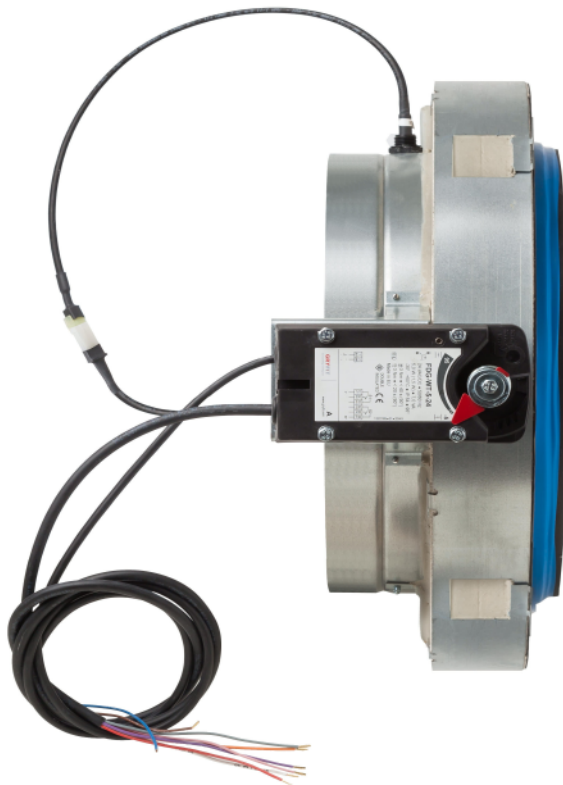




EPO PATENT APPLICATION EP22151377.3

Fire Damper

CX-4S + SMN



in libraries of
Fluid Desk
Building Information Modeling

EI 120 (v-i↔o) S
EN 13501-3+A1:2012
EN 15650:2010
Certificate of Constasy
of Performance
CE 1488-CPR-0281/W

FUNCTION

CX-4S fire dampers with SMN option are designed for buildings where in the event of a fire due to the rise of temperature the affected zone should be isolated from the other zones. The SMN option enables a unique installation on the surface of a building partition in less than 5 minutes with the use of only 4 mounting anchors. The performance criteria are satisfied in case of fire from inside to outside of damper as well as outside to inside or both, respectively.

APPLICATION

CX-4S + SMN fire dampers are installed in vertical or horizontal fire rated partition walls penetrated by air ducts. Fire dampers closes as a result of rise in temperature in ventilation duct above 72°C or 95°C and activation of fusible link. Closed fire dampers maintain the required fire resistance ratings of partitions and prevent the spread of fire into the adjoining compartments.

If the damper has been exposed to fire, it has to be replaced with a new one. Signalling of closure of the damper blade is provided by the use of micro switches.

DESCRIPTION

The CX-4S + SMN consists of:

- circular casing made of galvanized steel sheet alternatively stainless or acid proof steel,
- round insulating collar made of fire resistant board with installation brackets to be bent before assembly,
- combination of smoke and fire proof seals of damper blade,
- control mechanism.



ACCESSORIES

Fuse only fire damper:

- microswitch indicating "open" position,
- microswitch indicating "closed" position,
- microswitch indicating "open" and "closed" positions,
- ergonomic handle eDZ,
- fusible link socket SC.

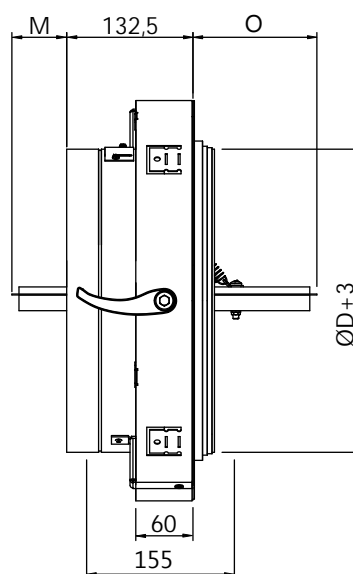
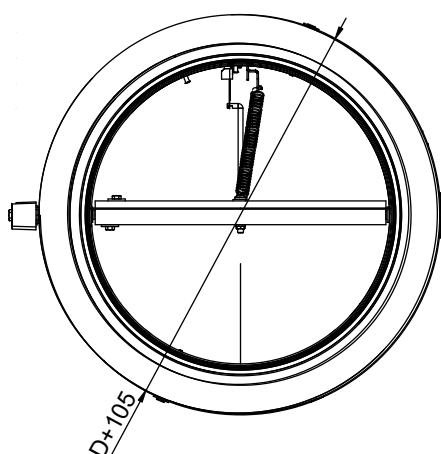
Fire damper with actuator:

- FDG-WT-5,
- FDG-WT-8.

DIMENSIONS AND INSTALLATION METHOD

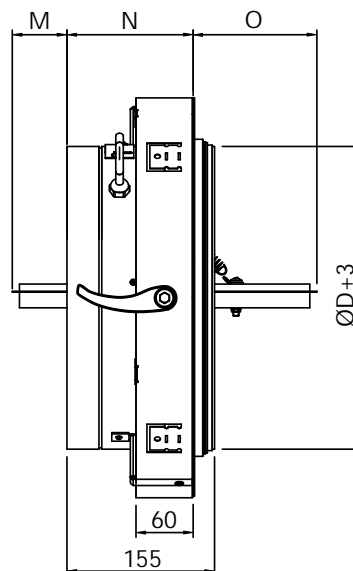
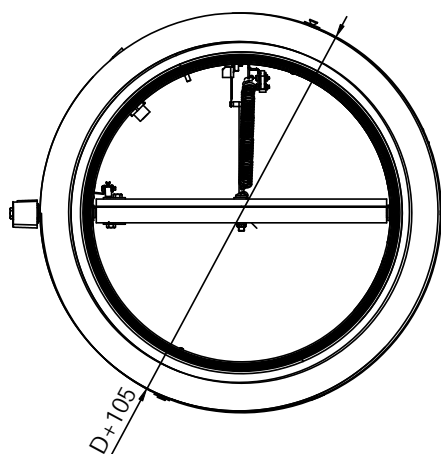
CX-4S + SMN FUSE ONLY WITH SLEEVE CONNECTION

D	M	N	O	S
[mm]	[mm]	[mm]	[mm]	[dm ²]
100	0	132,5	0	0,5
125	0	132,5	35	0,9
160	0	132,5	52,5	1,6
200	0	132,5	72,5	2,6
250	25	132,5	97,5	4,3
315	57,5	132,5	130	7,0



CX-4S + SMN FUSE ONLY WITH SLEEVE CONNECTION AND MICROSWITCHES

D	M	N	O	S
[mm]	[mm]	[mm]	[mm]	[dm ²]
100	0	132,5	0	0,5
125	0	132,5	35	0,9
160	0	132,5	52,5	1,6
200	0	132,5	72,5	2,6
250	25	132,5	97,5	4,3
315	57,5	132,5	130	7,0

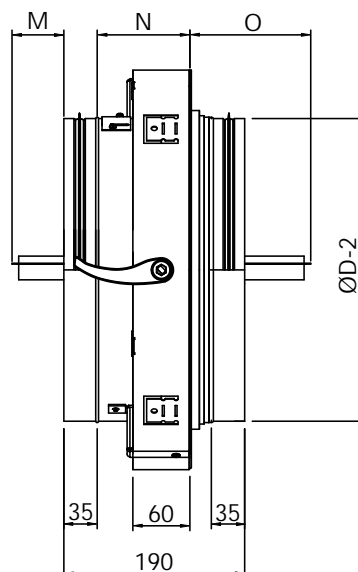
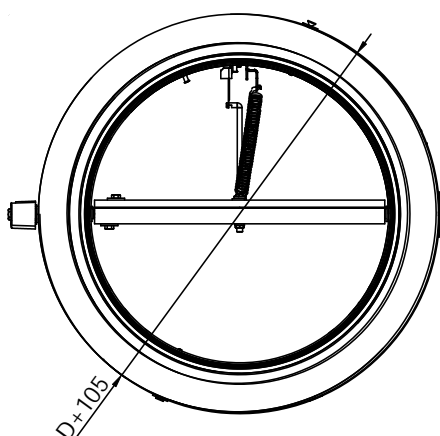




DIMENSIONS AND INSTALLATION METHOD

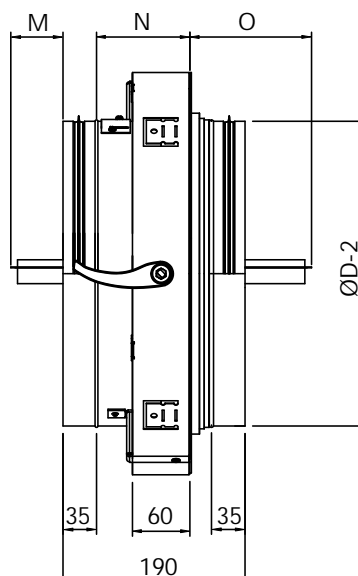
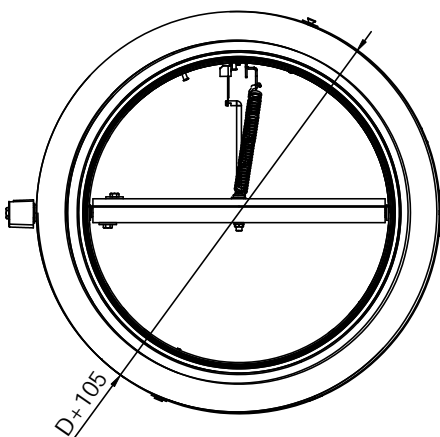
CX-4S + SMN FUSE ONLY WITH NIPPLE CONNECTION

D	M	N	O	S
[mm]	[mm]	[mm]	[mm]	[dm ²]
100	0	97,5	0	0,5
125	0	97,5	0	0,9
160	0	97,5	0	1,6
200	0	97,5	69,5	2,6
250	22	97,5	94,5	4,3
315	54,5	97,5	127	7,0



CX-4S + SMN FUSE ONLY WITH NIPPLE CONNECTION AND MICROSWITCHES

D	M	N	O	S
[mm]	[mm]	[mm]	[mm]	[dm ²]
100	0	97,5	0	0,5
125	0	97,5	0	0,9
160	0	97,5	0	1,6
200	0	97,5	69,5	2,6
250	22	97,5	94,5	4,3
315	54,7	97,5	127	7,0

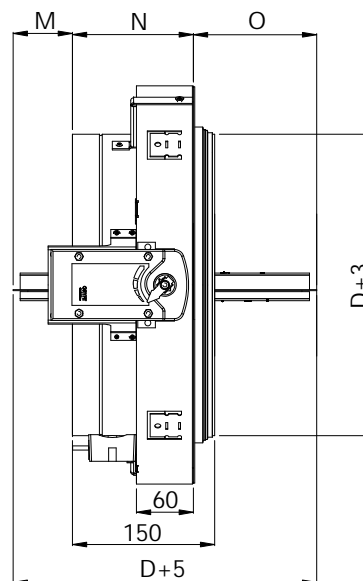
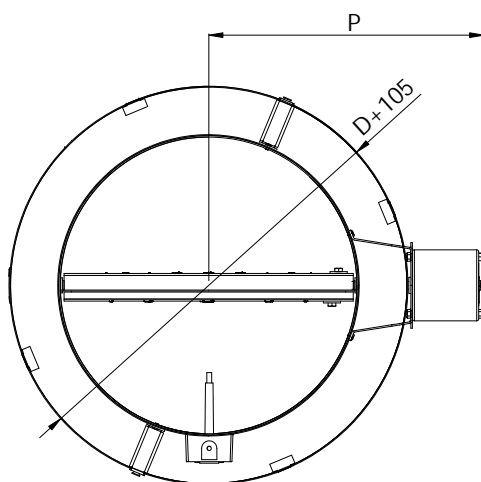




DIMENSIONS AND INSTALLATION METHOD

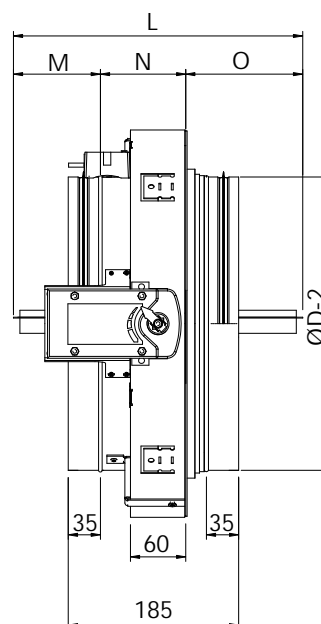
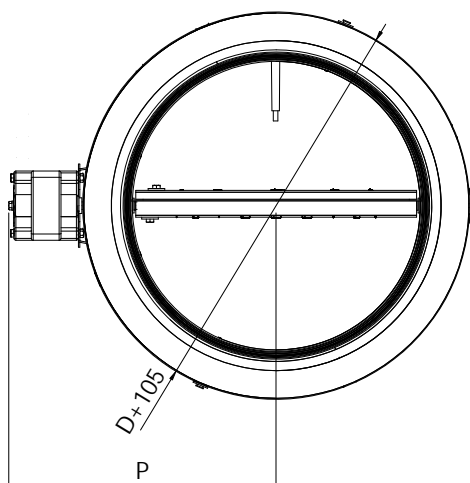
CX-4S + SMN WITH FDG-WT-5 ACTUATOR AND WITH SLEEVE CONNECTION

D	M	N	O	P	S
[mm]	[mm]	[mm]	[mm]	[mm]	[dm ²]
100	-	127,5	22,5	182,5	0,5
125	-	127,5	35	195	0,9
160	-	127,5	52,5	212,5	1,6
200	5	127,5	72,5	232,5	2,6
250	30	127,5	97,5	257,5	4,3
315	62,5	127,5	130	290	7,0



CX-4S + SMN WITH FDG-WT-5 ACTUATOR AND WITH NIPPLE CONNECTION

D	M	N	O	P	S
[mm]	[mm]	[mm]	[mm]	[mm]	[dm ²]
100	-	92,5	-	182,5	0,5
125	-	92,5	-	195	0,9
160	-	92,5	-	212,5	1,6
200	37	92,5	69,5	232,5	2,6
250	62	92,5	94,5	257,5	4,3
315	94,5	92,5	127	290	7,0

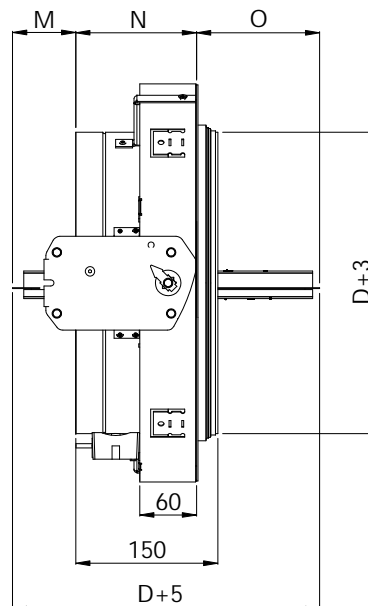
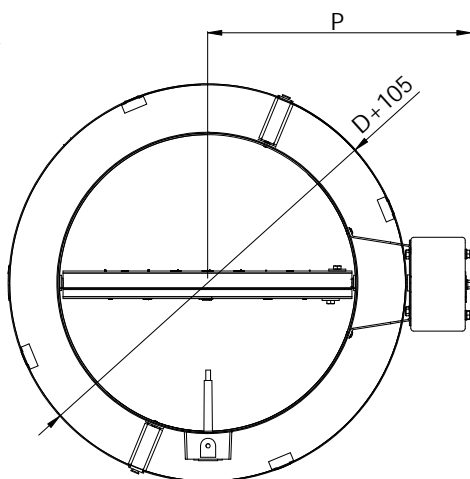




DIMENSIONS AND INSTALLATION METHOD

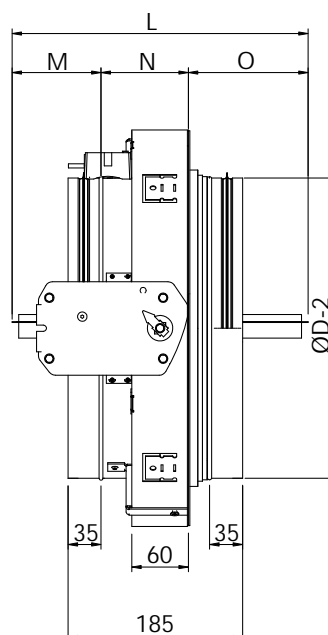
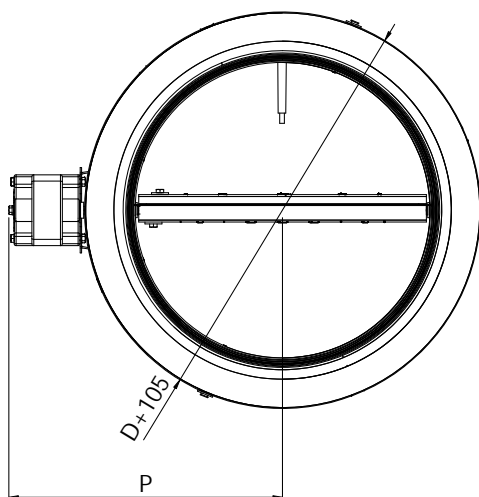
CX-4S + SMN WITH FDG-WT-8 ACTUATOR AND WITH SLEEVE CONNECTION

D	M	N	O	P	S
[mm]	[mm]	[mm]	[mm]	[mm]	[dm ²]
100	-	127,5	22,5	170	0,5
125	-	127,5	35	182,5	0,9
160	-	127,5	52,5	200	1,6
200	5	127,5	72,5	220	2,6
250	30	127,5	97,5	245	4,3
315	62,5	127,5	130	277,5	7,0



CX-4S + SMN WITH FDG-WT-8 ACTUATOR AND WITH NIPPLE CONNECTION

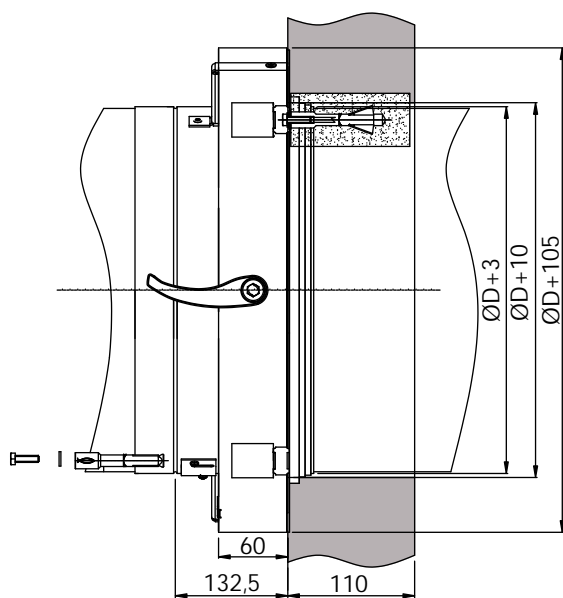
D	M	N	O	P	S
[mm]	[mm]	[mm]	[mm]	[mm]	[dm ²]
100	-	92,5	-	170	0,5
125	-	92,5	-	182,5	0,9
160	-	92,5	-	200	1,6
200	37	92,5	69,5	220	2,6
250	62	92,5	94,5	245	4,3
315	94,5	92,5	127	277,5	7,0



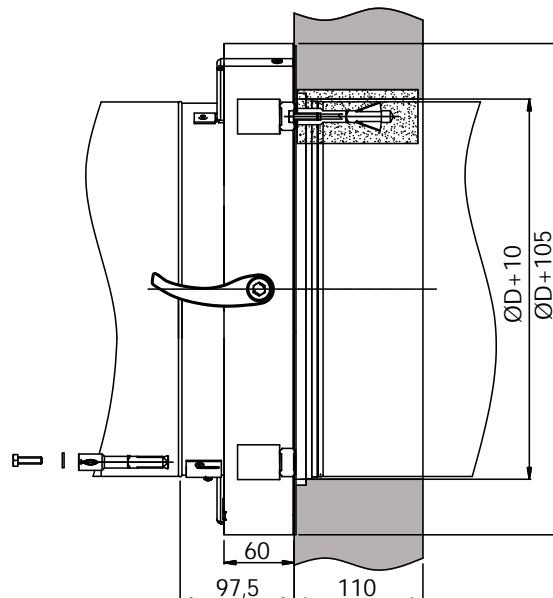


DIMENSIONS AND INSTALLATION METHOD

CX-4S + SMN FUSE ONLY IN A CONCRETE OR BRICK VERTICAL PARTITION



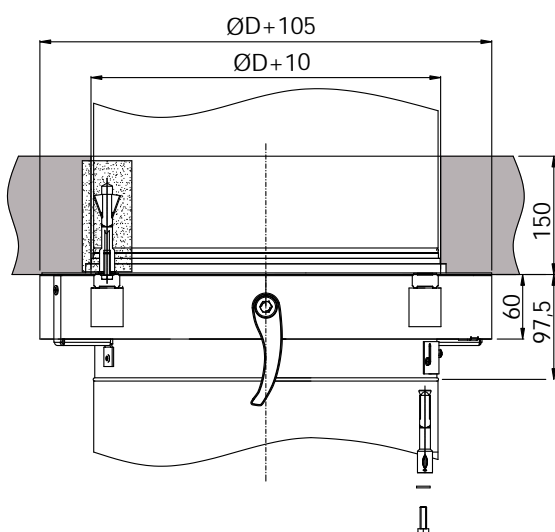
sleeve connection



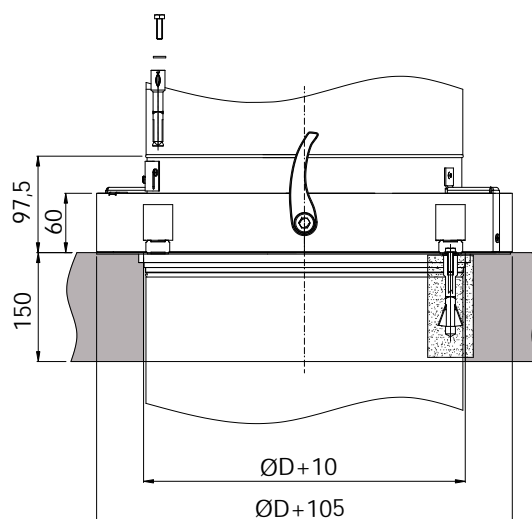
nipple connection

GRYFIT CX-4S + SMN damper can be installed both with its blade axis positioned horizontally and vertically.

CX-4S + SMN FUSE ONLY IN A CONCRETE HORIZONTAL PARTITION



nipple connection
handle and access door under the partition



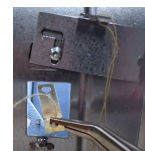
nipple connection
handle and access door above partition



ACCESSORIES

REPLACEMENT OF FUSIBLE LINK - OR OPTION

To replace the fusible link - applies to fuse only fire damper, remove the inspection cover, which is available in case of OR option. Make sure that the damper blade is in closed position and with the help of the half - round nose pliers insert the fusible link into inspection opening and using the handle reset the damper blade to open position and set the fusible link on hooks.



REPLACEMENT OF FUSIBLE LINK SOCKET - SC OPTION

Choose SC option - applies to fuse only fire damper, to provide fusible link socket allowing test of the fire damper blade closing and fuse replacement without any tools within several seconds.

Pull the red cord to close the fire damper damper blade. To reopen the damper, move the eDZ handle to a position parallel to the direction of air flow through the damper. The damper will be locked in the open position with means of the mechanism – subjected to patent application, integrated in the SC fuse release socket. To replace the fusible link or to inspect the damper close the damper blade by pulling the red cord and remove socket.



EMS MODULE

Easy Maintenance System module guarantee quick and correct connection of the portable TZ tester that enables delivery of suitable control – impulse or deenergizing of a selected voltage – 24 V or 230 V, in purpose of functionality assessment during the installation work, commissioning process of installation and during normal management of the building. Use of the EMS system together with the TZ tester speeds up commissioning of the installation considerably leaves no doubt as regards to its correct performance.



ELECTRICAL WIRING DIAGRAM

CHARACTERISTICS OF ACTUATOR	FDG-WT-5-230	FDG-WT-5-24
Supply voltage [V]	230V AC	24V AC/DC
Power input during tensioning the spring [W]	4 W	4 W
Power input during stand-by [W]	1 W	1 W
Time of movement – engine [s]	<40 s	<40 s
Time of movement – spring [s]	<20 s	<20 s
Torque motor [Nm]	>3 Nm	>3 Nm
Protection class IP	IP54	IP54
Sound power level – actuator dB(A)	<45 dB(A)	<45 dB(A)
Sound power level – spring dB(A)	<65 dB(A)	<65 dB(A)

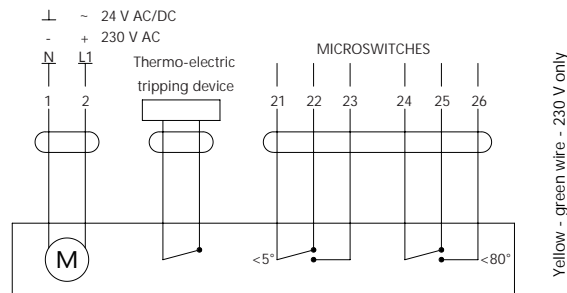
CHARACTERISTICS OF ACTUATOR	FDG-WT-8-230	FDG-WT-8-24
Supply voltage [V]	230V AC	24V AC/DC
Power input during tensioning the spring [W]	9,2 VA	3,5 W
Power input during stand-by [W]	6,9 VA	0,5 W
Time of movement – engine [s]	55-71 s	55-71 s
Time of movement – spring [s]	21 s	21 s
Torque motor [Nm]	8 Nm	8 Nm
Protection class IP	IP54	IP54
Sound power level – actuator dB(A)	47 dB(A)	47 dB(A)
Sound power level – spring dB(A)	52 dB(A)	52 dB(A)



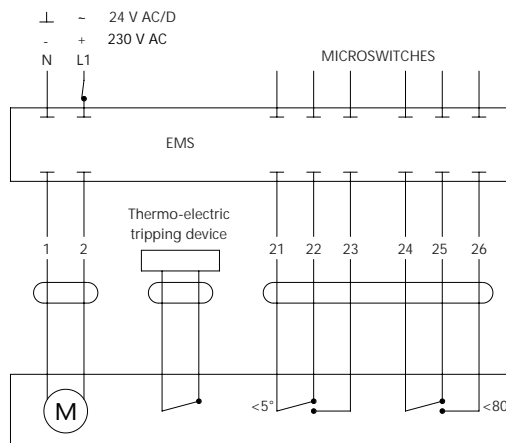
ELECTRICAL WIRING DIAGRAM

DAMPER WITH FDG-WT-8 OR FDG-WT-5 ACTUATOR*

Optional actuators: FDG-WT-8-24, FDG-WT-8-230, FDG-WT-5-24* and FDG-WT-5-230*.



DAMPER WITH FDG-WT-8 ACTUATOR* AND EMS OR FDG-WT-5 ACTUATOR* AND EMS



*FDG-WT-5-24 and FDG-WT-5-230 actuators are applicable for all sizes of CX-4S + SMN fire dampers.

EXAMPLE OF SPECIFICATION AND PURCHASE ORDER

Enquiry:

Fire damper EIS120 GRYFIT CX-4S installation on the surface of a building partition without mortar, D=200+Actuator 24/48V AC/DC FDG-WT-8-24 + Module EMS + EPDM gaskets

GRYFIT quotation:

GRYFIT CX-4S + SMN, D=200 + FDG-WT-8-24 + EMS + EPDM gaskets T

Enquiry:

Fire damper EIS120 GRYFIT CX-4S installation on the surface of a building partition without mortar with the possibility of replacing the fusible link without tools and with the possibility of performing a test of closing, D=315 + microswitches indicating open and closed position + EPDM gaskets

GRYFIT quotation:

GRYFIT CX-4S + SMN, D=315 + 1WKPP + SC + eDZ + EPDM gaskets T