M30 Inductive 3-wire DC Proximity Switches AT1



Robust, heavy-duty case proximity switches for DC operation

- Shielded and unshielded models
- IP67 nickel-plated brass housing
- Short-circuit protection
- Inductive loads protection
- Reverse polarity protection
- Side-mounted LED operation indicator
- Integral metal cable support or M12 metal plug
- Nominal sensing range: Shielded 10mm

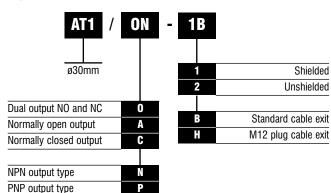
Unshielded 15mm

■ UL and CUL approved





Options and ordering codes



Specification

Supply voltage 10-30 VDC Ripple 10% maximum Maximum consumption 20mA Switching frequency 150Hz, 200Hz** Output type NPN or PNP Output state NO or NC Load current ≤ 400mA Residual output voltage 1V max. IL=100mA Leakage current <10µA Time delay before availbility 100ms Output current limit 450-500mA Short circuit protection autoreset Polarity reversal protection yes Inductive loads protection yes LED status indicator yes (at the side) Insulation resistance >2000mΩ to 2000VDC Dielectric strength 2000VAC 50Hz for 1 min Protection degree IP67 Temperature range -25° +70°C Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 VO Tightening torque 100 Nm max	Model	AT1
Supply voltage 10-30 VDC Ripple 10% maximum Maximum consumption 20mA Switching frequency 150Hz, 200Hz** Output type NPN or PNP Output state NO or NC Load current ≤ 400mA Residual output voltage 1V max. IL=100mA Leakage current <10µA	Hysteresis	10% maximum
Ripple 10% maximum Maximum consumption 20mA Switching frequency 150Hz, 200Hz** Output type NPN or PNP Output state NO or NC Load current ≤ 400mA Residual output voltage 1V max. IL=100mA Leakage current <10µA	Repeatability	5%
Maximum consumption 20mA Switching frequency 150 Hz, 200 Hz** Output type NPN or PNP Output state N0 or NC Load current ≤ 400 mA Residual output voltage $1V$ max. $IL=100$ mA Leakage current $< 10\mu$ A Time delay before availbility 100 ms Output current limit 450 - 500 mA Short circuit protection autoreset Polarity reversal protection yes Inductive loads protection yes LED status indicator yes (at the side) Insulation resistance > 2000 mΩ to 2000 VDC Dielectric strength 2000 VAC 50 Hz for 1 min Protection degree IP67 Temperature range $-25^{\circ} + 70^{\circ}$ C Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 VO Tightening torque 100 Nm max Ambient humidity 35% - 85% r.h.	Supply voltage	10-30 VDC
Switching frequency 150Hz, 200Hz** Output type NPN or PNP Output state N0 or NC Load current $\leq 400\text{mA}$ Residual output voltage 1V max. IL=100mA Leakage current $<10\mu\text{A}$ Time delay before availbility 100ms Output current limit 450-500mA Short circuit protection autoreset Polarity reversal protection yes Inductive loads protection yes (at the side) Insulation resistance $>2000\text{m}\Omega$ to 2000VDC Dielectric strength $2000\text{VAC} = 100\text{m}\Omega$ Temperature range $2000\text{VAC} = 100\text{m}\Omega$ Temperature drift $2000\text{VAC} = 100\text{m}\Omega$ Housing material nickel-plated brass Front material PBT to UL94 VO Tightening torque $2000\text{VM} = 100\text{VM}\Omega$ To NM max Ambient humidity 35% -85% r.h.	Ripple	10% maximum
Output type NPN or PNP Output state N0 or NC Load current ≤ 400mA Residual output voltage 1V max. IL=100mA Leakage current <10 μ A Time delay before availbility 100ms Output current limit 450-500mA Short circuit protection autoreset Polarity reversal protection yes Inductive loads protection yes LED status indicator yes (at the side) Insulation resistance >2000mΩ to 2000VDC Dielectric strength 2000VAC 50Hz for 1 min Protection degree IP67 Temperature range -25° +70°C Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 VO Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Maximum consumption	20mA
Output state NO or NC Load current \leq 400mA Residual output voltage 1V max. IL=100mA Leakage current $<$ 10 μ A Time delay before availbility 100ms Output current limit 450-500mA Short circuit protection autoreset Polarity reversal protection yes Inductive loads protection yes LED status indicator yes (at the side) Insulation resistance $>$ 2000m Ω to 2000VDC Dielectric strength 2000VAC 50Hz for 1 min Protection degree IP67 Temperature range $-25^{\circ} + 70^{\circ}$ C Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 VO Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Switching frequency	150Hz, 200Hz**
Load current ≤ 400mA Residual output voltage 1V max. IL=100mA Leakage current <10µA	Output type	NPN or PNP
Residual output voltage 1V max. IL=100mA Leakage current <10μA	Output state	NO or NC
Leakage current $<10\mu A$ Time delay before availbility 100ms Output current limit $450\text{-}500\text{mA}$ Short circuit protection autoreset Polarity reversal protection yes Inductive loads protection yes LED status indicator yes (at the side) Insulation resistance $>2000\text{m}\Omega$ to 2000VDC Dielectric strength 2000VAC 50Hz for 1 min Protection degree IP67 Temperature range $-25^{\circ} + 70^{\circ}\text{C}$ Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 VO Tightening torque 100 Nm max Ambient humidity 35% -85% r.h.	Load current	≤ 400mA
Time delay before availbility Output current limit Short circuit protection Polarity reversal protection Jes Inductive loads protection LED status indicator Insulation resistance Dielectric strength Protection degree Temperature range Temperature drift Housing material Front material PBT to UL94 VO Tightening torque 100 MA About 450-500mA 450-500mA 450-500mA yes Let he side) yes (at the side) 1969 2000VAC 50Hz for 1 min Protection degree IP67 Temperature range -25° +70°C Temperature drift 10% Sn Housing material PBT to UL94 VO Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Residual output voltage	1V max. IL=100mA
Output current limit 450-500mA Short circuit protection autoreset Polarity reversal protection yes Inductive loads protection yes LED status indicator yes (at the side) Insulation resistance >2000mΩ to 2000VDC Dielectric strength 2000VAC 50Hz for 1 min Protection degree IP67 Temperature range -25° +70°C Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 VO Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Leakage current	<10µA
Short circuit protection autoreset Polarity reversal protection yes Inductive loads protection yes (at the side) LED status indicator yes (at the side) Insulation resistance >2000mΩ to 2000VDC Dielectric strength 2000VAC 50Hz for 1 min Protection degree IP67 Temperature range -25° +70°C Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 VO Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Time delay before availbility	100ms
Polarity reversal protection yes Inductive loads protection yes LED status indicator yes (at the side) Insulation resistance >2000mΩ to 2000VDC Dielectric strength 2000VAC 50Hz for 1 min Protection degree IP67 Temperature range -25° +70°C Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 V0 Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Output current limit	450-500mA
Inductive loads protection yes LED status indicator yes (at the side) Insulation resistance >2000mΩ to 2000VDC Dielectric strength 2000VAC 50Hz for 1 min Protection degree IP67 Temperature range -25° +70°C Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 VO Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Short circuit protection	autoreset
LED status indicator yes (at the side) Insulation resistance >2000m Ω to 2000VDC Dielectric strength 2000VAC 50Hz for 1 min Protection degree IP67 Temperature range -25 $^{\circ}$ +70 $^{\circ}$ C Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 V0 Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Polarity reversal protection	yes
$\begin{array}{llllllllllllllllllllllllllllllllllll$	Inductive loads protection	yes
Dielectric strength 2000VAC 50Hz for 1 min Protection degree IP67 Temperature range -25°+70°C Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 V0 Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	LED status indicator	yes (at the side)
Protection degree IP67 Temperature range -25°+70°C Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 V0 Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Insulation resistance	$>$ 2000m Ω to 2000VDC
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Temperature drift 10% Sn Housing material nickel-plated brass Front material PBT to UL94 V0 Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Protection degree	IP67
Housing material nickel-plated brass Front material PBT to UL94 V0 Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Temperature range	-25° +70°C
Front material PBT to UL94 V0 Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Temperature drift	10% Sn
Tightening torque 100 Nm max Ambient humidity 35%-85% r.h.	Housing material	nickel-plated brass
Ambient humidity 35%-85% r.h.	Front material	PBT to UL94 V0
<u> </u>	Tightening torque	100 Nm max
Weight (approx.) 270g	Ambient humidity	35%-85% r.h.
	Weight (approx.)	270g

Note:

• version only available in Plug-in

A version pre-wired

Other cable options:

Customised cables Please contact IMO for price and availability

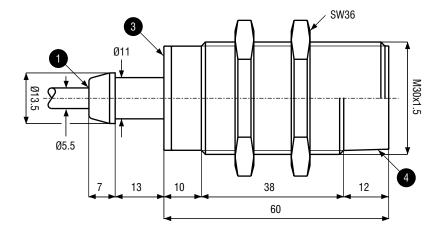
M30 Inductive 3-wire DC Proximity Switches AT1 continued



Dimensions (mm)

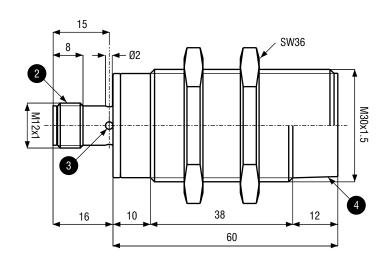
AT1/**-*B in line cable exit with tang

Cable: ø5mm, 2m length, 3 x 0.34mm², PVC material



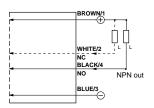
AT1/**-*H M12 plug cable exit

- 1 In line cable exit with tang
- 2 M12 plug-in exit
- 3 Red, output state LED
- 4 Unthreaded section on unshielded models

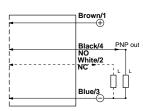


Output circuit – wiring connections

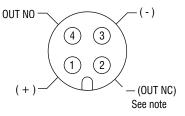
NPN output PT1



PNP output PT1



M12 plug - pin connections Cable exit option H



NOTE: (pin connections): At present, all plug exit sensors have the output on pin 4. According to EEC Directives, the output of NC plug exit models will be changing to pin 2 (NO will remain on pin 4). A plug cable to match these NC sensors MUST be a 4-wire type as 3-wire cables are connected to pins 1, 3 and 4 – contact IMO to check stock types.