

# Ultrasonic proximity switch



<b>6GR6233-3BB00-PF</b>	Compact range M18S, <b>normally open</b> Kompaktreihe M18S, <b>Schließer</b>	Connector M12  Stecker M12
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**Size/Bauform** : cylindrical M18 Shorty/zyllindrisch M18 Shorty  
**straight form / gerade-Bauform**

**Function/Funktion** : **Retroreflective/Reflexionsschranke**

### Operating distance/Schaltabstand


Sensing range/Erfassungsbereich : 0 ... 700 mm  
Focusing range/Einstellbereich : 200 ... 700 mm  
Switching zone size/Fensterbreite : +/- 50 mm  
Adjustment/Einstellung : Teach-in via Pin/Teach-in über Pin  
Switching hysteresis/Hysterese H : 3 mm  
Standard target/Normmessplatte : 20 x 20 mm  
Rated ultrasonic frequency/  
Ultraschallnennfrequenz : 200 kHz

### Output/Ausgang

Output/Ausgangsart : pnp  
Switching function/Schaltfunktion : Normally open/Schließer  
Rated operational current/  
Bemessungsbetriebsstrom Ie : 150 mA  
Output voltage drop/Spannungsfall max. Ud : 2 V  
Off-state current/Reststrom Ir : max. 0,01 mA  
Short circuit strength/Kurzschlußfestigkeit : built-in/eingebaut  
Overload withstand capability/  
Überlastfestigkeit : built-in/eingebaut

### Power supply voltage/ Versorgungsspannung

Rated operational voltage/  
Bemessungsbetriebsspannung Ue : 24 V DC  
Operating voltage range/  
Betriebsspannungsbereich UB : 20 ... 30 V DC  
No-load supply current/Leerlaufstrom Io : max. 20 mA  
max. ripple content/zul. Restwelligkeit : 10 %


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**Teach-in/Lerneingang**

Function/Funktion	:	Position of switching zone/ Lage Schaltbereichsfenster
max. input voltage/max. Eingangsspannung	:	Operational voltage/Betriebsspannung
max. L-Level (Teach-in active)/ max. L-Pegel (Teach-in aktiv)	:	< 0,7 V
min. H-Level (Teach-in inactive)/ min. H-Level (Teach-in inaktiv)	:	15 V
Input resistance (No-load supply current)/ Eingangswiderstand (Stromsenke)	:	16 kOhm
min. Teach-in time/min. Teach-in Zeit	:	3 sec
Synchronization/Synchronisieranschluß	:	not built-in/nicht eingebaut

**Times/Zeiten**

Frequency of operating cycles/ Schaltfrequenz	f	:	5 Hz
Time delay before availability/ Bereitschaftsverzug	tv	:	20 ms
Response time/Ansprechzeit		:	100 ms

**Temperatures/Temperaturen**

Rated temperature/ Bemessungstemperatur	Tu	:	25 Cel
Ambient temperature range/ zul. Umgebungstemperatur	Ta	:	-25 ... +70 Cel
Storage temperature range/ zul. Lagertemperatur	Ts	:	-40 ... +85 Cel
Thermal drift (teach value)/ Temperaturdrift (Toleranzwert)		:	
by heating treatment/bei Erwärmung		:	+ 0,17 % / K
by cooling off/bei Abkühlung		:	- 0,17 % / K

**Electrical protections/****Elektrische Schutzmaßnahmen, EMV**

Reverse voltage protection/ Verpolungsschutz	:	built-in/eingebaut
Wire breakage protection/ Drahtbruchsicherheit	:	built-in/eingebaut
Inductive overvoltage/Induktionsschutz	:	built-in/eingebaut
False pulses/Einschaltfehlimpuls	:	suppressed/unterdrückt
IEC 61000-4-2		4 kV
IEC 61000-4-3		10 V/m
IEC 61000-4-4		2 kV
IEC 61000-4-6		10 V/m
EN 55011		Class B

**Mechanical protections/****Mechanische Schutzmaßnahmen**

Degree of protection/Schutzart	:	IP 67
Shock/Schockbeanspruchung	:	30 g; 11 ms duration/Einwirkdauer
Vibration/Schwingbeanspruchung	:	10 bis 55 Hz, 1 mm amplitude/Amplitude
Max. tightening torque/ max. Anzugsdrehmoment	:	60 Nm

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## Indicators/Anzeigen

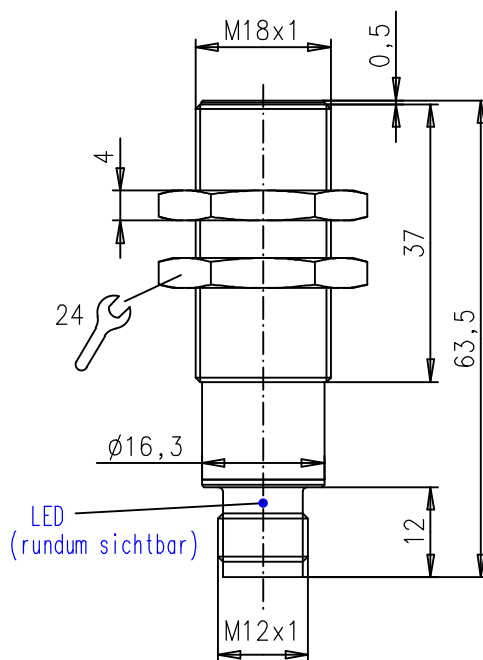
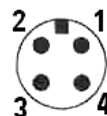
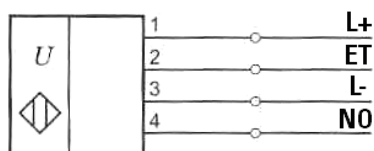
: LED (yellow)/LED (gelb):  
 Switching status: On: LED shines/  
 Schaltzustand: Ein: LED leuchtet  
 Teach-in mode: LED flashes/  
 Teach-in Modus: LED blinkt

## Mounting conditions/ Einbaubedingungen

Mounting position/Einbaulage : any/beliebig  
 Max. cable length/  
 max. zulässige Leitungslänge : 300 m

## Constructive characteristics/ Konstruktive Merkmale

Housing material/Gehäuse : brass nickel-plated/Messing vernickelt  
 Connection/Anschluß : Connector M12, 4-pole/Stecker M12, 4-polig  
 Direction of radiation/Abstrahlrichtung : Front side/stirnseitig  
 Weight/Gewicht : 0,03 kg





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