CAN bus Distances and CAN fiber extension gateways from EKS Engel

Clemens - 2026-10-02 - easYgen-3000XT



Maximum CAN bus length The maximum length of the communication bus wiring is dependent on the configured baud rate. Observe the maximum bus length. (Source: CANopen; Holger Zeltwanger (Hrsg.); 2001 VDE VERLAG GMBH, Berlin und Offenbach; ISBN 3-8007-2448-0).

Recommendation is to think about CAN Fiber Optics conversion to increase CANbus distance

Download EKS Engel CAN Fiber Gateway application note here:

https://wss.woodward.com/manuals/PGC/easYgen-3000XT_series/Application_Notes/45056_AN_CAN-to-Fiber-Converter_A.pdf

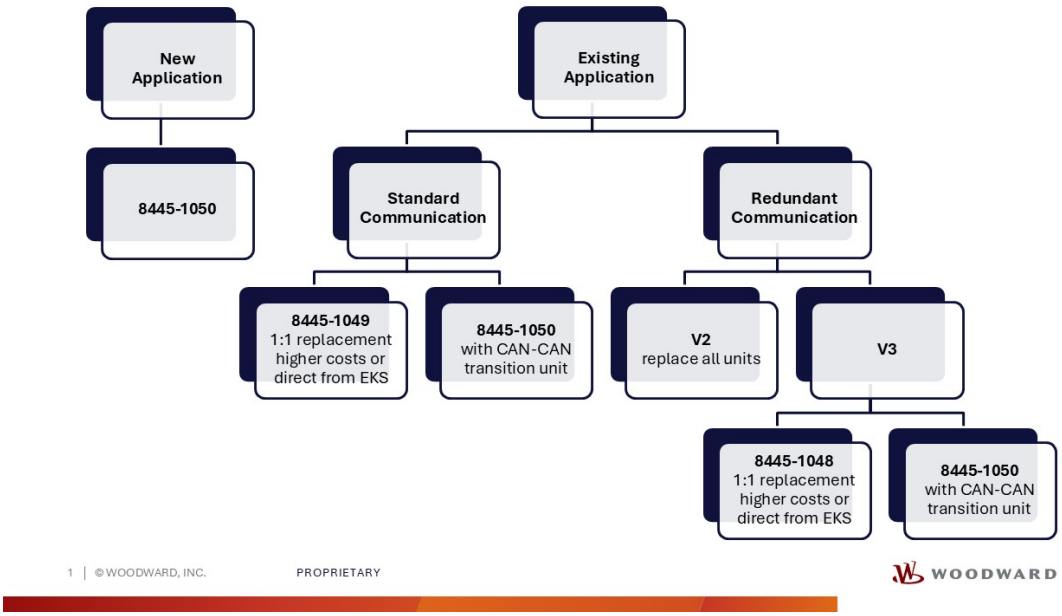
EKS 3DSTP CAD Modell

https://wss.woodward.com/manuals/Support/CAD_data_3rdparty_accessories/WWD_8445-1048_DL-CAN_CANR_Fibre_Modules_STEP_File.zip

Woodward P/N 8445-1050 DL-CAN-FD-R-FV / 2X13 MM-SC

https://www.eks-engel.de/en/products/industrial-network-technology/interface/the-dl-can-fv-dl-can-r/

which refers to: Ring Coupler for CAN FD Networks: DL CAN-FV



Former & OLD part numbers

Woodward's latest part number, 8445-1050 DL-CAN-FD-R-FV / 2X13 MM-SC, is not backward compatible on the fiber side because the protocol has changed. As a result, it does not connect with previous V2 and V3 versions.

Woodward P/N 8445-1048 DL-CANR **V2** REDUNDANT CAN FIBER OPTIC SYSTEM EKS Engel P/N 010007573 **- obsolete, do not mix V2 with new V3 converters !**

Woodward P/N 8445-1048 DL-CANR **V3** REDUNDANT CAN FIBER OPTIC SYSTEM EKS Engel P/N 01000-8273-V3

Woodward P/N 8445-1049 DL-CAN **V2** CAN FIBER OPTIC SYSTEM EKS Engel P/N 010007423

Please contact EKS directly if you need to modify or expand larger existing applications. There are options that we do not promote or support on our side.

Type	P-ST	H-ST	MM-ST	MM-SC	MM-SC/BIDI	SM-ST	SM-SC	SM-E2	SM-SC/BIDI
Article no. DL CAN	01000 7401	01000 7412	01000 7421	01000 7423	01000 7423-BIDI A 7423-BIDI B	01000 7431	01000 7433	01000 7435	01000 7433-BIDI A 7433-BIDI B
Article no. DL CAN-2x	01000 7451	01000 7462	01000 7471	01000 7473	01000 7473-BIDI	01000 7481	01000 7483	01000 7485	01000 7483-BIDI
Type	**P-ST**	**H-ST**	**MM-ST**	**MM-SC**	**MM-SC/BIDI**	**SM-ST**	**SM-SC**	**SM-E2**	**SM-SC/BIDI**
Article no. DL CAN-R	-	-	01000 8271-V3	01000 8273-V3	-	01000 8281-V3	01000 8283-V3	-	-
FO-connector	ST	ST	ST	SC	SC	ST	SC	E-2000	SC
Fiber type	POF 980/1000 µm	HCS 200/230 µm	Multimode 62,5 (50)/125 µm					Singlemode 9/125 µm	
Optical budget	12 dB	12 dB	12 dB					16 dB	
FO range	50 m (180 dB/km)	200 m (8 dB/km)	5 km (1 dB/km)				30 km, others up to 100 km on request (0,3 dB/km)		
Wavelength	650 nm	850 nm	1310 nm		1310 nm 1550 nm		1310 nm		1310 nm 1550 nm
Data rate max.	10, 20, 22,2, 50, 100, 125, 250, 500, 800, 1000 KBaud Switchable: none or wave impedance (Rw + Rpd + Rpu)								
Transmission type	Half duplex								

Attachments

- fibre_replacement_tree_01.pptx (97.21 KB)
- DL-CAN-FD_Produktvorstellung.pdf (1.15 MB)