

Robust Level Switch unaffected by dust and adhesion

Tilt Switch

For detecting upper limit of hoppers, chutes, etc.



MFFP-40C
Detector

AMDC-12C
Transducer

Robust level switch unaffected by adhesion

Suitable for upper limit detection in storage silos, hoppers, chutes, etc. for powder and solid materials.

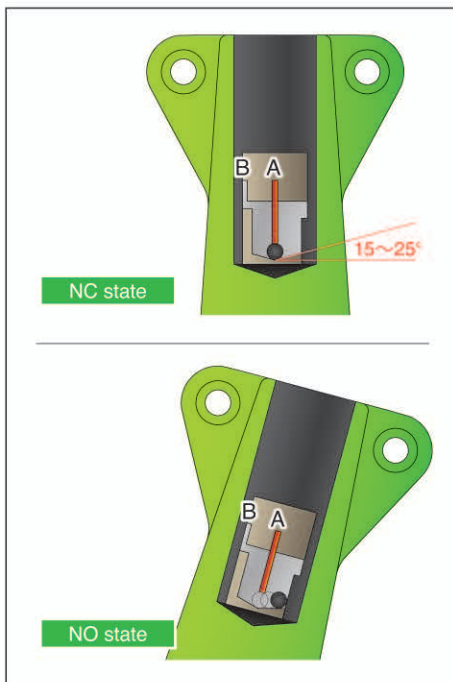


Principle

Sensor (detection unit) of Tilt Switch has a built-in tilt switch. When sensor is not in contact with material to be detected, contact between A and B is closed (NC state) via an iron ball.

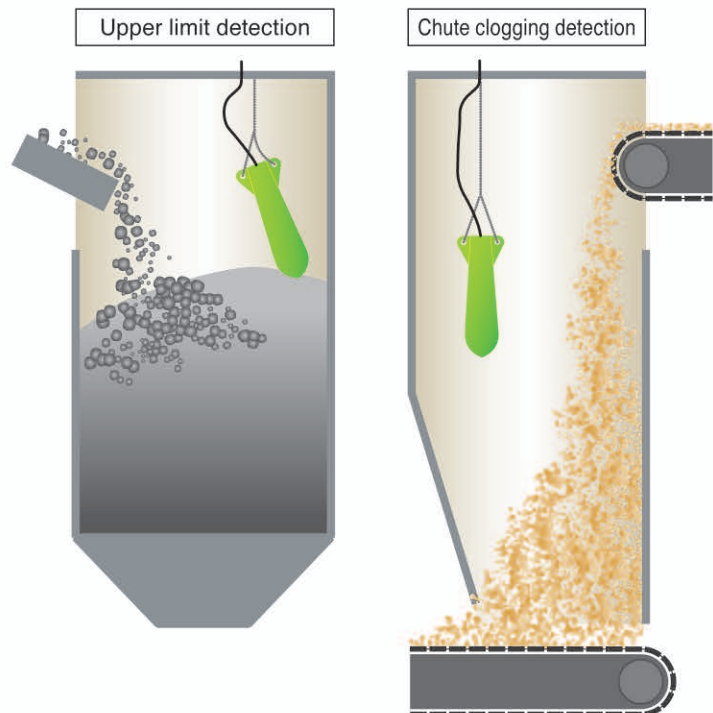
When sensor is inclined due to accumulated material, iron ball in the inclination switch rolls and contact point between A and B is opened (NO state). In principle, the sensor is not affected by floating dust or adhered objects.

Tilt switch detection principle



Features

- Compact structure and robust
- Wear-resistant upper limit switch
- Casing material is tag tile cast iron
Excellent toughness
- IP67 protection
- Applicable for powder with cross paddle (option)



Applications

- Clinker silo
- Coal/coke silo
- Gravel/sand silo
- Ore silo
- Cement silo
- Aggregate bin etc.

Specifications

Detector

Model	MFFP-40C(standard)	MFFP-40	MFFP-40W	MFFP-40CW
Model configuration	with link chain	Only detector	with cross paddle	with link chain & cross paddle
Detection angle	Approx. 10 ~ 25° *1			
Detection specific gravity	1.0 or more (particle size 30mm) *2		0.6 or more (particle size 30mm) *2	
Detecting length	5m max. from mounting position			
Built-in switch	CW1725-1 Ball type switch			
Type of contact	NC contact			
Contact capacity	DC30V 0.25A *3			
Allowable temperature	-15 ~ +60°C			
Protection	IP 67			
Coating color of detecting part	MUNSELL7.5GY6/10			
Coating color of terminal box	MUNSELL 5Y 7/1			
Mass	Approx. 5kg	Approx. 2.5kg	Approx. 2.5kg	Approx. 5kg

Option: Intrinsic Safety explosion-proof type is available

*1 Detection angle when connected to DC12 to 24V. If you connect more than 24V DC, the detection angle will increase.(+5°)

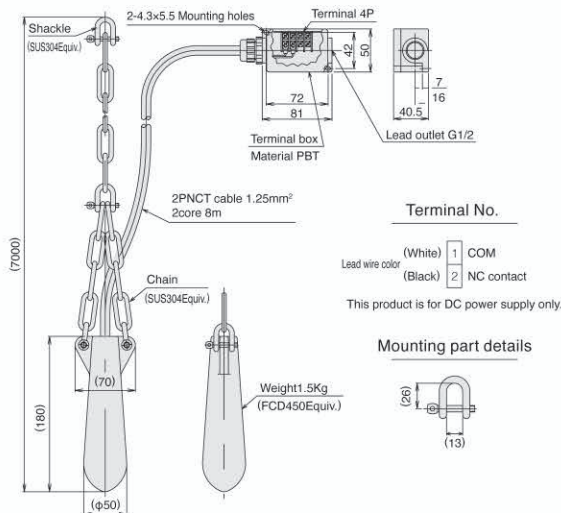
*2 The above values depend on the conditions of detected objects and installation environment.

*3 For DC power only

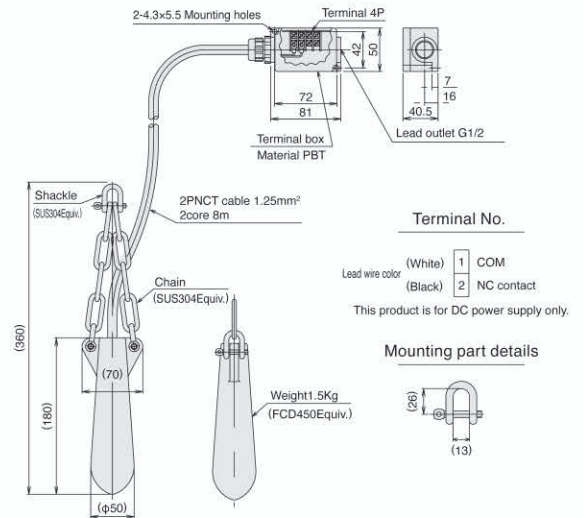
Dimensions

Detector

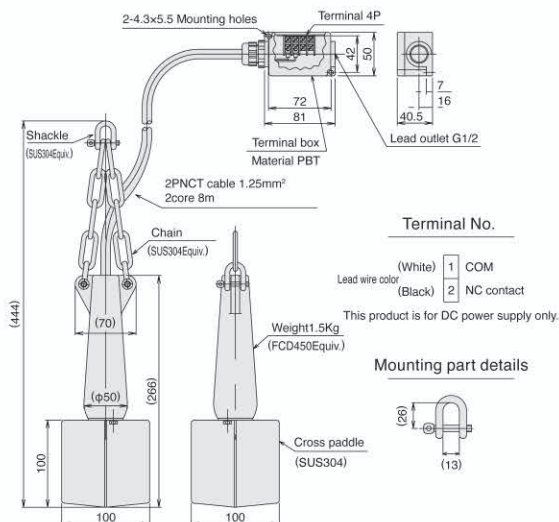
MFFP-40C



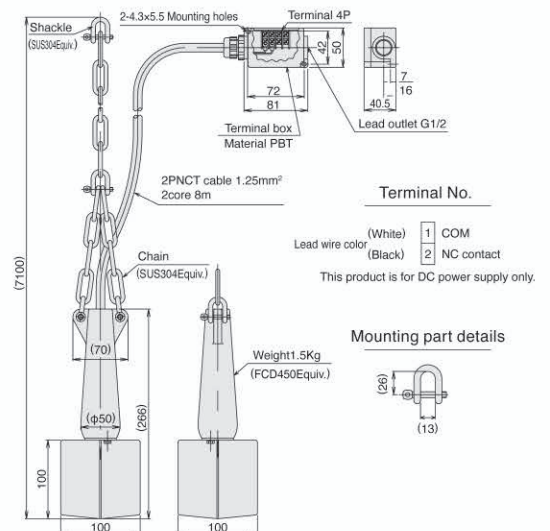
MFFP-40



MFFP-40W



MFFP-40CW



Specifications

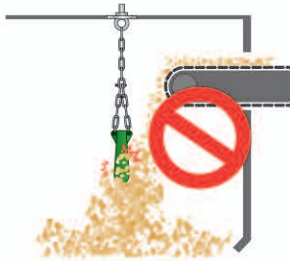
Transducer

Model	AMDC-12C
Connection with detector	NC contact (for fail safe)
Output contact	1C contact
Contact capacity	AC 250V 2A/DC 125V 0.3A (Load resistance)
Timer	1 ~ 10s Variable
Indicator lamp	Power lamp
	Detect lamp
Allowable temperature	-10 ~ +50°C
Protection	IP 40
Power supply	AC100/110V, 200/220V, 50/60Hz
Mass	0.4kg

How to use?

Mounting precautions

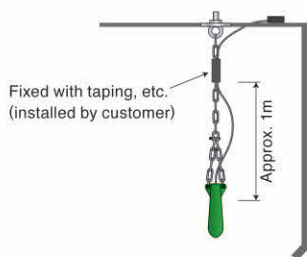
Prevent the charging material from contacting the switch directly because the impact may cause misdetection or damage. Since it is designed to detect by inclination, install it in a location where there is enough space so that it will not hit a wall even if it is inclined.



Cable fixing instructions

The lowest limit for securing hanging chain and cable is approximately 1m from detector. Make cable longer than chain slightly and do not make it tense.

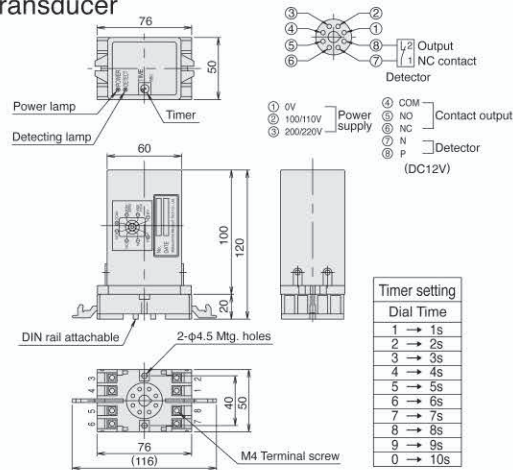
*If cable is fixed in a tensioned condition, it may cause failure of detection or delay in detection.



Specifications are subject to change without notice.
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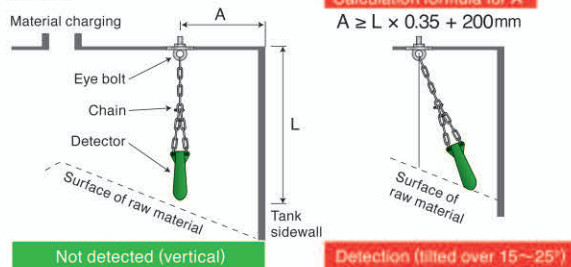
Dimensions

Transducer



Detector mounting position

If detector is installed near side wall of the tank, it may be interfered by the side wall and may cause misdetection. Determine distance A from side wall of the tank to mounting position of detector based on calculation formula below.



Precautions when mounting

Contact capacity of Tilt switch is rated voltage DC60V and rated current 0.25A. Since AC voltage cannot be connected directly to detector, a transducer (AMDC-12C) is required.

⚠ AC voltage cannot be connected directly



Caution
 • Please read the instruction manual carefully to use this product correctly and safely.
 • If there is a possibility of applying this product to a system that requires safety that is directly related to human body, please contact our sales representative.

Distributor



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