

# DIN 4630:2022-05 (E)

## Road vehicles - Data parameter specification for body application units in commercial vehicles; Text in English

---

Inhalt	Seite
Foreword .....	6
1 Scope.....	7
2 Normative references .....	7
3 Terms and definitions.....	8
4 Abbreviations .....	9
5 Definition of use cases .....	10
5.1 General use cases .....	10
5.2 Examples of network-architecture .....	11
5.3 BAU sub-parts.....	11
6 Specification of parameters .....	12
6.1 Parameter attributes.....	12
6.2 Detailed specification of generic parameters .....	12
6.2.1 General.....	12
6.2.2 Error code .....	12
6.2.3 Alarm code.....	13
6.2.4 Commercial vehicle status.....	13
6.2.5 Vehicle lowering status .....	14
6.2.6 Vehicle load .....	14
6.3 Detailed specification of general ECU parameters .....	15
6.3.1 General.....	15
6.3.2 ECU input voltage .....	15
6.3.3 ECU temperature .....	15
6.3.4 CPU temperature .....	15
6.3.5 Hosting vehicle type .....	16
6.3.6 Implemented logical entities .....	16
6.4 Detailed specification of TGU parameters.....	17
6.4.1 General.....	17
6.4.2 BAU or sub-part enable request .....	17
6.5 Detailed specification of IGU parameters.....	18
6.5.1 General.....	18
6.5.2 ISO 11992 parameters .....	18
6.5.3 CiA 413-5 parameters .....	18
6.5.4 J1939 parameters.....	18
6.6 Detailed specification of the FMU parameters.....	18
6.7 Detailed specification of general BAU parameters.....	18
6.7.1 General.....	18
6.7.2 BAU type.....	18
6.7.3 BAU sub-type.....	19
6.7.4 Next maintenance day.....	19
6.7.5 Next maintenance month.....	19
6.7.6 Next maintenance year.....	20
6.8 Detailed specification of generic BAU and BAU sub-part parameters .....	20
6.8.1 General.....	20
6.8.2 BAU or BAU sub-part.....	20
6.8.3 BAU or BAU sub-part mode .....	21

6.8.4	BAU or sub-part mounting location .....	21
6.8.5	BAU or sub-part status.....	22
6.8.6	BAU or sub-part enable status .....	22
6.8.7	BAU or sub-part position status .....	23
6.8.8	BAU or sub-part moving status .....	23
6.8.9	Operating hours.....	24
6.8.10	Resettable operating hours.....	24
6.8.11	Operating cycles .....	24
6.8.12	Resettable operating cycles .....	25
6.8.13	Remaining operating hours .....	25
6.8.14	Hydraulic oil pressure .....	26
6.8.15	Hydraulic oil level .....	26
6.8.16	Hydraulic oil temperature.....	26
6.8.17	Chain emergency-stop status .....	27
6.8.18	Windshield wiper control request.....	27
7	Specification of BAU specific parameters.....	28
7.1	General .....	28
7.2	Lifting units (LU).....	28
7.2.1	General .....	28
7.2.2	LU categories .....	28
7.2.3	Transport position status .....	28
7.2.4	Vehicle-mounted crane unit (VMCU) .....	29
7.2.5	Tail-lift unit (TLU) .....	29
7.3	Heating and refrigerating unit (HRU).....	33
7.3.1	General .....	33
7.3.2	HRU classes .....	34
7.3.3	HRU compartment number .....	34
7.3.4	HRU temperature setpoint command.....	34
7.3.5	HRU return air temperature.....	35
7.3.6	HRU supply air temperature .....	35
7.3.7	HRU evaporator temperature .....	35
7.3.8	HRU compartment temperature setpoint status .....	35
7.3.9	HRU status .....	36
7.3.10	HRU ambient temperature.....	36
7.3.11	HRU battery voltage .....	37
7.3.12	HRU diesel operating hours.....	37
7.3.13	HRU electrical operating hours .....	37
7.3.14	HRU total operating hours .....	38
7.3.15	HRU functionality and mode.....	38
7.4	Refuse collecting unit (RCU) .....	39
7.4.1	General .....	39
7.4.2	RCU categories.....	39
7.4.3	Classes of RCU compliant to EN 16815 .....	40
7.5	Container unit (CU).....	41
7.5.1	General .....	41
7.5.2	Categories of CUs .....	41
7.5.3	General CU parameters .....	42
7.5.4	CU status.....	42
7.5.5	Closure elements states .....	43
7.6	Tipper unit (TU) .....	44
7.6.1	General .....	44
7.6.2	Categories of TUs.....	44
7.6.3	Temperature of loaded material.....	44
7.6.4	Tipper inclination in x-axis.....	44
7.6.5	Tipper inclination in y-axis.....	45
7.7	Fire-fighting unit (FFU) .....	45
7.7.1	General .....	45

7.7.2	Categories of FFUs .....	45
7.7.3	Specific FFU parameters.....	45
<b>Annex A</b>	<b>(normative) Parameter mapping to SAE J1939-based networks .....</b>	<b>46</b>
A.1	Mapping of the application layer.....	46
A.1.1	General.....	46
A.1.2	Industry group and source addresses .....	46
A.1.3	Overview on general PGs .....	46
A.1.4	Overview on PGs transmitted by LUs.....	51
A.1.5	Overview on PGs transmitted by HRUs .....	51
A.1.6	Overview on PGs transmitted by RCUs.....	52
A.1.7	Overview on PGs f transmitted by CUs .....	52
A.1.8	Overview on PGs transmitted by TUs .....	52
A.1.9	Overview on PGs transmitted by FFUs.....	52
A.2	Detailed specification of general PGs.....	52
A.2.1	Alarms (ALARM) .....	52
A.2.2	Acoustic warning request (AWR).....	52
A.2.3	Acoustic warning state (AWS) .....	53
A.2.4	Vehicle load (AXL).....	53
A.2.5	Body application unit 1 (BAU1) .....	54
A.2.6	Body application unit 2 (BAU2) .....	55
A.2.7	Body application unit 3 (BAU3) .....	55
A.2.8	Body application unit 4 (BAU4) .....	56
A.2.9	Body application unit 5 (BAU5) .....	56
A.2.10	Body application unit 6 (BAU6) .....	57
A.2.11	Body application unit 7 (BAU7) .....	58
A.2.12	Body application unit 8 (BAU8) .....	58
A.2.13	Electronic control unit (ECU).....	59
A.2.14	ECU power supply (ECU_PWR) .....	59
A.2.15	ECU temperatures (ECU_TMP).....	60
A.2.16	Error information (ERROR) .....	60
A.2.17	Heating and refrigerating unit 1 (HRU1).....	61
A.2.18	Heating and refrigerating unit 2 (HRU2).....	62
A.2.19	Heating and refrigerating unit 3 (HRU3).....	62
A.2.20	Heating and refrigerating unit 4 (HRU4).....	63
A.2.21	HRU temperature setpoint (HTS).....	63
A.2.22	Lifting unit (LU1) .....	64
A.2.23	Tail-lift unit 1 (TLU1) .....	65
A.2.24	Vehicle status (VS) .....	65
A.2.25	Windshield wiper request (WWR).....	66
A.3	Transport layer protocol specification .....	66
A.4	Data link layer protocol requirements.....	66
A.5	Physical layer requirements.....	67
A.5.1	General requirements.....	67
A.5.2	Connector requirements.....	67
A.6	Additional requirements .....	67
A.6.1	Address claiming .....	67
A.6.2	Sleep and wake-up handling.....	68
<b>Annex B</b>	<b>(normative) Parameter mapping to EN 50325-4 (CANopen) communication networks .....</b>	<b>69</b>
B.1	CANopen specific parameter attributes.....	69
B.2	Mapping to the application layer .....	69
B.2.1	Overview .....	69
B.2.2	Pre-specified PDOs.....	71
B.3	Transport layer protocol requirements .....	71
B.4	Data link layer protocol requirements.....	71
B.5	Physical layer requirements.....	71
<b>Annex C</b>	<b>(informative) Begriffe.....</b>	<b>72</b>
	<b>Bibliography.....</b>	<b>74</b>