

# IFW210



## Inductive sensor

IFB3004UBPKG/K1/SC/US-104



Product characteristics		
Electrical design		PNP
Output function		normally open
Sensing range	[mm]	4
Housing		Threaded type
Dimensions	[mm]	M12 x 1 / L = 45
Application		
Special feature	gold-plated contacts; Increased sensing range; correction factor = 1; Magnetic-field immune	
Application	Inductive sensors for welding applications	
Magnetic-field immune		yes
Max. electromagnetic field immunity	[mT]	300
Electrical data		
Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 20
Protection class		II
Reverse polarity protection		yes
Outputs		
Electrical design		PNP
Output function		normally open
Max. voltage drop switching output DC	[V]	2.5
Permanent current rating of switching output DC	[mA]	100
Switching frequency DC	[Hz]	2000
Short-circuit protection		yes
Overload protection		yes
Monitoring range		
Sensing range	[mm]	4
Real sensing range $S_r$	[mm]	$4 \pm 10\%$
Operating distance	[mm]	0...3.24
Increased sensing range		yes

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Accuracy / deviations		
Correction factor		steel: 1 / stainless steel: 1 / brass: 1 / aluminum: 1 / copper: 1
Hysteresis	[% of Sr]	3...15
Switch-point drift	[% of Sr]	-10...10
Correction factor = 1		yes
Operating conditions		
Ambient temperature	[°C]	-40...85
Protection		IP 65; IP 66; IP 67; IP 68; IP 69K
Tests / approvals		
EMC	EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-6 HF conducted	10 V
	EN 55011 emission	class B
MTTF	[years]	659
Embedded software included		yes
UL approval	Ta	-25...70 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL approval number	A005
	File number UL	E174191
Mechanical data		
Weight	[g]	24.3
Housing		Threaded type
Mounting		flush mountable
Dimensions	[mm]	M12 x 1 / L = 45
Thread designation		M12 x 1
Material		housing: brass weld coated; sensing face: LCP black; LED window: PEI; lock nuts: brass weld coated
Tightening torque	[Nm]	2
Displays / operating elements		
Display	Switching status	4 x LED, yellow
Accessories		
Items supplied		lock nuts: 2
Remarks		
Pack quantity		1 pcs.
Electrical connection - plug		
Connector: 1 x M12; coding: A; Contacts: 3, gold-plated		

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### Connection

