1 SUBSET-126 vs. SFERA Compatibility Table

- SUBSET-126 Version: 0.1.0 (24-03-2022)
- SFERA Version: 2.00

1.1 ATO Header

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
NID_PACKET_ATO	8 bits	0-8	N/A	N/A	N/A	N/A	N/A	This element indicates the type of packet that follows (e.g. Handshake Request, Segment Profile, Journey Profile...). It must be used to create the correct SFERA message.	The type of SFERA message should be converted into the correct NID_PACKET_ATO.	
L_PACKET_ATO	16 bits	0-65535	N/A	N/A	N/A	N/A	N/A	This element is unnecessary in SFERA as it indicates the length in bits of the packet that follows.	When converting a SFERA message to SS-126, the number of bits of the message produced has to be counted and written in L_PACKET_ATO.	
NID_OPERATIONAL	32 bits	0-99999999; possibility of having "F" in one or more of the positions	N/A	MessageHeader / NID_OPERATIONAL	No	xs:string (with 8 digits between 0 and 9 or between A and F)	N/A	No conversion	No conversion	In SFERA it is possible to use other subscription mechanisms.
NID_ENGINE	24 bits	To be assigned	N/A	MessageHeader / NID_ENGINE	No	xs:string (with 24 digits between 0 and 1)	N/A	No conversion	No conversion	In SFERA it is possible to use other subscription mechanisms. The resolution/formula of NID_ENGINE is still to be defined in SS-126, so the content is kept in binary form.
T_Timestamp_Date	15 bits	0-32767	Days: from 0 (01/01/2010)	MessageHeader / timestamp	Yes	xs:dateTime	N/A	It is possible to convert T_Timestamp_Date and		

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
		to 32767 (18/09/2099)						T_Timestamp_Seconds to the SFERA timestamp and back with an algorithm (the explicit definition of the algorithm is out of the scope of this document).		
T_Timestamp_Seconds	17 bits	0-86399	Seconds: from 0 (00:00:00) to 86399 (23:59:59)	MessageHeader / timestamp	Yes	xs:dateTime	N/A	It is possible to convert T_Timestamp_Date and T_Timestamp_Seconds to the SFERA timestamp and back with an algorithm (the explicit definition of the algorithm is out of the scope of this document).		
N_Packet_Counter	8 bits	0-255	N/A	MessageHeader / message_ID	Yes	xs:string	N/A	N_Packet_Counter should be combined with T_Timestamp_Date, T_Timestamp_Seconds and NID_ENGINE to create a SFERA message_ID.	SFERA message_ID should be decomposed (using also timestamp and NID_ENGINE) to create N_Packet_Counter.	

1.2 Handshake Request Packet

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
N_ITER	5 bits	0-31	N/A	N/A	N/A	N/A	N/A	[Conversion is not to an element, but to the multiplicity of the element]	[Conversion is not to an element, but to the multiplicity of the element]	
M_ATO_Version (k)	16 bits	0-255 for major and 0-255 for minor version	N/A	N/A	N/A	N/A	N/A	N/A	N/A	M_ATO_Version is not translated; the SFERA-SS126 translator should already know the version it is referring to.

1.3 Handshake Acknowledgement Packet

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
NID_C	10 bits 0-1023 N/A			SFERA_G2B_ReplyMessage / HandshakeAcknowledgement / SP_Zone / NID_C	No	NID_C_Type (xs:short between 0 and 1023)	N/A	No conversion	No conversion	
NID_ATOTS	14 bits	0-65535	N/A	MessageHeader / sourceDevice	Yes	deviceType (xs:string)	N/A	Number to string	String to number	The SFERA header also contains other mandatory attributes.
M_ATO_Version	16 bits	0-255 for major and 0-255 for minor version	N/A	MessageHeader / SFERA_version_major and SFERA_version_minor	Yes	xs:string	N/A	According to SS-126↔SFERA conversion table.	According to SS-126↔SFERA conversion table.	
T_Timeout_ATOTS_Response	8 bits	0-255	Seconds	SFERA_G2B_ReplyMessage / HandshakeAcknowledgement / timeout_ATOTS_Response	No	xs:duration	Seconds	Conversion from absolute value to xs:duration	Conversion from xs:duration to absolute value	
T_Reporting_Time	8 bits	0-255	Seconds	SFERA_G2B_ReplyMessage / HandshakeAcknowledgement / reportingTime	No	xs:duration	Seconds	Conversion from absolute value to xs:duration	Conversion from xs:duration to absolute value	

1.4 Handshake Reject Packet

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes

SS-126 name	SS-126 length			SS-126 precision or range	SS-126 unit	SFERA name		SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
Q_Reject_Reason	2 bits	0-3	N/A	SFERA_G2B_ReplyMessage / HandshakeReject / handshakeRejectReason	No	xs:string	N/A	0→"ATO system version incompatible"; 1→"Another DAS-TS/ATO-TS in charge"; 2→"DAS-TS/ATO-TS in charge unknown"	"ATO system version incompatible"→0; "Another DAS-TS/ATO-TS in charge"→1; "DAS-TS/ATO-TS in charge unknown"→2				
NID_C	10 bits			0-1023	N/A	SFERA_G2B_ReplyMessage / HandshakeReject / SP_Zone /NID_C		No	NID_C_Type (xs:short between 0 and 1023)	N/A	No conversion.	No conversion	
NID_ATOTS	14 bits			0-16383	N/A	SFERA_G2B_ReplyMessage / HandshakeReject / ATOTS_ID		No	xs:string	N/A	Number to string	String to number	

1.5 Journey Profile Request Packet

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
NID_C	10 bits	0-1023	N/A	SFERA_B2G_RequestMessage / B2G_Request / JP_Request / RequestFromTimingPoint / SP_Zone / NID_C	Yes (if RequestFromTimingPoint and SP_Zone are specified)	NID_C_Type (xs:short between 0 and 1023)	N/A	No conversion	No conversion	
NID_SP	32 bits	0-4294967295	N/A	SFERA_B2G_RequestMessage / B2G_Request / JP_Request / RequestFromSegmentProfile / SP_ID	No	xs:string	N/A	Number to string	String to number	

1.6 Journey Profile Packet

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
Q_JP_Status	3 bits	0-4	N/A	JourneyProfile / JP_Status	No	xs:string	N/A	0→Invalid; 1→Valid; 2→Unavailable; 3→Update; 4→Overwrite	Invalid→0; Valid→1; Unavailable→2; Update→3; Overwrite→4	
N_ITER_SP	8 bits	0-255	N/A	N/A	N/A	N/A	N/A	Convert to/from number of SegmentProfileList elements under JourneyProfile		
→NID_C (k)	10 bits	0-1023	N/A	JourneyProfile / SegmentProfileList / SP_Zone / NID_C	Yes	NID_C_Type (xs:short between 0 and 1023)	N/A	No conversion	No conversion	
→NID_SP (k)	32 bits	0-4294967295	N/A	JourneyProfile / SegmentProfileList / SP_ID	Yes	xs:string	N/A	Number to string	String to number	
→M_SP_Version (k)	16 bits	0-255 for major and 0-255 for minor version	N/A	JourneyProfile / SegmentProfileList / SP_VersionMajor and SP_VersionMinor	Yes	xs:unsignedInt	N/A	No conversion	No conversion	
→Q_SP_DIR (k)	1 bit	0-1	N/A	JourneyProfile / SegmentProfileList / SP_Direction	No	xs:string	N/A	0→Reverse; 1→Nominal	Reverse→0; Nominal→1	
→N_ITER (k)	5 bits	0-31	N/A	N/A	N/A	N/A	N/A	Convert to/from number of TimingPointConstraints elements under JourneyProfile / SegmentProfileList		
→→NID_TP (k,l)	32 bits	0-4294967295	N/A	JourneyProfile / SegmentProfileList / TimingPointConstraints / TP_ID	Yes	xs:string	N/A	Number to string	String to number	
→→T_Latest_Arrival_Date (k,l)	15 bits	0-32767	Days: from 0 (01/01/2010) to 32767 (18/09/2099)	JourneyProfile / SegmentProfileList / TimingPointConstraints / TP_latestArrivalTime	No	xs:dateTime	N/A	Algorithm available (explicit definition out of scope).	Algorithm available (explicit definition out of scope).	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
→→T_Latest_Arrival_ Seconds (k,l)	17 bits	0-86400	Seconds: from 0 (00:00:00) to 86400 (24:00:00)	JourneyProfile / SegmentProfileList / TimingPointConstraints / TP_latestArrivalTime	No	xs:dateTime	N/A	Algorithm available (explicit definition out of scope).	Algorithm available (explicit definition out of scope).	
→→T_Arrival_Window (k,l)	10 bits	0-1023	Seconds	JourneyProfile / SegmentProfileList / TimingPointConstraints / arrivalWindow	No	xs:duration	N/A	W→"PTxMyS" where x=INT(W/60) and y=MOD(W/60)	"PTxMyS"→W where W=60*x+y	
→→Q_TP_Alignment (k,l)	2 bits	0-3	N/A	JourneyProfile / SegmentProfileList / TimingPointConstraints / TP_alignment	No	xs:string	N/A	0→Front; 1→Middle; 2→Rear	Front→0; Middle→1; Rear→2	
→→Q_Stop_Skip_Pass (k,l)	2 bits	0-3	N/A	JourneyProfile / SegmentProfileList / TimingPointConstraints / TP_StopSkipPass	No	xs:string	N/A	0→Stopping_Point; 1→Skipped_Stopping_Point; 2→Passing_Point	Stopping_Point→0; Skipped_Stopping_Point→1; Passing_Point→2	
→→Q_TP_Information (k,l)	2 bits	0-3	N/A	JourneyProfile / SegmentProfileList / TimingPointConstraints / TP_Information	No	xs:string	N/A	0→None; 1→End_of_Journey	None→0; End_of_Journey→1	
→→Q_Day_Light_Saving (k,l)	1 bit	0-1	N/A	JourneyProfile / SegmentProfileList / TimingPointConstraints / daylightSaving	No	xs:boolean	N/A	No conversion	No conversion	
→→Q_Opening_Door_Side (k,l)	2 bits	00,01,10,11	N/A	JourneyProfile / SegmentProfileList / TimingPointConstraints / StoppingPointInformation / openingDoorSide	No	xs:string	N/A	00→None; 01→Right; 10→Left; 11→Both	None→00; Right→01; Left→10; Both→11	
→→Q_Centralised_Opening (k,l)	1 bit	0-1	N/A	JourneyProfile / SegmentProfileList / TimingPointConstraints / StoppingPointInformation / centralisedOpening	No	xs:boolean	N/A	No conversion	No conversion	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name		SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
→→Q_Relaxed_Coupler (k,l)	1 bit	0-1	N/A	JourneyProfile / SegmentProfileList / TimingPointConstraints / StoppingPointInformation / relaxedCoupler	No	xs:boolean	N/A	No conversion	No conversion		
→→Q_Train_Hold (k,l)	1 bit	0-1	N/A	JourneyProfile / SegmentProfileList / TimingPointConstraints / StoppingPointInformation / trainHold	No		xs:boolean	N/A	No conversion	No conversion	
→→T_Departure_Date (k,l)	15 bits	0-32767	Days: from 0 (01/01/2010) to 32767 (18/09/2099)	JourneyProfile / SegmentProfileList / TimingPointConstraints / StoppingPointInformation / departureTime	StoppingPointInformation is optional. If it is included, departureTime is mandatory.	xs:dateTime	N/A	Algorithm available (explicit definition out of scope).	Algorithm available (explicit definition out of scope).	
→→T_Departure_Seconds (k,l)	17 bits	0-86399	Seconds: from 0 (00:00:00) to 86399 (23:59:59)	JourneyProfile / SegmentProfileList / TimingPointConstraints / StoppingPointInformation / departureTime	StoppingPointInformation is optional. If it is included, departureTime is mandatory.	xs:dateTime	N/A	Algorithm available (explicit definition out of scope).	Algorithm available (explicit definition out of scope).	
→→T_Minimum_Dwell_Time (k,l)	10 bits	0-1023	Seconds	JourneyProfile / SegmentProfileList / TimingPointConstraints / StoppingPointInformat	No		xs:duration	N/A	W→"PTxMyS" where x=INT(W/60) and y=MOD(W/60)	"PTxMyS"→W where W=60*x+y	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
				ion / minimumDwellTime						
→→Q_Automatic_Clos ing (k,l)	1 bit	0-1	N/A	JourneyProfile / SegmentProfileList / TimingPointConstraint s / StoppingPointInformat ion / automaticClosing	No	xs:boolean	N/A	No conversion	No conversion	
→N_ITER (k)	5 bits	0-31	N/A	N/A	N/A	N/A	N/A	Convert to number of TemporaryConstraints elements under JourneyProfile / SegmentProfileList	Convert from number of TemporaryConstraints elements under JourneyProfile / SegmentProfileList	
→→Q_TC_Type (k,l)	2 bits	0-3	N/A	JourneyProfile / SegmentProfileList / TemporaryConstraints / temporaryConstraintT ype	Yes (if there are Temporary Constraints)	xs:string	N/A	0→ASR;1→Low_Adhesion;2 →Unavailable_DAS_Operati ngModes (and Unavailable_DAS_Operating Modes / DAS_drivingMode = GoA2, GoA3, GoA4);3→Unavailable_DAS_ OperatingModes (and Unavailable_DAS_Operating Modes / DAS_drivingMode = GoA1);4→TractionTotalCurre nt	ASR→0;Low_Adhesion→1; Unavailable_DAS_Operatin gModes and Unavailable_DAS_Operatin gModes / DAS_drivingMode = GoA2, GoA3, GoA4→2Unavailable_DAS_ OperatingModes and Unavailable_DAS_Operatin gModes / DAS_drivingMode = GoA1→3;TractionTotalCurr ent→4	
→→Q_TC_Range (k,l)	2 bits	0-3	N/A	JourneyProfile / SegmentProfileList / TemporaryConstraints / startEndQualifier	Yes	xs:string	N/A	0→Starts; 1→Ends; 2→StartsEnds; 3→WholeSP	Starts→0; Ends→1; StartsEnds→2; WholeSP→3	
→→D_TC_Start_Locat ion (k,l)	24 bits	0-16777215	cm	JourneyProfile / SegmentProfileList / TemporaryConstraints / startLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceTy pe (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→D_TC_End_Locati on (k,l)	24 bits	0-16777215	cm	JourneyProfile / SegmentProfileList / TemporaryConstraints	No (but some guidelines have to be in the IRS as it must	distanceTy pe (xs:double)	m	/100	Y=ROUND(X*100,0)	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
				/ endLocation	exist under certain circumstances)					
→→Q_FRONT (k,l)	1 bit	0-1	N/A	JourneyProfile / SegmentProfileList / TemporaryConstraints / AdditionalSpeedRestriction / ASR_Front	No	xs:boolean	N/A	No conversion	No conversion	
→→V_Speed_Level (k,l)	7 bits	0-120	"km/h" (5 by 5)	JourneyProfile / SegmentProfileList / TemporaryConstraints / AdditionalSpeedRestriction / ASR_Speed	No	speedType (i.e. xs:unsignedShort)	km/h	*5	Y=INT(X/5)	INT is used rather than ROUND because it rounds down. Speeds should always be rounded to the lower value: the

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
										y might be safety related, and slower is safer.
→→Q_Low_Adhesion _Rate (k,l)	3 bits	0-7	N/A	JourneyProfile / SegmentProfileList / TemporaryConstraints / LowAdhesion / lowAdhesionRate	No	xs:string	N/A	0→"Dry Rail"; 1→"Dry Rail (Medium)"; 2→"Dry Rail (Low)"; 3→"Low Adhesion"; 4→"Very Low Adhesion"; 5→"Extremely Low Adhesion"	"Dry Rail"→0; "Dry Rail (Medium)"→1; "Dry Rail (Low)"→2; "Low Adhesion"→3; "Very Low Adhesion"→4; "Extremely Low Adhesion"→5	
→→M_CURRENT (k,l)	10 bits	0-1000; 1023	dA	JourneyProfile / SegmentProfileList / TemporaryConstraints / TractionTotalCurrent / maxCurValue	No	currentType (xs:decimal)	A	*10. Element TractionTotalCurrent not included if M_CURRENT is 1023.	Y=INT(X/10). 1023 if TractionTotalCurrent is not included.	

1.7 Journey Profile Acknowledgement Packet

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
T_JP_Reference_Timestamp_Date	15 bits	0-32767	Days: from 0 (01/01/2010) to 32767 (18/09/2099)	N/A: SFERA includes the "correlation_ID" attribute in the header, which can be used to reconstruct the reference timestamp of the JP update packet	N/A	N/A	N/A	It is possible to convert Timestamp_Date and Timestamp_Seconds to the SFERA timestamp and back with an algorithm (the explicit definition of the algorithm is out of the scope of this document).		
T_JP_Reference_Timestamp_Seconds	17 bits	0-86399	Seconds: from 0 (00:00:00)	N/A: SFERA includes the "correlation_ID"	N/A	N/A	N/A	It is possible to convert Timestamp_Date and		

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
		to 86399 (23:59:59)		attribute in the header, which can be used to reconstruct the reference timestamp of the JP update packet				Timestamp_Seconds to the SFERA timestamp and back with an algorithm (the explicit definition of the algorithm is out of the scope of this document).		
N_JP_Reference_Packet_Counter	8 bits	0-255	N/A	-	-	-	-	Packet_Counter should be combined with Timestamp_Date, Timestamp_Seconds and NID_ENGINE to create a SFERA message_id.	SFERA message_id should be decomposed (using also timestamp and NID_ENGINE) to create Packet_Counter.	

1.8 Segment Profile Request Packet

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
N_ITER	5 bits	0-31	N/A	N/A	N/A	N/A	N/A	Convert to number of B2G_Request / SP_request elements under SFERA_B2G_RequestMessage	Convert from number of B2G_Request / SP_request elements under SFERA_B2G_RequestMessage	
→NID_C (k)	10 bits	0-1023	N/A	SFERA_B2G_RequestMessage / B2G_Request / SP_Request / SP_Zone / NID_C	Yes	NID_C_Type (xs:short between 0 and 1023)	N/A	No conversion	No conversion	
→NID_SP (k)	32 bits	0-4294967295	N/A	SFERA_B2G_RequestMessage / B2G_Request / SP_Request / SP_ID	Yes	xs:string	N/A	No conversion	No conversion	

1.9 Segment Profile Packet

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
N_ITER	5 bits	0-31	N/A	N/A	N/A	N/A	N/A	Convert to/from number of SegmentProfiles	Convert from number of SegmentProfiles	
→NID_C (k)	10	0-1023	N/A	SegmentProfile / SP_Zone	Yes	NID_C_Typ	N/A	No conversion	No conversion	

SS-126 name	SS-126 length bits	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
	bits			/ NID_C		e (xs:short between 0 and 1023)				
→NID_SP (k)	32 bits	0-4294967295	N/A	SegmentProfile / SP_ID	Yes	xs:string	N/A	Number to string	String to number	
→Q_SP_Status (k)	1 bit	0-1	N/A	SegmentProfile / SP_Status	No	xs:string	N/A	0→Invalid; 1→Valid	Invalid→0; Valid→1	
→M_SP_Version (k)	16 bits	0-255 for major and 0-255 for minor version	N/A	SegmentProfile / SP_VersionMajor and SP_VersionMinor	Yes	xs:unsignedInt	N/A	No conversion	No conversion	
→L_SP (k)	24 bits	0-16777215	cm	SegmentProfile / SP_Length	Yes	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→D_EoA_Offset (k)	24 bits	0-16777215	cm	SegmentProfile / distance_EoA_Offset	No	xs:decimal	m	/100	Y=ROUND(X*100,0)	
→Q_UTC_Offset (k)	7 bits	0-112	N/A	SegmentProfile / UTC_Offset	No	xs:unsignedByte	N/A	Same value	Same value	
→M_SP_Altitude (k)	20 bits	-100000 to 948575	cm	SegmentProfile / SP_Altitude	No	xs:decimal	m	/100	Y=ROUND(X*100,0)	
→Q_ATOTS_Contact_Info_Dir (k)	2 bits	0-3	N/A	SegmentProfile / NextSP / directionOfApplicationOnSP	No	xs:string	N/A	1→Nominal; 2→Reverse	Nominal→1; Reverse→2	
→NID_C (k)	10 bits	0-1023	N/A	SegmentProfile / NextSP / ATOTS_ContactInfo / NID_C	No	NID_C_Type (xs:short between 0 and 1023)	N/A	No conversion	No conversion	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
→NID_ATOTS (k)	14 bits	0-16383	N/A	SegmentProfile / NextSP / ATOTS_ContactInfo / ATOTS_ID	No	xs:string	N/A	Number to string	String to number	
→NID_C (k)	10 bits	0-1023	N/A	SegmentProfile / NextSP / SP_Zone / NID_C	No	NID_C_Type (xs:short between 0 and 1023)	N/A	No conversion	No conversion	
→NID_SP (k)	32 bits	0-4294967295	N/A	SegmentProfile / NextSP / SP_ID	No	xs:string	N/A	Number to string	String to number	
→V_STATIC (k)	7 bits	0-120	"km/h" (5 by 5)	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileStart / SSP_Speed	No	speedType (i.e. xs:unsignedShort)	km/h	*5	Y=INT(X/5)	INT is used rather than ROUND because it rounds down. Speeds should always be rounded to the lower value: they might be safety related, and slower is safer.
→Q_FRONT (k)	1 bit	0-1	N/A	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileStart / SSP_Front	No	xs:boolean	N/A	No conversion	No conversion	
→N_ITER (k)	5 bits	0-31	N/A	N/A	N/A	N/A	N/A	Convert to number of SpecificSSP elements under SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileStart	Convert from number of SpecificSSP elements under SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileStart	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
→→Q_DIFF (k,l)	2 bits	0-3	N/A	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileStart / SpecificSSP / specific_SSP_Category	No	xs:string	N/A	0→Cant_Deficiency_SSP; 1→Other_SSP_Replaces_CDSSP; 2→Other_SSP_Noreplace_CDSSP	Cant_Deficiency_SSP→0; Other_SSP_Replaces_CDSSP→1; Other_SSP_Noreplace_CDSSP→2	
→→NC_CDDIFF (k,l)	4 bits	0-10	N/A	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileStart / SpecificSSP / CantDeficiencySSP / SSP_NC_CDDIFF	No	xs:unsignedByte (to be changed to xs:string)	N/A (to be changed to mm)	No conversion (to be changed to enumeration: 0→80, 1→100, 2→130, 3→150, 4→165, 5→180, 6→210, 7→225, 8→245, 9→275, 10→300)	No conversion (to be changed to enumeration: 80→0, 100→1, 130→2, 150→3, 165→4, 180→5, 210→6, 225→7, 245→8, 275→9, 300→10)	
→→NC_DIFF (k,l)	4 bits	0-2	N/A	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileStart / SpecificSSP / OtherSpecificSSP / SSP_NC_DIFF	No	xs:string	N/A	0→Freight_Train_P_Position; 1→Freight_Train_G_Position; 2→Passenger_Train	Freight_Train_P_Position→0; Freight_Train_G_Position→1; Passenger_Train→2	
→→V_DIFF (k,l)	7 bits	0-120	"km/h" (5 by 5)	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileStart / SpecificSSP / V_DIFF	No	speedType (i.e. xs:unsignedShort)	km/h	*5	Y=INT(X/5)	INT is used rather than ROUND because it rounds down. Speeds should always be rounded to the lower value: they might be safety related, and slower is safer.
→N_ITER (k)	5 bits	0-31	N/A	N/A	N/A	N/A	N/A	Convert to number of StaticSpeedProfileChange elements under SP_Characteristics /	Convert from number of StaticSpeedProfileChange elements under SP_Characteristics /	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
								StaticSpeedProfile	StaticSpeedProfile	
→→D_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileChange / location	Yes (if StaticSpeedProfileChange exists).	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→V_STATIC (k,l)	7 bits	0-120	"km/h" (5 by 5)	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileChange / SSP_Speed	No	speedType (i.e. xs:unsignedShort)	km/h	*5	Y=INT(X/5)	INT is used rather than ROUND because it rounds down. Speeds should always be rounded to the lower value: they might be safety related, and slower is safer.
→→Q_FRONT (k,l)	1 bit	0-1	N/A	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileChange / SSP_Front	No	xs:boolean	N/A	No conversion	No conversion	
→→N_ITER (k,l)	5 bits	0-31	N/A	N/A	N/A	N/A	N/A	Convert to number of SpecificSSP elements under SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileChange	Convert from number of SpecificSSP elements under SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileChange	
→→→Q_DIFF (k,l,m)	2 bits	0-3	N/A	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileChange / SpecificSSP / specific_SSP_Category	No	xs:string	N/A	0→Cant_Deficiency_SSP; 1→Other_SSP_Replaces_CDSSP; 2→Other_SSP_Noreplace_CDSSP	Cant_Deficiency_SSP→0; Other_SSP_Replaces_CDSSP→1; Other_SSP_Noreplace_CDSSP→2	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
→→→NC_CDDIFF (k,l,m)	4 bits	0-10	N/A	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileChange / SpecificSSP / CantDeficiencySSP / SSP_NC_CDDIFF	No	xs:unsignedByte (to be changed to xs:string)	N/A (to be changed to mm)	No conversion (to be changed to enumeration: 0→80, 1→100, 2→130, 3→150, 4→165, 5→180, 6→210, 7→225, 8→245, 9→275, 10→300)	No conversion (to be changed to enumeration: 80→0, 100→1, 130→2, 150→3, 165→4, 180→5, 210→6, 225→7, 245→8, 275→9, 300→10)	
→→→NC_DIFF (k,l,m)	4 bits	0-2	N/A	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileChange / SpecificSSP / OtherSpecificSSP / SSP_NC_DIFF	No	xs:string	N/A	0→Freight_Train_P_Position; 1→Freight_Train_G_Position; 2→Passenger_Train	Freight_Train_P_Position→0; Freight_Train_G_Position→1; Passenger_Train→2	
→→→V_DIFF (k,l,m)	7 bits	0-120	"km/h" (5 by 5)	SegmentProfile / SP_Characteristics / StaticSpeedProfile / StaticSpeedProfileChange / SpecificSSP / V_DIFF	No	speedType (i.e. xs:unsignedShort)	km/h	*5	Y=INT(X/5)	INT is used rather than ROUND because it rounds down. Speeds should always be rounded to the lower value: they might be safety related, and slower is safer.
→G_New_Gradient (k)	10 bits	0-255	‰	SegmentProfile / SP_Characteristics / GradientSteepest / GradientSteepestStart / gradientValue	Yes (if GradientSteepest is defined)	gradientValueType (i.e. unsignedShort)	mm by m	No conversion	No conversion	In converting from SS-126 to SFERA, it is advisable to use the same values also for

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
										SegmentProfile / SP_Characteristics / GradientAverage
→Q_GDIR (k)	1 bit	0-1	N/A	SegmentProfile / SP_Characteristics / GradientSteepest / GradientSteepestStart / gradientDirection	Yes (if GradientSteepest is defined)	gradientDirectionType (i.e. xs:string)	N/A	0→Downhill; 1→Uphill	Downhill→0; Uphill→1	In converting from SS-126 to SFERA, it is advisable to use the same values also for SegmentProfile / SP_Characteristics / GradientAverage
→N_ITER (k)	5 bits	0-31	N/A	N/A	N/A	N/A	N/A	Convert to number of GradientChange elements under SP_Characteristics / Gradients	Convert from number of GradientChange elements under SP_Characteristics / Gradients	
→→D_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Characteristics / GradientSteepest / GradientSteepestChange / location	Yes (if GradientSteepest is defined)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	In converting from SS-126 to SFERA, it is advisable to use the same values also for SegmentProfile / SP_Characteristics / GradientA

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
→→G_New_Gradient (k,l)	10 bits	0-255	‰	SegmentProfile / SP_Characteristics / GradientSteepest / GradientSteepestChange / gradientValue	Yes (if GradientSteepest is defined)	gradientValueType (i.e. unsignedShort)	mm by m	No conversion	No conversion	In converting from SS-126 to SFERA, it is advisable to use the same values also for SegmentProfile / SP_Characteristics / GradientAverage
→→Q_GDIR (k,l)	1 bit	0-1	N/A	SegmentProfile / SP_Characteristics / GradientSteepest / GradientSteepestChange / gradientDirection	Yes (if GradientSteepest is defined)	gradientDirectionType (i.e. xs:string)	N/A	0→Downhill; 1→Uphill	Downhill→0; Uphill→1	In converting from SS-126 to SFERA, it is advisable to use the same values also for SegmentProfile / SP_Characteristics / GradientAverage
→Q_Radius_Category (k)	5 bits	0-31	N/A	SegmentProfile / SP_Characteristics / Curves / CurveStart / curveRadius	Yes (if Curves are defined)	xs:decimal	m	Conversion is done at midrange. For extremes, conversion is done at the extreme value. 0→7000; 1→6750; 2→3650; 3→2400; 4→1750; 5→1375; 6→1162.5; 7→1000; 8→875; 9→775; 10→675; 11→575; 12→500;	R>7000m→0; 7000m≥R>4500m→1; 4500m≥R>2800m→2; 2800m≥R>2000m→3; 2000m≥R>1500m→4; 1500m≥R>1250m→5; 1250m≥R>1075m→6; 1075m≥R>925m→7;

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
								13→450; 14→400; 15→350; 16→312.5; 17→287.5; 18→262.5; 19→237.5; 20→212.5; 21→187.5; 22→162.5; 23→150	925m≥R>825m→8; 825m≥R>725m→9; 725m≥R>625m→10; 625m≥R>525m→11; 525m≥R>475m→12; 475m≥R>425m→13; 425m≥R>375m→14; 375m≥R>325m→15; 325m≥R>300m→16; 300m≥R>275m→17; 275m≥R>250m→18; 250m≥R>225m→19; 225m≥R>200m→20; 200m≥R>175m→21; 175≥R>150m→22; R≤150m→23.	
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of CurveChange elements under SP_Characteristics / Curves	Convert from number of CurveChange elements under SP_Characteristics / Curves	
→→D_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Characteristics / Curves / CurveChange / location	Yes (if CurveChange exists)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→Q_Radius_Category (k,l)	5 bits	0-23	N/A	SegmentProfile / SP_Characteristics / Curves / CurveChange / curveRadius	Yes (if CurveChange exists)	xs:decimal	m	Conversion is done at midrange. For extremes, conversion is done at the extreme value. 0→7000; 1→6750; 2→3650; 3→2400; 4→1750; 5→1375; 6→1162.5; 7→1000; 8→875; 9→775; 10→675; 11→575; 12→500; 13→450; 14→400; 15→350; 16→312.5; 17→287.5; 18→262.5; 19→237.5; 20→212.5; 21→187.5; 22→162.5; 23→150	R>7000m→0; 7000m≥R>4500m→1; 4500m≥R>2800m→2; 2800m≥R>2000m→3; 2000m≥R>1500m→4; 1500m≥R>1250m→5; 1250m≥R>1075m→6; 1075m≥R>925m→7; 925m≥R>825m→8; 825m≥R>725m→9; 725m≥R>625m→10; 625m≥R>525m→11; 525m≥R>475m→12; 475m≥R>425m→13; 425m≥R>375m→14; 375m≥R>325m→15; 325m≥R>300m→16; 300m≥R>275m→17; 275m≥R>250m→18;	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
									250m≥R>225m→19; 225m≥R>200m→20; 200m≥R>175m→21; 175≥R>150m→22; R≤150m→23.	
→M_VOLTAGE (k)	4 bits	0-5	N/A	SegmentProfile / SP_Characteristics / RatedVoltage / RatedVoltageStart / voltageValue and frequency	Yes (if RatedVoltage is defined)	xs:int	V	0→No element. 1→voltageValue=25000, frequency=50; 2→voltageValue=15000, frequency=16.7; 3→voltageValue=3000, frequency=0; 4→voltageValue=1500, frequency=0; 5→voltageValue=750, frequency=0	Only accept values consistent with the possibilities in SS-126. No element→0; voltageValue=25000, frequency=50→1; voltageValue=15000, frequency=16.7→2; voltageValue=3000, frequency=0→3; voltageValue=1500, frequency=0→4; voltageValue=600, frequency=0→5; voltageValue=750, frequency=0→5	
→NID_CTRACTION (k)	10 bits	0-1023	N/A	SegmentProfile / SP_Characteristics / RatedVoltage / RatedVoltageStart / NID_CTRACTION	No	xs:unsignedByte	N/A	No conversion	No conversion	
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of RatedVoltageChange elements under SP_Characteristics / RatedVoltage	Convert from number of RatedVoltageChange elements under SP_Characteristics / RatedVoltage	
→→D_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Characteristics / RatedVoltage / RatedVoltageChange / location	Yes (if RatedVoltageChange exists)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→M_VOLTAGE (k,l)	4 bits	0-5	N/A	SegmentProfile / SP_Characteristics / RatedVoltage / RatedVoltageChange / voltageValue	Yes (if RatedVoltageChange exists)	xs:int	V	0→No element. 1→voltageValue=25000, frequency=50; 2→voltageValue=15000, frequency=16.7;	Only accept values consistent with the possibilities in SS-126. No element→0; voltageValue=25000,	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
								3→voltageValue=3000, frequency=0; 4→voltageValue=1500, frequency=0; 5→voltageValue=750, frequency=0	frequency=50→1; voltageValue=15000, frequency=16.7→2; voltageValue=3000, frequency=0→3; voltageValue=1500, frequency=0→4; voltageValue=600, frequency=0→5; voltageValue=750, frequency=0→5	
→NID_CTRACTION (k)	10 bits	0-1023	N/A	SegmentProfile / SP_Characteristics / RatedVoltage / RatedVoltageChange / NID_CTRACTION	No	xs:unsignedByte	N/A	No conversion	No conversion	
→M_CURRENT (k)	10 bits	0-1000,1023	"A" (10 by 10)	SegmentProfile / SP_Characteristics / CurrentLimitation / CurrentLimitationStart / maxCurValue	Yes (if CurrentLimitation is defined)	xs:int	A	*10; 1023→No CurrentLimitation element	Y=INT(X/10,0). If CurrentLimitation is not defined, M_CURRENT is 0	
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of CurrentLimitationChange elements under SP_Characteristics / CurrentLimitation	Convert from number of CurrentLimitationChange elements under SP_Characteristics / CurrentLimitation	
→→D_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Characteristics / CurrentLimitation / CurrentLimitationChange / location	Yes (if CurrentLimitationChange exists)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→M_CURRENT (k,l)	10 bits	0-1000,1023	"A" (10 by 10)	SegmentProfile / SP_Characteristics / CurrentLimitation / CurrentLimitationChange / maxCurValue	Yes (if CurrentLimitationChange exists)	xs:int	A	*10; 1023→No CurrentLimitation element	Y=INT(X/10,0). If CurrentLimitation is not defined, M_CURRENT is 0	
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of Balise elements under SP_Points	Convert from number of Balise elements under SP_Points	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
→→Q_NEWNID_C (k,l)	1 bit	0-1	N/A	N/A	N/A	N/A	N/A	N/A	1 if SegmentProfile / SP_Points / Balise / NID_C exists; 0 otherwise	
→→NID_C (k,l)	10 bits	0-1023	N/A	SegmentProfile / SP_Points / Balise / NID_C	No	NID_C_Type (xs:short between 0 and 1023)	N/A	No conversion; only fill in the value in SFERA if the variable is present in SS-126	No conversion	
→→NID_BG (k,l)	14 bits	0-16383	N/A	SegmentProfile / SP_Points / Balise / baliseGroupIdentifier	No	xs:unsignedShort	N/A	No conversion	No conversion	
→→N_ITER_BG (k,l)	3 bits	0-15	N/A	N/A: every Balise element has a baliseGroupIdentifier	N/A	N/A	N/A	Create a separate Balise element for each balise, with the same baliseGroupIdentifier	Count the Balise elements with the same baliseGroupIdentifier	
→→→N_PIG (k,l,m)	3 bits	0-7	N/A	SegmentProfile / SP_Points / Balise / baliseRelativePosition	No	xs:unsignedByte	N/A	No conversion	No conversion	
→→→D_Location (k,l,m)	24 bits	0-16777215	cm	SegmentProfile / SP_Points / Balise / location	Yes (if Balise exists)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of TimingPoint elements under SP_Points	Convert from number of TimingPoint elements under SP_Points	
→→NID_TP (k,l)	32 bits	0-4294967295	N/A	SegmentProfile / SP_Points / TimingPoint / TP_ID	Yes (if TimingPoint exists)	xs:string	N/A	Conversion from number to string.	String to number.	
→→D_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Points / TimingPoint / location	Yes (if TimingPoint exists)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→Q_Stop_Location_Tolerance (k,l)	5 bits	0-19,31	N/A	SegmentProfile / SP_Points / TimingPoint / StoppingPointLocation / stopLocationTolerance	No	distanceType (xs:double)	m	0→0.1; 1→0.2; 2→0.3; 3→0.4; 4→0.5; 5→1; 6→1.5; 7→2; 8→2.5; 9→3; 10→5; 11→7.5; 12→10; 13→15; 14→20; 15→25; 16→30; 17→50; 18→75; 19→100; 31→Attribute not included	Only accept values consistent with the possibilities in SS-126. 0.1→0; 0.2→1; 0.3→2; 0.4→3; 0.5→4; 1→5; 1.5→6; 2→7; 2.5→8; 3→9; 5→10; 7.5→11; 10→12; 15→13; 20→14;	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
									25→15; 30→16; 50→17; 75→18; 100→19; Attribute not included→31.	
→→Q_STP_Reached (k,l)	5 bits	0-19,31	N/A	SegmentProfile / SP_Points / TimingPoint / StoppingPointLocation / distance_STP_Reached	No	distanceType (xs:double)	m	0→0.1; 1→0.2; 2→0.3; 3→0.4; 4→0.5; 5→1; 6→1.5; 7→2; 8→2.5; 9→3; 10→5; 11→7.5; 12→10; 13→15; 14→20; 15→25; 16→30; 17→50; 18→75; 19→100; 31→Attribute not included	Only accept values consistent with the possibilities in SS-126. 0.1→0; 0.2→1; 0.3→2; 0.4→3; 0.5→4; 1→5; 1.5→6; 2→7; 2.5→8; 3→9; 5→10; 7.5→11; 10→12; 15→13; 20→14; 25→15; 30→16; 50→17; 75→18; 100→19; Attribute not included→31.	
→→L_TEXT (k,l)	8 bits	0-255	characters	N/A: unneeded in XSD	-	-	-	-	Length of attribute "SegmentProfile / SP_Points / TimingPoint / TP_Name / name"	
→→→X_TEXT (k,l,m)	8 bits	0-255	N/A	SegmentProfile / SP_Points / TimingPoint / TP_Name / name	No	xs:string	N/A	Decode from UTF-8	Encode each character in UTF-8. Note that multiple TP names can be put in SFERA; if there are multiple names, one has to be chosen to be converted to SS-126.	
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of Platform elements under SP_Areas	Convert from number of Platform elements under SP_Areas	
→→Q_Range (k,l)	2 bits	0-3	N/A	SegmentProfile / SP_Areas / Platform / startEndQualifier	Yes	xs:string	N/A	0→Starts; 1→Ends; 2→StartsEnds; 3→WholeSP	Starts→0; Ends→1; StartsEnds→2; WholeSP→3	
→→D_Start_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / Platform / startLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
→→D_End_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / Platform / endLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of Tunnel elements under SP_Areas	Convert from number of Tunnel elements under SP_Areas	
→→Q_Range (k,l)	2 bits	0-3	N/A	SegmentProfile / SP_Areas / Tunnel / startEndQualifier	Yes	xs:string	N/A	0→Starts; 1→Ends; 2→StartsEnds; 3→WholeSP	Starts→0; Ends→1; StartsEnds→2; WholeSP→3	
→→Q_Tunnel_Category (k,l)	2 bits	0-2	N/A	SegmentProfile / SP_Areas / Tunnel / tunnelCategory	No	xs:string	N/A	0→SingleTrack; 1→DoubleTrack; 2→Wide-crossSection	SingleTrack→0; DoubleTrack→1; Wide-crossSection→2	
→→D_Start_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / Tunnel / startLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→D_End_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / Tunnel / endLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of AxleLoadSpeedProfile elements under SP_Areas	Convert from number of AxleLoadSpeedProfile elements under SP_Areas	
→→Q_Range (k,l)	2 bits	0-3	N/A	SegmentProfile / SP_Areas / AxleLoadSpeedProfile / startEndQualifier	Yes	xs:string	N/A	0→Starts; 1→Ends; 2→StartsEnds; 3→WholeSP	Starts→0; Ends→1; StartsEnds→2; WholeSP→3	
→→M_AXLELOADCAT (k,l)	7 bits	0-12	N/A	SegmentProfile / SP_Areas / AxleLoadSpeedProfile / axleLoadCategory	Yes	xs:string	N/A	0→A; 1→HS17; 2→B1; 3→B2; 4→C2; 5→C3; 6→C4; 7→D2; 8→D3; 9→D4; 10→D4XL; 11→E4; 12→E5.	A→0; HS17→1; B1→2; B2→3; C2→4; C3→5; C4→6; D2→7; D3→8; D4→9; D4XL→10; E4→11; E5→12.	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
→→V_New_Speed_Level (k,l)	7 bits	0-120	"km/h" (5 by 5)	SegmentProfile / SP_Areas / AxleLoadSpeedProfile / newSpeedLevel	Yes	speedType (i.e. xs:unsignedShort)	km/h	*5	Y=INT(X/5)	INT is used rather than ROUND because it rounds down. Speeds should always be rounded to the lower value: they might be safety related, and slower is safer.
→→Q_FRONT (k,l)	1 bit	0-1	N/A	SegmentProfile / SP_Areas / AxleLoadSpeedProfile / ALSP_Front	No	xs:boolean	N/A	No conversion	No conversion	
→→D_Start_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / AxleLoadSpeedProfile / startLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→D_End_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / AxleLoadSpeedProfile / endLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of UnprotectedLevelCrossingStop elements under SP_Points	Convert from number of UnprotectedLevelCrossingStop elements under SP_Points	
→→D_UnprotectedLx_Stop (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Points / UnprotectedLevelCrossingStop / location	Yes (if UnprotectedLevelCrossingStop exists)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of PermittedBrakingDistanceArea elements under SP_Areas	Convert from number of PermittedBrakingDistanceArea elements under SP_Areas	
→→Q_Range (k,l)	2 bits	0-3	N/A	SegmentProfile / SP_Areas / PermittedBrakingDistance Area / startEndQualifier	Yes	xs:string	N/A	0→Starts; 1→Ends; 2→StartsEnds; 3→WholeSP	Starts→0; Ends→1; StartsEnds→2; WholeSP→3	
→→D_Permitted_Braking_Distance (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / PermittedBrakingDistance Area / permittedBrakingDistance	No	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→Q_PBD_SBEB (k,l)	1 bit	0-1	N/A	SegmentProfile / SP_Areas / PermittedBrakingDistance Area / PBD_Brake	No	xs:string	N/A	0→Service_Brake; 1→Emergency_Brake	Service_Brake→0; Emergency_Brake→1	
→→G_PBD (k,l)	8 bits	0-255	‰	SegmentProfile / SP_Areas / PermittedBrakingDistance Area / gradient_PBD	No	gradientValueType (i.e. unsignedShort)	mm by m	No conversion	No conversion	
→→Q_GDIR_PBD (k,l)	1 bit	0-1	N/A	SegmentProfile / SP_Areas / PermittedBrakingDistance Area / gradientDirection_PBD	No	gradientDirectionType (i.e. xs:string)	N/A	0→Downhill; 1→Uphill	Downhill→0; Uphill→1	
→→D_Start_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / PermittedBrakingDistance Area / startLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→D_End_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / PermittedBrakingDistance Area / endLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of SwitchOffRegenerativeBrakeArea elements under SP_Areas	Convert from number of SwitchOffRegenerativeBrakeArea elements under SP_Areas	
→→Q_Range (k,l)	2 bits	0-3	N/A	SegmentProfile / SP_Areas / SwitchOffRegenerativeBrakeArea / startEndQualifier	Yes	xs:string	N/A	0→Starts; 1→Ends; 2→StartsEnds; 3→WholeSP	Starts→0; Ends→1; StartsEnds→2; WholeSP→3	
→→D_Start_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / SwitchOffRegenerativeBrakeArea / startLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→D_End_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / SwitchOffRegenerativeBrakeArea / endLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of SwitchOffEddyCurrentBrakeArea elements under SP_Areas	Convert from number of SwitchOffEddyCurrentBrakeArea elements under SP_Areas	
→→Q_Range (k,l)	2 bits	0-3	N/A	SegmentProfile / SP_Areas / SwitchOffEddyCurrentBrakeArea / startEndQualifier	Yes	xs:string	N/A	0→Starts; 1→Ends; 2→StartsEnds; 3→WholeSP	Starts→0; Ends→1; StartsEnds→2; WholeSP→3	
→→D_Start_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / SwitchOffEddyCurrentBrakeArea / startLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→D_End_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / SwitchOffEddyCurrentBrakeArea / endLocation	No (but some guidelines have to be in the IRS as it must exist under certain	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
					circumstances)					
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of SwitchOffEddyCurrentEmergencyBrakeArea elements under SP_Areas	Convert from number of SwitchOffEddyCurrentEmergencyBrakeArea elements under SP_Areas	
→→Q_Range (k,l)	2 bits	0-3	N/A	SegmentProfile / SP_Areas / SwitchOffEddyCurrentEmergencyBrakeArea / startEndQualifier	Yes	xs:string	N/A	0→Starts; 1→Ends; 2→StartsEnds; 3→WholeSP	Starts→0; Ends→1; StartsEnds→2; WholeSP→3	
→→D_Start_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / SwitchOffEddyCurrentEmergencyBrakeArea / startLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→D_End_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / SwitchOffEddyCurrentEmergencyBrakeArea / endLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of SwitchOffMagneticShoeBrakeArea elements under SP_Areas	Convert from number of SwitchOffMagneticShoeBrakeArea elements under SP_Areas	
→→Q_Range (k,l)	2 bits	0-3	N/A	SegmentProfile / SP_Areas / SwitchOffMagneticShoeBrakeArea / startEndQualifier	Yes	xs:string	N/A	0→Starts; 1→Ends; 2→StartsEnds; 3→WholeSP	Starts→0; Ends→1; StartsEnds→2; WholeSP→3	
→→D_Start_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / SwitchOffMagneticShoeBrakeArea / startLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→D_End_Location	24	0-16777221	cm	SegmentProfile / SP_Areas /	No (but some guidelines have to	distanceType	m	/100	Y=ROUND(X*100,0)	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
(k,l)	bits	5		SwitchOffMagneticShoeBrakeArea / endLocation	be in the IRS as it must exist under certain circumstances)	(xs:double)				
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of DynamicBrakeForceInhibitionArea elements under SP_Areas	Convert from number of DynamicBrakeForceInhibitionArea elements under SP_Areas	
→→Q_Range (k,l)	2 bits	0-3	N/A	SegmentProfile / SP_Areas / DynamicBrakeForceInhibitionArea / startEndQualifier	Yes	xs:string	N/A	0→Starts; 1→Ends; 2→StartsEnds; 3→WholeSP	Starts→0; Ends→1; StartsEnds→2; WholeSP→3	
→→D_Start_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / DynamicBrakeForceInhibitionArea / startLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→D_End_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / DynamicBrakeForceInhibitionArea / endLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→N_ITER (k)	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of LimitedDynamicBrakeForceArea elements under SP_Areas	Convert from number of LimitedDynamicBrakeForceArea elements under SP_Areas	
→→Q_Range (k,l)	2 bits	0-3	N/A	SegmentProfile / SP_Areas / LimitedDynamicBrakeForceArea / startEndQualifier	Yes	xs:string	N/A	0→Starts; 1→Ends; 2→StartsEnds; 3→WholeSP	Starts→0; Ends→1; StartsEnds→2; WholeSP→3	
→→M_Dynamic_Brake_Force Limit (k,l)	16 bits	0-65535	kN	SegmentProfile / SP_Areas / LimitedDynamicBrakeForceArea / dynamicBrakeForceLimit	Yes (if LimitedDynamicBrakeForceArea exists)	xs:unsignedShort	kN	No conversion; 65535→No element LimitedDynamicBrakeForceArea	No conversion; if LimitedDynamicBrakeForceArea doesn't exist→65535	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
→→D_Start_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / LimitedDynamicBrakeForceArea / startLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	
→→D_End_Location (k,l)	24 bits	0-16777215	cm	SegmentProfile / SP_Areas / LimitedDynamicBrakeForceArea / endLocation	No (but some guidelines have to be in the IRS as it must exist under certain circumstances)	distanceType (xs:double)	m	/100	Y=ROUND(X*100,0)	

1.10 Status Report Packet

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
M_ATO_State	4 bits	0-7	N/A	SFERA_B2G_EventMessage / B2G_StatusReport / ATO_State	No	xs:string	N/A	0→Unknown, 1→CO, 2→NA, 3→AV, 4→RE, 5→EG, 6→DE, 7→FA	Unknown→0, CO→1, NA→2, AV→3, RE→4, EG→5, DE→6, FA→7	
Q_STR_Indicators	16 bits	bit0-bit6	N/A	For bit3: SFERA_B2G_EventMessage / B2G_StatusReport / AdhesionConditionsChange / newAdhesionConditions. For all other bits: SFERA_B2G_EventMessage / B2G_StatusReport / • JP_SP_ConsistencyError ; • routingError• nextStoppingPointSkip; • operationalConditionsFulfillment; • trainMoving; • unableToStop; • slipSlideReported.	No	xs:boolean	N/A	bit0→JP_SP_ConsistencyError; bit1→routingError; bit2→nextStoppingPointSkip; bit3=0→No translation; bit3=1→SFERA_B2G_EventMessage / B2G_StatusReport / AdhesionConditionsChange / newAdhesionConditions="Worse"; bit4→operationalConditionsFulfillment; bit5→trainMoving; bit6→unableToStop; bit7→slipSlideReported	JP_SP_ConsistencyError→bit0; routingError→bit1; nextStoppingPointSkip→bit2; SFERA_B2G_EventMessage / B2G_StatusReport / AdhesionConditionsChange / newAdhesionConditions="Worse"→bit3=1; operationalConditionsFulfillment→bit4; trainMoving→bit5; unableToStop→bit6; slipSlideReported→bit7	
V_TRAIN_ATO	10	0-1023	km/h	SFERA_B2G_EventMess	Yes	speedType	km/	No conversion	No conversion	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
	bits			age / B2G_StatusReport / PositionSpeed / speed		(i.e. xs:unsigned Short)	h			
L_TRAIN	12 bits	0-4095	m	SFERA_B2G_EventMessage / B2G_StatusReport / TrainCharacteristicsChange / TC_ChangeFeatures / trainLength	No	xs:integer	m	No conversion	No conversion	
DRIVER_ID	128 bits	16 ISO 8859-1 alphanumeric characters	N/A	SFERA_B2G_EventMessage / B2G_StatusReport / driverID	No	xs:string	N/A	No conversion	No conversion	
NID_C	10 bits	0-1023	N/A	SFERA_B2G_EventMessage / B2G_StatusReport / PositionSpeed / SP_Zone / NID_C	Yes (if PositionSpeed exists)	NID_C_Type (xs:short between 0 and 1023)	N/A	No conversion	No conversion	
NID_SP	32 bits	0-4294967295	N/A	SFERA_B2G_EventMessage / B2G_StatusReport / PositionSpeed / SP_ID	No	xs:string	N/A	Number to string	String to number	
D_Sending_Position	24 bits	0-16777215	cm	SFERA_B2G_EventMessage / B2G_StatusReport / PositionSpeed / location	Yes	distanceType (xs:double)	m	/100. "Undefined" location (16777215): PositionSpeed will not be included.	Y=ROUND(X*100,0). If PositionSpeed is not included: use 16777215.	
NID_C	10 bits	0-1023	N/A	SFERA_B2G_EventMessage / B2G_StatusReport / PreviousTimingPoint / SP_Zone / NID_C	No	xs:string	N/A	No conversion	No conversion	
NID_TP	32 bits	0-4294967295	N/A	SFERA_B2G_EventMessage / B2G_StatusReport / PreviousTimingPoint / TP_ID	No	xs:string	N/A	Conversion from number to string.	String to number.	
Q_Pass_Stop_Depart	2 bits	0-2	N/A	SFERA_B2G_EventMessage / B2G_StatusReport / PreviousTimingPoint / TP_Pass_Stop_Depart	No	xs:string	N/A	0→Passed; 1→Stopped; 2→Departed	Passed→0; Stopped→1; Departed→2	
Q_Accurate_Sto	2	0-2	N/A	SFERA_B2G_EventMessage / B2G_StatusReport	No	xs:string	N/A	0→Undershoot; 1→Accurate;	Undershoot→0; Accurate→1;	

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
pping	bits			/ PreviousTimingPoint / TP_Accurate_Stopping				2→Overshoot	Overshoot→2	
N_ITER	5 bits	0-23	N/A	N/A	N/A	N/A	N/A	Convert to number of TimingPointEstimation elements under B2G_StatusReport	Convert from number of TimingPointEstimation elements under B2G_StatusReport	
→NID_C (k)	10 bits	0-1023	N/A	SFERA_B2G_EventMessage / B2G_StatusReport / TimingPointEstimation / SP_Zone / NID_C	Yes (if TimingPointEstimation exists)	NID_C_Type (xs:short between 0 and 1023)	N/A	No conversion	No conversion	
→NID_TP (k)	32 bits	0-4294967295	N/A	SFERA_B2G_EventMessage / B2G_StatusReport / TimingPointEstimation / TP_ID	Yes	xs:string	N/A	Conversion from number to string.	String to number.	
→T_Arrival_Date (k)	15 bits	0-32767	Days: from 0 (01/01/2010) to 32767 (18/09/2099)	SFERA_B2G_EventMessage / B2G_StatusReport / TimingPointEstimation / forecastedArrival	Yes	xs:dateTime	N/A	Algorithm available (explicit definition out of scope).	Algorithm available (explicit definition out of scope).	
→T_Arrival_Seconds (k)	17 bits	0-86400	Seconds: from 0 (00:00:0 0) to 86400 (24:00:00)	SFERA_B2G_EventMessage / B2G_StatusReport / TimingPointEstimation / forecastedArrival	Yes	xs:dateTime	N/A	Algorithm available (explicit definition out of scope).	Algorithm available (explicit definition out of scope).	

1.11 Status Report Acknowledgement Packet

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
T_STR_Reference_Timestamp_Date	15 bits	0-32767	Days: from 0 (01/01/2010) to 32767 (18/09/2099)	N/A: SFERA includes the "correlation_ID" attribute in the header, which can be used to reconstruct	N/A	N/A	N/A	It is possible to convert Timestamp_Date and Timestamp_Seconds to the SFERA timestamp and back with an algorithm (the explicit definition of		

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
				the reference timestamp of the Status Report packet				the algorithm is out of the scope of this document).		
T_STR_Reference_Timestamp_Seconds	17 bits	0-86399	Seconds: from 0 (00:00:00) to 86399 (23:59:59)	N/A: SFERA includes the "correlation_ID" attribute in the header, which can be used to reconstruct the reference timestamp of the Status Report packet	N/A	N/A	N/A	It is possible to convert Timestamp_Date and Timestamp_Seconds to the SFERA timestamp and back with an algorithm (the explicit definition of the algorithm is out of the scope of this document).		
N_STR_Reference_Packet_Counter	8 bits	0-255	N/A	-	-	-	-	Packet_Counter should be combined with Timestamp_Date, Timestamp_Seconds and NID_ENGINE to create a SFERA message_id.	SFERA message_id should be decomposed (using also timestamp and NID_ENGINE) to create Packet_Counter.	

1.12 Session Termination Request Packet

This packet is translated with a SFERA_G2B_RequestMessage / G2B_Request / SessionTerminationRequest.

1.13 Session Termination Packet

SS-126 name	SS-126 length	SS-126 precision or range	SS-126 unit	SFERA name	SFERA mandatory	SFERA precision (datatype)	SFERA unit	Conversion SS-126→SFERA	Conversion SFERA→SS-126	Notes
Q_Termination_Reason	4 bits	0-15	N/A	SFERA_B2G_ReplyMessage / B2G_ReplyPayload / SessionTermination / sessionTerminationReason	No	xs:string	N/A	0→"End of Journey reached"; 1→"DAS-TS/ATO-TS Termination Request"; 2→"Last SP left"; 3→"Cab closed"; 4→"TRN or train length not valid"; 5→"ETCS-OB in NL"; 6→"ETCS-OB in SH"; 7→"ATO-TS Handover cancelled"	"End of Journey reached"→0; "DAS-TS/ATO-TS Termination Request"→1; "Last SP left"→2; "Cab closed"→3; "TRN or train length not valid"→4; "ETCS-OB in NL"→5; "ETCS-OB in SH"→6; "ATO-TS Handover cancelled"→7	