:

subtracting a first parameter from a quantity of allocated symbols to calculate a quantity of available REs in a PRB, and calculating the TBS based on an obtained value;

subtracting a second parameter from a quantity of available REs in the allocated resource, and calculating the TBS based on an obtained value, wherein the quantity of available REs in the allocated resource is calculated based on the size of the allocated resource;

multiplying a third parameter by the quantity of available REs in the allocated resource, and calculating the TBS based on an obtained value, wherein the quantity of available REs in the allocated resource is calculated based on the size of the allocated resource;

multiplying a fourth parameter by a quantity of available physical resource blocks (PRBs) in the allocated resource, and calculating the TBS based on an obtained value; and

multiplying an information median by a fifth parameter, and calculating the TBS based on an obtained value, wherein the information median is calculated based on the size of the allocated resource, wherein

the first parameter, the second parameter, the third parameter, the fourth parameter, and the fifth parameter are related to the target resource overhead, and the third parameter, the fourth parameter, and the fifth parameter are all greater than 0 and less than or equal to 1.

18. The terminal device according to claim 15, wherein the target resource overhead comprises the resource overhead of the PSCCH and is calculated based on configuration of the PSCCH, a parameter related to at least one of the resource overhead of the PSCCH or the resource overhead of the SFCI is obtained in at least one of the following manners:

predefined in a protocol;

preconfigured by a network device;

configured by a network device;

configured based on a transmission type;

indicated by using SCI or DCI;

negotiated through RRC configuration between terminal devices; and

obtained based on feedback information.

19. The terminal device according to claim 15, wherein when the sidelink data is retransmission sidelink data, the computer program is executed by the processor to further implement: using a TBS for initial transmission of the sidelink data as a TBS of the retransmission sidelink data.

20. A computer-readable storage medium, wherein the computer-readable storage medium stores a computer program, and when the computer program is executed by a processor to implement:

calculating a transport block size (TBS) based on a size of an allocated resource and a target resource overhead; wherein the target resource overhead comprises a resource overhead of a physical sidelink feedback channel (PSFCH); and

transmitting sidelink data based on the calculated TBS;

wherein the calculating a TBS based on a size of an allocated resource and a target resource overhead comprises: calculating the TBS based on the size of the allocated resource and a parameter related to the target resource overhead, wherein the parameter indicate the resource overhead of the PSFCH and is obtained in at least one of the following manners:

configured by a network device; or,

indicated by using sidelink control information (SCI).