

Mechanical time switch modules

- Battery backup with quartz version
- Daily or weekly program
- Improved dust protection
- 1 channel
- 16 A/250 V AC switching capacity
- Fitting compatible with digital time switch modules FMD
- Only for fitted mounting
- Additional color combinations see page 32-33

Applications
For solutions up to 16 A

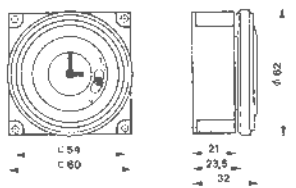
	Drive	Program	Specifications
	FM/1 STuZH		
	Synchronous drive	Daily program	With clock face and manual switch
	FM/1 SWuZH		
	Synchronous drive	Weekly program	With clock face and manual switch
	FM/1 QRTuZH		
	Quartz drive	Daily program	With clock face and manual switch
	FM/1 QRWuZH		
	Quartz drive	Weekly program	With clock face and manual switch
	FM/1 STuZ		
	Synchronous drive	Daily program	With clock face, without manual switch
	FM/1 SWuZ		
	Synchronous drive	Weekly program	With clock face, without manual switch
	FM/1 QRTuZ		
	Quartz drive	Daily program	With clock face, without manual switch
	FM/1 QRWuZ		
	Quartz drive	Weekly program	With clock face, without manual switch
	FM/1 STuH		
	Synchronous drive	Daily program	Without clock face, with manual switch
	FM/1 SWuH		
	Synchronous drive	Weekly program	Without clock face, with manual switch
	FM/1 QRTuH		
	Quartz drive	Daily program	Without clock face, with manual switch
	FM/1 QRWuH		
	Quartz drive	Weekly program	Without clock face, with manual switch

Technical Data

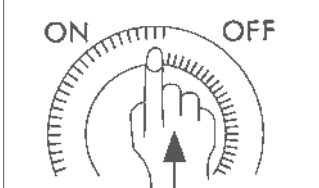
	FM/1 S	FM/1 Q (16 A)	FM/1 Q low load (0,1 A)
Dimensions H x W x D (mm)	60 x 60 x 32	60 x 60 x 32	60 x 60 x 32
Cut out (mm)	Ø 64	Ø 64	Ø 64
Fitting depths (mm)	21	21	21
Weight (g) approx.	75	75	75
Nominal voltage	220-240 V AC/50 Hz 110-120 V AC/60 Hz	230V AC/130 V DC	230V AC/130 V DC
Power consumption	1 VA at 220 V AC	2 VA at 220 V AC 0,2 VA at 24 V DC	2 VA at 220 V AC 0,2 VA at 24 V DC
Current output – Relay	Switch, galvanic insulation	Switch, galvanic insulation	Switch, galvanic insulation
Switching current AC – Resistive load (VDE, IEC) – Resistive load (UL) – Inductive load cos. φ 0,6 – Incandescent lamp load	16 A/250 V AC 21 A/250 V AC 8 A/250 V AC 1350 W	16 A/250 V AC 21 A/250 V AC 8 A/250 V AC 1350 W	0,1 A/250 V AC 0,1 A/125 V AC 0,05 A/250 V AC –
Switching current DC	–	–	100 mA/24 V DC 100 mA/60 V DC 100 mA/220 V DC
Minimum switching current AC	100 mA/20 V AC	100 mA/20 V AC	5 mA/300 mV AC
Minimum switching current DC	100 mA/20 V DC	100 mA/20 V DC	5 mA/300 mV DC
Battery backup	–	150 h	150 h
Battery charge time	–	70 h	70 h
Operation accuracy	Mains synchronous	type ± 1.5 s/day at 20°C	type ± 1.5 s/day at 20°C
Ambient temperature	-40°C ... +85°C	-20°C ... +55°C	-20°C ... +55°C
Security level for fitting acc. to instructions	II	II	II
Shortest switching time – Daily program – Weekly program	15 min 2 h	15 min 2 h	15 min 2 h
Shortest switching interval – Daily program – Weekly program	15 min 2 h	15 min 2 h	15 min 2 h
Automatic override	possible	possible	possible
Clock face	possible	possible	possible
According to	EN 60730-1 EN 60730-2-7	EN 60730-1 EN 60730-2-7	EN 60730-1 EN 60730-2-7
Type of connection	flat DIN 6.3 mm	flat DIN 6.3 mm	flat DIN 6.3 mm

Dimensional drawings/circuit diagrams:

FM/1 S, FM/1 Q

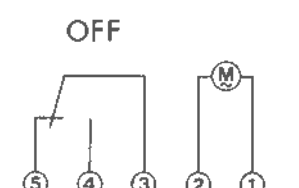


Tappet position

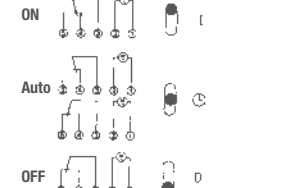


FM/1 S, FM/1 Q

OFF



FM manual switch





Voltage variants	Nominal range AC (tolerance: -15%/+10%) Details on unit and packaging	Nominal range DC (tolerance: -15%/+10%) Details on unit and packaging	Information on invoice and delivery note
Quartz drive 45 – 60 Hz	24-36 V 48-72 V 100-160 V 220-240 V	12-15 V 24-36 V 48-72 V 100-160 V	30 V AC/12 V DC 60 V AC/30 V DC 130 V AC/60 V DC 230 V AC/130 V DC
Synchronous drive 50 or 60 Hz	24 V/50 Hz 110-120 V/60 Hz 220-240 V/50 Hz 220-240 V/60 Hz	– – – –	24 V/50 Hz 110-120 V/60 Hz 220-240 V/50 Hz 220-240 V/60 Hz

Mechanical time switch modules

- Synchronous drive
- 12 h program with FM modules
- 1 channel
- 16 A/250 V AC Switching current

- Applications**
- For solutions up to 16 A
 - Defrost technology

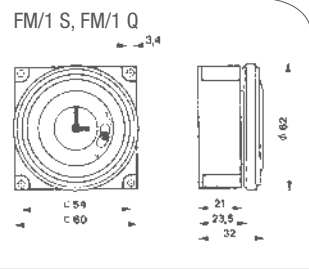
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	Synchronous drive	Daily program	Without clock face and manual switch
	FM/1 SWu		
	Synchronous drive	Weekly program	Without clock face and manual switch
	FM/1 QRTu		
	Quartz drive	Daily program	Without clock face and manual switch
	FM/1 QRWu		
	Quartz drive	Weekly program	Without clock face and manual switch
FM/1 Su 12 h			
	Synchronous drive	12 hour program	FM-module

Technical Data

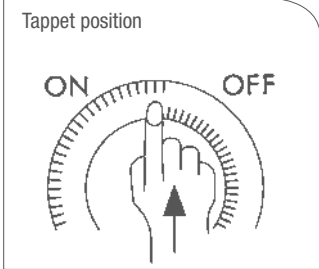
	FM/1 S		FM/1 Su 12 h	FM/1 Q (16 A)	FM/1 Q low load (0,1 A)
Dimensions H x W x D (mm)	60 x 60 x 32			60 x 60 x 32	60 x 60 x 32
Cut out (mm)	Ø 64			Ø 64	Ø 64
Fitting depths (mm)	21			21	21
Weight (g) approx.	75			75	75
Nominal voltage	220-240 V AC/50 Hz 110-120 V AC/60 Hz			230V AC/130 V DC	230V AC/130 V DC
Power consumption	1 VA at 220 V AC			2 VA at 220 V AC 0,2 VA at 24 V DC	2 VA at 220 V AC 0,2 VA at 24 V DC
Current output – Relay	Switch, galvanic insulation			Switch, galvanic insulation	Switch, galvanic insulation
Switching current AC – Resistive load (VDE, IEC) – Resistive load (UL) – Inductive load cos. j 0.6 – Incandescent lamp load	16 A/250 V AC 21 A/250 V AC 8 A/250 V AC 1350 W			16 A/250 V AC 21 A/250 V AC 8 A/250 V AC 1350 W	0,1 A/250 V AC 0,1 A/125 V AC 0,05 A/250 V AC –
Switching current DC	–			–	100 mA/24 V DC 100 mA/60 V DC 100 mA/220 V DC
Minimum switching current AC	100 mA/20 V AC			100 mA/20 V AC	5 mA/300 mV AC
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Battery charge time	–			70 h	70 h
Operation accuracy	Mains synchronous			type ± 1.5 s/day at 20°C	type ± 1.5 s/day at 20°C
Ambient temperature	-40°C ... +85°C			-20°C ... +55°C	-20°C ... +55°C
Security level for fitting acc. to instructions	II			II	II
Shortest switching time – Daily program – Weekly program – 12h program	15 min 2 h –	– – 7,5 min		15 min 2 h	15 min 2 h
Shortest switching interval – Daily program – Weekly program – 12h program	15 min 2 h –	– – 7,5 min		15 min 2 h –	15 min 2 h –
Automatic override	possible	–		possible	possible
Clock face	possible	–		possible	possible
According to	EN 60730-1 EN 60730-2-7			EN 60730-1 EN 60730-2-7	EN 60730-1 EN 60730-2-7
Type of connection	flat DIN 6.3 mm			flat DIN 6.33 mm	flat DIN 6.3 mm

Dimensional drawings/circuit diagrams:

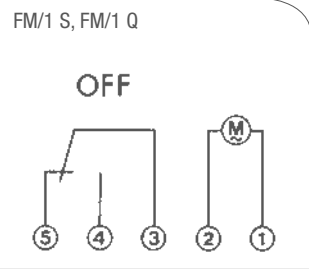
FM/1 S, FM/1 Q



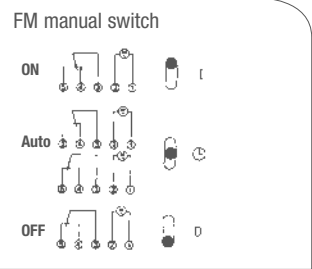
Tappet position



FM/1 S, FM/1 Q



FM manual switch



For voltage variants refer to p. 37.