



GSM8-32系列电动机保护型断路器

GSM8-32 Range Circuit-Breaker of Protection Motor

一、用途 APPLICATION

GSM8-32系列电动机保护型断路器（以下简称断路器）主要用于交流50Hz/60Hz，额定工作电压至415V，额定工作电流0.1A~32A的电路中，作为三相电动机的过载、短路和三相不平衡保护及不频繁起动和运转中分断之用，还可作为隔离器使用。

GSM-32 series motor protection breaker (abbr. breaker) is mainly used in the circuit of AC 50 (or 60Hz), rated operating voltage 415V and rated operating current 0.1-32A for overload, short circuit and unbalanced three phase protection of three-phase motor as well as unfrequented starting and breaking during operation. It can be also used as isolator.

二、采用标准及认证情况

CONFORM STANDS AND CERTIFICATION

- 断路器采用模块式结构，能方便地加装辅助触头、报警触头、欠电压脱扣器和分励脱扣器等附件。

This breaker use module design and can conveniently added auxiliary contact、alarm contact、under-voltage release and shunt release ect..

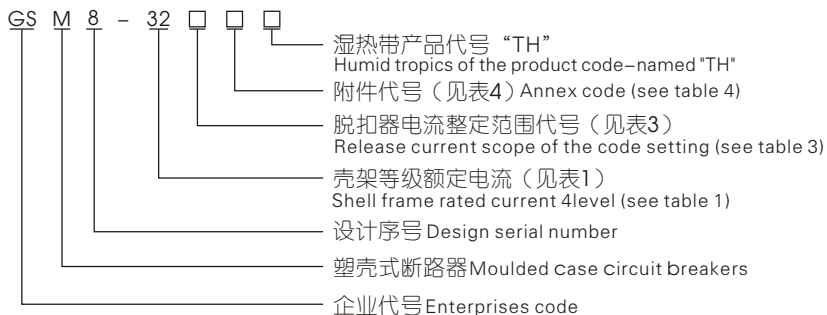
- 本系列产品符合以下标准：

This product complies with the demands of the following standards:

- △ GB14048.2 低压开关设备和控制设备 低压断路器
GB14048.2 Low-voltage Switchgear and control gear low-voltage breaker
- △ GB14048.3 低压开关设备和控制设备
GB14048.3 low-voltage switchgear and control gear
- △ 低压开关、隔离器、隔离开关及熔断器组合电器
Switchgear、Isolation、Separated Switch And Fuse Combination Apparatus
- △ GB14048.4 低压开关设备和控制设备
GB14048.4 Low-voltage switchgear and control gear
- △ 低压机电式接触器和电动机起动器
Low-voltage mechanical breaker and motor starter
- △ 通过CCC、CE认证。

Through the CCC certification, the EU CE safety certification.

三、型号及其含义 TYPE AND MEANS



四、正常工作条件与安装条件

WORKING CONDITION AND INSTALLATION CONDITION

- △ 周围空气温度：-20℃ ~ +60℃。 Environment temperature : -20℃ ~ +60℃
- △ 温度补偿范围：-20℃ ~ +60℃。 The range of temperature: -20℃ ~ +60℃
- △ 海拔高度：安装地点海拔不超过2000m。 Elevation: ≤2000m
- △ 环境条件：应无会引起爆炸的介质，也无会腐蚀金属和破坏绝缘的有害气体和导电尘埃。

Environment condition: There must be not any explosive medium and there must be not any gas which would corrode metal or any conducting dust which would destroy the insulation.

- △ 安装类别：安装类别Ⅱ、Ⅲ。 Installing categories: Class Ⅱ、Ⅲ。
- △ 污染等级：污染等级为3。 Pollution protection: Grade 3
- 安装条件：Installation condition
- △ 安装面与垂直面的倾斜度不大于30度；
The tilt gradient between installation face and vertical face should ≤30°
- △ 采用TH35-7.5标准安装轨安装；
Installing condition: mounted by TH35-7.5 standard rail track.
- △ 断路器应安装和使用在无明显摇摆、冲击和振荡的地方。
Products should be used in no significant impact and vibration place.

五、主要技术参数 MAIN TECHNICAL PARAMETERS

- 基本技术参数见表1 Basic technical parameters (as table 1) 表(table)1

型号 Type	使用类别 Usage classification	壳架等级 额定电流 Inm Frame rated current	额定绝缘电压 Ui Rated insulation voltage	操作性能 Operation performance		操作频率 (次/h) Operation frequency
				通电操作 循环次数 Electrify operation cycle-index	不通电操作 循环次数 Non-electrify operation cycle-index	
GSM8-32	AC-3	32A	690V	60000次	60000次	120

- 动作特性参数见表2 The action characteristic parameters (as table 2)

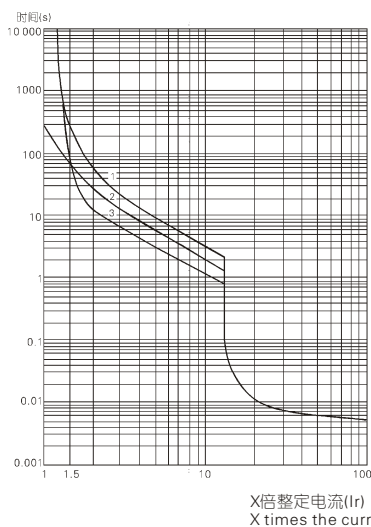
表(table)2

项目 Item	序号 Serial number	试验电流 Testing current		约定时间 Order time	起始状态 Initial state	预期结果 Expectancy ending	附注 note
延时保护特性 +20±2℃ Time-delay protection character	a	1.05In		t≤2h	冷态 cold state	不脱扣 not release	-
	b	1.2In		t < 2h	热态 hot state	脱扣 release	紧接a项试验后, 5s内 电流稳定升至规定值 Immediately after a pilot, 5s with current provisions rose to a stable value
	c	1.5In		t < 4min	热态 hot state	脱扣 release	紧接a项试验后, 5s内 电流稳定升至规定值 Immediately after a pilot, 5s with current provisions rose to a stable value
瞬时保护特性 Instantaneous protection character	d	In≤0.25	7.68In	t≤0.2s	冷态 cold state	不脱扣 not release	-
		In > 0.25	9.6In				
	e	In≤0.25	11.52In	t < 0.2s	冷态 cold state	脱扣 release	-
		In > 0.25	14.4In				
断相保护特性 +20±2℃	f	2极 pole 1.0In 1极 pole 0.9In		t≤2h	冷态 cold state	不脱扣 not release	
	g	2极 pole 1.15In 1极不通电 1 pole not electrify		t < 2h	热态 hot state	脱扣 release	紧接f项试验后, 5s内 电流稳定升至规定值 Immediately after f pilot, 5s with current provisions rose to a stable value

注：瞬时脱扣器的电流整定范围为 $12I_n \pm 20\%$ ($I_n > 0.25$) 或 $9.6I_n \pm 20\%$ ($I_n \leq 0.25$)，具体数值见d、e项。

Note: instantaneous release of the current setting range $12I_n \pm 20\%$ ($I_n > 0.25$) or $9.6I_n \pm 20\%$ ($I_n \leq 0.25$) the specific numerical see d, e item.

■ 时间-电流特性曲线 ($20 \pm 2^\circ\text{C}$) 见图1 Time-current character curve (as Picture 1)



图(picture)1

- 1 从冷态开始, 3极
From the beginning of cold, 3 poles
- 2 从冷态开始, 2极
From the beginning of cold, 2 poles
- 3 从热态开始, 3极
From the beginning of hot, 3 poles

■ 短路分断能力 Short-circuit breaking capacity (as table 3)

表(table)3

脱扣器电流整定范围代号 Release setting current No	电流整定范围 (A) Setting current range	额定电流 (A) Rated current	短路分断能力 (Ue: 415V) Breaking capacity	
			极限短路分断能力 Icu (KA) Breaking capacity of rated limit short-circuit	运行短路分断能力 Ics (KA) Breaking capacity of rated running short-circuit
01	0.1~0.16	0.16	50	50
02	0.16~0.25	0.25	50	50
03	0.25~0.4	0.4	50	50
04	0.4~0.63	0.63	50	50
05	0.63~1	1	50	50
06	1~1.6	1.6	50	50
07	1.6~2.5	2.5	50	50
08	2.5~4	4	50	50
10	4~6.3	6.3	50	50
14	6~10	10	50	50
16	9~14	14	15	7.5
20	13~18	18	15	7.5
21	17~23	23	15	6
22	20~25	25	15	6
32	24~32	32	10	5

六、断路器附件 CIRCUIT-BREAKER ACCESSORY

■ 附件种类及其功能(见表4) accessory variety and function

表(table)4

附件名称 Accessory name		附件代号 Accessory No.	接线图 Wiring picture	触点形式 Contact type	备注 Note
辅助触头 Auxiliary contact	内挂 inside hung	FN11		一常开、一常闭 One normal open One normal close	嵌装在断路器内部, 且每台断路器最多可嵌装1块 Embedded in the internal circuit breaker and each circuit breaker with embedded up to 1
		FN20		二常开 Two normal open	
	外挂 outside hung	FW11		一常开、一常闭 One normal open One normal close	加挂在断路器的左侧, 且每台断路器最多可加装2块。 Canada hung on the left side of the circuit breakers, and each circuit breaker to install upto2
		FW20		二常开 Two normal open	
短路报警触头 short-circuit alarm contact		DB11		一常开(报警) One normal open(alarm) 一常闭(报警) One normal close(alarm)	断路器发生短路故障时, 报警触头切换。 Short circuit breaker failure alarm contact switch 加挂在断路器的左侧, 最多可加挂1块 Canada hung on the left side of the circuit breakers, plus up to a hanging
辅助触头 (辅助+报警) Auxiliary and alarm contact		FB0110		一常闭(报警) One normal open(alarm) 一常开(辅助) One normal close(auxiliary)	报警触头在断路器发生短路或过载故障时切换。 Contact the police in the circuit breaker overload or short circuit failure of the switch 辅助触头指示断路器主触头的合分闸状态。 Auxiliary contact breaker assisted instructions joint contact the gate at state 加挂在断路器的左侧, 最多可加挂1块。 Canada hung on the left side of the circuit breakers, plus up to a hanging
		FB0101		一常闭(报警) One normal open(alarm) 一常闭(辅助) One normal close(auxiliary)	
		FB1010		一常开(报警) One normal open(alarm) 一常开(辅助) One normal close(auxiliary)	
		FB1001		一常开(报警) One normal open(alarm) 一常闭(辅助) One normal close(auxiliary)	
欠压脱扣器 Under-voltage release		QY1		----	加挂在断路器的右侧, 最多可加挂1块。 Canada hung on the right side of the circuit breakers, plus up to a hanging
分励脱扣器 Shunt release		FL1		----	加挂在断路器的右侧, 最多可加挂1块。 Canada hung on the right side of the circuit breakers, plus up to a hanging

■ 附件性能参数 accessory character parameters

△ 辅助触头性能参数 (见表5) auxiliary contact character parameters

表(table)5

辅助触头 Auxiliary contact		辅助触头FN Auxiliary contact				辅助触头FW Auxiliary contact						
额定绝缘电压 (V) Rated insulation voltage		250				690						
约定发热电流 (A) Convention thermal current		2.5				6						
通电操作次数 Electrify operate times		60000次				60000次						
不通电操作次数 Non-electrify operate time		60000次				60000次						
AC-15	额定工作电压 (V) Rated work voltage	24	48	110/ 127	230/ 240	48	110/ 127	230/ 240	380/ 415	440	500	690

(续表 Continue on top of table)

	额定工作电流 (A) Rated work current	2	1.25	1	0.5	6	4.5	3.3	2.2	1.5	1	0.6
DC-13	额定工作电压 (V) Rated work voltage	24	48	60	-	24	48	60	110	220	-	-
	额定工作电流 (A) Rated work current	1	0.3	0.15	-	6	5	3	1.3	0.5	-	-

△ 辅报触头（辅助触头+报警触头）性能参数(见表6)

Auxiliary and alarm contact character parameters(as table 6)

表(table)6

类型 type		辅助触头 auxiliary contact							报警触头 alarm contact			
额定绝缘电压 Rated insulation voltage		690 V							690 V			
约定发热电流 Convention thermal current		6 A							2.5 A			
通电操作次数 Electrify operate times		60000次							1000次			
不通电操作次数 Non-electrify operate time		60000次							1000次			
AC-15	额定电压 (V) Rated voltage	48	110/127	230/240	380/415	440	500	690	24	48	110/127	230/240
	额定电流 (A) Rated current	6	4.5	3.3	2.2	1.5	1	0.6	1.5	1	0.5	0.3
DC-13	额定电压 (V) Rated voltage	24	48	60	110	220	-	-	24	48	60	-
	额定电流 (A) Rated current	6	5	3	1.3	0.5	-	-	1	0.3	0.15	-

△ 短路报警触头性能参数(见表7)

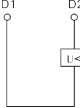
Short-circuit alarm contact character parameters(as table 7)

表(table)7

类型 type		短路信号触头DB11 Short-circuit alarm contact			
额定绝缘电压 Rated insulation voltage		690 V			
约定发热电流 Convention thermal current		2.5 A			
通电操作次数 Electrify operate time		1000次			
不通电操作次数 Non-electrify operate time		1000次			
AC-15	额定电压 (V) Rated voltage	24	48	110/127	230/240
	额定电流 (A) Rated current	1.5	1	0.5	0.3
DC-13	额定电压 (V) Rated voltage	24	48	60	-
	额定电流 (A) Rated current	1	0.3	0.15	-

△ 欠压脱扣器性能参数(见表8) Under-voltage character parameters(as table 8)

表(table)8

欠压脱扣器类型 under-voltage type	欠压脱扣器QY1 under-voltage
接线图 Wiring picture	
额定绝缘电压(V) Rated insulation voltage	690
额定工作电压Ue(V) Rated work voltage	110/127、220/240、380/415
吸合电压 pull voltage	(0.8 ~ 1.1) Ue
释放电压 release voltage	(0.35 ~ 0.7) Ue

△ 分励脱扣器性能参数(见表9) Shunt release character parameters(as table 9)

表(table)9

类型 type	分励脱扣器 F11 shunt release
额定绝缘电压(V) Rated insulation voltage	690
额定控制电源电压us(V) Rated control power voltage	110/127、220/240、380/415
吸合电压 pull voltage	(0.7 ~ 1.1) us

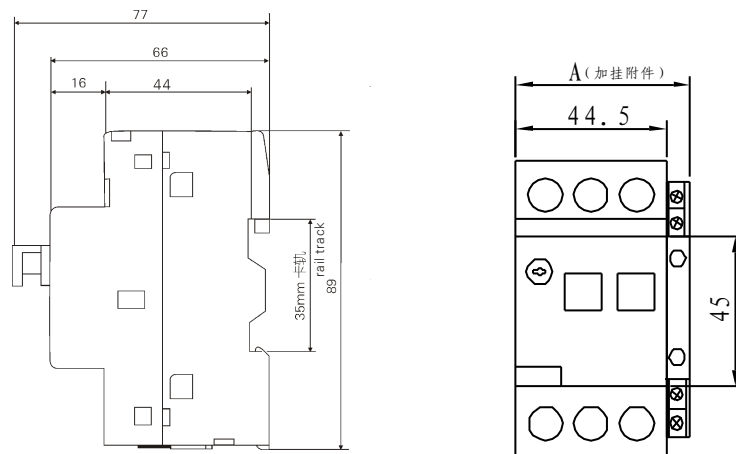
■ 电气附件组合(见表10) Electrical accessories portfolio (as table 10)

表(table)10

安装方式 installation way	电气附件组合 Electrical accessories portfolio	备注 remark
左装 left loaded	辅助触头FW auxiliary contact	左装附件依次从左至右的加装顺序不能改变。 Left turn from left to right loaded the annex to the installation of the order can not be changed
	辅助触头FW+辅助触头FW auxiliary contact+auxiliary contact	
	辅助触头FB Des contact has been reported	
	短路报警触头DB+辅助触头FB Short-circuit alarm contact+Des contact has been reported	
	辅助触头FW+短路报警触头DB auxiliary contact+Short-circuit alarm contact	
	短路报警触头DB Short-circuit alarm contact	
右装 right loaded	欠压脱扣器QY1 Under-voltage release	分励脱扣器和欠压脱扣器二者仅可加装其一。 Separation of release and under-voltage release the two to install only one.
	分励脱扣器FL1 Separation of release	
内嵌 embed	辅助触头FN auxiliary contact	----

七、外形及安装尺寸(见图2)

OUTLINE AND MOUNTING DIMENSIONS(as Picture 2)

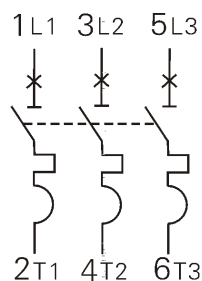


图(picture)2

加挂 附件类型 Annex type	A(单位: mm)
辅助触头(FW11、FW20) Auxiliary contact	53.5
短路报警触头 (DB11) Des contact has been reported	53.5
辅报触头 (FB0110、FB0101、FB1010、FB1001) Des contact has been reported	53.5
分励脱扣器 (FL1) Separation of release	62.5
欠电压脱扣器 (QY1) Under-voltage release	62.5

八、接线图 WIRING PICTURE

- 断路器主接线图(见图3) breaker mainly wiring picture(as table 3)



图(picture)3

九、注意事项 NOTICE

- △ 断路器应垂直安装，且在安装前应先检查断路器铭牌上所列的技术参数是否符合使用要求。
Circuit breakers should be installed vertically and check in before the installation of circuit breakers nameplate on the technical parameters set out in compliance with the requirements to use
- △ 通电前应人工操作几次断路器，其机构动作应灵活可靠、无阻滞现象。
Electricity before manual circuit breaker on several occasions, the agency action should be flexible and reliable, non-blocking phenomenon
- △ 按下闭合按钮（黑色），电路处于接通状态；按下断开按钮（红色），电路处于断开状态。
Press the button closure (black), the circuit is connected to the state; press the disconnect button (red), in a disconnected state circuit
- △ 使用过程中，应对断路器进行定期检查（一般为一个月），即在断路器合闸通电状态下，拨动试验按钮（试验按钮用符号“Test”表示），断路器应可靠断开。
The use of the process, circuit breakers should be carried out checks on a regular basis (normally one month), that is, in the state circuit breaker switch on, the test will be button (marked "TEST") as shown by the direction of the arrow struck, the circuit breaker to disconnect reliable
- △ 当断路器因线路发生过载、短路故障而断开时，应先排除故障后再使断路器重新合闸。
When the circuit breaker occur as a result of overload, short circuit and

disconnected, should enable the rear troubleshooting closing re-breaker

- △ 本断路器为免维护型，所以当断路器发生故障不能正常工作时，用户不得私自打开断路器进行维修。

The circuit breaker for maintenance-free type, so when the circuit breaker failure does not work, the user can not open the circuit breaker for maintenance

- △ 使用电流调节旋钮，须按线路实际电流调节至相应位置，请勿超负荷使用。
Current regulation of the use of knob, according to current regulation of the actual lines corresponding to the location; do not the use of overload

十、订货须知 ORDER NOTICE

■ 订货时，需指明如下内容：In order need attention following

- △ 断路器名称、型号、规格及所带附件名称、型号、规格。

The circuit-breaker and its accessory's name、type and specification.

- △ 订货数量。Order volume

- △ 订货日期。Order date

- △ 货运方式。Freight way.

例如：GSM8-3205 DB11+FB 100台 铁路快运

Example: GSM8-3205 DB11+FB 100 sets railway express

表示：GSM8-32电动机保护断路器，脱扣器电流整定范围为0.63~1A,加装短路报警触头、辅报触头，运输方式为铁路快运，共100台。

Means: GSM8-32 motor protection circuit-breaker, release current setting range is 0.63~1A, added short-circuit alarm contact and auxiliary and alarm contact, the transportation is railway express, order number is 100 sets.