0TGxxxx.0x

1 General information

Technology Guarding is the license protection used for individual software components. Licenses are stored on the "Technology Guard", a dongle that is connected to an available USB interface on the target system.

The licenses themselves are checked in Automation Runtime on the target system. Automation Runtime will detect a license violation if there are licensing requirements that are not covered by the licenses on the Technology Guard.

- 2 tamper-resistant operating hours counters
- Possible to store multiple B&R licenses
- Customized license storage possible
- Customized data storage possible

Information:

The extended user-specific operation of the Technology Guard is handled via library "AsGuard". For additional information about library "AsGuard", see Automation Help.

1.1 Differences between Technology Guard models

0TG1000.01

Mass storage device (MSD) variant. The Technology Guard is registered internally like a normal USB flash drive. It is displayed in Windows with a drive letter.

0TG1000.02

Human interface device (HID) variant. Identical in design to 0TG1000.01, but the Technology Guard is registered internally like a USB mouse, for example. It is not displayed in Windows.

Information:

Technology Guard 0TG1000.02 is only supported starting with Automation Runtime D4.09.

0TGF016.01

Mass storage device (MSD) variant. The Technology Guard is registered internally like a normal USB flash drive. It is displayed in Windows with a drive letter. 16 GB of memory are available for applications. Relevant machine data can thus be stored directly on the USB flash drive.

2 Order data

Order number	Short description	Figure
	Technology Guard	
0TG1000.01	Technology Guard (MSD)	
	Hardware Key -Dongle	
0TG1000.02	Technology Guard (HID)	

Table 1: 0TG1000.01, 0TG1000.02 - Order data

Order number	Short description	Figure
	Technology Guard	
0TGF016.01	Technology Guard (MSD) with integrated flash drive, 16 GB (MLC)	

Table 2: 0TGF016.01 - Order data

3 Technical data

Order number	0TG1000.01	0TG1000.02	0TGF016.01
Short description			
Accessories	Technology Guard for B&R license management		Technology Guard for B&R license management, integrated flash memory
General information			
Note	Manufacturer ID: 0x064F Product ID: 0x03E9	Manufacturer ID: 0x064F Product ID: 0x2AF9	Manufacturer ID: 0x064F Product ID: 0x03F3
Connection	High-speed USB 2.0 certified, 1.1 compatible		USB 3.1 type A, compatible with 2.0
Coding	128-bit AES, SHA-256, 2048-bit RSA, 224-bit ECC		
Data retention	10 years at room temperature		10 years at 40°C
Data reliability	Licenses: Up to 10 million updates		
MTBF	>3 million hours		
Power supply	5 V		
Power consumption	<20 mA (LEDs off) <60 mA (both LEDs on)		Max. 130 mA with USB 2.0 Max. 180 mA with USB 3.1
Application memory			
Size	241 bytes customized data		16 GB customized data
Operation	Via library AsGuard		License management using library AsGuard
Data retention	-	-	>1 year at 2.5 TB (write) >3 years at 250 GB (write)
Guaranteed erase/write cycles	Up to 10 million updates		-
Certifications			
CE	Yes		
UKCA	Yes		
UL	cULus E115267 Industrial control equipment		-
HazLoc	cULus HazLoc E180196 Industrial control equipment for hazardous locations Class I, Division 2, Groups ABCD, T4		-
DNV	Temperature: **B** (0 to 55°C) Humidity: **B** (up to 100%) Vibration: **A** (0.7 g) EMC: **B** (bridge and open deck)		-
LR	ENV3		-
KR	-	Yes	-
ABS	Yes		-
BV	**EC31B** Temperature: 5 - 55°C Vibration: 0.7 g EMC: Bridge and open deck		-
EAC	Product family certification		
Endurance			
Guaranteed data volume			
Guaranteed	-	-	40 TB
Results for 5 years	-	-	20 GB/day
Erase/Write cycles			
Guaranteed	-	-	3000 per cell (2-bit)
Ambient conditions			
Temperature			
Operation	-25 to 85°C		-25 to 55°C
Relative humidity			
Operation	5 to 95%, non-condensing		
Mechanical properties			
Dimensions			
Width	12 mm		12.1 mm
Length	16.7 mm		22 mm
Height	4.5 mm		

Table 3: 0TG1000.01, 0TG1000.02, 0TGF016.01 - Technical data